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NAV's Horizon Scan 2023–2035

Societal trends and consequences for NAV

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Photo montage: Colourbox

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1. EXECUTIVE SUMMARY

NAV's Horizon Scan 2023 addresses key societal trends that are likely to affect the labour and welfare area in the years leading up to 2035, and the consequences these may have for NAV. The scan makes use of both forecasting and assumptions on how society is likely to change in the years ahead. The future, meanwhile, is unpredictable, and sudden, unforeseen changes are likely to become a challenge for NAV.

1.1. Restructuring and labour shortages

The labour market will presumably be shaped by technological advancements, the green transition and an ageing population. For NAV, a key focus will be to facilitate for necessary changes in the labour market and to manage sudden and unexpected shifts. This is likely to take the form of increased occupational and geographic mobility and a strengthening of knowledge and skills in the population. It will demand a stronger knowledge about the labour market and workplace inclusion, development of knowledge-based services and a strengthening of collaboration with employers and the educational and health sectors.

Unemployment is expected to remain low, and there will probably be a labour shortage, especially within health services and occupations requiring trade certificates. By 2040, we expect to see 60 percent of the labour force working in service industries, in both the private and the public sector, whereas we expect to see reductions in both the petroleum industry and retail. Labour shortages invite conditions where it is easier to include those who are currently not part of the labour force. Employers must adjust their expectations in the recruitment process and must place greater emphasis on inclusion and training.

The Covid pandemic and war in Ukraine have highlighted existing vulnerabilities in the globalized economy. As a result, international trading patterns may change, and regions and countries may strive for increased self-sufficiency. We expect to see a decline in industrial employment in Norway, but regionalization may lead to new industry jobs being created in Europe, thus cushioning the decline in Norway. A high pay level limits the potential for new industrial jobs in Norway, except in cases where competence requirements or natural resources give us an advantage.

In the past 10–15 years, the gap between the highest and the lowest incomes has increased in Norway. Recently settled refugees and those with a weak connection to the labour market are over-represented among those with the lowest level of income. In addition, those who have not completed upper secondary school are over-represented among the unemployed, and we expect this trend to strengthen. Restructuring, weaker economic growth internationally, more uncertainty world-wide, and a risk of high inflation and high interest rates persisting are all factors that may contribute to increased inequality and reduced purchasing power among vulnerable groups in the years to come. In turn, this could lead to increased demand for social services and benefits from NAV.

Public health is expected to improve in most age groups of working age, but not for the population as a whole, as the share of elderly people in the population will increase significantly in the years to come. Towards 2035, the share of the population aged 18–66 receiving health-related benefits is expected to remain stable. Improved public health in this age group and a high demand for labour are indication that fewer people will receive health-related benefits in the years to come. Other factors, such as the risk of increasing disability among young people and labour market restructuring leading to increased exclusion, are indication of the opposite.

1.2. Ageing and centralization challenge the welfare state

The population is increasing at a slower rate than in previous years, whereas ageing accelerates due to lower birth rates and an expected decrease in net immigration. The part of the population who are over 67 years old is expected to increase by more than 30

percent towards 2035, as opposed to a 5-percent population increase overall. For people of working age, we are expecting a moderate population increase of 2 percent towards 2035.

3 out of 4 employees in NAV work with services and benefits aimed at people of working age, and we therefore assume that the population increase will have modest consequences for the overall workload of NAV in most areas. However, an ageing population will lead to an increase of approx. 35 percent in the number of retirees and recipients of assistive technology, and this development may prove challenging for NAV. At the same time, ageing will increase the gap between expenses and incomes in the National Budget, and this will affect labour and welfare policy. We expect to see increased demand for rationalization in the public sector. This could entail that NAV will be asked to work with more user groups with an aim of employment than we currently do, and that we will have to pinpoint even more accurately who will need more extensive assistance from the various parts of the agency.

Net immigration is expected to decrease from the current level, but even so, the number of immigrants to Norway is expected to continue to increase faster than the rest of the population. Less immigration may make it easier for those who do come here to gain access to the labour market. A different composition of immigrants, with fewer migrant workers, may pull the trend in the opposite direction, if those who do come here lack the skills and qualifications needed. Climate change and a risk of persistent war and conflict may lead to a higher number of refugees. Labour shortages may also lead to changes in immigration policy and increased occupational migration, even from countries outside the EU. If immigration increases more than expected, this will lead to an increased demand on NAV to assist in qualification and employment-oriented services. It will also increase the workload related to the processing of international cases for those who live abroad or who have accumulated rights in other countries.

The population growth is expected to be concentrated to central areas. 4 out of 10 municipalities are expected to see a population decrease, whereas 2 out of 3 municipalities expect to see a decrease in the part of the population within working age. This will lead to a shortage of qualified labour in many areas of the country. Centralization and digitization will lead to fewer users for many NAV offices. Reorganization may be required to ensure service quality and effective resource utilization.

1.3. New expectations and opportunities

People will, to a greater extent than before, expect services to be tailored to their needs and to be cohesive across the public sector.

Digital literacy within the population and access to high-quality digital tools are expected to increase significantly towards 2035, but we need to focus on counteracting digital exclusion. The main barriers against adopting digital services are health or social limitations, language barriers and lack of bureaucratic or digital proficiency. Towards 2035, NAV must focus on making services more user-friendly and providing good alternatives to those who cannot use digital services.

The digitization of society will continue, and the distinction between digital and in-person meetings will become more indistinct. Digitization represents a considerable opportunity for NAV in terms of contact and communication with users and to ease administration. As an example, digital meeting places and platforms may help facilitate the maintenance and coordination of the interaction between NAV, users and partners. We believe artificial intelligence and decision support will become key tools in NAV's service production. NAV may also be assigned new responsibilities as a data provider. In its role as a key player in the welfare area, NAV's focus will be an ethical and responsible approach to the use of data-driven services with broad support in the population.

Due to digitization, fewer users will have traditional, in-person meetings with their counsellors. At the same time, personal meetings will continue to be important for individuals with complex needs. We presume that interpersonal skills and knowledge of user groups

with complex needs will become even more important for NAV's counsellors.

NAV must evolve to take advantage of the opportunities provided by technology and to meet new needs with new services. As a result, we need to focus on service development, competence, funding, organization, legislation, data sharing, ethics and privacy. These are all factors that may affect how, and how fast, the digitization process can proceed.

1.4. Risk of increased unpredictability in policies

Societal challenges related to restructuring, inclusion, ageing and the sustainability of the welfare state are expected to have an impact on labour and welfare policies in the years leading up to 2035. The lines of conflict will likely be centred on considerations between universal and means-tested benefits, between benefit levels and incentives for work, disagreement over how the public sector is organised and the role of the public sector within service production, as well as within immigration, climate and regional policies.

The political landscape has undergone a rapid transformation, with the pandemic, an ongoing war in Ukraine and increased inflation. Geopolitical uncertainty has consequences, in the form of changing international framework conditions and greater emphasis on security and preparedness. Persistently high energy and commodities prices may lead to increased poverty and inequality. This may give rise to increased polarisation, where there is less will to compromise and less trust in the authorities, and where policies increasingly come as a response to crises and acute situations. This could, in turn, lead to more abrupt changes to labour and welfare policies. At the same time, Norway has strong barriers against polarisation and social unrest, in the form of a political culture characterised by stability, a multi-party system that ensures inclusion of various social interests, and a well-developed welfare state.

A trend where more space is granted for local adjustments and service development in collaboration with users and other affected parties is reflected in trust reforms implemented in Norway and several neighbouring countries. More localised service development will make evaluations and knowledge-sharing more important, to enable others to learn from, and implement, successful solutions.

We expect the EU to play a bigger role for Norway as a global player in a more uncertain world, both as a trading partner, and in data protection and digitalisation policies. Norway and NAV are affected by the EU both directly, through the EEA, and indirectly, by the EU assuming a more active role in recommendations and action plans in labour and welfare policies and skills policies.

Skills policies will become even more central in the years to come, especially considering technological developments and the green transition. It will be especially important to ensure inclusion of vulnerable groups in the labour market, as well as to ensure that all members of the labour force are able to build competence throughout their careers. Potential measures include better access to upper secondary education, apprenticeships and mentoring, as well as facilitation for life-long learning and options to combine employment with (further) education.

1.5. NAV's competence needs are affected by societal change

NAV's competence must evolve to meet the rate of restructuring in the labour market, changed expectations from users, digitalisation and increased collaboration with other organisations. These are some examples:

A higher rate of restructuring in the labour market will require NAV to have an up-to-date analytical knowledge and understanding of what these changes mean for the labour market and for service development, on both a national and a local level. Continuous and practice-oriented competence development will be required to identify, reflect on and to apply the employee's knowledge and experience. In order to access knowledge that may strengthen and renew service development, a culture where assessments and experiences are shared between NAV's units is

required. Knowledge of innovative and smooth service development, including how competence development can be integrated in service development, will also be a key factor in an environment of rapid restructuring. Both managers and employees must take responsibility for competence development and learning opportunities.

Changes in user expectations will require deeper knowledge of user needs, in order to gain a better understanding of their situation. Especially important will be the knowledge of what promotes inclusion of vulnerable groups, such as youth, immigrants and others who are experiencing, or are at risk of, long-term exclusion. We also need a good overview of worker skills to meet future challenges and changed needs with good quality measures. Guidance competence can be developed through both formal education and informal arenas of self-reflection and skills training. Relevant areas include communication and relationship work, as well as training in how research-based knowledge can be applied in one's own practice. To meet user expectations of uniform and continuous services, NAV should also emphasise knowledge of how internal core areas, such as guidance, inclusion, labour market and administration, interact and relate to each other.

Continuous services across sectors and administrative levels will require increased knowledge of partners in other sectors, which services can be offered to users, what the effects of such services are, and how new services can be developed in collaboration with other parties. Sharing knowledge and learning from experience across sectors will be central in contributing to uniform services and meeting future user needs. This will require structured approaches between different groups, users and employers, such as through networks, collaborations and co-creation projects. At the same time, this means that NAV must build competence on what is required for inter-sectorial collaborations to succeed, and how such collaborations can be evaluated and further developed.

Digitalisation will require legal competence, as well as technological and analytical competence. NAV's employees must build competence of how to use digital technology in meetings with users. Increasing use of artificial intelligence and decision support gives rise to a need for increased knowledge of how algorithms can be applied in safe and appropriate ways to build knowledge and further develop our practices. In addition, NAV will need to understand how digitalisation affects the labour market.

1.6. The biggest uncertainties for NAV

What will NAV's surroundings look like in 2035, and what will the consequences for NAV be? Since our first horizon scan in 2014, we have attempted to predict the future. We have been right about many things, but at the same time, several major, unforeseen events have had considerable consequences for NAV and society in general.

- We did not predict the war that broke out in 2022, nor the consequences this would have on energy and food prices, even though Russia invaded Crimea as early as in 2014.
- Norway joined the EEA in 1994, but we did not predict the so-called "EEA case" (misinterpretation of EEA regulations) in 2021.
- There had been several warnings about a pandemic, but we did not predict the Covid pandemic.

We can form a vision of the future by predicting trends and speculating about the opportunities that new technology may bring. At the same time, unforeseen events will continue to occur. These could bring new opportunities, or cause problems we have no choice but to handle.

To account for some of this uncertainty, every chapter of this report highlights the most uncertain trends that may have consequences for NAV towards 2035.

Unforeseen events require rapid restructuring and new priorities, especially in the public sector. During the Covid pandemic, NAV played an important role in terms of making sure we had enough essential workers to keep critical services operational and paying subsistence benefits to those who needed it. The war in Ukraine has led to sharp price inflation and an increase in the need for financial assistance, among other things. This has given rise to a discussion of benefit levels, especially in terms of minimum rates.

Disinformation and attacks on and politically motivated manipulation of digital tools constitute vulnerabilities for NAV. Such issues could affect NAV's ability to make payments as well as the public's trust in public services. Even though we are always working to prepare for the unexpected, unforeseen events are difficult to prepare for and represent the biggest uncertainty in this Horizon Scan.

In terms of demographic predictions, immigration to Norway represents the biggest uncertainty. Statistics Norway predicts low net immigration in the years to come, but there is some risk that **the numbers of both new refugees and migrant workers** may be higher than expected. Climate change, and the risk of the current situation, with war and conflict persisting, may lead to a higher number of refugees. More refugees will mean an increased need of follow-up and coordination across sectors to ensure sufficient integration. This could affect the competence needs of NAV employees and shift the follow-up work to measures beyond NAV's current portfolio of services. Generally, we expect the number of migrant workers to go down due to ageing populations all over Europe and reduced wage disparities between Norway and other countries. To meet labour demands, however, it is possible that occupational migration may be higher than expected, and that Norway may increasingly accept migrant workers from countries outside the EU/EEA.

Another key uncertainty is the **restructuring ability of the labour market and the public sector.** In terms of the labour market, restructuring is largely a response to changes in competence demands as a result of technological developments and the green transition. If we see persistent imbalances in the labour market, this could lead to increased exclusion, which will result in a higher rate of unemployment and more recipients of health-related benefits. This will increase the demands on NAV in the form of increased demands for follow-up and income support.

A demand for **continued restructuring in the public sector** is triggered by ever-increasing expectations for improved efficiency as a result of an increased perceived gap between public expenditures and revenues, as well as for the public sector to seize on new opportunities provided by digitalisation. The latter involves expectations for NAV and other public bodies to develop inclusive services to counteract digital exclusion, implement new channels in step with a digital generational change and improve services with the help of artificial intelligence. The demand for increased efficiency in the public sector could, potentially, reduce NAV's economic scope of action, something that, in turn, could trigger a demand for increased digitalisation of services. It is still uncertain, however, whether digitalisation will have the expected gains – this could be due to digitalisation optimism, unsuitable models for funding, or because digital solutions are not necessarily a good fit for all users. In addition, there are many ethical and legal considerations to the use of artificial intelligence, which means that he opportunities and consequences going forward remain highly uncertain. In the opposite direction, one could also speculate whether the gap between public expenditures and revenue could have the opposite effect on NAV. While increased pressure on public funds could lead to increased demand for efficiency and lower ambitions for the public sector in general, one potential outcome for NAV could be that NAV instead is assigned new mandates and responsibilities for making sure more people are included in the labour market.

Political trends are by nature uncertain, in that they are heavily influenced by other societal trends. The current geopolitical situation makes things even more unpredictable, as we do not know how long the war in Ukraine will last, or how the international power balance will develop and affect Norway. This creates uncertainty for many factors, including the arrival numbers of refugees. The international situation may also affect EU policies and Norway's relationship with the EU, which may, in turn, lead to changes in the rules and regulations NAV has to comply with. Social unrest and increased poverty may lead to increased polarisation in society and may undermine the public's trust in the public sector. Reduced trust may make the interaction between NAV and its users more complicated, and in the long term it may affect the public's support of the welfare state. This could happen, for example, if the public's

expectations of income protection are not met. Furthermore, cyberattacks and disinformation are risk factors for NAV, in the form of actual attacks on payment systems or databases, for example, increased fraud based on advanced technology, or disinformation campaigns that breed polarisation and distrust. This could mean that NAV's preparedness efforts will become more important.

1.7. Changes from the last Horizon Scan

Below are listed the most important changes from NAV's last Horizon Scan (NAV 2021):

- A **more uncertain world**, especially in the wake of Russia's invasion of Ukraine, has highlighted vulnerabilities in the global economy. Considerations of supply security could lead to **a regionalisation of international supply chains**, which may give rise to increased demands for industry in Europe and in the United States. This also applies to Norway, where competence and natural resources give us an advantage, but where our high pay levels are a limiting factor. Challenges related to security and preparedness also play a bigger role than in the last Horizon Scan.
- We believe these uncertain times will mean that **the EU will play a more central role** in the years to come. For Norway, this is especially true in terms of supply security and preparedness, but the EU will likely also assume a more active role in labour and welfare policies, skills policies and IT policies.
- **Migration trends** will be more uncertain than they have been before. This is due to the risk of persistent high numbers of refugees as a result of climate change, war and conflict. In addition, we believe that increased occupational migration from countries outside the EU/EEA could become a relevant consideration due to the shortage of labour, and because an ageing population and high economic growth in EU member states in Eastern Europe will make it more difficult to attract migrant workers from these countries.
- The risk of **political polarisation** has increased and become more real through the war in Ukraine, the energy crisis, high price inflation in general and increased interest rates.
- **Artificial intelligence** is establishing itself as a more mature technology, through so-called "base models", and AI has become more relevant and easier to implement in new areas. This will also include NAV. One example is ChatGPT.
- To better assess uncertainties in our analysis, we have included separate subchapters in chapters 3–9, discussing which trends are associated with the highest level of uncertainty, and the potential consequences to NAV. **These uncertainties with the biggest potential consequences for NAV** in the years to come have been summarised in chapter 1.6.

2. INTRODUCTION

Society is changing rapidly. New challenges and opportunities mean that NAV must plan and evolve, while taking into consideration unexpected changes. The Horizon Scan discusses the biggest societal trends that may affect NAV in the years leading up to 2035, which consequences these trends may have for NAV and which of them are associated with the highest degree of uncertainty.

The Horizon Scan is divided into seven societal areas (chapters 3–9): demographics, user expectations, technology, the labour market, health, living conditions, and policy. Chapter 10 presents the results from two user surveys aimed at NAV employees and NAV's user representatives.

The analysis aims to contribute to

- more accurate strategies and priorities for NAV in the years to come. The findings from the Horizon Scan will be a key source in the implementation of NAV's strategy, "NAV 2030" (NAV 2023) and any future updates.
- reflection and discussion of how societal trends may affect us in the years to come, both in terms of NAV in general and in the individual units where people work.

The primary target audience is NAV's own employees, especially its managers and employee representatives. An additional goal is to disseminate knowledge externally. Many of the trends identified are key focus areas for our partners as well. The Horizon Scan may contribute to a shared view of the challenges we face, which makes it easier to work together across institutions and sectors, and it may also contribute to more knowledge-based labour and welfare policies.

NAV's Horizon Scan was first published in July 2014 (NAV 2014), and this is the fifth version of the report.

The Horizon Scan is based on both internal and external analyses, supplemented with assessments of opportunities and challenges NAV may face as a result of societal trends. To ensure broad support and relevant input, it has been a priority to involve all of NAV in the preparation of the report. This has been achieved in the form of surveys sent out to employees and user representatives, as well as consultation with labour organisations, user committees, the director committee of the Directorate of Labour and Welfare, other management committees, and the Norwegian Association of Local and Regional Authorities (KS). We have also conducted meetings and workshops with partners and experts from various fields.

As for which societal trends are most important and how these affect NAV's services, NAV has a broad and complex area of responsibility, with considerable variation in terms of outcome and geographical scope. Despite the scope of this Horizon Scan, it does not cover all variations. We therefore recommend that units in NAV prepare their own analyses, if deemed necessary and appropriate.

This report has been prepared by the Directorate of Labour and Welfare. The editors and authors are Ole Christian Lien (chair), Marianne Åsheim Friess, Sverre Friis-Petersen, Jorunn Furuberg, Gard Ringen Høibjerg, Jørgen Daroische Holbæk-Hanssen, Kristian Myklathun, Jon Petter Nossen, Tor Erik Nyberg, Robindra Prabhu, Håkon Røstad, Raija Kristin Sandvik and Magne Sortland. In addition, Anne Lise Lunder Arvesen, Nina Bakken, Kent Daleng, Louis Maurice Dieffenthaler, Sigrid Anna Eggen, Ingrid Olive Engesæter, Kristin Fredriksen, Eirik Lamøy, Per Inge Langeng, Jorunn Litland, Kine Nan Lium, Marianne Pedersen, Ida Frisak Ringnes, Hanne Røvig Schjold, Beate Løwald Solberg, Benedicte Stavnum, Erik Vattekar and others have contributed.

3. DEMOGRAPHICS

By: Magne Sortland

Summary: Ageing, centralisation and uncertainties relating to immigration

Norway's population has increased sharply in recent years. At the same time, the composition of our population has changed, among other things due to reduced mortality, lower birth rates and high immigration. The population growth is expected to slow down in the years to come. From 2023 to 2035, the Norwegian population is expected to increase by 5 percent. The three most important demographic trends towards 2035 are an ageing population, centralisation and decreased net immigration.

The population segment aged 19–66 is expected to increase 2 percent towards 2035. As 3 out of 4 NAV employees work with users of working age, we expect that the direct effect of demographic change will be relatively modest in terms of NAV's workload. There is still some uncertainty due to increasing uncertainty relating to immigration. The ageing population, however, will lead to a significant increase in some user groups. The population segment aged 67 and over is expected to increase by more than 30 percent towards 2035. The number of recipients of retirement pension and assistive technology is expected to increase proportionately, by approx. 35 percent.

The increased demand for assistive technology will pose the greatest challenge, as this is an area that requires extensive personal assistance. There are some uncertainties related to how increased expectations, new technology and improved health will affect this development. The increase in recipients of retirement pension will also increase NAV's workload, despite pensions being an area with a high degree of automation and the user group requiring minimal follow-up from NAV once they start claiming retirement pension. The reason for the increased workload is that increased migration in recent decades means we are expecting a sharp increase in the number of international cases, and these have not been automated to any significant degree. In addition, the restructuring of contractual pension schemes (AFP) in the public sector means that the number of new pension claims is expected to increase by almost 30 percent before 2035.

The number of immigrants resident in Norway is expected to increase by 16 percent before 2035. This is higher than the overall population growth, but lower than the increase seen in the years after 2000. From 2024, we are expecting an annual net immigration of approx. 12,000, which is clearly lower than before, but we deem the situation going forward to be highly uncertain. It could change quickly, especially in terms of the number of refugees. For that reason, NAV has to be prepared for rapid reprioritisation. It is expected that the number of immigrants from Eastern Europe outside of the EU, Africa, Asia and Latin America will increase the most, by 19 percent towards 2035. This is because refugees, and especially those who come to Norway through family reunification, are expected to make up a significantly higher share of immigrants in the years to come. Decreased immigration and labour shortages may make it easier for immigrants to enter the labour market. A higher share of immigrants who lack relevant skills and experience may pull the trend in the opposite direction.

Annual occupational migration has decreased by almost 40 percent in the last decade, which makes it more challenging to meet labour demands, especially in rural municipalities. We expect the rate of occupational migration to remain relatively low in the time to come, but this too is uncertain, as persistent labour shortages may lead to changes in political priorities.

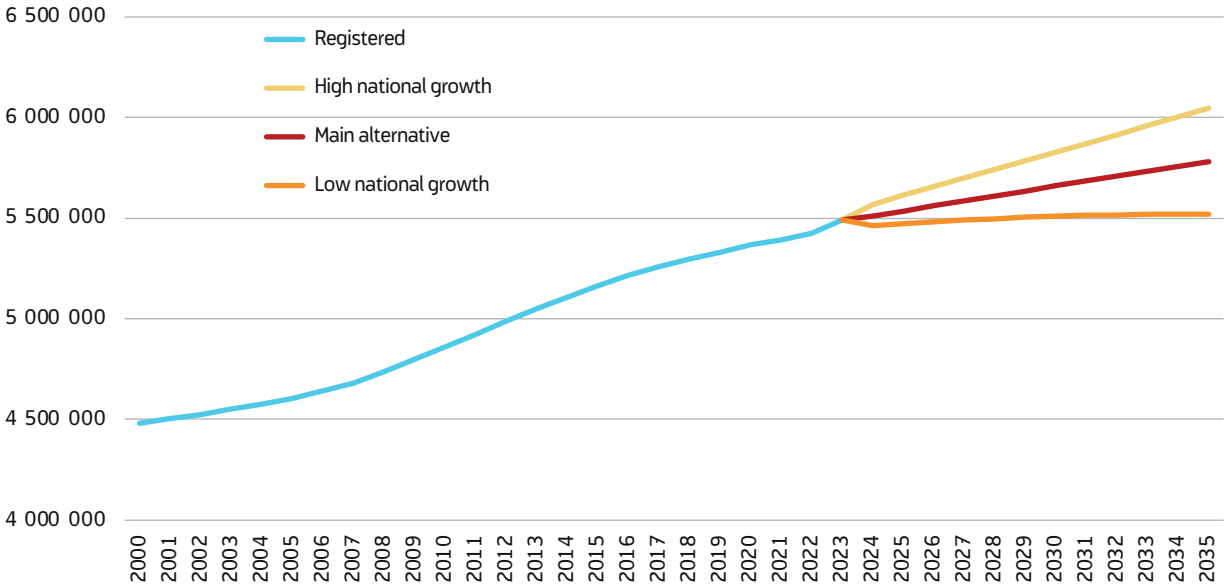
The population is expected to increase in all Norwegian counties except Nordland, and the population growth is expected to be the highest in the most central municipalities. The population is expected to decrease in 4 out of 10 municipalities towards 2035, whereas 2 out of 3 municipalities expect to see a decrease in the part of the population that is of working age. Increasing life expectancies and young people moving away will lead to a stronger ageing effect on the population in less centralised areas of the country. By 2035, the least centralised municipalities are expected to see 17 percent of the population above the age of 75, compared to 9 percent in the most centralised municipalities. This could make it difficult to recruit qualified employees in these less centralised areas, including recruitment within NAV. Population changes will also affect how NAV should be organised going forward, to ensure efficient use of resources and access to adequate communities of expertise.

An ageing population will increase the discrepancy between expenditures and revenues in the National Budget, which will lead to increased demands of efficiency in the public sector. At the same time, we may see increased political expectations for NAV to engage in employment-oriented follow-up of more user groups than we currently do, and increased expectations of accuracy in terms of identifying who needs more comprehensive assistance. This includes young people and the elderly, recipients of disability benefit and financial assistance, and older employees who have the option of working longer before retirement.

3.1. Weak annual population growth in the next decade – ageing trend continues

This chapter is largely based on Statistics Norway's (SSB) latest population statistics as of 1 January 2023 (SSB 2023) and population projections from June 2022 (Tømmerås og Thomas 2022 og Leknes og Løkken 2022). At the start of 2023, the population of Norway was just shy of 5.5 million. In the new population pro-

Figure 3.1. Population development of Norway, with projections towards 2035 in three alternatives. Figures as of 1 January every year



Source: Statistics Norway

jections, the population growth from 2023 to 2035 is unchanged from the previous projections. In the three alternatives presented in Figure 3.1, we can expect the population to be between 5.5 and 6 million in 2035.

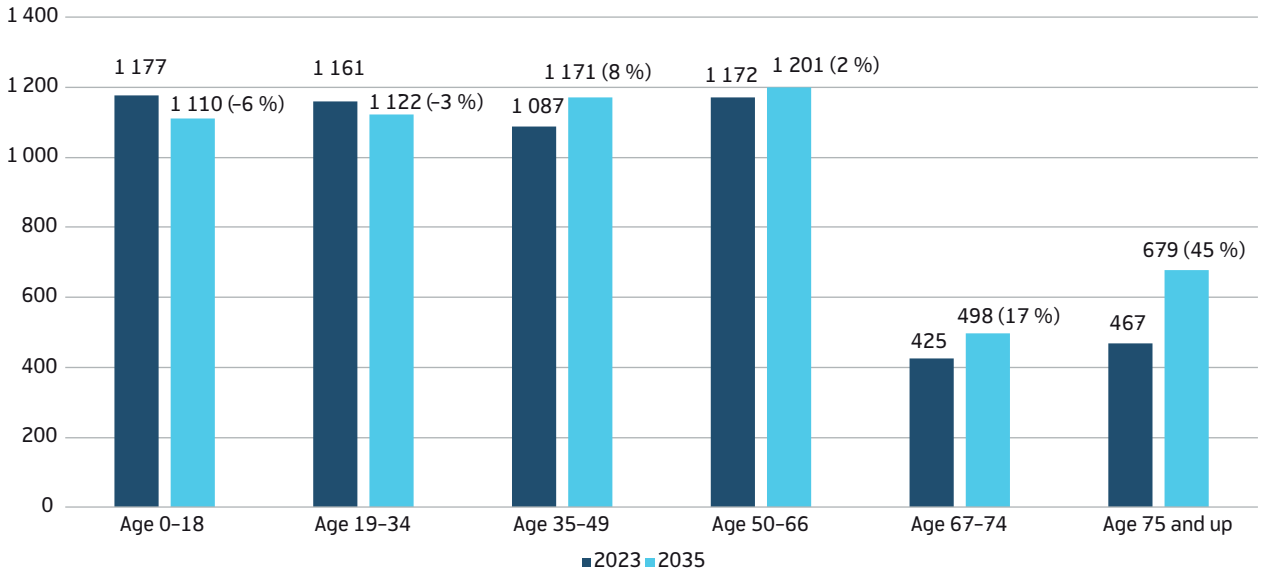
Since 2000, the population has, on average, increased by 0.9 percent per year. In Statistics Norway's main alternative, the population is expected to increase by approx. 290,000 people in 2035, compared to the current population. This is equivalent to an annual increase of approx. 0.4 percent, and 5.3 percent for the time period overall. This expected increase means NAV will have more users, but the consequences of this vary, depending, among other things, on the age composition of the population, immigration to Norway and population developments in different areas of the country. The rest of the chapter focuses on the most important demographic trends in the years to come, and it is based on Statistics Norway's main alternative.

Greatest increase among older age groups

The number of old people in Norway is increasing. Towards 2035, the part of the Norwegian population over the age of 75 is expected to increase by 45 percent. Overall, the age group 67 and older is expected to increase by approx. 32 percent, which means this group will increase by 285,000 people by 2035. The 0–18 age group is expected to decrease by 6 percent in the same time period. This significant increase in the oldest age group will lead to a sharp increase in the number of recipients of retirement pension and assistive technology (see Figure 3.3 and fact box).

Life expectancy has increased by almost 10 years from the introduction of national insurance until today, and the average life expectancy is now around 83 years. In 2035, this is expected to increase to approx. 86 years. Like in Norway, populations in the rest of Europe are also ageing. Norway has a somewhat more favourable demographic development than other European countries (Eurostat 2022). By 2035, approx. 24 percent of the population in the 27 EU member states will be over the age of 67, whereas in Norway, this share is expected to be 20 percent. In the years to come, the growth in public revenues is expected to decrease, and expenditures, in the form of pensions and health and care services, are expected to increase (Meld. St. 14 (2020-2021)). In other words, an ageing population may make it difficult to fund current welfare schemes, but returns from the oil fund (Government Pension Fund Global) mean these chal-

Figure 3.2. Population in 2023 and 2035, by age group. Figures in 1,000. Percentage-wise changes in parentheses.



Source: Statistics Norway

lenges will likely be less severe in Norway than in many other European countries.

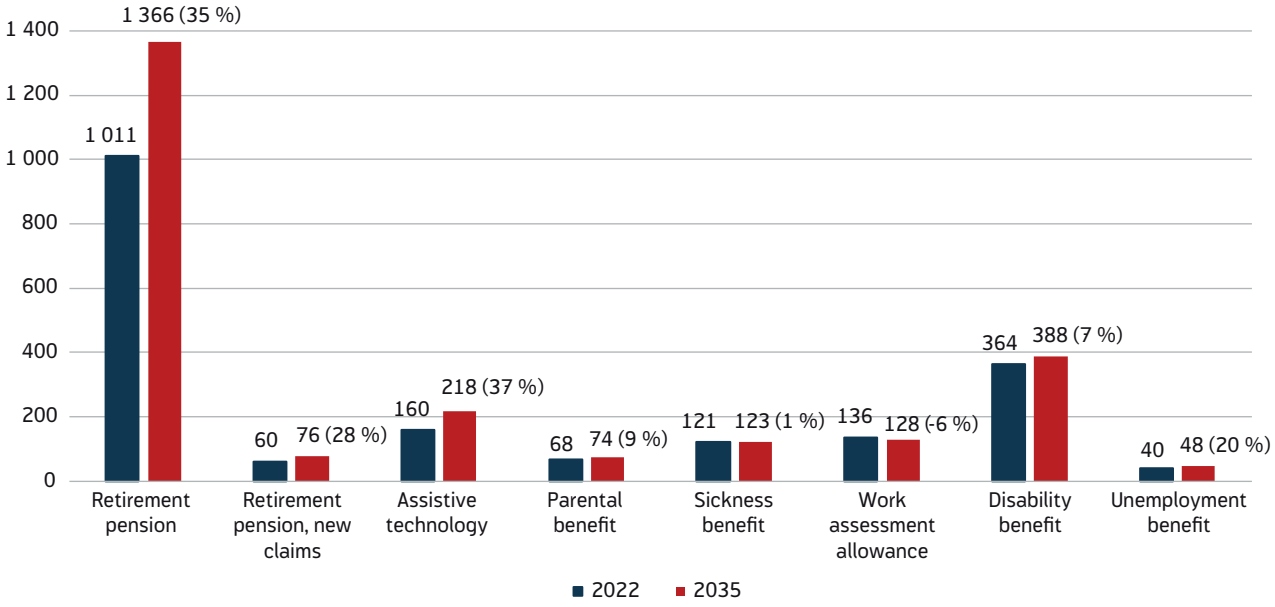
More recipients of retirement pension

Every year, NAV publishes long-term forecasts for the benefit budget, which, among other things, show how demographic developments will affect expenditures (NAV 2022). The differences in population growth for different age groups will lead to very different developments in the number of recipients of various benefits. Low birth rates mean fewer recipients of benefits for families with children, whereas increased life expectancy means more recipients of assistive technology and retirement pension. In its main alternative, Statistics Norway expects a fifth of the population to be 67 years old or older in 2035. In the period 2011–2021, we saw an increase of 42 percent in the number of recipients of retirement pension. In the same period, NAV's overall resource use related to pensions has decreased.

We estimate that in 2022, NAV had 360 FTEs engaged in processing, guidance, operation and development in the pension segment of activities. This accounts for only roughly 2 percent of all state employees in NAV. This is mainly because recipients of retirement pension are a user group that requires limited personal assistance from NAV and there is a high level of automation in the case processing. The increase in new recipients of retirement pension has slowed in the last decade, but this trend is expected to reverse, to an increase of almost 30 percent in the next decade. The increase in new recipients of retirement pension can mainly be attributed to the restructuring of contractual pension schemes (AFP) in the public sector, to a scheme that must be claimed concurrent with ordinary retirement pension.

Currently, international cases lay claim to almost half of the resources allocated to manual processing of pension cases. Cases that require manual processing include cases where the pensioner either lives or moves abroad, or where the pensioner lives in Norway, but has lived in other countries over the course of their careers. International cases have increased more than domestic cases in recent years. Increased migration over the last decades, especially since the expansion of the EU in 2004, will likely lead to a sharp increase in cases in the years to come. This is an area where case processing has not been automated to any significant degree, which means that any growth will lead to increased demand for pension-related guidance and processing resources. By

Figure 3.3. Recipients of assistive technology and selected NAV benefits in 2022 and 2035, and changes in %. Figures in 1,000.



Source: **NAV**

2035, NAV is expected to need approx. 50 additional FTEs for the processing of retirement pension in NAV Family Benefits and Pensions. This estimate is associated with some uncertainty. On the one hand, an increase in the number of international cases will generate a need for more processing resources, but a higher degree of automation may pull the trend in the opposite direction.

3 out of 4 NAV employees work directly or indirectly with services or benefits aimed at people of working age. For several of these benefits, we expect to see an increase in the number of users that is close or, or below, the general population growth. For sickness benefits, for example, we expect to see an increase of 1 percent in the number of workers on sick leave from 2022 to 2035. Among the benefits aimed at people of working age, we expect to see the highest increase in the number of recipients of disability benefit, but this is a benefit where NAV offers minimal follow-up. In 2022, NAV Work and Benefits had approx. 235 FTEs working with the processing of applications for disability benefit. A majority of the resources dealing with recipients of disability benefit can be found in NAV Work and Benefits and NAV Appeals, which processes applications and appeals. If the expected increase in users proves accurate, there will be an increased need for case workers in NAV Work and Benefits, equivalent to approx. 10–20 FTE in 2035, assuming the same level of automation that we have today.

Up to 2025, we expect to see a decrease in the number of recipients of work assessment allowance (AAP), followed by a moderate growth towards 2035, as a result of demographic development. The decrease in the coming years can be attributed to regulatory changes, where the maximum benefit period was reduced from 4 years to 3 years as of 1 January 2018. In addition, a two-year limit was implemented for the period where a person can receive work assessment allowance beyond the ordinary maximum benefit period, as well as a 52-week waiting period. The waiting period was removed from 1 February 2022, and from 1 July 2022, the rules regarding extensions beyond the ordinary benefit period of 3 years were made less strict. Following the changes from 2018, we expect to see more recipients transitioning to disability benefit more quickly, or returning to work, but at the same time, the changes from 2022 may pull the trend in the opposite direction. It will still be some years before we see the full effects of these changes.

More recipients of assistive technology

In the years to come, we expect to see a sharp increase in the number of people who receive assistive tech-

Developments in assistive technology

The demand for assistive technology will increase
One of the objectives outlined in the Government's health and care services plan for 2015–2020 (Meld. St. 25 (2005-2006)) was for *"more elderly people to live at home for longer, and live active and independent lives – with individually adapted services, security and dignity"*. Most users of assistive technology are elderly. In 2021, 70 percent of users were over the age of 60, and 40 percent were over the age of 80. While we expect to see an increase in the number of years of healthy life (see chapter 8.2), the significant increase in elderly persons will lead to an increased demand for assistive technology. According to the Healthcare Personnel Commission's report NOU 2023: 4, facilitation must be made for the implementation of technology and aids in homes, which may further increase demand.

Rural municipalities have the highest share of elderly people. Many elderly persons live in homes of low value, and in municipalities where the availability of homes with the necessary accessibility features is low. There will be an increased demand for home adaptations, but this is relatively resource-intensive and requires inspections and collaborations between the municipality, the Norwegian State Housing Bank and others to find good solutions in each individual case. In particular, we expect to see a sharp increase in these types of complex cases in the smallest and least centralised municipalities (209 municipalities in total). These municipalities are characterised by low population density, depopulation and an ageing population, with a considerable price gap between new and pre-owned homes. As a consequence, many elderly people own homes they are unable to sell.

An ageing population will likely lead to an increasing share of people with hearing losses. Technological developments may somewhat compensate for this. Those who have not previously used NAV's interpretation services may benefit from speech-to-text interpretation. The benefits of speech-to-text interpretation has become more widely known, and user organisations and others are now disseminating information about this service, so the demand for this is likely to increase.

We expect to see a 6-percent decrease in the number of children under the age of 18, which could mean a proportionate decrease in the demand for assistive technology in this age group. Stricter requirements for universal design could lead to a decrease in demand for individual adaptation for all age groups. This will take time, however, not just in terms of private homes, but also because the requirement to upgrade school buildings, for example, will not be triggered until a school needs it (Røe et al. 2021). It will take time before society has complete compliance with universal design when it comes to buildings, transportation, events, schools and workplaces.

Labour shortages and desire for increased inclusion
Employment and education levels among persons with disabilities are lower than among the population overall. (Bufdir 2023). With a smaller share of the population being of working age and expected labour shortages, it will be even more important to provide assistive technology, adaptations and measures for as many as possible of young people with disabilities, to make it possible for them to find employment or complete an education (Government 2017).

The need for interpretation is highest among people of working age. A low population growth, on its own, will lead to a low increase in demand. The demand for sign language interpretation services may decrease some, as more children now receive cochlear implants (CI). Parents today are, however, also conscious of the importance of sign language and the fact that being bilingual is beneficial in children's linguistic development. Furthermore, CI are not an option in all situations. Speech recognition technology and the technology used in automated captions, translations and text-to-speech solutions are rapidly evolving. Digital meetings and instruction can contribute to interpreters becoming more efficient, because they do not have to travel as much. Technological development is expected to be very beneficial for hearing impaired, vision impaired and functionally impaired people. The new language act strengthens the position of sign language in society. This could lead to increased demand from public bodies, who have a mandatory obligation to provide interpretation services. We also expect to see an increased demand for sign language interpretation in other languages beside Norwegian. The demand for interpretation in an educational setting and in the workplace could increase due to people who are deaf or hearing impaired increasingly pursuing educations or careers where sign language interpretation is needed. It is therefore difficult to predict the expected demand for such interpretation services.

User expectations
Assistive technology and interpretation help people with disabilities lead lives where they are able to accomplish goals, participate and be active in par with people who do not have disabilities. Users of assistive technology are expected to increasingly expect easy and quick access to the services they need, as well as having genuine influence upon their own situation and decisions made. For those who are working or pursuing an education, and for parents with disabled children, time is an especially critical factor. They, like most people, would prefer to spend time with family, on hobbies and social activities, and on work.

Technology provides new opportunities for accessibility and self-service, which means that those who prefer it, are able to take more control. From a user perspective, however, options or manner of delivery are not what matters most, but rather quality – which means that aids and services must be effective, safe, predictable and available at the right time. Users expect to have access to the services they are entitled to and need, regardless of their age, of where they live or of what gender they are. Users also expect public bodies to collaborate well, which will be especially important for NAV's assistive technology services, which are often provided in collaboration with other providers, such as municipalities, the health and care services, the Norwegian State Housing Bank and others.

User expectations are influence by what people perceive to be comparable services. In recent years, we have seen a rapid development in online shopping and home delivery services in other sectors. This trend is expected to continue, and it will lead to expectations of similarly good solutions in the assistive technology area. Technological developments related to smart-homes and personal technology, provided by actors such as Apple and Google, will also lead to increased expectations for assistive technology.

Technological development
The development of digital technology for the consumer market that may meet needs that currently require special aids, may lead to improved accessibility and reduced costs. Consumer articles, clothing, household products and machines get integrated sensors that collect data by connecting to an internet-based service. The assistive technology field can take advantage of this to plan maintenance and gain a deeper understanding of patterns of use, which will require assessments of privacy and ethics. Major progress is on the horizon, and this will benefit artificial intelligence, mechanical robotics and automation, which are also expected to play a major role in the assistive technology of the future. Examples include automatic text-to-speech and speech-to-text, self-driving cars and the use of exoskeletons. An exoskeleton is a mechanical framework with joints that may be motorised/hydraulic, and these can be used by soldiers or craftsmen, or in rehabilitation, training and mobility support (IBERDROLA (undated)). This technological development will likely lead to a larger range of useful aids, and could therefore also contribute to increased demand as well as increased use of assistive technology.

The Internet of Things (IoT) makes it possible to understand the use of aids, to predict events and to recommend measures before the event happens, by using sensors and artificial intelligence. This technology will be especially useful for service and repair jobs, periodic inspection and remote support, including to prevent outages and service interruptions. Such use of technology will require careful development of laws, regulations and rules related to data protection, data processing agreements and opinions to ensure everything remains legal and broad acceptance from the public. In many cases, it will also require close integration between providers of these aids and technologies, public bodies in Norway and the users themselves. Digitalisation provides new opportunities for interaction, where providers of assistive technology connect with municipal occupational therapists, and municipalities build services aimed at NAV's interface. Other municipal services can also be integrated, possibly based on IoT sensor data from assistive technology. Data showing patterns of use can uncover the potential for better use of aids and technologies, or whether advanced aids are not used as intended.

The development of technology and processes allow us to make the management of assistive technology even more efficient. Such changes require coordinated efforts related to economics, logistical systems, provider contracts, instructions and interaction with municipalities, the specialist health service and providers.

Current solutions sometimes seem time-consuming and cumbersome, because delays can occur at many stages when aids are sent from the provider via NAV to the municipality before it is received by the user.

Political developments
Increased demand, increased user expectations, more options and new opportunities for collaboration and use of technology could lead to increased political interest in the assistive technology area. An expert committee report from 2017 on more efficient and future-oriented assistive technology management explores, among other things, the role distribution between municipalities, the health sector, NAV and other public bodies, and these topics could become relevant again in the years to come (Government 2017). Today, assistive technology related to hygiene, mobility, home adaptation, etc., is handled by NAV centres for assistive technology, in close collaboration with municipal health personnel. Cases involving hearing aids, orthopaedic aids, wigs, prostheses and specialised glasses are handled by the specialist health services, who apply to NAV for administrative decisions. Testing, adaptation and delivery are agreed directly with the provider.

In 2023, the Government is planning to introduce a new reform aimed at making it possible for the elderly to continue living at home for longer (Government 2022). This goal may lead to an increased demand for assistive technology. Norway is at the forefront when it comes to the use of technology, and politicians may see potential for industry development and a new export industry of innovative products (Kvistum 2017).

The burden of funding, shared between NAV, the municipalities, other public bodies (including the health sector) and individual users, is challenged regularly. This is due to the balance between what is considered technical aids, funded by national insurance, and what is considered standard equipment. This could entail that some aids, currently provided by NAV in areas such as personal hygiene, household chores, vision and hearing, will no longer be covered, because items that are commonly used and acquired by the general public will normally not be covered by national insurance. Considerations of reuse and service life may also become more important, in line with increasing consciousness of environmental issues.

Consequences for NAV
NAV must be able to cope with a sharp increase in the demand for assistive technology. As previously mentioned, NAV currently has 1,400 employees working with assistive technology and adaptations. These services are performed in close collaboration with municipalities, the health sector, providers and other NAV units. Both technology and trust are needed for closer collaboration between these many different actors, and this could contribute towards meeting some of the increased demand.

Developments in the assistive technology area will, as for many areas within NAV, place new demands on change management and interdisciplinary approaches. We have mentioned needs related to legislative developments, data protection, logistics, digital technology, procuration and collaboration with others. Increasing volumes could also challenge the capacity of exist-

ing infrastructure, such as warehouses. An increase in the number of users of assistive technology could have consequences for organisation and localisation, including assessments of which services should remain local and close to the users.

A demand for increased adaptation to ensure that more people are able to pursue careers and educations will require increased collaboration between NAV and the municipalities, county governors, schools and employers, to ensure they are familiar with, and request, services that enable participation. Assistive technology is an important presence factor, but it requires effort from several parties, and this effort must be weighted against other priorities (SINTEF 2020). Often, things go wrong at transition points. A child may have an adaptation measure in place in one school, for example, but it is lost when the child starts attending a new school. A stronger effort when it comes to marketing the services could contribute to achieving the goal of increased participation. We expect assistive technology management evolving into competence centres for professional guidance and adaptation, including for adaptation options that are not covered by national insurance.

NAV's services in the assistive technology area exist alongside other support functions – in schools and in the labour market. Collaboration at a systematic level and dissemination and sharing of knowledge between sectors with overlapping responsibilities will be crucial success factors. Digital interaction platforms, channels of dissemination and learning forums will be hugely beneficial. At the same time, different regulatory frameworks for the different parties are a problem, because these frameworks do not always support each other or pull in the same direction. Harmonisation of rules and regulations will therefore be an important factor in the development of the assistive technology system of the future.

nology from NAV. This is largely due to a strong population increase among the elderly, but changes in user expectations and improved availability of high-quality aids also play a role.

If the expected increase in users of assistive technology is accurate, the number of users will increase by almost 40 percent by 2035. In 2022, NAV had 1,400 FTEs working with assistive technology and adaptation. It is uncertain how much the number of assistive technology users will increase. The trend may be somewhat mitigated by people staying healthy for longer, but demands related to workplace inclusion and a desire to continue living at home for longer may lead to increased demand.

Increased dependency?

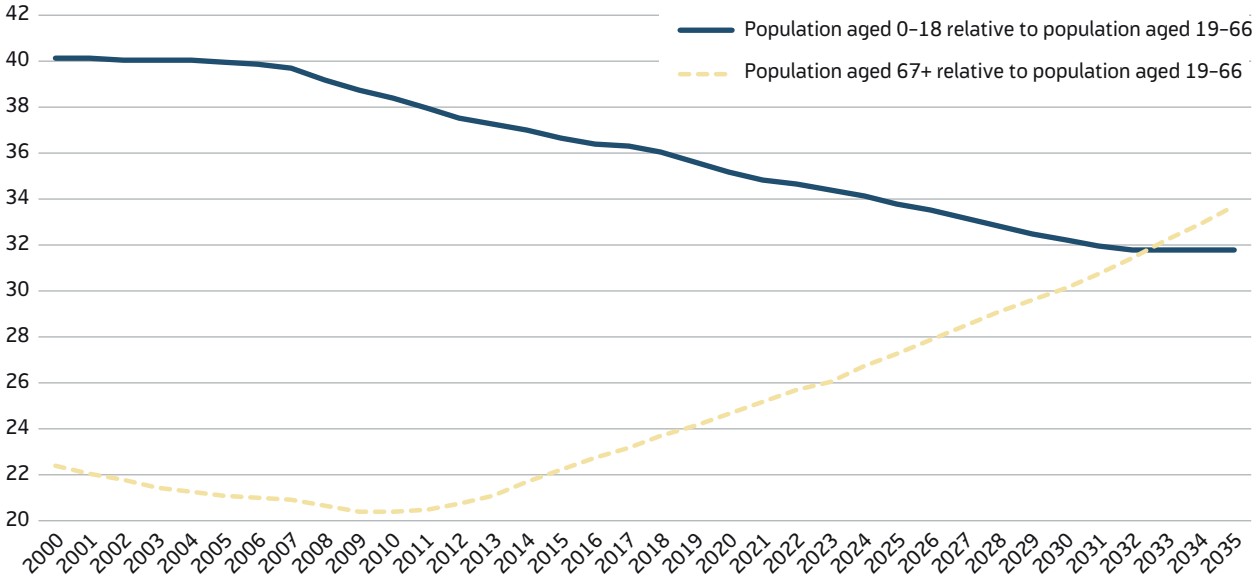
An ageing population means the rate of dependency will increase in the years to come. If the demographic projections are accurate, we will, by 2035, have more people aged 67 and older than we have people aged 0 to 18 in Norway (see figure 3.4). Traditionally, the rate of dependency in a country is measured as the ratio of people of working age to the number of people who are not of working age. Several researchers, however, have argued that this method is inaccurate, and that the rate of dependency should rather be measured by the share of the population who are ill, rather than the share of the population who are elderly. The argument for such an approach is that the population in Norway is becoming healthier, and that a number of diseases occur later in life now, compared to before (Solli 2022). The current measure of dependency is affected by an ageing population, but this does not take into account that the elderly population is healthier, and that the rate of participation in the labour force among elderly people is increasing (read more about this in chapter 8).

From 2001 to 2021, the average age of retirement from the labour force has increased by 2.1 years, to 65.8 years, according to NAV's own figures. While the trend for retirement age has levelled out since 2014, we believe it is likely that it will continue to increase towards 2035. The ageing population leads to labour shortages, and this will make older workers more attractive in the labour market. Other underlying trends, such as better health and higher education levels pull in the same direction. The restructuring of AFP in the public sector from 2025, and the Pension Committee's recommendation of increasing age limits in the pension system will, if adopted, likely also contribute to a higher retirement age (NOU 2022:7).

3.2. Immigration to Norway is expected to decrease towards 2035

Immigration has played a major role in Norway's population growth in recent decades. This is primarily due to high immigration rates from the EU and EEA. In 2019, rules relating to residence permits were amended, which made it easier for non-Nordic nationals to remain in Norway. These new rules made it possible for people

Figure 3.4. Dependency, measured as share of population aged 0–18 and 67+, relative to the share of the population aged 19–66. Percentage

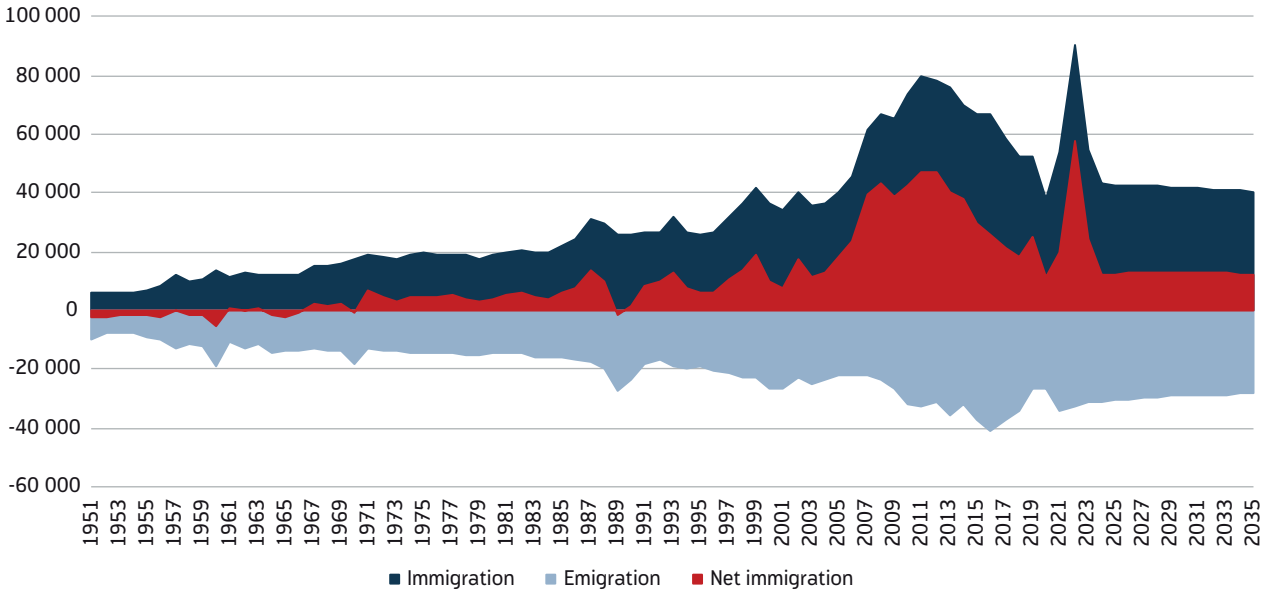


Source: Statistics Norway

from most EU countries to freely move to Norway to study, work or live with their families (UDI 2009). In the years since the oil crisis in 2014–2016, immigration from EU and EEA countries has decreased sharply.

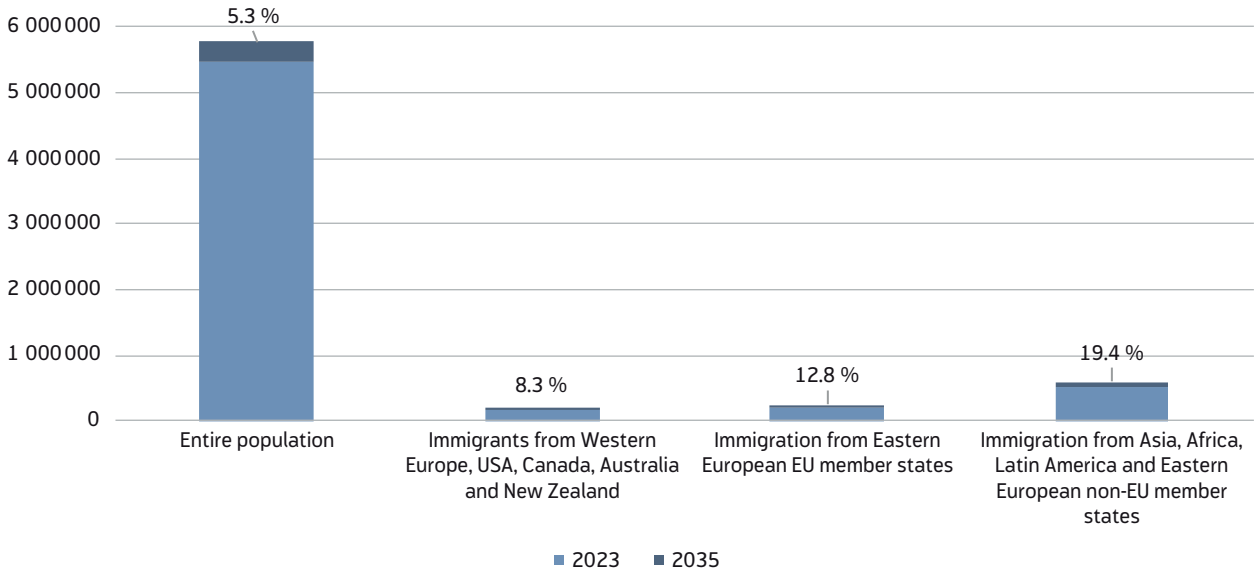
From 2010 to 2021, the number of migrant workers coming to Norway has decreased by almost 30 percent. This has made it more difficult to meet demands for labour in regions with low population growth or even population decreases. In the years to come, we expect immigration figures to remain relatively stable, with the exception of the likely wave of Ukrainian refugees. Less than half of all new immigrants to Norway in 2021 were migrant workers. Today, we have very few elderly immigrants in

Figure 3.5. Developments in immigration, emigration and net immigration to Norway



Source: Statistics Norway

Figure 3.6. Population in 2023 and 2035, by origin. Figures for both years and percentage-wise growth between years

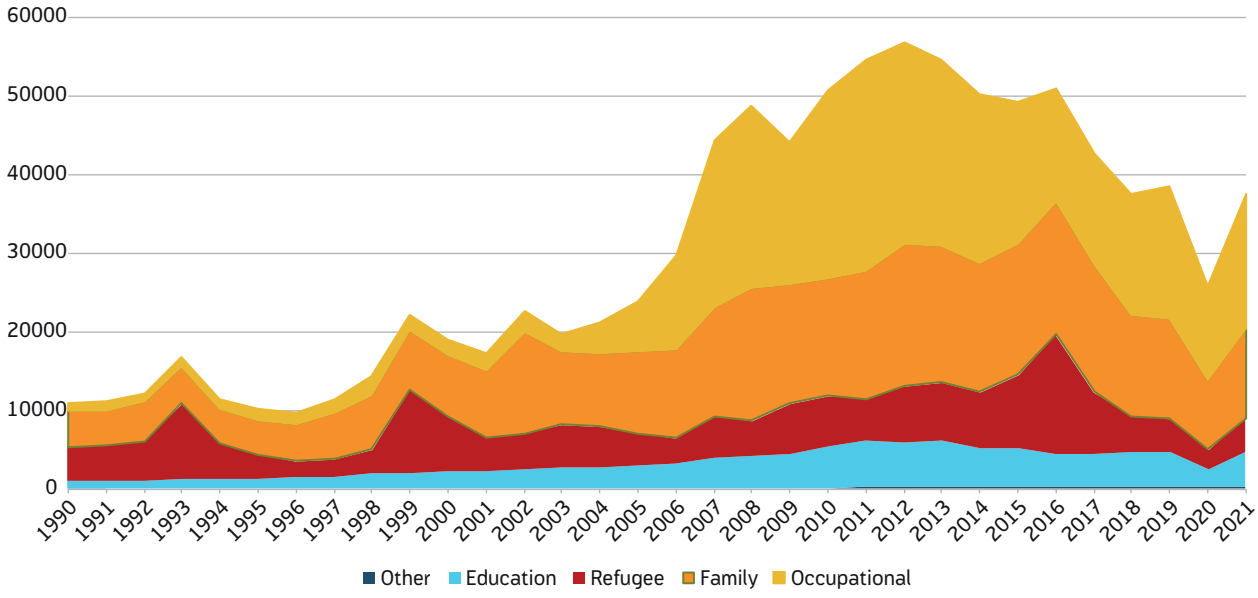


Source: Statistics Norway

Norway, but this figure is expected to increase sharply in the years to come. In 2023, 6 percent of the immigrant population in Norway was over the age of 67. By 2035, this share will increase to approx. 12 percent. We expect that elderly immigrants in the future will be less active in the labour force and have a lower level of education compared to Norwegian-born people of the same age (Tønnessen and Syse 2021). One consequence of this is that the effort to increase labour force participation among the elderly will be more challenging.

All in all, we expect the immigrant population in Norway to increase by approx. 15–16 percent from 2023 to 2035. Immigration from Eastern Europe outside of

Figure 3.7. Immigration to Norway by reason for immigration and immigration year



Source: Statistics Norway

the EU, Africa, Asia and Latin America will likely increase the most, by 19 percent from 2023 to 2035.

Moving patterns among immigrants

Immigrants make up approx. 15 percent of Norway's population, but they account for approx. 20 percent of moves between Norwegian municipalities (Tønnessen 2022). There is a clear tendency for immigrants to choose to live in more centralised locations than the population overall, and immigrants therefore contribute to the increasing centralisation trend we see in Norway. As of 1 January 2023, immigrants and Norwegian-born with immigrant backgrounds make up 34 percent of the population of Oslo. In Viken, this share is 23 percent, whereas Nordland has the lowest share of immigrants in relation to population, at approx. 12 percent. Reduced immigration to Norway will, in the long term, have greater consequences for small municipalities, that have relied on high immigration to keep their population numbers up.

High rates of immigration and emigration may lead to more complex cases

Most of the people who immigrate to Norway are of working age. This means that the increasing number of immigrants in Norway will mostly affect NAV Labour Market Services division. We expect to see a reduction in net immigration in the years to come, and this will also limit the expected increase. Significant resources within NAV are dedicated to providing assistance to, and following up, on persons with an immigrant background. One reason for this is the level of education among immigrants, which tends to be lower than in the population overall (IMDi 2021), and the number of jobs that do not require any vocational training, upper secondary education or other formal qualifications is dwindling. Stronger competition for such jobs will mean it will be more challenging for NAV to assist this group in the future. At the same time, the current labour shortage, especially in the health and care sector, is expected to persist. The focus for NAV, therefore, will be to ensure that users with low formal qualifications find employment, and to provide labour for industries where demand is high. This requires NAV to work closely with other public bodies, including to ensure that immigrants have their education from other countries approved.

For NAV Benefits, the increase will lead to a higher number of cases requiring an exchange of information with foreign national insurance authorities. A higher level of education will also lead to an increased export of benefits. The number of pensioners living abroad has increased by more than 50 percent in the last decade, from 35,200 in 2011, to 53,800 in 2022. In the same period, the number of retirement pensioners has increased by approx. 34 percent. Approx. 200 FTEs currently work with the processing of international cases. Dependence on communication with foreign national insurance authorities means that the processing of such cases cannot be automated to any significant degree.

3.3. Centralisation continues

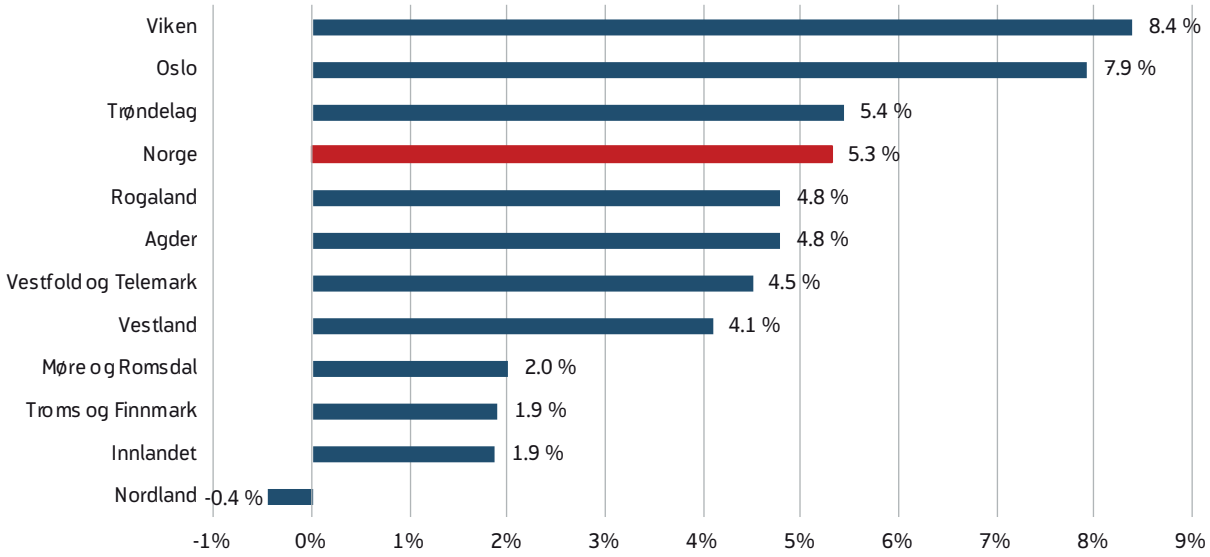
In the years to come, we expect to see a moderate population increase in Norway. Statistics Norway's projections suggest that the Norwegian population will increase by 5.3 percent by 2035, but that population development will vary from region to region. The increase is likely to be the highest in Viken (8.4 percent) and Oslo (7.9), whereas we expect to see a population decrease in Nordland (-0.4 percent).

Population growth decreases in rural areas, and increasing life expectancies and young people moving away will lead to a stronger ageing effect on the population in less centralised areas of the country. Oslo and Rogaland currently have the lowest share of elderly persons, whereas Innlandet and Nordland have the highest shares. By 2035, almost 15 percent of the population in Oslo will be over the age of 67, whereas approx. 25 percent of the population in Nordland and Innlandet will be over the age of 67. A majority of counties will likely have an excess of births, which contributes to the population increase, whereas we expect to see a deficit of births in Nordland, Innlandet and Vestfold and Telemark.

Population growth continues in centralised areas

The population growth is expected to be highest in the most centralised areas of the country, and less centralised municipalities have seen population decreases for several decades. This is primarily due to young people moving away from rural areas, which in turn also affects birth rates in these communities.

Figure 3.8. Population growth by county, 2023 to 2035



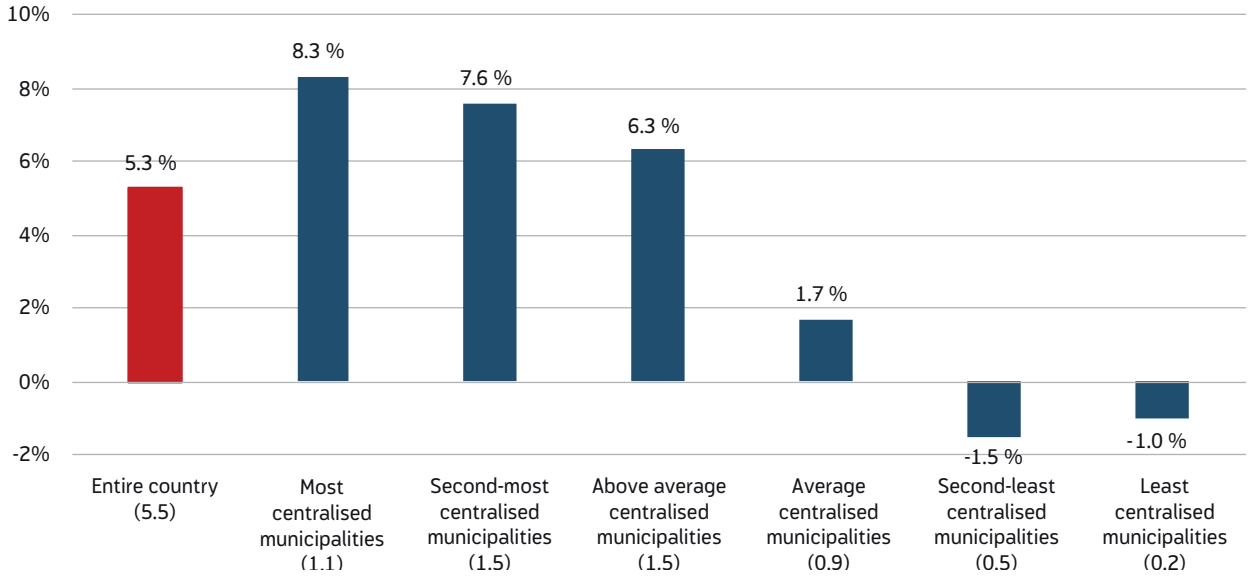
Source: Statistics Norway

Statistics Norway has sorted Norwegian municipalities into six different centralisation categories, based on how long people have to travel for work and service functions. At the start of 2023, approx. 70 percent of the population live in municipalities with above-average levels of centralisation, and the population growth is expected to be stronger the more centralised the municipality is.

Decrease in working-age population in 2 of 3 municipalities

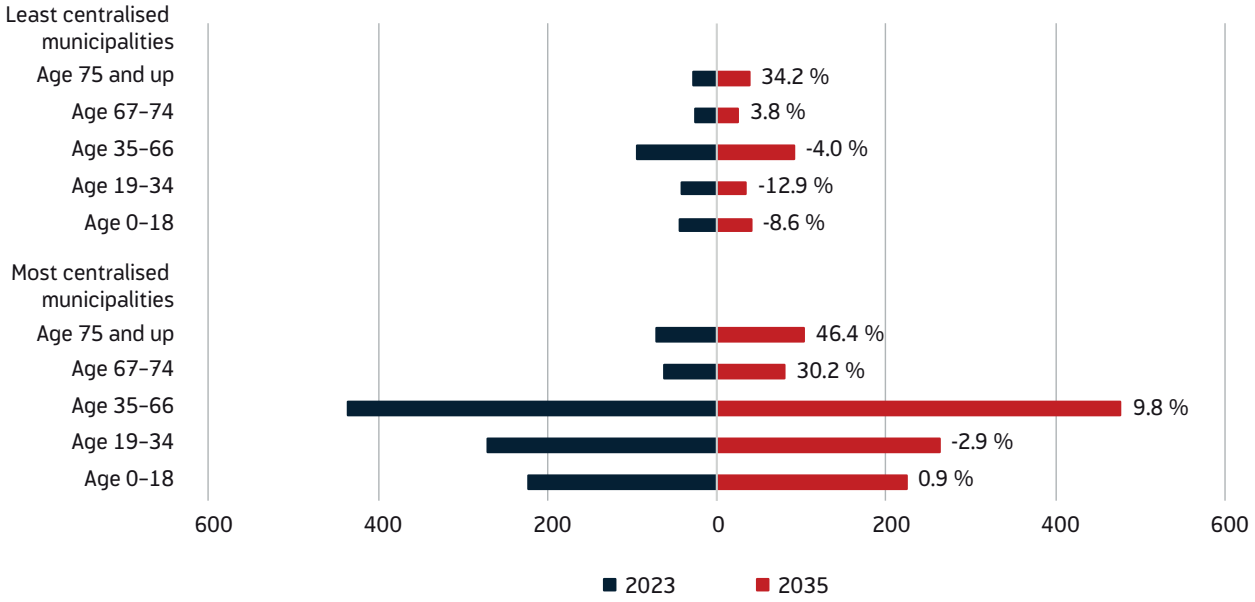
Towards 2035, we expect to see population decreases in the least and second to least centralised municipalities. The new projections suggest population decreases in approx. 40 percent of municipalities, but these municipalities currently account for only 13 percent of the Norwegian total population. The population ages –

Figure 3.9. Population growth from 2023 to 2035, by municipal groups based on centralisation. Population of each group in millions in parentheses



Source: Statistics Norway

Figure 3.10. Populations in 2023 and 2035 in the country's most and least centralised municipalities, by age group. Figures in 1,000 and percentage change



Source: Statistics Norway

in the most centralised areas of the country as well as the least centralised municipalities. The major difference is that centralised areas will still see a population increase in younger age groups. By 2035, 9 percent of the population in the most centralised municipalities will be over the age of 75, whereas the equivalent share is approx. 17 percent in the least centralised municipalities. This means that we expect to see decreases in the working-age populations (age 19–66 in this context) in as much as 2 of 3 municipalities by 2035.

Norwegian Association of Local and Regional Authorities (KS) has developed a so-called "future tool" that offers insight into demographic changes for individual municipalities, "Fremtidsverktøyet 2040". The tool has three parts: First, general trends for local communities in Norway are projected. Then, users can check the status for individual municipalities and development trends towards 2040, and finally, various pathways can be explored in a scenario workshop. This tool could provide interesting insights for NAV offices to use in their approaches.

Population development may affect organisation and competence needs

Differences in population development may have consequences for how NAV is organised. In regions where the population is ageing rapidly, we could see severe labour shortages, such as in health and care services. Labour shortages may also make it difficult to recruit employees in NAV.

Another consequence of population development could be less demand for services from NAV in municipalities where the working-age population is decreasing. This could, in turn, lead to fewer and larger NAV offices, to ensure a strong knowledge community and efficient resource utilisation in less centralised areas. This development is already in process. As early as 2017, the first NAV offices merged as a result of the local government reform, and in 2018, it was decided that NAV Work and Benefits, which processes most application for benefits from NAV, would reduce the number of units from 24 to 17. In recent years, several municipalities have established regional collaborations, where municipalities have established joint NAV offices.

When a larger share of the population has an immigrant background, it could mean that NAV, to a greater extent, reflects the diversity found in our communities and among our users. A broader understanding of languages and cultures from other countries could strengthen

NAV's ability to offer advice on competence and education requirements – not just to individual users, but also to the educational sector and other authorities.

In the years to come, we expect to see an increased discrepancy between expenditures and revenues in the National Budget, which will lead to increased demands of efficiency in the public sector. At the same time, this development could lead to expectations for NAV to engage in employment-oriented follow-up of additional user groups, such as disabled people, recipients of financial assistance and the elderly. Proposals have been made, among other things, to try work-oriented disability benefit, which entails that persons with 100% impaired work capability would get help to combine disability benefit with gainful employment (Prop. 1 S (2022-2023)).

3.4. Unforeseen events the biggest challenge for NAV

The world is always changing, and unforeseen events challenge NAV's ability to provide good services to the population. The recent pandemic and large number of refugees from Syria and Ukraine are examples of such unforeseen events. In terms of demographic predictions, immigration to Norway represents the biggest uncertainty. In addition to refugee flows caused by war and conflict, we may also see a sharp increase in the number of climate refugees. Every year, millions of people are displaced due to natural disasters and extreme weather, and we are already seeing more people being displaced as a result of natural disasters than due to war and conflict (iDMC 2022).

Persistent labour shortages could lead to new policies that increase immigration to Norway, as is the case in many other countries. France, Germany and the Netherlands are preparing changes to immigration policies that would make it easier to attract workers, including workers from outside the EU (Alderman 2022). This could mean that NAV will play a role in mapping out competence needs and contributing to the recruitment of foreign labour.

3.5. Questions for reflection

- How will your unit be affected by demographic changes?
- Will demographic changes affect the labour market in the community where you work?
- Where and how will increased migration affect NAV?
- What may an increased dependence and a larger discrepancy between expenditures and revenues in the National Budget entail for NAV?

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4. LABOUR MARKET

By: Kristian Myklathun

Summary: Transition due to new technology and the green transition

The labour market is facing major transitions towards 2035 as a result of technological development and the green transition. Labour shortages are expected to be the most severe for health personnel at all levels of education, and generally for occupations that require trade or journeyman certificates. Drop-out rates for upper secondary education have gone down, but remain around 20 percent. In vocational programmes, the drop-out rate is higher, around 30 percent, which makes it difficult to meet competence demands.

Technological advancements and automation will likely continue to affect the labour market. Technology will both create and eliminate jobs, but so far, the net effect has been positive. The OECD suggests that 6 percent of jobs in Norway are at high risk of being eliminated entirely as a result of automation, whereas approx. 25 percent are expected to see significant changes. Uncertainty is high in these kinds of analyses.

Social inequality may increase as demand for highly skilled workers increases, whereas low and medium skilled jobs are eliminated. The green transition will also both generate and eliminate jobs. We are especially expecting to see jobs be eliminated in the petroleum sector. Towards 2035, the net effect will presumably remain positive. Approx. half of new green jobs are expected to be generated in occupations requiring trade certificates, such as operators and craftspersons.

Employment is expected to increase the most in private and public service production, at almost 10 percent towards 2040. Service industries are already the largest industries, and these are expected to make up 60 percent of the labour force in 2040. In the public sector, we expect to see the biggest increase in the health and care services sector. We expect to see the biggest decrease in employment in oil and gas production – almost 30 percent. We also expect to see a significant decrease in retail (-15 percent) and industry (-10 percent). For retail, this is primarily due to automation and online shopping, whereas the decrease in industry is largely attributable to ripple effects form the decrease in oil and gas production. The decrease in employment in these industries will, overall, be larger than the decrease in oil and gas production.

These transitions in the labour market could lead to periods of higher unemployment, especially in industries and occupations that are particularly affected. We do not expect to see a permanently increased unemployment rate, as an ageing population would otherwise lead to a labour shortage. We do, however, expect to see persistently high unemployment rates for those who have not completed upper secondary school.

To ease this transition, NAV plays an important role in contributing to increased occupational mobility. This will require close collaboration with both employers and the educational sector, as well as greater emphasis on finding and qualifying candidates for jobs in future-oriented industries. Key questions will be what the role of NAV will be to meet competence demands in the labour market in the years to come, and how best to collaborate with other sectors. This could affect how NAV assists employers, both in terms of recruitment of labour and in terms of following up on users after they start work. A lack of qualified labour means employers will have to adjust their expectations in the recruitment process and focus more on workplace training and inclusion of persons who are not part of the labour force.

The ageing population means a smaller share of the population are of working age, both in Norway and in other countries, which hampers economic growth.

Russia's invation of Ukraine led to increased commodity prices, many refugees and increased uncertainty about future economic developments. The consequences will depend on how long the war lasts and what the effects of it will be. Both the pandemic and the war in Ukraine have highlighted vulnerabilities in our globalised economy, and supply security has been moved higher up on the agenda. We could therefore see stronger regionalisation of international supply chains in the years to come, which could mean more industrial jobs in Europe. This also includes Norway in some cases, where competence requirements or natural resources give us an advantage. Industrial growth will, in any case, be limited due to high wage levels in Norway.

4.1. Introduction

For the last two years, the labour market has been characterised by a rapid recovery from the pandemic. NAV's business survey (2022) for the spring of 2022 showed the biggest labour shortage since 2008. Since then, the number of vacancies has gone down, and the labour shortage has also been reduced (Norges bank 2022). We now see a number of factor indicating an increase in unemployment in the near future. War in Ukraine, high price inflation and increasing interest rates impede economic growth, both in Norway and abroad.

When looking as far ahead as 10–15 years into the future, it is impossible to tell when economic upturns

or downturns will occur. When they do, we will have to disregard short-term changes and attempt to base our projections on underlying trends of development. NAV's measures and services must be designed in such a manner that we are able to cope with economic fluctuations.

4.2. Technology and the green transition affect the labour market and could give rise to increased social inequality

Consequences of the green transition

The top ten hottest years on record have all occurred after 2010 (NOAA 2021). Climate change also brings extreme weather situations more frequently, such as droughts, forest fires, floods and tropical cyclones. The effects of climate change are becoming more and more visible, and it will be difficult to reach the climate goals agreed in the Paris Agreement from 2015, where Norway and the rest of the world committed to making significant cuts in greenhouse-gas emissions. This international climate accord aims to limit the rise in global average temperatures to well below 2 degrees, preferably as close to 1.5 degrees as possible. A continuation of current policies will lead to a 2.8-degree rise by the end of the century, and this highlights how much of a change we still have to do to to curb the rise in global temperatures (UN Environment Programme 2022).

Our national climate goals are defined in the Climate Change Act. The goal is to reduce GHG-emissions by 50–55 percent by 2030, compared to the reference year 1990 (Ministry of Climate and Environment, 2021). In 2021, emissions were 4.7 percent lower than the reference year. To reach the goal, we need significant change in all areas of society.

Energy-related greenhouse gas emissions account for approx. ¾ of the world's total greenhouse gas emissions (OurWorldInData 2020), and the biggest emissions come from energy consumption in industry, buildings and the transport industry. A transition to renewable energy sources is one of the most important measures we have for reaching our climate goals.

The Russian invasion of Ukraine in February 2022 had major consequences for the energy situation in Europe. Russian gas accounted for an especially large share of the energy mix in Germany, where more than half of the gas consumed came from Russia. When Russia cut gas exports to Europe down to a minimum, countries had to find alternative energy sources. This led to a considerable hike in prices, especially gas prices, which increases revenues from the Norwegian continental shelf. Increased gas prices also accelerates the transition to renewable energy in Europe.

Petroleum investments have decreased in recent years, but we expect to see an in increase towards 2025 (Statistics Norway 2022d; Offshore Norge 2021). After this, projections are more uncertain, and will depend, among other things, on price developments in oil and gas, new discoveries and political willingness to grant exploration and production permits on the continental shelf. Statistics Norway assumes that the dip in production from 2024/2025 will be followed by a decrease in petroleum investments, and that the petroleum industry will account for a smaller and smaller share of the Norwegian economy in the years to come (Cappelen et al. 2020). Based on this, they estimate that the number of workers in oil and gas production in 2035 will be approx. 21 percent lower than in 2022.

The combination of less demand for oil, climate change and a global focus on renewable energy will likely increase the demand for a transition from a petroleum-driven economy. In addition, we also expect to see reduced costs in relation to renewable energy. Revenue from the petroleum industry will continue to be important for the Norwegian economy for many years still, but the development of new projects on the Norwegian continental shelf will likely slow down towards 2035. Among other things, this will affect the parts of our industry that depend on making deliveries to the petroleum industry. Norwegian authorities have also introduced four different priority areas for speeding up the green transition in the Norwegian economy and creating new, green jobs.

Roadmap for a green industrial initiative

In June 2022, the Government introduced a roadmap for a green industrial initiative (Ministry of Trade, Industry and Fisheries, 2022). The goal of this industrial initiative is to accelerate the transition and to

assist companies in the establishment and development of green industry. In this context, the Government has identified seven priority areas: offshore wind, hydrogen, batteries, maritime industry, CO_2 management, forestry and bioeconomy. Central instruments in this effort will be government risk mitigation in the form of loans, guarantees and grants. The Government has indicated that they will set aside NOK 60 billion for such instruments towards 2025.

Among the most high-profile projects are several large battery factories that will be built in the years to come. Expansion of battery storage capacities is a key element in the green transition, because it enables electrification and promotes use of renewable energy sources.

The Morrow Batteries factory to be established in Arendal is estimated to create 2,500 new jobs. Due to consumption effects, a number of additional jobs will likely also be created in relation to this factory, including among suppliers, in the public sector locally and in other parts of trade and industry in the region. Menon Economics (2022) has estimated that the factory will bring a total of 4,500 new jobs to the Arendal region.

Freyr has plans to establish four battery cell factories in Mo i Rana. Initially, there is a planned investment of NOK 17 billion for two factories, which will employ 600 people. In time, the factory is expected to have 1,500 employees. For this project, Menon Economics (2021) estimates a total of 2,500 new jobs in the municipality as a result of the new factory, which would lead to a population increase of 5,000 people in the region. In 2021, the recorded number of workers in the Municipality of Rana was 13,400. With the spin-off effect, it is expected that the number of workers will increase by almost 20 percent.

The establishment of large factories in regions where the local labour market is relatively small, is associated with both challenges and opportunities. Experiences form a similar battery factory in Northern Sweden indicate that there will be a demand for a wide range of qualifications at these factories (Norsk Industri 2021). They assume that 75–80 percent of employees will be so-called "union employees", i.e. machine operators and employees who work with maintenance and logistics. This includes both skilled and unskilled workers. The rest will be engineers, supervisors and administrative employees. Henriksen (2022) has assessed the competence needs in jobs involved in the green transition in Norway, and has reached similar conclusions. In one main scenario, it is estimated that the green transition will provide jobs for 64,000 people in groups who will be especially important, beyond the general economic development. Of these, 50 percent are tradespersons and operators, 40 percent are engineers and supervisors, and 10 percent are graduate engineers and IT developers.

This means the establishment of factories could increase local job opportunities significantly for people with both high and low qualifications. As large, new factories like these will also need a large number of new employees quickly, they may ask for NAV's assistance with recruitment, which could give those who are unemployed in the region an opportunity to enter the labour force.

A key question will be the degree to which labour can be redistributed from industries where we expect to see less employment in the years to come, to emergent, green industries where we expect to see more employment. There are considerable differences in the scope of transition the different industries are faced with. Some shipyards, for example, who previously primarily built supply vessels for the petroleum industry, have used their existing expertise to also build ferries and cruise ships (Statistics Norway 2019). Among offshore workers, many will be able to perform the same types of jobs onshore without further education or training – such as cleaners, cooks and nurses. Experiences and expertise from oil production may also be useful in the development of offshore wind energy. In addition, Norwegian petroleum workers will be attractive candidates for oil production jobs in other countries. This could potentially mitigate the effects on the labour market of reductions in petroleum production and investments on the Norwegian continental shelf.

Technology changes the labour market

Technological advancements mean some jobs are lost and others are changed. OECD estimates that 14 per-

cent of jobs in OECD countries are at risk of being lost, whereas 32 percent of jobs will likely change considerably (OECD, 2019)[1]. Norway, however, is the OECD country that is least vulnerable to the negative consequences of technological development. OECD estimates that only 6 percent of Norwegian jobs are at risk of being lost to automation, and that 25 percent of jobs may change considerably. This is likely due to the fact that many jobs at risk from automation have already been automated or moved abroad. This, in turn, must be seen in light of Norway's compressed wage structure, with a relatively high wage level for those with the lowest wages, compared to other countries.

Technological advancements lead to lower production costs, which, when viewed in isolation, means the prices of the products go down. This means households spend less of their income on the products in question, which may increase demand for other goods and services. At the same time, technological advancements also lead to a more productive labour force, which increases incomes.

Technological advancements may also have unintended consequences, however, such as increased economic inequality. Acemoglu and Restrepo (2022) estimate that between 50 and 70 percent of the increase in income inequality in the United States between 1980 and 2016 was attributable to a decrease in relative wages among workers specialised to perform routine tasks in industries with heavy automation.

According to the OECD (2019) technological advancements have led to increased inequality in the period 2005–2015, in that routine jobs with medium-high qualification requirements are disappearing, whereas the number of jobs with either high or low qualification requirements are increasing. This is in line with the findings of Asplund et al. (2011), who find a similar pattern in Nordic countries in the period 1995–2006. Barth and Østbakken (2021) however, do not find the same pattern in Norway in the period 2004–2018. Their research shows that increased demand for highly educated workers and a decreased demand for workers with medium-high qualifications, but they did not see an increased demand for workers with little or no education. This is largely due to decreased employment opportunities for retail workers. If this trend continues, we will see fewer job opportunities for workers with low qualifications.

Historically, labour-saving technological advancements have primarily affected goods-producing industries more than service providers. This has contributed to service providers gradually accounting for a larger share of employment over time. In time, technological advancements may also come to affect service industries to a greater degree (see examples in chapter 6).

During the pandemic, online shopping increased significantly, and since Q1 2020, Norwegian payment cards have been used more online than in brick-and-mortar shops (SSB 2022e). Along with a rise in self-service payment solutions, this contributes to the decrease in employment in the retail industry.

The consequences of technological advancements also affect those with a high education level, and researchers expect significant changes in job content for many academic professions too (Andersen et al. 2020). Menon Economics (2019) emphasises legal technology as an area where the potential consequences are significant, because such technology may use the time needed for administrative and routine tasks, such as the preparation of contracts. In addition, Frey and Osborne (2013) also point to accounting and some occupation in banking and insurance. In NAV, automation of case processing has, in some areas, reduced the need for case workers.

The net effect of large technological changes on employment has so far been positive (OECD 2019). The World Economic Forum (WEF) has estimated that while automation will cause a large number of jobs to disappear, new interactions between humans, machines and algorithms will create approx. 12 million more jobs globally towards 2025 than the jobs that are lost (World Economic Forum 2020).

[1] No timeframe has been specified for this development. Estimates are, among other things, based on the degree to which jobs require fine motor skills or creative or social intelligence, which are presumed to be skills that as yet are difficult to automate.

Jobs with a low risk of automation are most likely to see an increase in employment in the years to come. The transition is expected to be especially difficult in industries with a generally low level of education and specific competence (Ødegård et al. 2020). While the number of jobs in the long term will likely increase, some of the people who lose their jobs as a result of automation will have skills that will no longer be in demand.

The Norwegian Committee on Skill Needs(NOU 2020: 2) points out that digital competence is becoming an essential skill in the labour market, and that a lack of digital competence could lead to fewer job opportunities. More than 70 percent of workers believe that they to some or a considerable degree will have to increase their digital skills as a result of increased digitalisation (Ingelsrud and Steen 2019). At the same time, the share of workers who report being willing to pursue further or continuing education if their workplace makes arrangements for it, is decreasing (Ingelsrud et al. 2022). This share is also clearly lower among those with an upper secondary education than it is for people with a higher education, despite the risk of automation, and thus the need for re-education, is the highest among this group. In the figures for completed education/training, those without a higher education background are also under-represented (Statistics Norway 2022c).

The increasing importance of data may also lead to new opportunities. The Confederation of Norwegian Enterprise (NHO (2020)) points out that data now account for an increasingly larger share of value-creation in most industries. The emergent trand of artificial intelligence and big data analysis will likely make it even easier to realise the value of existing data (see chapter 6). This is true for data as a pure resource in value-creation, but also for increased productivity in the public and private sectors. An analysis, performed on behalf of the Ministry of Local Government and Modernisation (2020) suggests that the data centre industry employs approx. 2,000 people, but that the industry will likely see expansive growth in the next decade, provided it has good and predictable framework conditions. Towards 2030, it is estimated that the industry could employ upward of 25,000 people.

Due to a high rate of transition in the years to come, we may see several periods of increased unemployment in some industries or geographical areas. From past experience, we know that geographic mobility in unemployment, in the form of relocation, is relatively low (Andreev and Schou 2017). Geographic mobility in terms of commuting, however, is significantly higher, as is occupational mobility (Kann et al. 2018). Mobility is also higher among those with a high education and high income. Given that digitalisation and automation are expected to affect low-income groups the hardest, we should consider measures that promote geographic and occupational mobility. The Employment Committee (NOU 2019: 7) recommended, among other things, more strict enforcement of current rules pertaining to mobility for recipients of unemployment benefit, and better digital tools to help job seekers identify and map their options based on vacancies.

Competence enhancement is a key measure for improving occupational mobility among job seekers (see also chapter 9.3). In April 2020, the Government presented a report to the Storting on the skills reform "Lifelong Learning". The report presented a wide range of measures to prevent people from becoming "outdated" due to a lack of skills (Meld. St. 14 (2019-2020)). This includes measures to stimulate demand for skills development, opening the educational system for lifelong learning and improve the link between supply and demand for skills development. A proposal for a new programme for employment-oriented skills-enhancement has also been presented (NOU 2019: 12). This would be a collaborative effort between employers and public authorities, in terms of both execution and funding. New education and training programmes will be developed, based on specific skill needs that have been identified in the workplace. This includes formal education, in the form of upper secondary education, tertiary education and higher education, as well as informal training.

The Productivity Commission (NOU 2016: 3), the Cappelen Committee (NOU 2016: 15), and the Norwegian Committee on Skill Needs (NOU 2018: 2) argue that major structural changes in the workplace must be met with skills-enhancement approaches. This must take place through the strengthening and

development of measures and tools in educational and labour market policy. They especially point to solutions where ordinary workplaces are used as an arena for qualification and education. At the same time, the apprenticeship scheme, labour market schemes and welfare schemes must be designed to prevent unintended consequences and detrimental displacement effects. This will require that the education sector, employers and NAV work more closely together.

NAV plays a central role to ease the transition from unemployment to employment. When more people experience job insecurity, more people may also need assistance from NAV. In order to provide good guidance, we need to know how digitalisation affects different groups, and we need to support the increasing demand for lifelong learning.

Platform economy – opportunities and challenges

The platform economy, or sharing economy, has so far not found a very strong foothold in Norway. The platform economy is characterised by economic activity and employment being organised through digital platforms, where the platform enables interaction between different groups (Oppegaard 2020). The platform economy includes various platforms, such as Foodora, Wolt, Uber, Airbnb and Getaround (formerly Nabobil).

The term platform economy includes several different business models and ways of organising labour (ILO, undated). Services like Airbnb and Getaround let you rent out your own property. Among those companies that involve labour, there are different approaches to organisation. Many bike messengers in the food delivery service Foodora, for example, are permanent employees whose pay is negotiated by collective agreement, whereas drivers in Wolt and Uber are self-employed. Self-employed persons do not have the same rights when it comes to national insurance and pension rights and employment protection as to regular employees. This could lead to poor conditions for more people.

Workers who are not permanent employees participate less in training activities within businesses, and this could, in time, have negative consequences for the overall competence in this part of the labour force. Contractors in the platform economy must therefore, to a greater degree than others, take independent initiative to enhance their skills and competence.

There is little new knowledge about how prevalent this type of employment is in Norway. A mapping survey from 2017 shows that approx. 1 percent of the population aged 18–65 had performed work through digital platforms in the past 12 months, but only 30 percent of these stated that they performed such work weekly or more often (Alsos et al. 2017). The scope is expected to increase, however. The European Commission (2021) estimates that the number of people who perform work through digital platforms in the EU will increase, from 28 million in 2021, to 43 million in 2025. NHO (2020) point out that digitalisation contributes to erasing geographic market boundaries, which would represent a good potential for growth for businesses in the platform economy, even in Norway.

The Sharing Economy Committee (NOU 2017: 4) identified a range of challenges, but also opportunities, related to the growth of the sharing, or platform, economy. This could promote more efficient utilisation of existing resources and stronger competition, thus leading to lower prices, better products and more innovation. It also provides more job opportunities for people who, for various reasons, have been unable to find a place in the traditional labour market. At the same time, there are some unresolved issues related to taxation, consumer rights and the Norwegian labour market model. Some participants in the platform economy could end up with an income below minimum rates guaranteed by collective agreements, whereas those in high demand could achieve a high income. For NAV, following up on and managing these cases could be more complex, because the number of self-employed persons would increase, and having multiple employers at the same time could become more common.

4.3. Weaker growth prospects internationally

Less than two weeks after the last of the Covid-19 restrictions were lifted in Norway, Russia invaded Ukraine. This invasion has had enormous human and economic consequences. Both Russia and Ukraine are large commodities producers, and the war led to a spike

in prices for various commodities, such as wheat, fertiliser and energy. Since the war started, approx. 8 million people have fled Ukraine. Germany alone has registered more than a million Ukrainian refugees, whereas Norway accepted 36,000 refugees in 2022. We expect to accept the same number in 2023.

The war has led to considerable insecurity regarding the economic developments in the time to come. The situation puts a damper on all economic activity, as fewer investments are being made and households reduce their consumption.

In the wake of the invasion of Ukraine and the sanctions that followed, Russia chose to dramatically reduce the flow of gas to Europe. This hit Germany especially hard, where more than half of the gas used came from Russia. Reduced Russian gas exports led to a considerable price hike on gas and alternative energy sources, such as oil, coal and electricity. In time, the production of alternative energy sources will increase, and by making processes more efficient, the demand for energy will decrease. This will eventually bring energy prices down again. It is likely, however, that energy prices will remain higher than what we have been used to in the years to come, and this will continue to keep economic activity low.

Price inflation has accelerated, both in Norway and with our trading partners, in the past year. Prices started to increase as a result of the pandemic, where a combination of a shift in consumption, from services to goods, with global supply chain problems, led to considerable inflation in the price of goods. With the invasion of Ukraine and subsequent increase in energy prices, the price inflation surged even higher, and both the United States and the EU have experienced extremely high inflation 2022.

To manage price inflation, the central banks in Norway and countries we trade with have increased official interest rates significantly. Both the European Central Bank and the Federal Reserve in the United States have increased interest rates to the highest level we have seen since the financial crisis.

As a result of this development, OECD expects a global growth of 2.2 percent in 2023, before increasing to 2.7 percent in 2024 (OECD 2022). With the exception of 2020, which was the year of the pandemic, and 2008, when the financial crisis happened, the expected growth in 2023 is the weakest we have seen since 2002. The OECD expects a negative economic growth in the EU in 2023, and they believe a majority of the global growth this year will come from expanding economies in Asia.

Beyond the next couple of years, long-term trends will play out. The OECD (2021) expects growth in OECD countries to decline in the years to come. This is due to ageing populations and decreased productivity growth. Within the OECD, the share of the working-age population has decreased in recent years. Going forward, the OECD expects to see a negative effect on employment due to an ageing population. They expect this trend to be especially prevalent in the Eurozone. Less international growth will also affect Norway and reduce growth here due to reduced demand.

Productivity growth in the OECD has been low since the financial crisis, especially among the richest countries. The OECD expects productivity growth to remain low, at the same level as after the financial crisis, for these countries, but they expect productivity to grow more quickly in poorer countries. In time, therefore, productivity levels among the OECD countries will converge. It is a paradox that low productivity growth has coincided with rapid technological advancements in the years since the financial crisis. One possible explanation for this is that the technological development leads to increased productivity, but that there is a time delay (Crafts, 2018).

The pandemic and the war in Ukraine have, in different ways, highlighted vulnerabilities in our globalised economy. More people are now asking whether our dependence on certain countries could have national security consequences (see e.g. U.S.–China Commission (2022) and European Commission (2022)). Would the West, for example, impose effective sanctions against China, if they in the future were to realise their threats of invading Taiwan? Questions of this nature could mean that a regionalisation of international supply chains may become more relevant in the years to come. One outcome of this could be more

industrial jobs in Europe. For Norway, though, our high wage levels will be a limiting factor in terms of traditional, labour-intensive industry, but Norway could be a good candidate for industries with high competence requirements, or where our natural resources give us an advantage.

4.4. Highest unemployment rate among those with limited education

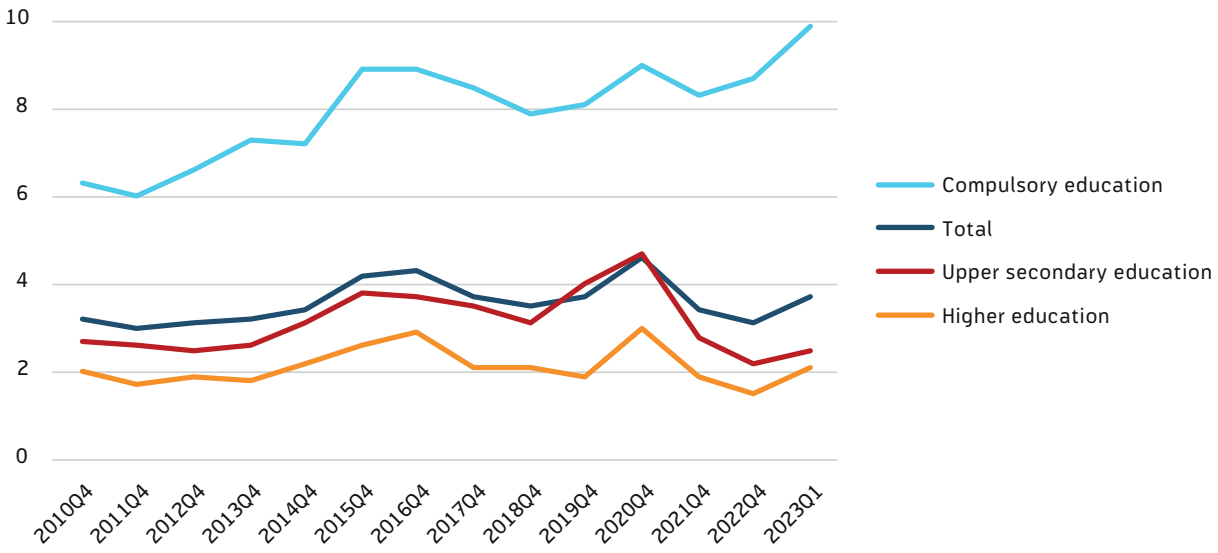
Statistics Norway estimates that the average rate of unemployment, measured by the Labour Force Survey (LFS), will be 4.3 percent for the period 2022–2040 (Cappelen et al., 2020). Unemployment rates vary with economic cycles, however. People with limited education are over-represented among the unemployed (Figure 4.1). They also report experiencing fear of losing their job more often than highly educated people (Norsk Monitor, figures not shown). Those who have not completed upper secondary education are clearly over-represented in unemployment statistics, whereas the differences are less dramatic between those whose highest level of completed education is upper secondary school and those who have completed higher education. Among those whose highest level of completed education is upper secondary school, there are differences between programmes, and unemployment is lower for those who have a trade certificate.

Connections with the labour market are more sensitive to economic fluctuations for those with limited education, and after an economic downturn, it takes them longer to re-enter the labour force. This is primarily because they are over-represented in industries that are sensitive to economic fluctuations, such as construction, and the fact that their jobs generally do not require any specific competence, which means they are more easily replaced. Unemployed people make up only a small share of the working-age population who are not part of the labour force. All in all, 661,000 aged 20–66 were not in education, employment or training in 2021 (Pedersen 2022). While we do not have specific figures, we know that people with limited education are strongly over-represented in this group as well.

The composition of education in the adult population has changed considerably in recent years. In 2010, 29 percent of the adult population had compulsory education as their highest level of completed education (Statistics Norway, 2022a). In 2021, this share has been reduced to 24 percent. In the same period, the share who has completed higher education has increased, from 28 to 36 percent.

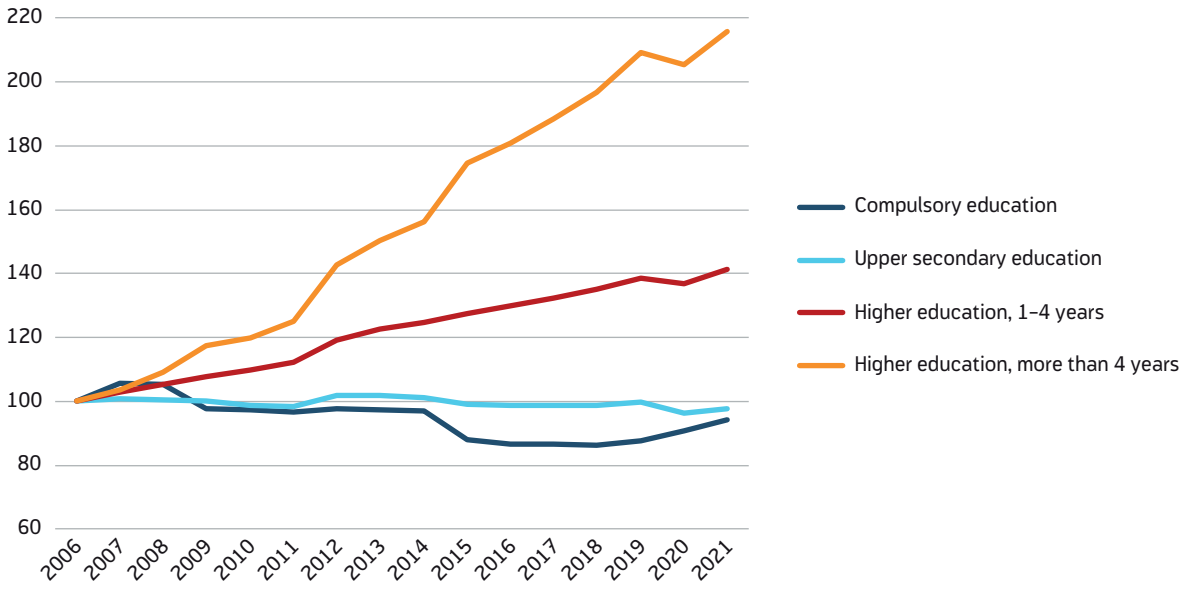
As the supply of people with a high level of education has increased, so, too, has the demand for this group. Between 2006 and 2021, the number of people in

Figure 4.1. Unemployment by highest level of completed education. Percentage



Source: Eurostat

Figure 4.2. Recorded employment, by highest completed level of education. Index, 2006 = 100.



Source: Statistics Norway (2022a).

employment increased by 373,000. In this period, the number of employed persons whose highest level of completed education is compulsory or upper secondary education has gone down, by 30,000 and 23,000, respectively, whereas the number of employed persons who have completed higher education has increased by 420,000. The number of employed persons who have completed a long education at the higher education level has more than doubled in the same period (Figure 4.2).

Model-based projections of education levels in the population suggest that the development we have seen in recent years will continue. Cappelen et al. (2020) suggest that the share of the labour force whose highest level of completed education is compulsory education, will drop to 16 percent in 2035, from 21 percent in 2022. Similarly, the projections indicate that the share of the population with a higher education background will increase, from 40 percent in 2022, to 48 percent in 2035. This is because younger people pursue higher education to a much higher degree than the people retiring from the labour force in the years to come did.

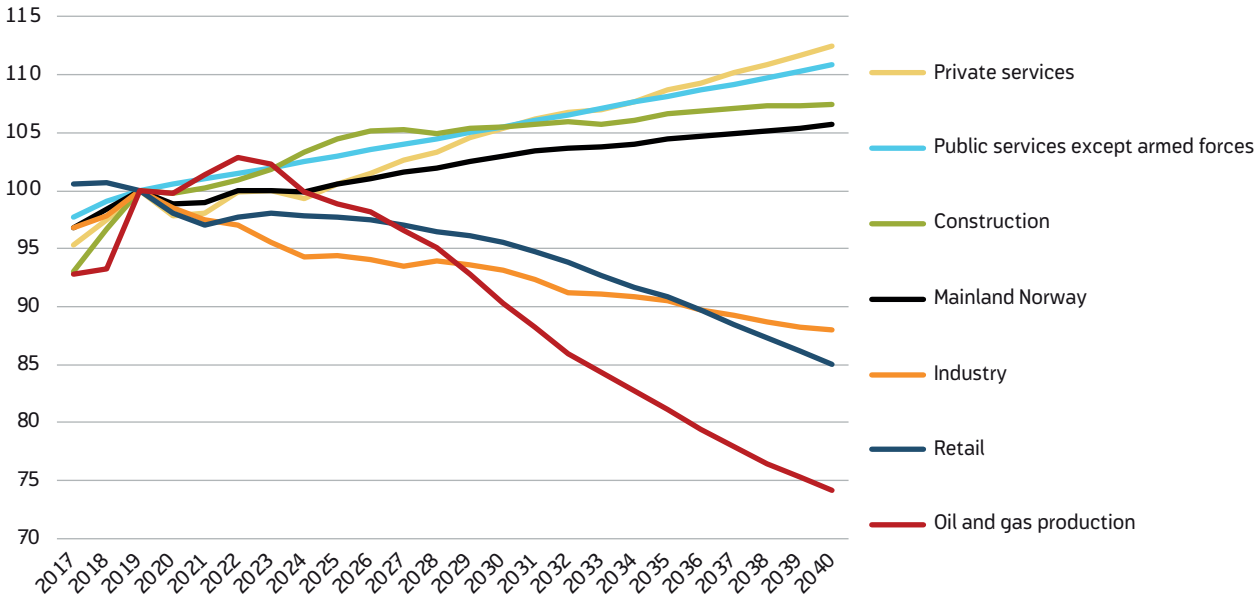
We expect to see higher unemployment rates for people with limited education going forward, too, and we expect the same will apply to those who are not in education, employment or training. Among other things, technological advancements will likely lead to additional benefits to a higher level of education, both because pay levels will increase for high-skill jobs, and because low- and medium-skilled jobs are at higher risk of being lost to automation. In addition, due to the Norwegian model for wage settlements, the so-called *frontfag* model productivity growth will lead to higher pay levels, even for the least productive businesses and workers. This will lead to increased demand for automation and outsourcing of low-skilled jobs that cannot be automated, to low-income countries.

4.5. Employment projections by industry

Statistics Norway's projections for employment developments by industry follow the projected development of the Norwegian economy, and, as seen in Figure 4.3, employment in private service industries and public administration will increase towards 2040, bringing employment numbers for mainland Norway up. (Cappelen et al.. 2020). Weak growth is projected for the construction industry, and in retail, industry and oil and gas production, employment will likely be lower in 2040 than in 2019.

Employment in the private service industry accounted for more than a quarter of all employment in mainland

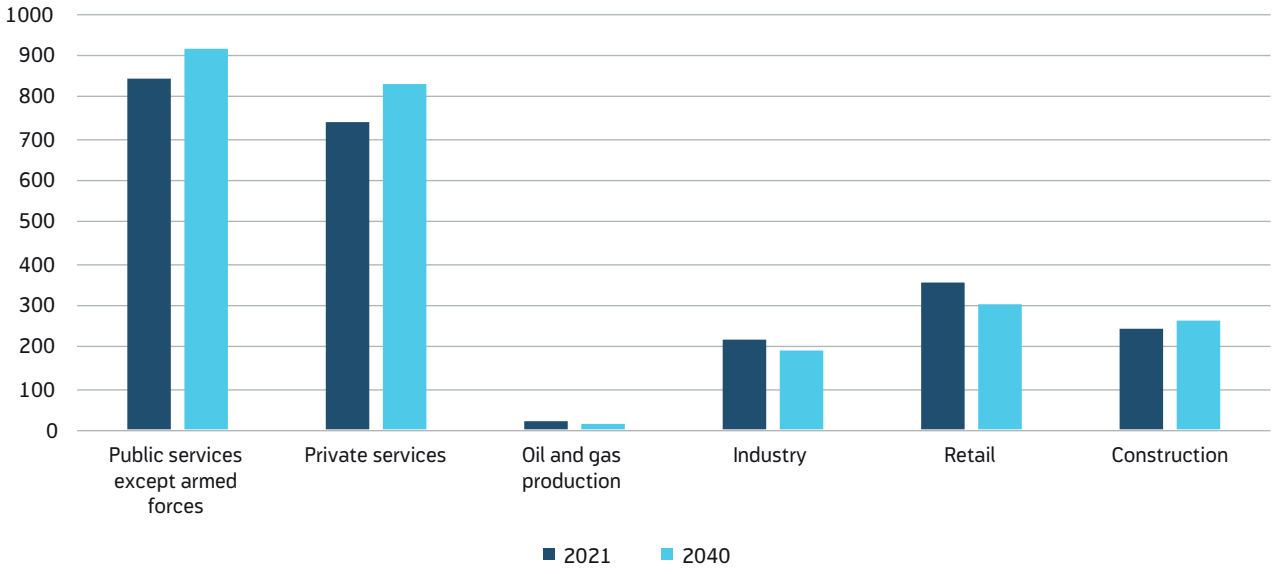
Figure 4.3. Projected employment by industry. Projection from 2020. Indexed, 2019=100



Source: **Statistics Norway** (Cappelen et al. 2020).

Norway in 2019. According to Statistics Norway's projections, this will increase by 13 percent by 2040, which is equivalent to 93,000 more employed persons than in 2019. In the public service industry, employment has increased steadily in recent decades, primarily due to growth in health and care services. This trend is expected to continue, which means that employment in public services, with the exception of the armed forces, will be 11 percent higher by 2040 than it was in 2019, i.e. approx. 90,000 more employed persons (Figure 4.4).

Figure 4.4. Employment by industry. Figures for 2021[2], projections for 2040. Figure in thousands



Source: **Statistics Norway** (Cappelen et al. 2020).

[2] For private services, the figures are from 2019.

This means that employment in the private and public service industries combined will accountf or almost 60 percent of employment in mainland Norway in 2040.

Retail is one of the largest industries in terms of the number of employees. In 2019, 359,000 people worked in the retail industry. Statistics Norway projects a small decrease in retail employment by 2040. While private consumption is expected to increase, we will likely see changes in patterns of trade and an increase in online shopping. According to the projection, the industry will employ 54,000 fewer people in 2040 than it does in 2019.

Employment in oil and gas production fell after the drop in oil prices in 2014, but Statistics Norway assumed employment would recover, before the employment rate would begin to drop again, relatively quickly. Figure 4.4 shows that from 2023, projections indicate a reduction of 28 percent of employment in the petroleum industry by 2040, which means approx. 6,000 fewer workers than in 2019. As mentioned in chapter 4.3, Russia's invasion of Ukraine led to increased demand for Norwegian oil and gas, and this may help mitigate this decrease somewhat in the years to come.

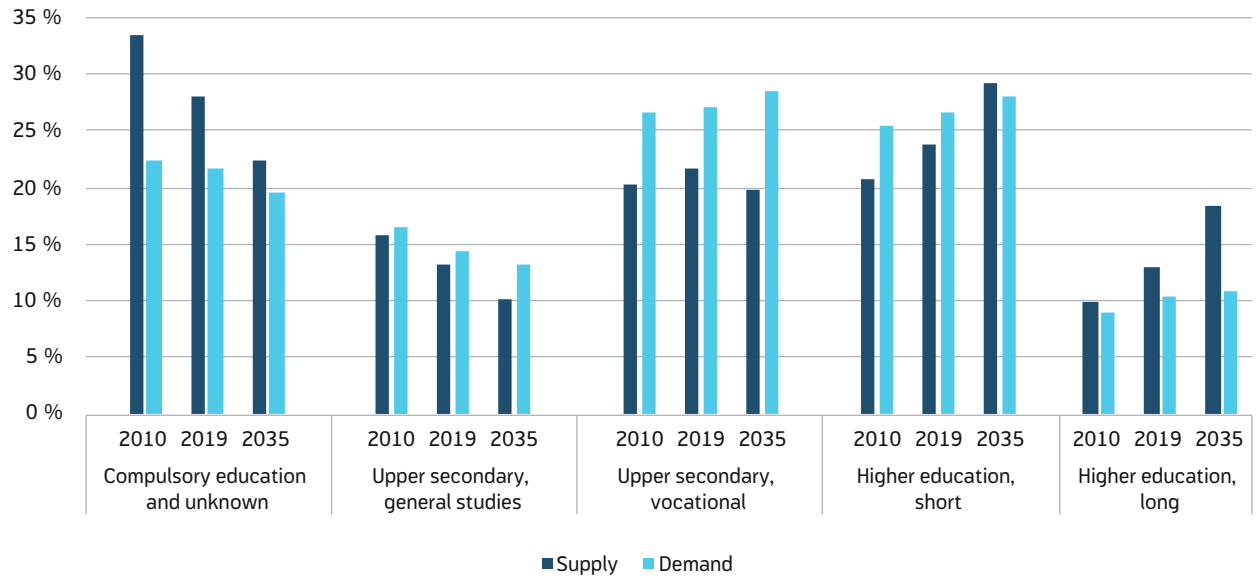
The decline of the petroleum industry also affects sub-suppliers to the petroleum industry, such as the engineering and shipbuilding industries. Other parts of the industry will likely see increased demand from abroad. At the same time, the projection assumes a relatively high productivity growth in the industry, which could further reduce the need for labour. Statistics Norway's projection suggests a drop in industrial employment equivalent to approx. 26,000 workers compared to 2019. As mentioned in chapter 4.3, vulnerabilities in the globalised economy and greater emphasis on security may lead to more industry jobs, and this could help mitigate the decline in industrial employment.

4.6. Shortage of health personnel and workers with trade certificates and ICT skills

Unbalanced development for some education groups

One key question is whether future demands for labour will correspond to the supply. Figure 4.5 shows projected supply and demand for labour by education level up to 2040 (Cappelen et al., 2020). The demand for labour is based on long-term forecasts for Norwe-

Figure 4.5. Supply and demand, labour at different educational levels, 2010, 2019 and 2035. Percentage of total labour force



Source: Statistics Norway (Cappelen et al. 2020).

gian economy, but the model does not take into account mechanisms that promote adjustments in the labour market, such as changes in relative pay levels. The model also does not take into account inflation in education requirements and skill needs. The projected gaps between supply and demand for some education groups should therefore not be interpreted as a projected rate of unemployment for these groups, but instead be taken as indication of a potential long-term imbalance in the labour market.

The projections show a significant imbalance for two education groups going forward. The shortage of workers with a vocational upper secondary education is expected to increase, and the supply of workers with a long higher education is expected to increase more than demand. The assumption is that those who leave the labour force are replaced by new workers at the same level of education.

Increasing shortage of workers with trade certificates – crucial to reduce upper secondary drop-out rates

The demand for workers with trade certificates is expected to increase in the years to come. At the same time, the share of the working-age population with this educational background is decreasing, as the number of workers who retire is higher than the number of young people who choose to pursue a trade certificate. The decrease can be attributed to fewer people pursuing trade certificates in health and care services, as well as in the umbrella category "other trades".

In order to meet future competence needs, it is important to encourage more pupils to choose vocational programmes, as well as to reduce the number of drop-outs. Unemployment rates are higher for people with limited or no education, and the biggest gap is found between those who have completed upper secondary education and those who have not. We should therefore focus on reducing drop-out rates in upper secondary education, and strive to get more people who, for one reason or another, dropped out, to go back and finish as adults.

Today, adults who did not complete upper secondary school rarely go back. This could, for example, be because they have obligations that make it difficult for them to prioritise education.

Several measures have been implemented to improve completion rates for secondary education in adults. In accordance with recommendations in Meld. St. 16 (2015-2016) several pilot projects involving modular training[3] for adults have been implemented for a number of subjects in upper secondary school, in addition to preparatory adult education for those who have not completed compulsory education. The goal of these measures is to provide education that is better suited to the individual's life circumstances and skills, and make it easier to combine education with work or other obligations.

Of the pupils who started upper secondary school in 2015, 80 percent have completed and earned university admissions qualifications or vocational competence within six years (Statistics Norway, 2022b). Of those who chose vocational programmes, 70 percent completed within the time period, whereas 89 percent of those who started general studies did. Completion rates have increased considerably in recent years. Compared to those who started in 2006, the completion rate has increased by 10 percentage points for vocational programmes, but it is important to continue working to bring this rate up even further.

The projections indicate that the demand for workers with a long higher education will remain stable, and the share is steadily increasing. The biggest increases will come in economics and business administration, the arts, the natural sciences excl. engineering, and the social sciences. This may seem paradoxical, in that current unemployment rates are lowest for those with a long education. This could partially be explained by highly educated people sometimes taking jobs that do not necessarily require such a high level of education. There is also some inflation in

[3] Modular education means the education is divided up into smaller units, which makes it more flexible and easier to adapt to what the individual already knows and needs to learn, as well as to their life circumstances and employment situation.

formal requirements for some jobs, which means that candidates with a short formal education are replaced by others with more education when they leave the labour force. This is partially because education functions as a so-called signalling mechanism, where job seekers document skills and abilities by completing education programmes, which may be relevant even when the education is not strictly relevant for the tasks to be performed. This is not fully taken into consideration in the projection, which means that the demand for highly educated workers may be underestimated.

Large and increasing shortage of health personnel

In NAV's business survey (Myklathun, 2022), we map out which occupations businesses struggle to recruit workers for. The survey shows that there is a particularly large shortage of nurses. Going forward, we will likely see an increased shortage of qualified workers in health and care services, both at upper secondary level and at the first-cycle higher education level. Three reasons especially mean we can be reasonably sure the demand for workers with this background will increase in the years to come: We will have more elderly people, we request additional health services when our welfare increases, and historically, labour-saving new technology has not significantly increased productivity in the health care sector. The last of these reasons is a paradox, when we know that there is a large and persistent shortage of qualified health personnel in large parts of the world (WHO, 2022). Jia et al. (2023) estimate that we will have a shortage of 30,000 nurses and 24,000 health workers in Norway by 2040 if current trends continue.

Labour-saving technology in the health sector will be an important factor in maintaining the level of quality in the health care sector when faced with a growing number of elderly people who need care. Nakrem and Kiran (2019) point to several examples of welfare technology with the potential to improve self-care abilities, thereby, to some degree, reducing the need for health personnel.

The Health Personnel Commission (NOU 2023: 2) found it is not possible to find a personnel-based solution to these challenges, and proposed increased implementation of such technology and stricter prioritisation. The goal is that employment in the health and care sector does not increase significantly from the current level. Another suggestion is to redistribute responsibilities between professions. This would reduce the need for physicians and nurses, but would, in turn, lead to increased demand for health workers. The demand for health personnel is so great that we will likely experience a shortage of health personnel even with such measures, but it may be possible to mitigate the situation somewhat.

Increased demand for ICT skills

The demand for workers with an education in ICT is expected to increase, from 56,000 in 2019, to 94,000 in 2030 (Winger Eggen et al., 2021). The increase is expected to include all education groups, from trade certificates to long university educations, but demand for workers with graduate degrees and higher is expected to increase the most. This increase is caused by growth in the ICT industry and increased demand for ICT professionals in other industry, with the latter being the biggest contributing factor. According to Winger Eggen et al. (2021) the current capacity of our education system is not sufficient to meet this demand.

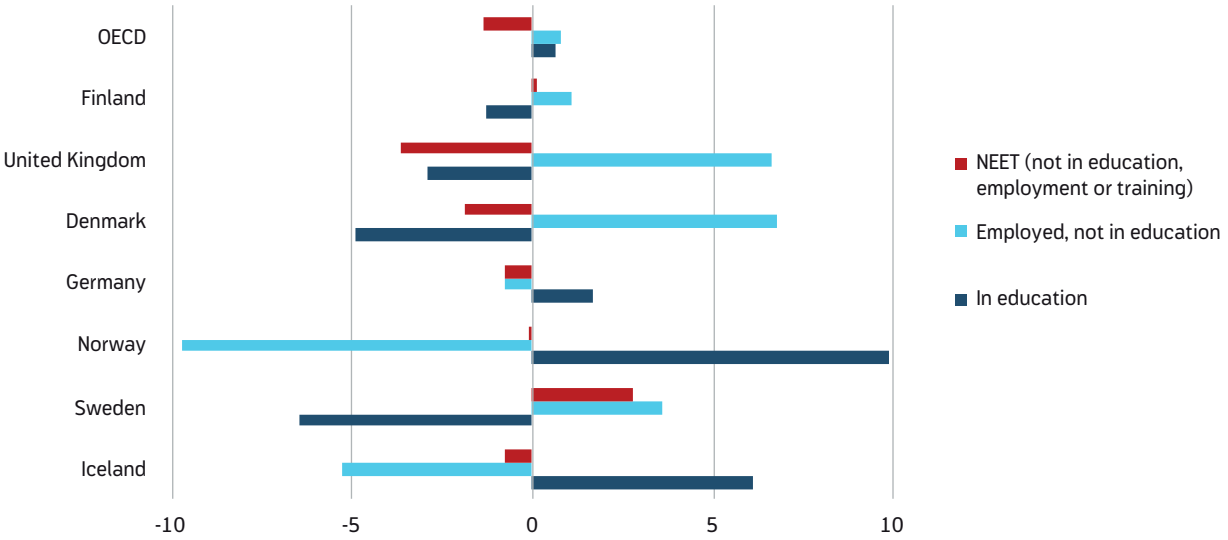
Currently, the ICT labour shortage is most pressing for software developers, with an estimated shortage og 1,600 workers (Myklathun, 2022). The labour shortage in this field is also noted in the EU (McGrath, 2021), and the situation is not likely to resolve itself shortly, in Norway or in Europe.

4.7. Rate of young people who are not in education or training low and stable

Employment among young people (age 15–29) fell by 10 percentage points in the period 2011–2021, whereas the share of young people in education increased about the same, which means that the number of young people who are not in education, employment or training (NEET) remained relatively unchanged (Figure 4.6)[4].

[4] Those who combine employment with education are categorised as "in education".

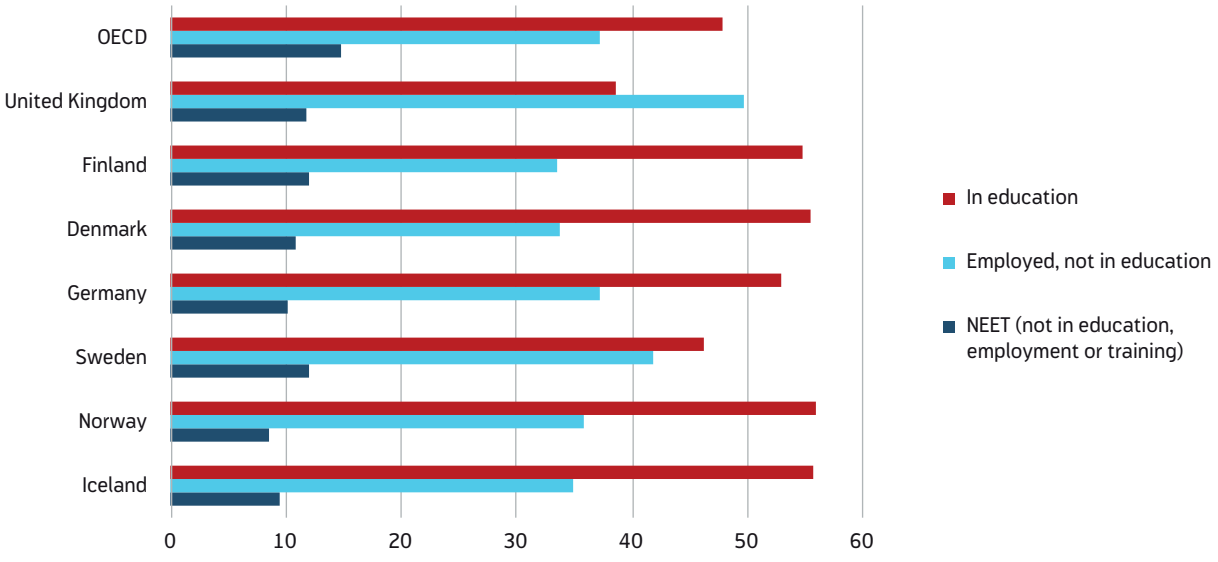
Figure 4.6. Young people aged 15–29, by activity. Change in percentage points, 2011 to 2021



Source: **OECD**

Employment rates among young people were 2 percentage points lower than the OECD average in 2021 (figure 4.7), whereas the share of young people in education was 8 percentage points higher. The share of young people not in employment, education or training was 8 percent in 2021. While this is a significant number, it is the lowest in the OECD, and 6 percentage points lower than average. When viewed in context of the fact that an increasing share of young people receive some form of health-related benefit (sickness benefit, work assessment allowance or disability benefit), as shown in chapter 8.3, it reflects the fact that the increase in these benefits do not lead to more young people not finding their place overall. We therefore do not believe there is any reason to expect an increase in the number of young NEETs in the years to come.

Figure 4.7. Young people aged 15–29, by activity in 2021. Percentage



Source: **OECD**

4.8. Trends associated with the greatest uncertainty

There is, necessarily, quite a bit of uncertainty associated with how the labour market will develop over the next 12 years, and usually, the changes we cannot foresee, will have the greatest impact.

One key uncertainty is how society will cope with the changes in skill demand as a result of technological developments and the green transition, especially the degree to which lifelong learning becomes more common to meet these demands. If we see persistent imbalances in the labour market, this could lead to increased exclusion, both as a result of a higher rate of unemployment and more recipients of health-related benefits. This will require more of NAV, due to the increased demand for follow-up and income protection.

There is considerable uncertainty associated with the speed and scope of technological development. Technologies with the potential to radically change the labour market have raised concerns and excitement since antiquity.

One area of application for artificial intelligence that has garnered a lot of attention lately, is self-driving vehicles. Despite great claims, the technology has so far not lived up to expectations. If cars are able to navigate on special roads, or all roads, without a driver's attention, this will affect the demand for transport workers.

This is a relatively large group of workers, and they mostly consist of workers with limited education. In a scenario where we achieve advanced self-driving vehicles within our time horizon, we may see a not-insignificant increase in the number of job seekers who will need NAV's assistance in finding other employment. In 2021, Norway had just under 25,000 employed truck drivers, whereas the number of bus drivers and tram operators was just under 15,000. In addition, we had around 14,000 car, taxi and van drivers (Statistics Norway 2022k). The time horizon for this technology is highly uncertain.

Another key trend associated with some uncertainty is economic globalisation. In the period from 1980 to the financial crisis in 2008, international trade increased rapidly, supply chains became more international, and the number of transnational businesses increased. Since the financial crisis, globalisation, measured as international trade relative to the GNP, has remained relatively stable.

Globalisation has had considerable consequences for the Norwegian labour market. Some business moved production to other countries, and international businesses have established themselves in Norway, and in some cases, have outperformed existing Norwegian businesses. At the same time, most people would agree that globalisation has led to increased economic growth.

In recent years, more people have argued in favour of reducing our dependence on China. A reduced dependence on Chine does not necessarily mean less globalisation if production is moved to other countries, but many see the correlation of these two phenomena. As mentioned in chapter 4.3, a regionalisation of supply chains may lead to an increase in industry jobs in Norway. Increased awareness of supply security and security in general could come at the cost of economic efficiency and reduce economic growth, though.

Concerns about globalisation often boil down to individual cases – such as Amazon establishing themselves in Norway, and that this is detrimental to Norwegian retailers, and that they also offer their workers poor employment conditions. Experiences from Sweden, where Amazon established in early 2020, so far indicate that we would have nothing to fear in that regard. Amazon has been able to grab a modest market share, and their warehouses are operated by a company bound by a collective agreement.

4.9. Questions for reflection

- How will labour market changes affect NAV?
- What will it mean for NAV that competence demands change rapidly?
- How will the platform economy and other changes in forms of employment affect NAV?
- How will we handle rapid changes for certain occupations or regions?

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5. USER EXPECTATIONS

By: Gard Ringen Høibjerg and Marianne Åsheim Friess

Summary: New channels, cohesive, custom and inclusive services

Citizen and employer expectations for public services will change in step with digitalisation and other societal developments. In this chapter, we present a model for the types of factors that shape user expectations, and which shows how societal trends affect expectations.

Digital development has long been a central trend in society, and has made some things easier for many, while making things more difficult for some. Digital exclusion is about more than a lack of digital skills. Barriers to adopting digital services include health, trust and lack of familiarity with the processes, language and rules of the public sector (bureaucratic competence). Towards 2035, we believe people will expect NAV to design services that are more inclusive and that take into considerations various barriers we know people can experience. In addition, people will expect equivalent and accessible alternatives for those who prefer or need personal assistance.

In the years to come, we believe people increasingly will expect the public sector to take a person-oriented approach to service development, as well as for us to work actively to provide more cohesive services built around different life situations. The digitalisation strategy for the public sector and the ongoing trust reform form the basis for these expectations, and we believe expectations will also increase as a result of people experiencing better and more accessible services in the private sector. The launch of ChatGPT, an artificial intelligence chatbot, in late 2022, for example, could potentially change our expectations for chatbots and similar forms of communication.

We believe technological developments will lead people to expect NAV to adopt new forms of communication, where the digital and the analogue increasingly converge. While technologies developed as augmented/virtual reality (AR/VR) and "metaverses" may seem alien today, we believe that people increasingly will expect to be able to reach NAV through new channels, if these technologies were made widely available elsewhere in society. How such channels will look is unclear, but the intention is for digital meetings to become more similar to in-person meetings.

While much will change by 2035, we believe the public's and employers' expectations for meetings with public bodies will be quite similar to current expectations in terms of being met with respect by a NAV that is both accessible and competent. Automation of simple requests can lead to greater expectations for NAV's professional and relational competence in direct interaction. In a transitioning labour market, we believe both employers and the public to an increasing degree will expect NAV to offer guidance on the skill demands of the future.

5.1. Introduction

> "Some of the basic expectations will be the same: respect and empathy." (User representative[5])

NAV serves many different groups: the public, employers and other partners – including the health care sector, education sector and various organisations. In this chapter, we have focused especially on how societal trends will affect expectations for NAV from users and employers in the future.

User expectations are closely linked to the other topics discussed in this Horizon Scan.

User expectations can be defined as the assumptions people have of a product or service before use, which form the basis of the person's experience of the service (Zeithaml et al., 1993). In this year's scan, we have prepared a model to better understand and work with user expectations.

When we set out to describe user expectations in 2035, we have to account for a certain level of uncertainty. In our approach to the future, we have concluded that it is more important to imagine the consequences of various scenarios for the future, rather trying our best to predict what the world will look like in 2035 (Miller, 2018, p. 5). To "look into the future", we have tried to take into consideration clear trends we can see in society today, while trying to identify other, more surprising developments.

[5] This quote, and other quotes from user representatives in this chapter, came from an input meeting with the central user committee for NAV, held in February 2023.

5.2. What are user expectations?

User expectations can be defined as the assumptions a person have about a service before using it (Zeithaml et al., 1993). If we are taking the bus in a new city, our expectations for this service will be shaped by previous experiences with riding the bus in other cities, assumptions about which behaviours to expect while on the bus, and perhaps expectations for how to purchase a ticket via an app or similar. After taking the bus, we can evaluate our bus ride based on the expectations we had, and say whether we found it easy, confusing or difficult to take the bus in this city.

Researchers have discussed the relative relationship between expectations for a service and the experience of the service in terms of *service quality* (Medberg & Grönroos, 2020; Zeithaml et al., 1993). The literature suggests that service quality can be measured by whether the expectations for the service are met, not met or surpassed (Medberg & Grönroos, 2020; Zeithaml et al., 1993, p. 35).

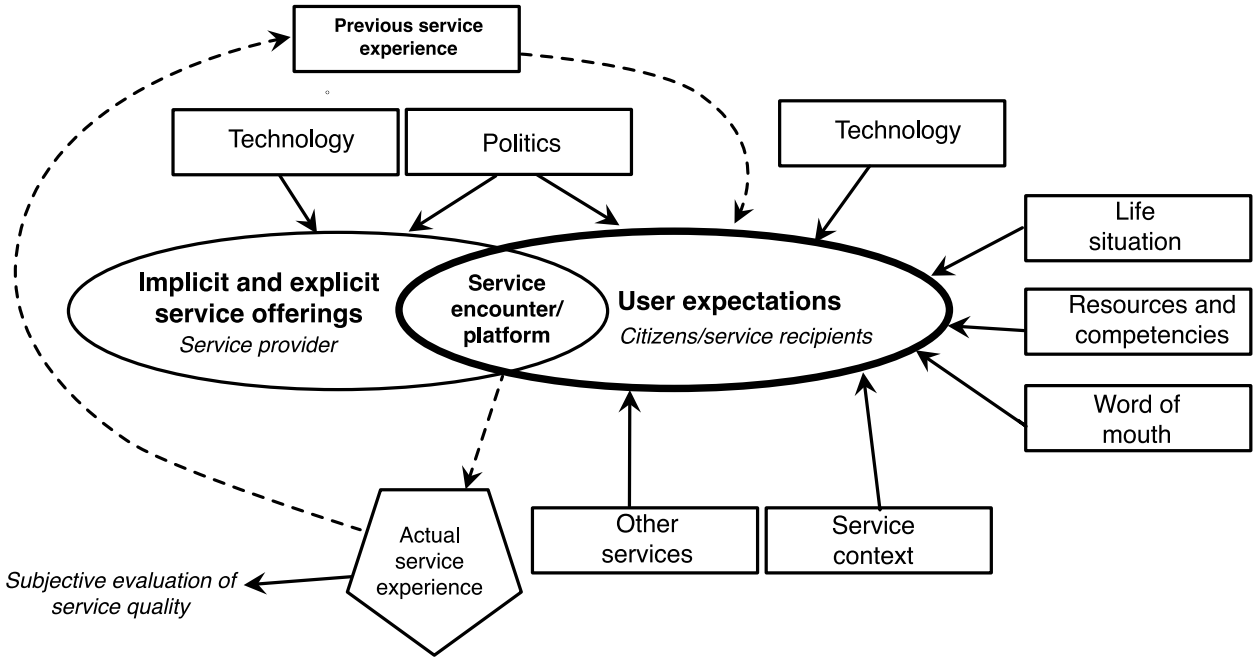
To better understand which factors affect expectations, and thereby the evaluation of services, we have developed a model where we combine models and theories from service and service quality research (Grönroos & Voima, 2013; Medberg & Grönroos, 2020; Parasuraman et al., 1991; Zeithaml et al., 1993).

Model for user expectations

The model (Figure 5.1) shows the value-creation process that occurs when services are provided, and how various factors affect user expectations for a service. At the core of this model is the process where an inhabitant, or service recipient/user, starts using a service (Grönroos & Voima, 2013).

The factors in this model can be divided into three spheres: The *inhabitant sphere*, *service provider sphere* and *external factors sphere*. This model only takes into account factors that influence user expectations. Several of the factors that influence expectations overlap with factors that influence and inform the development of service offerings. Some factors, such as life situation, service context and resources/competence, also affect service providers – such as employees of public organisations – just as they affect service recipients. We do not go further into this in

Figure 5.1. Model for user expectations



Source: **NAV**

this report, however, and the model does not account for this type of influence.

The inhabitant, service provider and external factors spheres

The *inhabitant* sphere includes factors that, in various ways, have the potential to influence the inhabitants' resources, abilities and entitlement to services, such as life situation, resources and competence, technology, prior interactions with the service and actual experience with the service. The model complies with the premise of service logic, where users represent the value-creation in their interaction with the service. The value of a service is assessed subjectively by the user of the service (Grönroos, 2019; Grönroos & Voima, 2013). This is illustrated by the arrow from the inhabitant sphere to the actual service experience, and continuing to the subjective assessmetn of service quality. The value of unemployment benefits in this sense, is therefore not determined by the funds transferred from NAV, but by the benefit the recipient derives from this transaction. This perceived value may include material goods, but also security and the ability to control one's own situation.

The *service provider sphere* includes factors that affect the design and communication of service offerings, such as policy and legislation, implicit and explicit service offerings, technology and service interactions/platform. Implicit and explicit service offerings refer to the tangible and non-tangible promises a service provider makes, and can be related to a clarification of expectations (Mason & Simmons, 2012). NAV as a social safety net can be interpreted as an implicit service offering – a form of security that is offered without specifying how, whereas the explicit service offering consists of a wide range of services and benefits NAV offers, which are described in statute. Sometimes blurred lines between what is implicit and what is explicit may cause confusion and this can affect the experience of the service and the perceived service quality.

External factors are any type of factor that, in various and sometimes unpredictable ways, has the potential to influence service offerings and inhabitants' expectations for and benefits from a service. This could include other services, "word of mouth" and service context. The inhabitants' experiences with digital services from the private sector may influence expectations for user-friendliness in interactions with public services. External events, such as a pandemic or crises of a more personal nature, may also affect a person's resources and competence in interactions with NAV or other service providers.

The model (Figure 5.1) is a starting point for better understanding user expectations from an inhabitant perspective. With this model, we want to distinguish between trends and developments in society in general, and the consequences these developments may have for the inhabitants' expectations in their interaction with NAV.

5.3. User expectations towards 2035

Below, we present how we believe user expectations will change towards 2035, especially in terms of individual users. Many of the same expectations will also apply to employers, but expectations unique to them are addressed later in the chapter.

Future services

The way public and private providers offer their services will likely change quite a lot in the years to come. At the same time, however, we assume that the outcome sought by service recipients likely will be quite similar to the outcomes they seek today. When we approach a service provider, we assume that these can help us in some way that will hopefully improve our situation.

In the years to come, a number of factors will affect the expectations we, as users, have for public and private services. People of different ages and in different life situations will have different expectations for different services. The 2021 Horizon Scan shows that the expectations of younger inhabitants are shaped by private service providers, such as Vipps and Snapchat, to a greater degree than those of older inhabitants (NAV, 2021, p. 31). As a consequence of this, NAV must consider whether to adjust to the expectations and solutions found with Vipps, Snapchat and other private providers, whether we should keep the solutions

Brief look back: nine years of Horizon Scans

This year's Horizon Scan is the fifth edition. The first was published in 2014. Previously, we have discussed a wide range of topics in the chapter on user expectations, including customised services for users, automated and invisible services, cross-sectoral collaboration and the enduring importance of security and predictability for users in their interaction with NAV.

In this edition, we evaluate one of the trends highlighted in 2014, when we looked ahead to 2025: "*From stationary to hand-held devices*".

> Technological advancements will give NAV the opportunity to conduct more meetings with users without meeting in person, and can spend less resources on an increasing number of users. Rapid advancements and increases in the use of hand-held devices will create a stronger expectation for NAV to be present on mobile platforms (NAV, 2014, p. 30).

The 2014 Horizon Scan pointed out that more than seven in ten Norwegians owned a smartphone at the time, and that 25 percent of internet traffic globally went through hand-held devices, such as smartphones and tablets (NAV, 2014, p. 29). The scan discussed how the internet was becoming "an integrated part of daily life", and that this development would lead us to performing the same kinds of services on hand-held devices as we did on "traditional computers" at the time.

In order to better understand how applies in 2023, we take a closer look at how accurate our predictions from 2014 were.

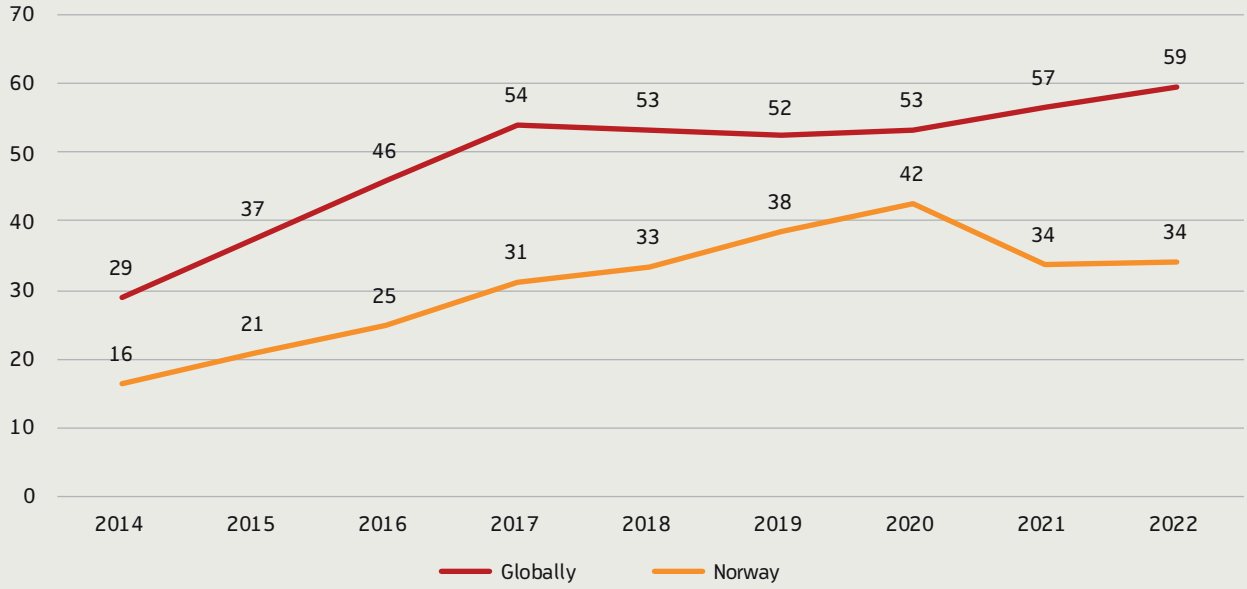
Hand-held devices in 2023

Now, in 2023, we can safely say that the world did, in fact, move in the direction we predicted in 2014. Globally, smartphone internet traffic overtook computer traffic already in 2016/2017 (see Figure 5.2). Since then, smartphone internet traffic has continued to increase globally, at around 59 percent in 2022. Compared to figures from 2014, the figure below shows that global smartphone internet traffic has doubled in the past nine years.

In a global context, Norway stands out. In this country, computers still account for almost 66 percent of internet traffic, compared to 34 percent for smartphones. Smartphone internet traffic in Norway hit a peak at 42 percent in 2020, before it dropped slightly again during the pandemic.[6] In Europe overall, smartphones overtook computers in terms of internet traffic in 2022.

According to the Norwegian media barometer 2021, 96 percent of the population had a smartphone in 2021 (Schiro, 2022, p. 60), and it has been established that "the smartphone has taken over many functions where we previously used other devices" (Schiro, 2022, p. 11). In line with the predictions of the 2014 Horizon Scan, smartphones *have* become "part of everyday life" (Schiro, 2022, s. 11).

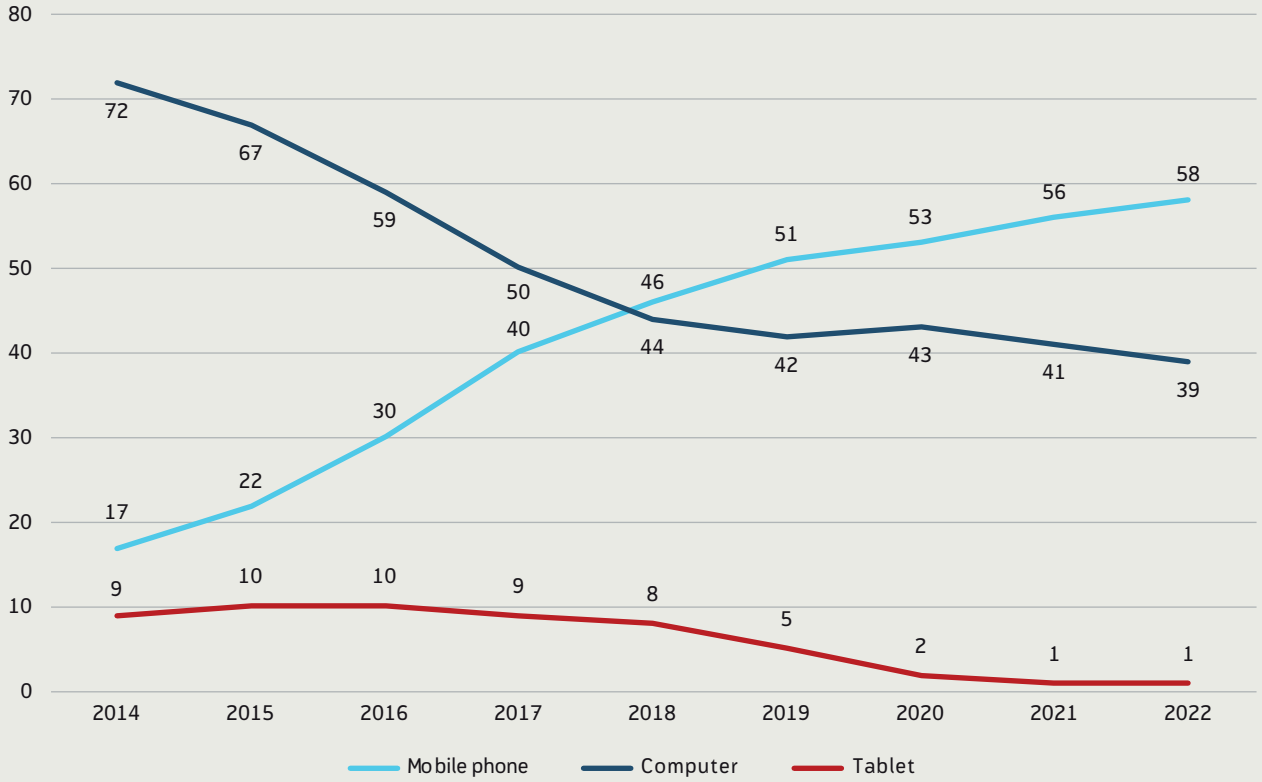
Figure 5.2. Share of internet traffic from hand-held devices, globally and in Norway. Percentage



Source: **www.statcounter.com**

[6] Statcounter.com (2022). Desktop vs Mobile Market Share Norway. URL: https://gs.statcounter.com/platform-market-share/desktop-mobile/norway#yearly-2011-2022

Figure 5.3. Visits to all pages on nav.no by unit. Percentage



Source: NAV

In order to understand what this means for NAV and whether we live up to the expectations that follow from increased use of hand-held devices, we have looked more closely at how people use smartphones in their interaction with NAV. Based on the trends we have described, we can assume that more users use a smartphone when they visit nav.no today, compared to in 2014.

User statistics from NAV's web pages indicate that a lot has happened since 2014, and that the switch to a majority of users accessing the website from a smartphone came at some point around 2018, Since then, the number of visitors to nav.no from smartphones has increased to 58 percent in 2022, compared to 39 percent of users who visit from a computer. Peak task metrics, which are used to understand what most visitors to a website do and whether they are able to accomplish what they came to do, show that approx. 80 percent are able to complete such tasks as submitting work registration cards, apply for sickness benefits and submit medical certificates from their smartphones (NAV, internal survey).

In summary, it seems that many inhabitants now expect to be able to complete tasks on nav.no from a smartphone, and that many of them are able to accomplish what they want using their smartphones. In other words, the transition to hand-held devices that was predicted in 2014 has been realised, and there is evidence to suggest that NAV has been able to adjust to this development.

we currently have, or whether we should develop a broader range of solutions and service platforms that are tailored to the specific need and wishes of different user groups.

Convergence of the analogue and the digital

In the years to come, we believe the digital and the analogue will increasingly converge (Accenture, 2022, see also chapter 6.2), i.e. that our conscious awareness of the distinction between our analogue and digital lives will be reduced. We commented on this trend as early as in our 2014 Horizon Scan (NAV, 2014, p. 30) and it has largely become reality, if we consider the widespread use of smartphones.

In recent years, variations of *extended reality* (XR) have been developed and commercialised (see also chapter 6). Such services use VR or AR goggles, which either brings the user into a new virtual reality (VR) or adds an additional digital layer (AR, or augmented reality) to the things we see around us. The game Pokemon GO is an example of the latter. NAV started experimenting with the use of VR in connection with virtual internships and job interviews as early as 2017 (Prasolova-Frøland et al., 2019). By the use of AR and VR technology, the EU Knowledge for Policy, among others, have predicted that we will spend part of our days in an environment where we seamlessly flow between digital and analogue interfaces. One potential service platform for this seamless future is the so-called metaverse: a digital universe that exists simultaneously and in parallel with the physical reality (OECD, 2021, p. 14).

In 2023, the metaverse and augmented reality may seem to belong to a distant future. Several countries and public bodies are, however, exploring the opportunities such technologies would provide (see chapter 6.2). Which platforms public bodies will use to interact with inhabitants in the future remains to be seen, but we believe the idea of meeting people where they are will become increasingly popular.

Future service interactions

Discussions of future forms of communication may lead to questions about the benefits of augmented realities and metaverses, which we cannot achieve through video meetings. The pandemic thrust video meetings at us as a daily form of communication and made us realise it was no longer always necessary to travel to have a meeting. At the same time, we became more aware of qualities that are lost when we meet on a screen.

Technological advancements, where digital communication becomes increasingly similar to physical meetings, are made to remedy that which is lost. Google's "Project Starline", where a holographic screen makes it feel like the person you are meeting is in the room with you, could serve as an example of how digital interactions may feel in 2035.

If technologies that are already available are made more accessible, such as AR/VR and language technology (see chapter 6), this could mean that a fewer user interactions will take place in a traditional NAV office in 2035 than what is currently the case. While analogue meetings both will, and often should, take place, we could imagine that different versions of digital realities would mean that more "face to face" meetings take place in individually customised, digital universes. Those who prefer it, may choose to have the follow-up meeting with their NAV counsellor on a digital beach in the Seychelles, or in another environment that generates a safe and pleasant atmosphere. If someone is trying out a new workplace, they may be provided with the opportunity to explore the workplace and the tasks they will be assigned in a virtual environment before they show up for their first day in person.

While the technology of the future is intriguing and holds a lot of promise, SINTEF (Sand et al., 2020) finds that digital interactions cannot fully replace meetings face to face. A digital service cannot completely replace an analogue service, but it may complement the analogue service in situations where more than one manner of interaction is available and can be used at the same time (Sand et al., 2020, p. 38). While the technology makes great promises about the opportunities and possibilities of the future, a wide range of challenges may also arise. The cost of VR or AR goggles, for example, could mean that many are, in practice, excluded from taking part in the opportunities provided by the new technology, which means that new inequalities are created in terms of access to the technology and opportunities (Aissaoui, 2021). In line with technological advancements, therefore, it will be important to ask how services promote inclusion, or exclusion.

> "Access to information must be easier. The information is already there, but it can be very hard to find. It's almost as if you have to have gone through the crisis you find yourself in." (User representative)

In the years to come, we believe people will develop high expectations for the accessibility of information and for NAV in general. In a consultation with NAV's central user committee, for example, it was suggested that the current practice of strict office hours perhaps

will not line up with future expectations. Part of this is an expectation that it should be easier to reach out in the future, and that you should be able to quickly get the help you need from NAV and other organisations.

Person-oriented approach

Reports to the Storting, as well as other reports and strategies have increasingly emphasised that a one must take a person-oriented approach with service users (Ministry of Local Government and Modernisation, 2019; Meld. St. 30, 2019, p. 42; NAV, 2021, p. 35; St. Meld. Nr. 31, 2001, p. 16). This view of people and service development is reflected in public service policy, research and theoretical development, where new views on value-creation have been expressed in recent years (Danielsson & Westrup, 2022; Grönroos, 2019; Høibjerg, 2021; Osborne, 2018).

New theoretical models for value-creation in the public sector have proposed a paradigm shift, going from an understanding that it is the public sector's job to create and transfer value to the inhabitants, to understanding value-creation based on whether or not the situations of service users subjectively improve (Danielsson & Westrup, 2022, p. 1; Osborne et al., 2022). In this user-oriented approach, the benefit, understood as the subjectively perceived value the user receives from using the service, is applied as a metric for value creation.

A user-centric understanding of value is expressed in NAV's new strategy. The ambition of "together we can find solutions with the ones who need it most" assumes a premise that the services are developed in collaboration with users, thus ensuring that they will be as beneficial as possible for users. Generally, the ongoing trust reform, which is "designed in close collaboration with user organisations, employee representatives and management from all major public organisations" (AP and SP, 2021, p. 38), is also an expression of a user-centric policy. While we may very well see more reforms before 2035, we believe that the signals given, where the reform "is about giving employees enough time and trust to provide users with better services" (AP and SP, 2021, p. 38), will contribute to higher expectations from inhabitants for public services.

Political promises and the institutions' own communication with inhabitants, shape user expectations through explicit and implicit service promises. In the years to come, we believe reforms and new approaches in public administration will gradually move in a direction where we take a more user-centric approach to service development. In practice, this may lead people to expect more differentiated services, which adapt to the individual's wishes and needs, whether these services are provided digitally or in person.

If more and more tasks can be completed without direct contact with case workers or others in the public sector, there is a greater expectation that those who need additional follow-up can get this from employees who will have more time to help them (Midtgård et al. 2022, s.8). While we do see some optimism in terms of how technology can be used to free up time for administrative staff, research also shows that it does not necessary follow that technology, such as automation, gives first-line employees more time to do their jobs (Løberg, 2022, p.7).

> "More people are expeced to go digital in the future, but this also means greater expectations that those who are unable to, get better help." (User representative)

> "Strengthen the first line, so that you are met by competent employees who have empathy." (User representative)

We believe the Norwegian people still, and perhaps increasingly, will clearly speak up about whether or not the public sector is able to live up to their expectations.

Are we on the brink of a digital generational change?

In 2001, Marc Pensky argued that the university students of the time were different from previous generations. They no longer fit into the mould of the educational systems developed by their forebears. Prensky argued that one should, from the early 2000s, start to speak differently about those who are digital natives and those who came into the digital world later in life, i.e. digital immigrants (Prensky, 2001).

If a divide between digital natives and digital immigrants was observed as early as 2001, a large share of the population can be considered digital natives in 2035. If we presumed that Prensky's students were around 20 years old (born in 1981), the Norwegian population will consist of approx. 65 percent "digital natives" by 2035.[7] The question is whether all of these are so familiar with digital technology that the problems we see today will disappear.

We believe the answer to that is no. As technology develops, we can reasonably expect some to keep up and learn the latest technology, but others will fall behind and not develop their digital skills further, based on what will be required in 2035. Digital literacy is a dynamic variable, and much like "punch card operator" is an outdated occupation and fax machines have fallen out of use, we presume that some of the technology we use today will also be phased out.

Anecdotal evidence in the form of news articles and social media posts in Norway and abroad would indicate that younger generations do not have the same relationship with various forms of technology and digital behaviours as older generations. This is because many of them have grown up with iPads in primary school, TikTok, cloud storage and good search functions, which would eliminate the need to store, download and upload data. For NAV and other public services, this could have consequences for future services, if users who are not familiar with downloading and uploading documents will still be required to do so to use the service.

In the years to come, the public sector will likely have to consider whether to teach younger generations yesterday's technology to manage in their interactions with the public sector, or whether the public sector must adapt and evolve in step with the rest of the world and its user's skills and expectations.

Digital wallets and cohesive services

Cohesive services and good collaboration between various public and private organisations have long been a political goal (St. Meld. Nr. 31, 2001, pp.16–17). This has, for example, been expressed in assessments considering whether "task distribution between administrative levels should [...] account for the fact that the public largely consider the public sector to be a single unit." (St. Meld. Nr. 31, 2001, p. 17). Despite this ambition, problems stemming from fragmented public services have persisted (Meld. St. 32, 2020, p. 148). Expectations and a desire for cohesive services seem difficult to realise.

In the years to come, we believe new technology will make services feel more cohesive for users. Among other things, we believe that the EU's work on digital wallets will have a considerable impact on inhabitants in both Norway and the rest of Europe (see also chapter 6). In addition to the function of a digital ID across borders and sectors, such wallets can also store information about us as citizens. In Norway, the Norwegian Digitalisation Agency is part of a large-scale pilot project for the EU digital wallet (Digdir, 2022), and this project outlines how you, for example, can store your driving licence, health certificates, diplomas and passport in this future digital wallet.

> "There will be expectations for services to be easy to use, accessible at any time, and coordinated. You shouldn't have to go to many different places to collect data." (User representative)

It has been predicted that digital wallets may take over for the kind of storage solutions many different systems currently have in place, and that information about us as users, patients and citizens is stored in our personal digital wallets,[8] rather than in fragmented systems that cannot communicate with each other. Scenarios outline in the UK's ongoing work (GOV.uk, 2022) into digital identities describe, for example, how vaccine information or information required for mortgage applications can be stored in such a digital wallet. As owners of our own data, we can opt to share our information with those that need it (Johnson, 2022).

[7] Based on the main alternative in Statistics Norway's population projections, Table 13599.

[8] EBSI (2022) *EBSI, a new trust paradigm for Web3*. URL: https://ec.europa.eu/digital-building-blocks/wikis/display/EBSI/EBSI+a+new+trust+paradigm+for+Web3

This is part of an ongoing trend where we, as internet users, to an increasing degree will get, or demand, back ownership of our own data, compared to what is the case today. Perhaps the future will bring a sort of new user-centric approach, where information about us as users is stored with us, and not with the organisations we reach out to for services, help and support.

Inclusive services

In order to start using services, a certain combination of resources and competence is required (Skålén et al., 2018). In NAV's user survey, competence is defined as the "sum of a person's abilities, knowledge and understanding of various aspects" (NAV, 2022b, p. 74), and is relevant for understanding whether a person is able to use the services being offered.

In recent years, and especially since Norway ratified the Convention on the Rights of Persons with Disabilities (CRPD, UN, 2006) in 2016, there has been more emphasis on designing services that are actively inclusive and making sure that the design of services at least does not cause new inequality. This is about designing services that do not require disproportionately high or specialised competence to access. This is especially important in the development of public services. Somewhat simplified, inclusive services can be about universal design, for example by putting in a ramp instead of stairs, to make the door accessible to as many people as possible.

Meld. St. 8 on the incorporation of CRPD in Norway emphasises digital exclusion and lack of access to BankID as a challenging area (Meld. St. 8, 2022, p. 34). The challenge is that BankID's are normally not issued to people who have a legal guardian. This creates a barrier for some people, because BankID is required to log into public websites, like HelseNorge, Altinn and NAV (Meld. St. 8, 2022, p. 34).

As more and more public services become digitalised, we also see a trend of increased awareness of digital exclusion. Lundberg and Syltevik (2017) argue that digitalisation could cause problems for many vulnerable user groups. A report prepared by SINTEF describes how technological advancements may have contributed to the exclusion of some users.

> "Taking away service desks may mean that several user groups who could previously manage by contacting their local NAV office directly, now may become more dependent on assistance." (Midtgård et al., 2022, p. 12).

SINTEF points to eight barriers that may affect the degree to which a person is able to adopt digital services (Midtgård et al., 2022). Some of these barriers can likely be overcome by an inclusive approach to service development. Several of these points can also be linked to the model for user expectations (Figure 5.1, *relevant factors in parentheses*)

1. Health-related challenges (*resources and competence/life situation*)
2. Social challenges (*life situation*)
3. Language barriers (*resources and competence*)
4. Lack of bureaucratic competence (*policy and legislation/resources and competence*)
5. Lack of digital competence (*technology, resources and competence*)
6. Digital divides/lack of access (*resources and competence/life situation*)
7. Lack of experience and uncertainty (*resources and competence*)
8. Trust issues (*service context*)

These barriers manifest in unique ways today. Lack of proficiency in Norwegian, for example, can be language barrier. Lack of access to BankID is one example of a digital divide (Midtgård et al., 2022, p.45, 51).

Studies have shown that people often face several barriers, and not just one, in their interactions with NAV (Løberg, 2022). For young people with health problems, the interaction with NAV may be compounded by a lack of bureaucratic competence and uncertainty (Olesen & Åsheim, 2022). Bureaucratic competence "has, among other things, to do with people's understanding of the administrative sector and their ability to find and apply information about their rights and obligations to improve their own situation" (Rybalka et al., 2022, p. 7). Migrant workers who get sick and go on sick leave may have their situation made more complicated because of language barriers (Synnes, 2022).

A study on refugee interactions with NAV shows that many with a refugee background find great joy and benefit in digital information and a digital dialogue with NAV. Findings from the report nevertheless indicate that digitalisation of NAV's services make us more accessible for those who are able to use them, while NAV seems to have become less accessible to users who need other forms of communication. (Liodden et al., 2023)

Different levels of competence and barriers to participation may prevent us from adopting both digital and analogue services. To explore this, NAV included bureaucratic competence as a new variable in its 2022 user survey, as this variable, like digital competence, is presumed to affect the degree to which users are able to access NAV's services (NAV, 2022b, p. 74). Among other things, the survey shows that users with low bureaucratic competence have a more strained and stressful relationship with NAV than others (NAV, 2022b, p.18–19).

Bureaucratic competence has been emphasised as an increasing requirement in interactions with the public sector, and one reason for this may be that people often used to get help with this in face-to-face interactions with the administration, but in a more digitalised service offering, people are more often left to their own devices when it comes to finding more generalised information on the internet" (Rybalka et al., 2022, p. 7). This shift in responsibility can be viewed as a change in the "administrative burden", where users, as digitalisation increases, are given greater administrative responsibilty for their own case when it comes to documentation and processing.

User expectations will likely be affected by how various barriers are accounted for in the digital development. We assume that service development in the years to come will take into better consideration any barriers that may be exclusionary. We believe this trend in large part will be driven by legislation, such as through Norway's execution of the UN Convention on the Rights of Persons with Disabilities (UN, 2006).

The ongoing effort into creating a joint European digital ID will likely give more people the ability to log in and access digital services, even across national borders. While more people will gain access to the services, it could, as mentioned, be challenging for some users to access them. Towards 2035, we believe we will have gained knowledge to make us better able to judge what to digitalise and how, to ensure we include as many people as possible.

Language barriers: Linguistic technology and dissemination of information

Linguistic technology and artificial intelligence (AI) will likely help remove some barriers in the interaction with digital services, and may make it easier to understand information across languages (see above and chapter 6). Developments in linguistic technology, including automatic speech recognition or automatic translation, are examples of innovations that may help improve interactions in the near future (European Commission). Google's AR goggles are one example of technology that may transform and affect digital interactions and NAV's meetings with users. The goggles have an automatic translation function and provide users with the opportunity to speak to each other across languages in real-time. This could help eliminate such linguistic barriers (Google, 2022).

Technology can also provide new ways of disseminating information, such as with chatbots and artificial intelligence (AI). While chatbots have only partially been able to meet user expectations so far, Gartner (2022) predicts that chatbots will become the primary customer service channel for a third of organisations by 2027. In 2022, we were introduced to ChatGPT, which can answer questions and compile information more effectively than previous generations of chatbots. The technology behind ChatGPT is based on the OpenAI GPT language model, which will likely have competition from other technologies in the years to come.

> "[There will be] expectations for better search engines than the ones we have today. It should be possible to lie awake at three in the morning and be able to find the information you need." (User representative)

A meeting with NAV in 2035

To explore the consequences of how some of the trends we have described will affect NAV, we have imagined a scenario.

A hyperdigital meeting

Peder Ås has recently lost his job to a robot. The same day as he received his notice, a message was automatically sent from his employer to NAV and other relevant public authorities that Peder had become a job seeker. When Peder comes home in the afternoon, he receives a question from the citizen portal through his AR contacts, where NAV asks him whether they should start searching for a new and relevant job for him. Peder accepts.

While Peder sleeps, a system based on artificial intelligence trawls through thousands of vacancies to see which ones may be a good fit for him. When he wakes up, a list of vacancies is ready for him, and Peder receives an invite to a meeting with a NAV counsellor in the public metaverse.

While Peder eats breakfast, the counsellor prepares for the meeting with a new citizen. The counsellor has found a sense of peace again, after moving out of the city and into a quieter neighbourhood. She is currently sitting in a public office space with colleagues from different organisations, and she has found a room that is optimised for meetings in the metaverse.

While Peder and the NAV counsellor live far apart, it is almost as if they are in the same room when both of them log on. Peder is fond of Gudbrandsdalslågen and has chosen the spot where Gausa empties into Lågen as the meeting location. They begin to talk and first go over what Peder wants to do now, and how NAV can help him achieve his goals. Even though Peder has already received a list of several vacancies that may be relevant for his current qualifications, he says he feels tired. Together, they agree that he take time to recover and explore options for competence enhancement. Peder also receives notice of a digital appointment with a doctor later that day. To guarantee financial security for Peder in the situation he finds himself in, the counsellor decides to grant financial support, and they agree to meet again in two weeks.

While new technologies get better at compiling or translating information for us, we will need a simple and comprehensible language in order for the technology to be useful.

The digitalisation strategy "One digital public sector" refers to clear and digitalisation-friendly legislation as a prerequisite for cohesive services and equal participation (Ministry of Local Government and Modernisation, 2019, p. 29). Efforts relating to the simplification of legal language will likely become both necessary and expected in line with technological developments towards 2035.

5.4. Employer expectations in 2035

The next 15 years will be characterised by major transitions in society, and perhaps especially in the labour market. As described in chapter 4, these transitions will be driven by many things, from the green transition and further automation, to the consequences that follow from an ageing population (Meld. St. 14, 2020, p. 7).

> "Employers will have expectations of accuracy and consistency in information, regardless of which NAV office we speak with. This also applies to any decisions that affect our employees."
>
> "The quality of service is expected to increase, with seamless services and a higher pace. I just want to know that I get what I am entitled to, at the right time, with no further follow-up."
>
> (Employer representative)[9]

Employers are citizens too, and will largely have the same expectations as individual users. Like citizens, employers also have different starting points for their contact with and use of public services. If the public services are difficult to understand and use, a large company with specialised HR staff, for example, will likely have a less strained relationship with NAV than other companies. At the same time, the services used by employers are different from the services used by individual users. This has consequences for the employers' expectations for NAV.

NAV's employer survey shows that a key aspect in employer satisfaction with NAV is whether NAV is able to understand their needs (NAV 2022a). This could be interpreted as employers expecting services

[9] This quote and other quotes from employer representatives come from meetings with NAV's central user committee and a contact meeting with the social partners, held in February and March 2023.

customised to their situation, as well as expecting NAV employees to familiarise themselves with the company's activities. Knowledge of the company is likely essential in recruitment, measures and transitions to find a good connection between NAV users and employers' needs. Regardless of whether NAV maps out company needs with the help of new technology or personal relations, a good understanding of employers in general, and the individual company's unique needs, will likely remain important even in the years to come.

For some services offered to employers, such as prevention of absences due to sicknes, employers will be able to choose other providers besides NAV. This could mean that companies have the same expectations for services, regardless of whether the provider is public or private (NAV, 2021, p. 31). Good services that meet the employer's needs will likely be important if NAV is to be a preferred partner for employers.

Recruitment and competence enhancement

In meetings with employer representatives in NAV's user committee and employers' organisations, it has been established that employers may come to expect NAV to increasingly provide good recruitment support and to assist with transitions. Employers need better services for matching potential employees with employers, and for NAV to help move labour where it is needed. It is very difficult to predict which kinds of competence will be required in the future. Employers expect NAV to take on a bigger role in this regard, along with other actors, and provide guidance to employers and employees.

Increasing labour shortages (see chapter 4.6) could lead to more employers looking to include people who are not currently part of the labour force. In this, employers expect to be able to work closely with NAV, where NAV assists in providing potential candidates with the necessary competence enhancement and follow-up in the workplace. As an example, the war in Ukraine may lead to a large number of refugees looking to settle permanently in Norway. Employers have expressed that they are prepared to take on this social responsibility, but they expect NAV, in collaboration with other partners, to assist with whatever qualification and language training is needed to help the inclusion of refugees run more smoothly. Labour shortages may also lead to employers expecting NAV to take on a bigger role in the recruitment of candidates from abroad, even from countries outside the EEA.

Transitions and robot recruitment?

The platform economy and new or changed forms of employment may transform what it means to be an employer in the years to come (ILO undated). As part of this change, we see a trend where the geographic ties between the place of work and the work performed may weaken, and several employers may have employees located all over Norway, and perhaps even abroad (NOU 2021:4, 2021, p. 157). Faced with changed forms of employment and a labour market where geographic location matters less and less – i.e. a situation where people's work location are more geographically scattered than before – we believe NAV will have to find new approaches. Sick leave follow-up, recruitment, measures and other services will likely have to evolve in step with changes in the labour market.

New technology and new forms of employment will lead to many changes for employers and employees (see chapter 4). This will lead to greater expectations for NAV and other partners to assist businesses in the transition process, including by assistance with recruitment and competence enhancement for those who are at risk of being excluded. A report prepared by Citrix (Citrix, 2020, p. 16) estimates that we, by 2035, will have come to or passed a technological tipping point where artificial intelligence begins to create more calue for companies than the people who work there do. Other predictions, which can be said to take a more optimistic view of the fate of humans, claim that technology largely will be used for repetitive and simple tasks, while people are reassigned to more meaningful tasks (Citrix, 2020, p. 17).

Transition and increased robotisation of society – be it in the form of automation, increased use of artificial intelligence or actual robots performing manual tasks – will lead to changes in the labour market and for NAV towards 2035. Perhaps employers will increasingly contact NAV to recruit both people and robots?

> "The discourse around immigration will change. Robots can't fix everything." (Employer representative)

Regardless of how things develop, NAV and other public bodies must stay on top of developments to see which consequences future changes will have for the social responsibilities they have.

Inclusive workplace and lifelong learning

The future brings promises of robots and advanced technology that will change the labour market. Even so, employers and the rest of us will likely have to continue what we have been doing so far: work together and learn new things.

In partnership with NAV, employers make sure that people find jobs and help maintain the level of welfare we have established in Norway. The Perspective Report 2021 (Meld. St. 14, 2020) discusses how society in the future has to make it easier for people to find employment and continue working (see chapters 4 and 9.3). This includes anything from measures for continuous competence enhancement for employees (Meld. St. 14, 2020, p. 230), to increased flexibility in the interaction between employment and social security schemes (Meld. St. 14, 2020, p. 239).

A higher rate of transition and rapid changes in competence demands could give rise to new forms of education. Since 2012, the use of MOOCs (massive open online courses) has exploded. Where this market had an estimated value of approx. USD 7.5 billion in 2022, the market research firm *Fact. MR* estimated that the market value could increase to 152 billion by 2032 (Fact. MR, 2022). These courses are normally shorter than full educational programmes, and can be taken from anywhere. We consider this to be a well-established trend and believe that the use of MOOCs and similar, short educational programmes will play an even bigger role in the future.

> "Connections between education, employers and NAV must become more seamless and smooth than they are today. Right now, things are anything but smooth." (User representative)

Expectations for an inclusive labour market where as many people as possible get the opportunity to work as much as they want, can be viewed in light of demographic changes we are likely to see in the years to come, as well as the political and economic consequences of this development (DigDir, 2022).

5.5. Trends associated with the greatest uncertainty

Below we address the two trends in user expectations we believe to be associated with the greatest uncertainty towards 2035.

Inclusive services

There is no doubt that digitalisation will continue towards 2035. The uncertainty is more about the degree to which NAV will develop more inclusive services in the future. On the one hand, we can see that more knowledge of various needs will help us develop services that are more inclusive. On the other hand, we can also envision that we continue to develop services, but that the gap is widening for those who already encounter barriers in their interaction with digital services. Another outcome could be that we develop new barriers that will require new competence.

A lack of bureaucratic competence or language barriers are, as previously mentioned, barriers that end up excluding people from accessing digital services. Among other things, NAV's 2021 Horizon Scan mentions that automation of services will make digital and bureaucratic competence less crucial, but the report also points out the potential issue that this could lead to less knowledge of public services and rules if you are not forced to seek it out or apply. This affects people's ability to check whether they have received what they are entitled to (NAV, 2021, p. 34).

Our success in simplifying legal language and rules is likely essential in terms of creating more inclusive services, both in terms of language barriers and in terms of bureaucratic competence. A digitalisation-friendly legislation is a prerequisite for cohesive services and equal participation (Ministry of Local Government and Modernisation, 2019, p. 29). Having

legal language that is easier to understand is also crucial for making it easier to adopt linguistic technology, which could lead to more inclusive services.

Digital generational change

Technological developments has moved with lightning speed in recent decades. Smartphones have become part of people's everyday lives, and individuals have now assumed responsibility for tasks that were previously performed by anything from travel agents to accountants.

In line with this development, we believe our technological behaviours will change, and we assume younger generations will prefer the types of digital tools they use in their everyday lives. This could have major consequences for and lead to increased uncertainty about how the public sector should plan the development of their services, and we predict that the digital development could take several paths in the years to come. While new generations are growing up with new technology, many of the ones who have worked whole careers mostly without computers and the internet are now facing retirement. Studies have shown that retirees are especially vulnerable and at risk of digital exclusion (Rybalka et al., 2022). It would be reasonable to assume that some of the people who retire in the next few years will not update themselves on new technology, but this will likely gradually change.

5.6. Questions for reflection

- Where and how do you expect to meet NAV in 2035?
- If one of those closest to you needed help from NAV, how would you prefer they be met?
- What does it mean when we say NAV should be accessible by all who need it?
- What does it mean to take a user-centric approach?

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6. DIGITAL TECHNOLOGY

By: Robindra Prabhu

Summary: Digitalisation and artificial intelligence provide great opportunities

Society is increasingly defined by how data is produced, collected, analysed and applied in services and production. This development is being fuelled by cheaper and more flexible computing power, greater and easier access to data, and rapid developments in services based on advanced algorithms and artificial intelligence.

We are preparing for a gear change with artificial intelligence, with models that are more widely applicable and that require fewer adjustments and customisation to be applied to a wide range of new areas. We are also expecting to see in-person and digital meetings converge, with the help of technologies such as virtual/augmented reality (VR/AR) and the metaverse.

Technological advancements provide NAV with ample opportunity to improve on current processes and make them more efficient, as well as to develop new business models. In order to take advantages of what these new technologies offer, NAV must evolve across all of its activities: Service offerings, meetings with users, regulations, organisation, interaction with others, processes, culture and competence. The biggest opportunities are associated with:

- Digitalisation of communication with users: NAV has considerable potential for digitalising more of its communication and follow-up with users. With a blurring of the distinction between the physical and the digital, hybrid solutions may become more common, i.e. a combination of automated services and personal contact through the amalgamation of digital and in-person interaction with users.
- Digitalisation of administration: In addition to the potential for increased self-service and automation in benefit administration and manual work processes, NAV has the opportunity to develop more proactive services, where users who are entitled to benefits from NAV will receive these benefits automatically, or receive a recommendation to apply.
- Cohesive and customised services: More use and sharing of data could meet user expectations for more cohesive services and services customised to the individual's needs.
- Artificial intelligence as decision support: New opportunities in artificial intelligence mean this technology could be used to provide guidance and support for NAV's users, as well as to counsellors and case workers. For example, counsellors can get recommendations concerning which users to prioritise for follow-up (so-called profiling), or job seekers can get recommendations about which competence-enhancing measures are most likely to increase their chances in the labour market.
- Platform provider: NAV could provide platforms that allow other actors to develop and offer services to various user groups. The more participants, the greater the networking effects of such platforms.

Which opportunities NAV can and should pursue must be reconciled with data protection regulations, laws, ethics and social acceptance. Awareness of these issues is on the rise, and EU policy (and thereby Norwegian policy) in fields like artificial intelligence and data sharing are more restrictive and responsible than what we see in the US and China. In its role as a key player in the welfare area, NAV's focus will be an ethical and responsible approach to the use of data-driven services with broad support in the population.

There will also be other challenges that may impede or delay digitalisation efforts. Competence demands in ICT and legislative development are vast and may be difficult to meet. Also, there are no guarantees that technological advancements will happen as quickly as expected, or in the areas predicted. New technologies can have unintended effects and may give rise to new vulnerabilities and security issues that could increase threats against NAV.

6.1. Introduction

Technological advancements continue to be made at increasing speed and scope. This affects our society in most areas and technology is becoming more and more important for business development and value-creation. Changes and transitions will drive technological innovations, which, in turn, will shape our lives and our society in the future. With new technologies comes new challenges, and these will affect the social discourse, policy development and directions. This chapter primarily discusses digital technology that affects NAV, because the effects of technology on the labour market were covered in chapter 4.

The climate crisis likely will likely stimulate innovation in "green technology" (WEF 2023), and will force industries to transition. New production tools and materials (DNV GL 2020a) will give rise to new

business opportunities and may lead to a more sustainable and circular economy. Agricultural robots that sow, harvest and gather will likely become a more common sight in rural areas (Tekna 2020), whereas driverless buses and ferries can transport you to and from work in the city (Norwegian Board of Technology 2020). Genetic mapping and customised medicine will lead to more detailed diagnoses and treatment options customised to our individual needs. Sensors and digital twins (see fact box) not only make production processes more efficient, but may also change how the process of designing and developing new products takes place. Further down the line, *quantum computers* (see fact box) will provide computing powers which outstrip even the most powerful microchips we have today by far, and this could give rise to entirely new opportunities in anything from the development of new medications and materials, to artificial intelligence (New Yorker, 2022, Harvard Business Review, 2021).

6.2. Digitalisation towards 2035

The world is shaped by how data is produced, collected, analysed and applied in services and production. Several converging factors amplify each other:

- cheaper and more flexible computing power
- greater and easier access to data
- development and use of algorithmic systems that convert data in different ways

The digitalisation trend will have consequences for business models, employment and societal structures, and has been referred to as the fourth industrial revolution (Schwab, 2016). With this development comes many new opportunities, but also several changes that may test our society.

In the next decade, digitalisation will blur the line between our physical and digital lives. Where we used to be "offline" or "online", our virtual and digital worlds converge and become harder to separate. Artificial intelligence may become a natural "assistant" in many people's everyday lives. At the same time, a central pillar of our digital society may be changing: Multiple parties compete to shape the internet of the future. While the direction is not yet clear, we can be pretty sure that a change made to the internet will affect both our lives and our society.

The metaverse and tomorrow's internet

The lockdowns that followed in the wage of the pandemic laid the foundation for technologies that promote efficient digital communication and interaction. At the same time, new technologies for virtual, augmented and mixed realities are being developed all the time. This is often collectively referred to as the *metaverse* (see fact box).

Today's virtual worlds online are only pale mirages of the metaverse vision. Several data analytics companies predict that younger generations especially, will spend a lot of time in the "metaverse" in the years to come (McKinsey-Metaverse, Gartner-Metaverse, 2022). Many children and young people are already used to playing and interacting with each other in virtual, social worlds that blur the distinction between our physical and our digital lives, such as *Minecraft*, *Fortnite* and *Roblox*.

The South Korean metropolis Seoul has launched Metaverse Seoul, where inhabitants, among other things, can contact city administrators, get career advice and take courses (Time 2022), and several Norwegian companies have also made their first forays into virtual spaces. In October 2022, the Brønnøysund Register Centre and the Norwegian Tax Administration announced that they are testing out information services in *Decentraland*, where users, in the form of avatars, can visit their offices to learn more about things like crypto-reporting and how to start a business (NTB 2022). This stunt in Decentraland is reminiscent of our first encounter with the internet and websites, and the next few years will show whether this is the beginning of a new chapter in internet history, or whether it is just a flash in the pan (NRK 2022). Such experimentation, however, is indication that tomorrow's internet is being forged, and points to the discourse that is sure to come. Perhaps by 2035, NAV has an office in the metaverse?

Service platforms

Recent decades have seen the emergence of service platforms (Finn, Airbnb, Amazon, Netflix), social

media and a transition from stationary computers to mobile devices. This model has given rise to new activities, services and ways to interact, but it has also cemented the position of just a few tech giants. These have managed to secure considerable power and have, in many ways, set the premise for our societal development. This model is now under pressure on several fronts. A new legislative package from the EU aims to regulate these tech giants and is predicted to fundamentally change the internet (Hovlid, 2022) (see section on regulation).

Data flows and control of own data

There are some new ideas about how data flows between different parties, how trust and security can be integrated, and what kind of ownership and control users should have of their own data. The web3 vision for tomorrow's internet, for example, seeks to shift power and control to "users" by using blockchains (Harvard Business Review, 2022) that make it more difficult for businesses, institutions or countries to control the data. Digital wallets, "data trusts", "data cooperatives" and "data unions" are other concepts. Regardless of which of these new ideas gain ground, we will likely see more innovation, as well as discourse into what tomorrow's internet will look like in the years to come (DW, 2022).

Gear change in the development of artificial intelligence

Developments in artificial intelligence (AI) continue at immense speed, now with a new generation of models. So-called "generative models" are deep-learning models trained on vast quantities of text, images, audio files, etc. from the internet. Results so far indicate that we are at a watershed moment in time. These models have broad applications and are seemingly creative: They can draw detailed images from simple text-based descriptions and create coherent texts and music. Not unlike the electrical engine, they may – with some adjustments and customisation – easily be applied in a wide range of areas.

AI-generated art has already won awards (NYT, 2022), and AI services are used by IT developers for coding (Github, 2022). Teachers are concerned that pupils use AI to write papers (NRK, 2022). Examples clearly show that the quality and applicability of AI-generated material has reached new heights. The technology is currently making inroads in creative, high-skill jobs that, until a few years ago, were considered at low risk of automation. Creative professionals, such as graphic designers, journalists and musicians, get access to both new support tools and, possibly, new competition. Generative models are predicted topave the way for a wide range of new services (Economist, 2022), not least in the way we collect and process information from the internet through searches. Instead of a list of links, we may get services that leverage several different sources and present us with pre-processed information in the desired format, such as a simple answer, a report, a presentation, a video or an image. Such a change in the way we use information online is expected to have fundamental and far-reaching consequences for a wide range of processes and services. Many employees and users of NAV could also get an AI-based assistant in the years to come.

At the same time, generative models give rise to several questions: These models have been trained on a majority of the content on the internet and therefore pick up bias in the data. As AI is applied in more contexts, the risk of compounding this bias increases. Another potentially problematic aspect is who builds these models and how they are made. Training them is currently so data- and resource-intensive that development is concentrated among tech giants. This could further cement their control and power. In addition, the risk of abuse also increases, if AI is used to generate false news and advanced computer viruses (Bommasani, Hudson et al., 2022).

Digital technology and geopolitics

Technological developments will likely take on a more marked geopolitical dimension. The rivalry between China and the United States is increasingly focused on technology. Both sides seek control and power and want to limit their mutual dependence and vulnerability (DN, 2022). Where the last decade has been dominated by American tech companies, we will likely see China emerge as a global superpower on technologies that are essential for both the digitalisation process and the green transition. Chinese compa-

nies are heavily invested in both the metaverse (CW,2022) and artificial intelligence. More than a million Norwegians use TikTok (Ipsos, 2022), and in the years to come, names like Baidu, Tencent, Alibaba and Xiaomi may become household names. This will give rise to new questions of technology, power, influence, manipulation and ownership (NRK, 2022).

The EU and Europe are trying to forge a "third path" (see section on regulation). No matter how these three regions (China, United States and EU) choose to regulate, control and exploit technological developments, it will likely affect value chains, technology choices, lives and employment in Norway (Brookings, 2022). New regulations that seek to limit the power, influence and control of tech giants over services and data, for example, could give rise to new business opportunities based on new digital business models.

6.3. A digital welfare state

Continued pressure to digitalise public administration

In the next decade, demand for health and care services will increase, and transition demands and the green transition will lead to more rapid changes in the labour market. In addition, a "fully digital" generation, born after the first smartphone was developed, will make their first experiences with NAV (see chapters 5 and 8). With this comes new expectations and responsibilities, while limited public budgets may mean stricter demands for efficiency and productivity in the services we provide. NAV manages large quantities of data on behalf of the Norwegian people, and when other actors use data to develop new knowledge and better services, expectations for efficiency and innovation in the public sector will likely also increase in parallel.

NAV's employees believe that digitalisation and improved efficiency are some of the factors that will characterise NAV the most in the years to come (chapter 10).

Digitalisation of public administration has been a cross-party political goal for several years, and this effort will likely continue into the next decade. The Government's digitalisation strategy for the public sector 2019-2025 (Ministry of Local Government and Modernisation 2019) seeks to have more tasks completed digitally, and to have citizens access services based on life events more than which agency is providing the services in question. The idea is that data is to be reused and shared between agencies. To support the latter, a national resource centre for data sharing was established in 2020 (Norwegian Digitalisation Agency 2020). Several of the seven prioritised life events, including "having a child", "child with serious illness", "lose and find a job", and "new in Norway" intersect significantly with NAV's activities. Data sharing, a clear and digitalisation-friendly legislative framework, joint ICT solutions, governance, coordination and collaboration, security and digital competence in the public are emphasised as key focus areas and prerequisites for success. The strategy is continued by PM Støre's Government, and initiatives include measures to ensure increased digital participation and competence in the population and to develop digital solutions in the assistive technology area (Ministry of Local Government and Regional Development, 2022).

All technology could potentially have unintended consequences, and it is important to be conscious of how technology is used and what we achieve by doing so. For example, there is evidence to suggest that digitalisation of NAV's services makes NAV more accessible for those who are able to use them, while NAV seems to have become less accessible to users who need other forms of communication. (Liodden et al. 2023). Automatically provided benefits would be good for a majority of users, but they could create barriers for atypical users, often those with low socioeconomic status (Larsson, 2021). It is important for NAV to be conscious of its approach to and use of technology, so that we protect everyone's rights.

At the same time, according to the National Strategy for Artificial Intelligence, the public sector should explore the potential of AI to "deliver more targeted and user-adapted services, enhance the social benefit of its own activities, rationalise operations and work processes, and reduce risk" (Kommunal- og moderniseringsdepartementet, 2020a).

Norway has a good starting point, with a proactive public sector that is implementing new digital services and a population that has the highest internet use in Europe (Statistics Norway, 2019). At the same time, Norway has lagged behind several other countries in Northern Europe, and we fall considerably behind Denmark, for example. A sector-based administrative culture, the inability to involve legal specialists early in digitalisation initiatives, and financing schemes with short horizons may be possible reasons for this development.

Smooth development, governance models and development optimism

The rate of development around us means that NAV must be able to handle rapid changes and transitions. The Digitalisation Strategy for the Public Sector (Government 2019) and a later report to the Storting (Ministry of Local Government and Modernisation 2020b) emphasise an "innovative and flexible" approach to the development of service offerings, to facilitate for a quicker rate of change, while still maintaining control and reliability. For NAV, a "flexible approach" would entail an interdisciplinary approach in the design of our products, as well as making minor adjustments and improvements. This could help mitigate the potential consequences of poor choices, in that we avoid large, costly and high-risk projects. It will be important for the public sector to promote a culture of innovation, where employees and organisations have the courage to try something new, that they are not too afraid of failure.

At the same time, flexible approaches to development are at odds with traditional methods of funding and governance in the public sector. There will likely be more discussions in the years to come on how digital development in the public sector should be organised, governed and funded (Digi, 2022, Digi, 2023, Digi, 2023b, Digi, 2023c) There will likely also be discussion on how goals, gains from improved efficiency and improved user experiences should be realised and evaluated (Klassekampen, 2023, Aftenposten, 2023).

Technology will continue to offer up new opportunities, while simultaneously challenging services and changing how NAV and its users interact, and it may also, in some cases, raise ethical questions (more on this in chapter 6.5). Feeling too exuberantly optimistic about development could have an economic downside and may mask social costs, such as digital exclusion (Aftenposten, 2023) (see also chapter 5.3). The ways in which NAV seizes opportunities, designs technology, changes its organisation and methods and copes with challenges will certainly be a defining characteristic of our welfare state in 2035.

Recruitment

In a relatively short time, NAV has built one of the largest IT communities in the country. In the years to come, we expect increasing demand for technological and analytical expertise in most industries, and strong competition for the brightest minds. This competition is heightened when several public enterprises are strengthening their digital production competence. 4 out of 5 public enterprises report that they are struggling to recruit the necessary ICT competence.(Statistics Norway, 2022).

In the wake of the pandemic, the competition for the brightest minds has taken on a new dimension: Hybrid work, with the option to work from anywhere. Both NAV and other public agencies are now giving their employees the option of working from anywhere in the country (Memu, 2021). On the one hand, this could provide better access to technological expertise. On the other hand, it will be easier for tech workers to work from anywhere in the world, and NAV may need to prepare for more international competition (Schibsted, 2023).

The role technology plays is also changing. According to Github, up to 40 percent of all lines of code produced by developers who use the AI assistant Copilot, are being written by the AI tool (Eric Rosenbaum, 2022). The emergence of low-code and no-code platforms, which use visual tools to solve programming tasks, may make IT development more accessible (IBM, 2022).

Technology trends with indirect significance for NAV

- **Green technology** refers to technologies that directly or indirectly promote environmentally friendly changes, and it includes anything from renewable energy to low-emission production and more efficient utilisation of resources and raw materials. The rapid development of battery technology (DNV,2020a) has contributed to making electric transport accessible to a large number of people, and it could also make solar and wind energy accessible at night and in periods with little or no wind. Solar energy has become the fastest growing energy technology in the world, and the price of solar energy is coming down (BBC, 2020).
- **New materials and production technology** Nanotechnology, advanced hybrid materials and additive production technology (e.g. 3D printers) brings new opportunities in product development, design, orthopaedics, spare parts, assistive technology, etc. In combination with sensors, simulations using so-called "digital twins" and robotisation of processes, it may be possible to produce goods in new ways. At the same time, work tasks may, in many cases, change in such a way that new competence is required.
- A **digital twin** is a digital representation of a physical object. This could, for example, be a visual presentation of a building or an engine with the help of design drawings, maintenance histories and sensors. A digital representation of an organisation can be used to predict the effects of organisational changes and identify process changes. Perhaps in 2035, the public sector will use information about each of us to create our digital twin?
- **Personalised medicine** refers to prevention, diagnostics, treatment and follow-up tailored to the biological make-up of each individual patient. Advances in molecular medicine and genetics provide new opportunities for personalised diagnostics and treatment, supported by advancements in nanotechnology and artificial intelligence. At the same time, sensor data, from smart watches for example, allow for new ways to notify users of their health condition.
- **Quantum computers** are different from traditional computers, in that logical operations are based on processes of quantum mechanics. These computers perform operations much more quickly than traditional computers, or operations that traditional computers simply cannot do. It is presumed that quantum computers will be able to crack a majority of the encryption currently used in modern data processing and communication. While the development of robust and reliable quantum computers still has its challenges, several companies are exploring options.

Technology trends with particular significance for NAV

- **Cloud services** provide access to shared computing powers from large datacentres via the internet. This allows for efficient operation and distribution of software. Many people use cloud services, such as map services, Gmail, OneDrive, Microsoft265 and various accounting software for businesses. During the pandemic, we saw several examples of how cloud services made it possible for public enterprises to readjust and adapt when inquiries from customers multiplies (World Economic Forum 2020a). The use of cloud services in the public sector is expected to increase in the years to come (Ministry of Local Government and Modernisation, 2016). This could improve security, because operation is being handled by large, professional actors. The NSM has expressed concern for the overall national dependence on foreign cloud service providers and what this may entail in case of crises and conflict (NSM, 2022). As NAV and the Norwegian public sector makes the move to the cloud, we can expect more discourse on digital autonomy.
- **Artificial intelligence (AI)**. Artificial intelligence systems perform tasks, physically or digitally, based on the interpretation and processing of structured or unstructured data to achieve a defined purpose (Ministry of Local Government and Modernisation 2020a). Some AI systems may also learn by analysing and taking into account the effect of prior actions within the environment. This technology lets us talk to our smartphones, translate between languages, recognize faces or let the car drive itself.
- **Foundation models:** A type of model within artificial intelligence that has been trained on vast quantities of non-adjusted data, and that has the potential to be used for a wide range of purposes, including purposes beyond the one originally intended (Wikipedia).
- **Generative AI**: A type of foundational model within artificial intelligence that generates new content in the form of text, images or sound, based on data it has been trained on (World Economic Forum, 2023). One example is the chatbot ChatGPT (OpenAI, 2022).
- **Machine learning** is a class of artificial intelligence where computers can learn without being programmed. The computer, on its own, is able to create rules based on data and results, because it learns from examples it has seen. Machine learning makes it possible to make assessments and decisions based on large quantities of data. This technology is used, among other things, to recognise patterns and connect occurrences that are similar, identify discrepancies, predict outcomes, create synthetic data, translate between languages, and translate language for speech

and image recognition. The technology can provide us with recommendations, or it can be set up to make decisions on its own. The emergence of digital toolkits that simplify the development of machine learning models, will make this technology more accessible.

- **Digital platforms** make it possible to create new business models by offering infrastructure that links customers and providers. Examples of platforms include Amazon, Apple, Alipay, Airbnb, Facebook, Uber, Spotify and Finn. Networking effects mean the value-creation increases as the number of users increases. These platforms are frequently data-driven, by having algorithms that provide users with advice and recommendations. As these platforms offer services across national borders and challenge traditional forms of employment, digital platforms will require legislative developments related to taxes, employment conditions, competition, security and data protection.
- **Hybrid reality** is a blend of real and virtual worlds, where physical and digital objects seem to naturally interact. Hybrid realities can be further divided into "virtual reality" and "mixed reality". Virtual reality (VR) is a computer technology that allows the user to influence and be influenced by a computer-generated environment that aims to simulate a reality. NAV has already experimented with giving youths insight into tasks and jobs they had never even considered før (MEMU, 2018). In a "mixed reality", you can mix digital information in with what you hear or see, such as in the game Pokemon Go.
- In **the metaverse**, a hybrid reality and the internet converge in a sensate and virtual universe, and bring social media, games and 3D graphics together (Norwegian Board of Technology, 2022). Exactly how this will look, is not yet clear. One common denominator, however, will be a realistic sense of physical presence in rich, virtual worlds – thereby bringing about a paradigm shift in how we use digital services. Tech giants all over the world are investing heavily. In 2021, Facebook changed its name to Meta, and the company has ambitions plans for a digital space where humans and services come together – a "walk-in" 3D internet where users can work, trade and meet friends (Delcker, 2022). For NAV, the metaverse promises a new virtual meeting place for colleagues, or perhaps a place where users can get guidance, discuss things with other users, take courses or get training.
- **Robotisation and autonomous objects** Self-driving machines, cars, robots and drones are autonomous objects, which use sensors and artificial intelligence to navigate and interact with their surroundings without any input from humans. Self-driving cars could affect everyone who works as drivers, and they could therefore also affect NAV, for example by providing new options for mobility for elderly persons and others who currently get help with customising a vehicle.
- **Mobile high-speed internet (5G and 6G)** Opportunities provided by smartphones have increased in step with the capacity of these devices. With the 5th generation mobile network (5G), we expected to see the distinction between mobile networks and fibre-based networks being erased (Norwegian Board of Technology 2019). The number of connected devices is expected to increase dramatically, which in turn generates more data for AI and other services. The introduction of 5G networks makes the **Internet of Things** possible, and with this, "smart cities", where you can trace goods from raw material to production, predict maintenance needs and "climate track" finished goods. Sensors on shop shelves will automatically give a notification when it is time to restock. 5G will likely lead to even more automation in some occupations. We expect the next generation of mobile network (6G) to be ready around 2030 (Lifewire, 2023), and this will likely increase network capacity even further and find even more areas of application. For NAV, 5G, and later 6G, will reduce the technical barriers to remote consultation and hybrid realities. This could give new opportunities for job seekers in the form of advance job training and customised vocational measures, for example with the use of virtual reality (VR).
- **Internet of Things (IoT)**: Consumer articles, clothing, household products and machines get integrated sensors that collect data by connecting to the internet. This could, for example, be useful for the assistive technology area, in planning maintenance and understanding patterns of use.

6.4. Digital interaction with users, automation, online self-service and meetings in the metaverse?

By 2035, very few recent graduates will have ever set foot in a bank or had to deal with a broadcasting schedule on TV. For NAV, too, digitalisation will move a lot of user dialogue and service production to digital interfaces, and our website, nav.no, is already regarded as Norway's largest NAV office by many.

Today, NAV has many different channels for communicating with users, including video meetings, and these could be more tightly intervowen in the years to come. This will require good communication skills and relational competence (MEMU, 2022).

The metaverse will provide entirely new opportunities for remote consultations and follow-up. The analytics company Accenture predicts that the metaverse will

usher in a new phase of digitalisation in society, which fundamentally changes the way we work, interact and exchange services – with new opportunities for public service providers as well (Accenture, 2022). Perhaps in the future, job seekers can get guidance, interview training and work-oriented training in virtual spaces that offer completely different opportunities for digital interaction than what we have available today (Time, 2022). NAV will likely have to facilitate for users contacting us through other channels than we currently offer, and we must also ensure that these channels overall provide a good user experience, where part of the communication is taking place in digital interfaces (Forbes, 2021). More opportunities also bring new demands for communication and relationship-building in digital spaces (MEMU, 2022). In combination with generative AI, virtual worlds, like the metaverse, could perhaps also offer "simulators" for counsellors – solutions that offer new ways to test out digital tools and practice in preparation of challenging interactions.

As user interaction is digitalised, we should ask *whom* NAV is digitalising for, and whether digital interfaces are suitable for users with complex assistance needs. NAV's services must be designed with the needs of users with and without digital competence in mind, and we must make sure vulnerable groups are not excluded. NAV must ensure that digitalisation and resource use take into consideration the needs and interests of user groups with complex assistance needs (Løberg, 2022). See chapter 5.3 for more on digitalisation and user expectations.

6.5. A digital public administration

Today's processes, systems and regulations are the result of yesterday's scope of opportunity. With a blank slate, organisation charts and work processes would likely have been different. As mail, paper and in-person meetings at NAV offices are replaced by digital self-service solutions, digitalisation creates space to rethink what good processes are and how we solve the tasks before us.

NAV as a platform provider

Digitalisation creates new opportunities for interaction between different actors. Digital platforms, such as Finn, Airbnb and LinkedIn do not provide services directly, but facilitate for interaction between different actors (see fact box).

In many areas, NAV is also an interaction coordinator between different actors, such as employers and job seekers, scheme operators and users, or employee, physician and employer. When this interaction moves to a digital interface, it creates a digital meeting place where NAV's role shifts from service provider to platform provider — one who provides information, enforces the rules for interaction and manages the platform, while also allowing for other actors to innovate by developing and offering services to our users. Arbeidsplassen.no is one such platform: it brings employers and job seekers together, with future interaction opportunities with other providers, such as Finn and LinkedIn, as well as HR and payroll systems. Providers of assistive technology can connect with municipal occupational therapists, and municipalities can build services compatible with NAV's interface. This enables closer integration with other municipal services, perhaps based on IoT sensor data from assistive technology provided by NAV. There is also potential for interaction across other public bodies. Labour market data from NAV and data from the education sector, for example, can be included in a platform where various actors develop new solutions for lifelong learning.

Life is a stream of events (and choices)

Today, job seekers can sit at their kitchen tables and submit applications for unemployment benefit, or they can apply for parental benefit on the train, on their way home from work. NAV's strategy(NAV, 2023) takes this even further: People should receive the payments they are entitled to automatically, and if an application is required, the process should be as simple as possible.

Algorithmic personalisation of content, recommendations and offers is already common. Users of Spotify, Finn and Netflix are used to seeing content that has been customised to their preferences and needs. This development shapes user expectations, and it is not unthinkable for public services to move in that direction, perhaps based on the user's life events and related needs.

Digitalisation makes it possible to create systems that identify life events, such as a new baby or a medical certificate for sick leave. Instead of waiting on the person, the public sector can initiate action, either in the form of a recommendation or a (partially) automated granting of benefits.

Job seekers who need to find a new job after being out on extended sick leave, can be matched with available jobs based on how their experience profile corresponds with other profiles that have made similar "leaps". Perhaps the user will also get a recommendation for a preparatory, virtual course on "Your NAV" and is automatically assigned a job specialist with experience from similar cases.

This could mean that the user experiences less friction in their meeting with proactive and event-oriented services, but at the same time, this shift may conflict with administrative principles related to co-determination, empowerment and involvement (JOU, 2019). It will therefore also be important for NAV to innovate and organise services in such a way that users have legal protection in their interaction with new technology.

Support for users and counsellors

Microsoft Teams is currently implementing support functions based on generative AI (see fact box), which, among other things, offer automatic minutes, themed meeting structures, suggestions for follow-up points, and real-time subtitles in other languages (Digi, 2023, Microsoft, 2023). Similarly, AI-based support could help simplify meetings between users and NAV, make documentation and planning tasks easier for counsellors, and provide both parties with overviews and insights into the process.

The same technology may also make things easier for users that currently struggle to use NAV's digital interfaces (Norwegian Board of Technology, 2022): By "talking to the machine" using informal language, either via text or speech, solutions using artificial intelligence can provide information about rights and obligations and provide help and support in filling out an application. This type of system could perhaps, in time, also provide simultaneous translation, interpretation or it could rephrase a difficult text into understandable language.

Job seekers can get more personalised recommendations for suitable jobs or competence measures that will have the biggest impact on their chances of finding a new job. Processes related to case processing, applications and follow-up of users in NAV can be digitalised, and in some cases, they may even be partially or fully automated. The Belgian VDAB uses AI-based technology to recommend job listings that fit the competence profiles of job seekers (OECD). Counsellors, on the other hand, can get insight into which users should be prioritised for follow-up. The Swedish Arbetsförmedlingen uses an algorithmic profiling tool to assess which level of intervention a job seeker needs (Arbetsförmedlingen). The French Pôle Emploi has tested a machine-learning model that assesses the likelihood of a job seeker finding employment within 6 months (European Network of Public Employment Services, 2020), based, among other things, on the job seeker's job history, qualifications, the local labour market and desired job qualities.

In the AMS in Austria, a similar support tool, which aims to allocate resources to users who are deemed to have the best chances of finding a job, has become the subject of heavy debate and criticism (Oeaw, 2020) amid claims of discrimination against groups that traditionally have been the furthest away from the labour market (Vitt, 2020, Frontiers, 2020). This example shows that it can be challenging to implement these kinds of systems while ensuring that principles of equal treatment, transparency, relevance and compliance are upheld Gundersen & Bærøe, 2022).

NAV has tested a decision support system in the follow-up of sickleave. Based on experiences from this work, questions related to the use of AI in public administration were brought to the Norwegian Data Protection Authority's regulatory sandbox (Norwegian Data Protection Authority). This exercise highlighted a central problem: The legislative framework for the processing of personal data is rarely designed to explicitly allow personal data to be used in the development of AI tools. This weakens predictability and the citizen's legal protection in their interaction

with public administration. In the years to come, we will likely see some debate over whether the laws should change – and if so, how – to take advantage of the opportunities provided by technology, while, at the same time, the same technology creates key barriers to use (see chapter 6.6).

Another open question concerns how the population's trust in NAV is affected by machine-learning in the welfare administration, and how algorithmic decision support affects the relationship between citizens and NAV. Does this lead to increased alienation and/or a stronger demand for case workers who are able to understand the user in context? One study, funded by NAV, suggests that the majority of citizens believe increased *automation* will lead to less accountability and legitimacy, but also less bias.

The same study shows that 60 percent of respondents know very little about machine learning and artificial intelligence, and that the population is divided in their views on whether use of this technology in public administration is something to be concerned about. Those who claim they have some knowledge of the technology, however, are more positive (Arnesen & Johanneson, 2022).

Digital identity in a digital wallet?

A digital wallet in your pocket

When the lines separating our physical lives from our digital lives begin to blur, traditional methods for digital verification of identity are put to the test. How can NAV be sure that benefits and services are received by the right person?

With solutions such as ID-porten, MinID and BankID, the Norwegian public sector has long been at the forefront of the world in the use and development of electronic identification solutions (Samarbeidsportalen). Through a proposed amendment to an EU regulation, we will likely get a new, joint European eID and digital wallet that can be used in most European countries (European Council, 2022). The eID can likely be used to log in to both private and public service providers, and the wallet will hold log-in information and personal documents, such as driving licences, diplomas and certificates. A central goal is to give users greater ownership of their digital identities and control over which data they share.

NAV will have to create systems to accept and process eIDs from other European countries, but this development could also bring some exciting opportunities: The need for manual document verification is, in several areas, a barrier to automated benefit processing. A student project has already explored how block chain technology, when combined with a digital wallet, can digitalise document verification and payment of unemployment benefit to job seekers (GitHub). Perhaps a digital wallet can also be used to include certified letters of recommendation, etc. in the digital employment and placement process.

Digitalisation may increase vulnerability

New technology is not necessarily exclusively positive. Sometimes it also brings new vulnerabilities and security risks. Information is produced and shared to stimulate innovation and new development, but it could also give threat actors insight into matters that can be used to plan unwanted or criminal activity aimed at individuals and organisations (Norwegian National Security Authority 2020).

During the pandemic, it was revealed that criminal actors exploited the opportunities which the increased use of digital services for the payment of benefits brought (Norwegian Tax Administration (undated)). These actors shared knowledge and false identities, and worked together to obtain benefits and goods to which they were not entitled. In the future, we expect similar opportunities may be exploited, given the rate of digitalisation within NAV, and we expect similar authorities and bodies will face the same challenges.

The US Department of the Treasury has identified the use of false and stolen identities for the purpose of fraud and money laundering as a challenge, and they express concerns that this type of criminal activity is transnational and often linked to international networks (Department of the Treasury 2022).

DNB's Annual Fraud Report from 2022 also highlights how criminals are always evolving to commit fraud. While it is not yet widespread, DNB describes

how criminals experiment with advanced artificial intelligence, machine-learning and deepfake technology to commit fraud. Deepfake technology makes it possible for criminals to present themselves as a completely different person in video or phone calls. Similar concerns were described in the Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime's (Økokrim) threat assessment from 2022, where they assume that criminal networks to an increasing degree will take advantage of opportunities made possible by technological advancements (Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime 2022). In combination with stolen identities, this type of technology and tools may make it easier to convince NAV that you are the person you pretend to be, thus gaining access to benefits you are not entitled to.

The Norwegian National Security Authority (NSM) report that exploitation of software vulnerabilities account for a considerable share of cyberattacks against Norwegian enterprises (NSM, 2022). According to the World Economic Forum (2020a), cyberattacks against critical infrastructure and data breaches will be notable threats in the coming decade. Attacks like the data breach against the Norwegian Storting in late 2020, (Ministry of Foreign Affairs 2020) are expected to become a more frequent occurrence.

With AI, we are starting to see new attack vectors which NAV and the rest of the public sector have limited experience with. It has been established that AI models can be manipulated to both change their behaviour and to leak information from the base data they have been trained on. With generative AI models, it will be easier for threat actors to create and use seemingly credible phishing e-mails, images, websites, artificial identities or code that exploits vulnerabilities or bypass antivirus protection. These can, for example, be used to trick employees and users to give up information, or to discredit NAV.

Recently, we have seen several examples of various actors using technology and digital platforms to control or corrupt public discourse, or otherwise pursue strategic goals. Digital proxies, false profiles, so-called "brigading", which refers to when groups work in a coordinated manner to manipulate others, are buoyed by the proliferation of algorithmically customised or manipulated information, such as so-called deep fakes (NRK 2019). Technology makes it more difficult to distinguish fake news from the real thing, and this is amplified in digital echo chambers, which can be used to manipulate opinion and contribute to increased polarisation. It may also be used as a targeted means to discredit figures of authority or otherwise undermine trust in NAV and the public sector (Misinformation Review 2020). At the same time, AI models can also be used to uncover attacks against infrastructure or identify false information.

NAV will have to take into account the consequences increased digitalisation may have for social security fraud. Increased digitalisation also requires a stronger focus on updating laws and regulations to better cover the realities of future solutions (Melkild 2023 and NØF 2023).

Green digitalisation?

The discourse surrounding the benefits and challenges of digitalisation will also have a climate aspect. While digitalisation can contribute to the green transition, both hardware and software, such as large AI models, come with a considerable carbon footprint, in both their production and their use. Frequent and widespread use of digital services, along with frequent replacement of equipment, further reinforces this trend. In the years to come, the discourse surrounding the impact of digitalisation on climate will likely deepen, and NAV can expect to be met with demands to contribute to a green and sustainable digitalisation process.

6.6. A new spring for technology regulations and legislative development?

While digitalisation does come with new security challenges, the use of data and algorithmic systems also raises major legal and ethical questions. In 2019, the UN poverty envoy warned against a "digital welfare dystopia" (FN, 2019) brought forth by artificial intelligence in the public sector, and in 2020, a Dutch court (de Rechtspraak, 2020) found that an AI-based

Central EU regulations on digitalisation policy

- The **Digital Markets Act** takes effect in 2023 and aims to prevent monopolisation and promote digital competition. The user will, among other things, be allowed to move their data between different service providers (Norwegian Board of Technology, 2022). If the act works as intended, it will not only limit the dominance of tech giants, but it will also make it easier for European tech companies to take up competition with them. Perhaps in a few years, we will see new European actors and a change in industry structures in Norway, too? When it becomes easier to move data between different service providers, organisations like NAV become less vulnerable.
- The **Digital Services Act** makes companies responsible for the spread of illegal content online, and it requires large platforms and search engines to be more transparent about their algorithms and how they moderate content. This issue was recently highlighted by NRK, when they documented how TikTok's algorithms pull children into a "world of extreme body conditioning" (NRK).
- The **Data Act** seeks to promote more sharing of data across organisations. As an example, both the barista and the maker of the coffee machine will have access to data about the coffee being produced by the machine. However, so does the competitor, who offers less expensive repairs of the machine. This will make it possible for new service providers to establish themselves, and could lead to changes in market structure.
- The **AI Act** regulates the use of AI through a risk-based approach: The higher the risk, the more stringent the requirements for responsible development and control. The use of AI in basic public services is considered "high risk" in this context. Many potential applications for AI within NAV and the rest of public administration, will likely therefore have to comply with more stringent requirements for, among other things, risk management, data and data quality, documentation, transparency and accountability, supervision and control.

system designed to uncover welfare fraud in the Netherlands was in violation of human rights (Privacy International, 2020).

Digitalisation may contribute to value-creation and more efficient processes in the public sector, but it may also shift values and redistribute power and decision-making in new and unintended ways that may marginalise vulnerable groups. Issues like bias, discriminating algorithms and "black boxes" that make it difficult to explain outcomes, have garnered some attention in recent years. At the same time, existing weaknesses and bias in manual processes are uncovered, and this could force NAV to take a closer look at whom to prioritise, how to prioritise, and how processes should be designed to protect the interests of users. Gartner (2020) has warned against a growing "digital trust and ethics crisis" in the years to come, and is now claiming that tools that ensure a responsible approach to and implementation of AI are a central strategic trend (Gartner, 2023). In the coming years, we will see several attempts to regulate development.

New regulations

Legislative abbreviations rarely make it into common vocabulary, with perhaps one notable exception: GDPR, the General Data Protection Regulation, which took effect in Europe in 2018. Since then, this regulation has been used as a template and inspiration for similar legislative action in many other places around the world. This could be seen as an example of how, when digitalisation blurs the lines between the physical and the digital, there is an increasing need for a democratic basis and some control over developments. In the years to come, the EU will enact several new acts (see fact box) in an attempt to regulate where and how technology will be allowed to shape our society (see chapter 9.5). These will also affect Norwegian law and Norwegian society, and they may, directly or indirectly, also affect NAV. Some draw on lessons learned in the last 10–15 years, whereas others try to preempt certain developments. Several sources predict that these acts overall, will change the direction of European digitalisation, which may, in turn, inspire legislative changes in other areas, too. Read more about digitalisation policy in the policy chapter.

Of these, we expect the **AI Act** (see fact box) to be the one with the most significant impact on NAV. AI applications that involve services or benefits provided by NAV will likely be considered "high risk" and therefore subject to more stringent requirements for transparency and accountability. From a regulatory

viewpoint, the use of AI in public administration is still largely uncharted territory. As our examples show, the use of AI will be both challenging and subject to much debate, and will require both legislative development, considerations of ethics, interaction and data sharing, as described by the European Commission (2019), National Strategy for Artificial Intelligence (Ministry of Local Government and Modernisation, 2020a) and the Norwegian Data Protection Authority (2022).

6.7. Trends associated with the greatest uncertainty

It is difficult to predict how technology will affect our lives, our society and NAV in 2035. 15 years ago, smartphones did not yet exist. Perhaps in another 15 years, we no longer use them?

Technology trends associated with considerable uncertainty include:

- The speed of change may put pressure on traditional models for funding and development in the public sector. Framework conditions for flexible and experimental digitalisation, organisational and cultural development, support for digital processes of change, and access to digital development competence are all factors of uncertainty that may affect NAV's ability to accommodate demands for change in the years to come. It is also uncertain whether NAV will be able to attract the necessary expertise.
- There is some risk that we are too optimistic about digitalisation, and that new technologies do not lead to the benefits and outcomes we expected, or that the implementation of new solutions prove to have a significant social cost for some groups.
- AI will likely be integrated in an increasing number of digital tools in the years to come. At the same time, these models raise several as yet unanswered questions with a considerable potential for ethical and legal repercussions. The regulatory framework is changing, and uncertainties surrounding both scope of opportunity and use in NAV are considerable.
- Disinformation, attacks and politically motivated manipulation of digital tools represent a vulnerability for NAV. Another, related factor of uncertainty is a potential geopolitical shift in the centre of gravity in tech development from the United States to China, and the shift in technological, strategic and political direction this could entail. If users expect the presence of or solutions based on Chinese technology, will it be possible for NAV to say no?

6.8. Questions for reflection

- How can data-driven services be useful in your field?
- How can NAV contribute to data-driven services becoming more widely accepted by the public?
- How can we prevent algorithms from discriminating against individuals or groups?
- How can we use technology to find more people jobs?
- How will technology change meetings with users in 2035?
- How do you want digitalisation to change NAV?

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7. LIVING CONDITIONS

By: Jorunn Furuberg

Summary: Young adults and refugees most vulnerable – development uncertain going forward

In the past ten years, we have seen the standard of living increase, where all income groups have experienced increased real income, even though this increase has been weak in recent years. A lot has changed in the past year, and in 2022, price inflation, especially in terms of electricity, food and fuel, has led to a significant increase in net expenses for households. Interest rates have also increased, which has led to increased housing costs for those who own their own home. It is uncertain whether increased inflation and high interest rates are going to continue. This will depend on how things go internationally, as well as on the labour market.

The share of the population earning a persistent low income according to the EU-60 threshold decreased in the last year we have data for (2021), and for most age groups, the trend is stable. The share earning a persistent low income is lower among older age groups, compared to the population average, and it is the young adult age group (18–34) that is the most at risk of low incomes. People with an immigrant background or people receiving benefits from NAV are over-represented in the low-income group. In recent years, the low-income share has been stable among people with an immigrant background. The low-income share is highest among immigrants from countries where a lot of refugees come from, and this share does decrease as the period of residence in Norway increases.

Among households where at least one member has a stable connection to the labour market, the share of low-income households has been low and stable in recent years. Among households where the primary earner receives benefits from NAV, the share of low-income households is high for most benefit recipients overall, except among retirement pension recipients. Among disability benefit recipients, the share of low-income households had doubled in the past ten years. Among those who receive minimum pensions, either as retirement pension or disability benefit, 7–8 of 10 report low incomes.

The survey on living conditions shows that persons in the low-income group more often report a lack of economic and social goods compared to the rest of the populations. In 2021, 30 percent of those in the low-income group reported that they lacked access to a private car, and 23 percent reported that they could not afford to replace worn-out furniture. Among social goods reported by the low-income group, not being able to afford a one-week holiday was most common. This was reported by approx. one fourth in the low-income group.

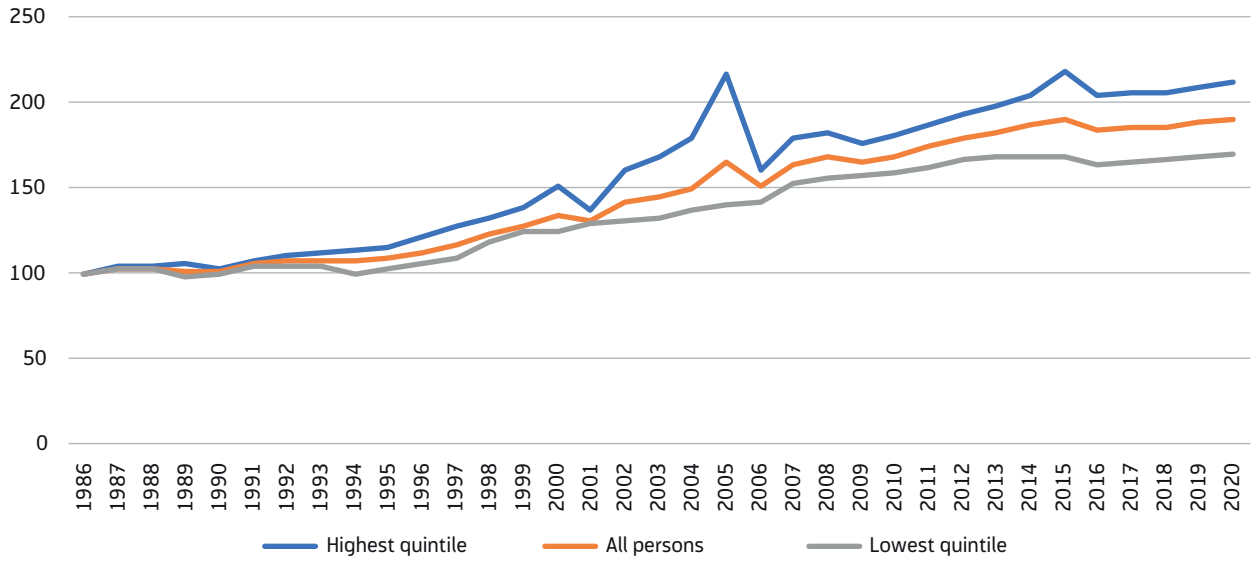
The share of the population receiving financial assistance decreased from 2018 to 2021, despite unemployment rates periodically being high during the pandemic. This is likely due to the expansion of income-guarantee schemes during this time. The share of recipients of financial assistance among immigrants has decreased in recent years up to the end of 2021, due to a reduction in the number of new refugees in this period. Preliminary figures indicate that the number of recipients of financial assistance increased by 9 percent from 2021 to 2022, as a result of increased costs for households in 2022, as well as an influx of refugees. A sample survey shows that the increase was even greater towards the end of the year.

There is considerable uncertainty associated with how the situation will develop going forward, and it will depend on economic growth, labour market developments, future adjustments of social benefits, and immigration, especially in terms of refugees. We will see the biggest challenges if we get a situation where income inequality increases, in combination with weak economic growth. A continued high influx of refugees and persistent imbalances in the labour market are among those factors that could lead to increased income inequality. Weak growth in the working-age population and risk of continued war and conflict are among the factors that could lead to weak economic growth. A combination of increased income inequality, low general income growth and potentially persistent high price inflation and high interest rates, could lead to added pressure on NAV's services, such as financial assistance, financial counselling or housing assistance.

7.1. Introduction

Living conditions refer to the resources each person has at their disposal, and to what degree people are able to benefit from these resources to create good lives for themselves and their loved ones. The term living conditions is used both in the National Insurance Act and in the Social Services Act. The benefits and schemes managed by NAV are essential in terms of guaranteeing the living conditions of groups that, for one reason or another, need income protection. By managing national insurance, NAV shall contribute to financial security and to "equalise income and living conditions

Figure 7.1. Developments in after-tax income per consumption unit (EU scale) Average. Index in fixed NOK from 2020. 1986=100



Source: Statistics Norway

over the course of the individual's life and between groups of individuals" (Section 1 of the National Insurance Act. NAV is the administrative body for the Social Services Act, which is the ultimate social safety net in our country. According to Section 1 of the Social Services Act, NAV has a responsibility to "improve the living conditions of disadvantaged persons, to contribute to social and economic security, including to ensure that the individual has an opportunity to live and reside independently, and to promote entry into employment, social inclusion and active participation in society".

Which type of living conditions a household will be able to achieve, strongly correlates to the household's combined income. Living conditions will also be influenced by other factors, such as wealth and personal resources, such as social network and family. For most, household income will be the factor that is most relevant for standard of living, and real income trends will give some indication of the development in living conditions for households. Income provides access to material resources, such as food, clothing, housing, transport and other necessary goods. Access to health services and education are also central factors for good living conditions. These services, however, are largely available to all households in Norway, regardless of income.

In addition, living conditions also indicate how people *perceive* that they are doing, what their quality of life is, and how content and happy they are. Living conditions includes some goods and resources that people, to some degree, have some control over, but also resources in the community and accessibility of private and public services.

Norway is one of the richest countries in the world, and our economic growth over many years has led to increased real incomes for most. In comparison to other countries, we have largely been able to maintain an even income distribution, with relatively small differences in living conditions. This can be attributed to persistent high employment rates and low unemployment, as well as to our taxation system, welfare schemes and incomes-policy collaboration, which have promoted income distribution and less inequality than in other countries.

Economically speaking, we have seen increases in standards of living for all income groups in recent decades. Figure 7.1 shows the development in after-tax income per consumption unit for the average of all persons, as well as the averages for the 20 percent (quintile) with the highest and lowest incomes. In the period 1986–2020, the average after-tax income per

consumption unit (EU scale) for the population as a whole, has increased by 91 percent. For the quintile with the highest income, the increase was 112 percent, and for the quintile with the lowest income, the increase was 70 percent. All income groups have seen growth in real incomes in the past 10 to 15 years overall, but in the past 5–6 years, real incomes have been slow to increase, and it has taken time to recover from the drop in 2016. By 2020, the quintile with the highest income had an income level that was slightly higher than the equivalent group in 2014. For the 20 percent at the bottom of the income distribution, real income growth has been slow since the oil price drop, and in 2020, the income of this group was only marginally higher than the equivalent group in 2013.

For recent decades overall, Norway has seen standards of living improve for all income groups, and we have not had any periods with significant drops in real income, even if the real income growth has been slow in recent years (Figure 7.1). Even so, a lot has changed for Norwegian households in the past year. Higher prices and interest rates throughout 2022 have led to a significant increase in living expenses. Price increases have been especially high for electricity, fuel and food. Increased rent and interest rates have led to higher housing costs. Statistics Norway has calculated that an average household in 2022 saw a NOK 18,000 net increase in expenses. That means that the expenses of an average household will be NOK 18,000 higher after adjusting for the estimated income increase (Lian et al. 2022). Households at the bottom of the income distribution had the highest relative increase in expenses. More expensive electricity, fuel and foods eat up a greater share of the income for low-income households, whereas higher interest rates will affect high-income households more severely.

There is considerable uncertainty associated with developments in this area in the years to come. We will see the biggest challenges if we get a situation where income inequality increases, in combination with weak economic growth. Labour market restructuring and changes in competence demands as a result of technological developments, among other things, may lead to increased income inequality, especially if the restructuring leads to persistent imbalances in the labour market (chapter 4.2). A continued high influx of refugees may also lead to increased inequality (chapter 3.4). There are also several factors that may

Definitions

After-tax income
This term refers to the sum of the household's recorded income after tax. This includes all earned income, investment income and transfers, such as pensions, social insurance benefits and housing benefit. Tax and negative transfers, such as child support payments and pension premiums, are deducted. There are some factors that affect the household's financial resources, but that are not included in the income term: The value of public services, home manufacture, value of housing services, durable consumer goods and any income evaded from taxation, such as income from undeclared work (Hattrem 2022).

EU-60
The EU has two different measures for low income, EU-60 and EU-50, where low income is defined as income below 60 or 50 percent, respectively, of median income, adjusted for how many adults and children who are part of the household. Median income is the income that would be in the middle of the distribution, if one were to arrange all incomes from lowest to highest. A special equivalence scale is used to calculate how many consumption units are in the household. EU-60 is the most commonly used measure for low income in Norway. We also distinguish between annual low income and persistent low income. Persistent low income means the household has had an income below the low-income measure for three consecutive years.

EU scale and consumption unit
Income is measured at household level. This means that a person with an income of 0 in personal income, may still not be considered low-income if their spouse or partner earns a sufficiently high income. In the EU scale, the first adult counts as 1, the next adult counts as 0.5, and any children count as 0.3. A household of two adults and two children would then be equivalent to 2.1 consumption units. This means that the household, according to the EU scale, would need an income 2.1 times that of a single person to achieve the same standard of living. This approach takes into consideration the economies of scale that larger households benefit from. In 2021, the low-income threshold was NOK 251,600 after tax per consumption unit according to the EU-60 measure. This means that the low-income threshold for a household with two adults and two children according to the EU-60 measure would be NOK 528,400 after tax.

lead to weaker economic growth in the years to come (chapter 4.3): Weak growth in working-age population, risk of continued war and conflict, and the fact that security and preparedness has been prioritised over economic efficiency in international trade. This could lead to a more permanent disruption of the long-standing trend of real income growth for median households and low-income groups.

A combination of increased income inequality, low general income growth and the possibility that price inflation and high interest rates continue, will likely lead to more households having to apply to NAV for assistance. More households may need financial assistance, either as a supplement to earned income or social insurance benefit, or as the sole source of income. The demand for other types of assistance will likely also increase, such as financial counselling and assistance with finding housing.

7.2. Relative low income and living conditions

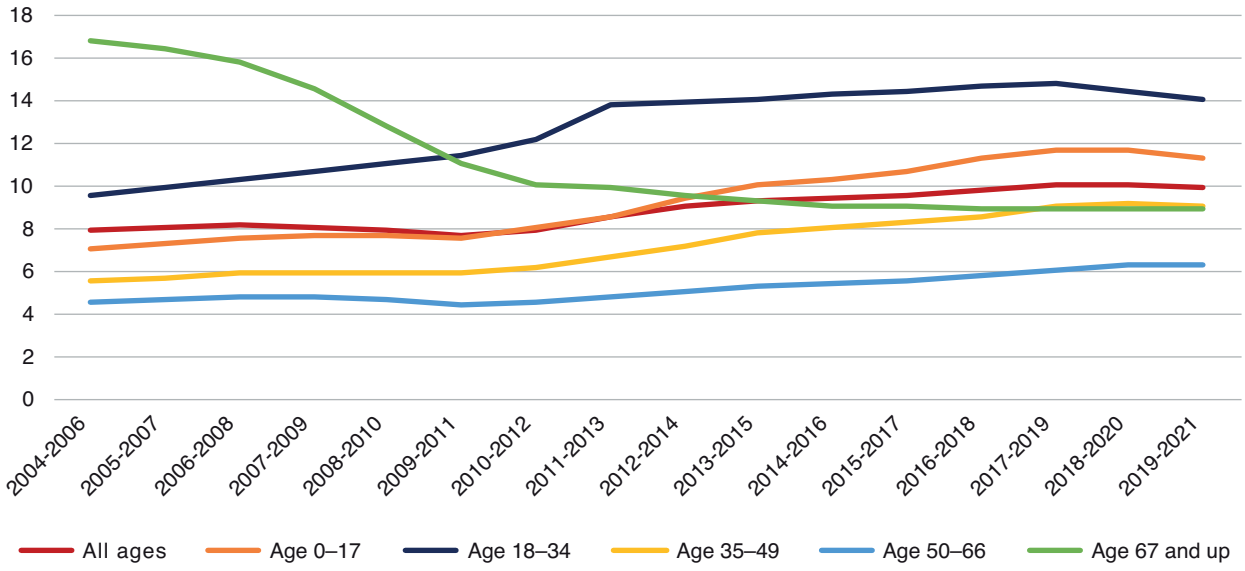
We have no official measures for poverty in Norway. Statistics Norway's measure of persistent low income, EU-60, is often used as a measure for poverty, or risk of poverty. It is important to note that this measure of low income is a relative measure. If the median income increases, so too will the low-income threshold. This means that two people, whose income before the median increase was slightly above the low-income threshold, now could be defined as low-income – even if their real income may be as high or even higher than before the increase. Similarly, if the median income decreases, some who previously had an income just below the low-income threshold, may no longer be considered low-income, even if their income does not change.

7.3. Young adults and immigrants most at risk of low-income

In the population overall, 9.9 percent were considered persistent low-income in the period 2019–2021, if the EU-60 measure for low income is applied (Figure 7.2).

The highest share of low income used to be found among the elderly. In recent years, this has changed, and from 2016, the share of persistent low income among persons aged 67 and older has been below the population average. The reason for this that the relatively large post-war generations, whose participation in the labour force, and accumulated pension rights, have been high, have now retired. The share of per-

Figure 7.2. Share of people with persistent low income (EU-60) by age. Percentage



Source: Statistics Norway

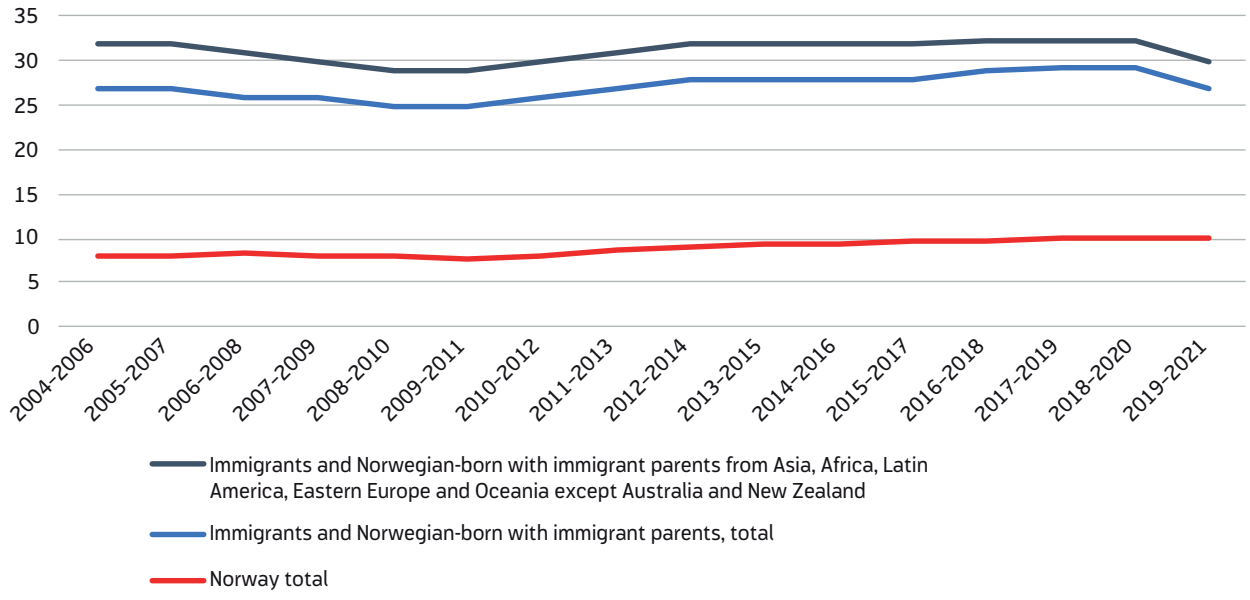
sons receiving the minimum state pension is going down. In December 2022, 13.2 percent of pensioners received the minimum pension, compared to 21.7 percent in 2012 (NAV 2022).

In recent years, the share of persons with a persistent low-income has gone down in all age groups under age 50. This share is highest among young people, aged 18–34. In recent years, the share has gone down slightly for this age group as well, and in 2021, 14.1 percent of young people aged 18–34 fell into the low-income group. The prevalence of low-income among young people can likely be attributed to many having a period of employment instability or part-time work before they are able to establish a stable footing in the labour market. Another explanation may be that the financial crisis of 2008 hit young people especially hard. The high demand for labour in the wake of the pandemic meant that the employment rate among young people under age 30 in 2021 was the highest it has been in 14 years. The share of young people not in education, employment or training was the lowest it has been since 2008 (Pettersen 2022). This could help explain the reduction in low income among young adults.

In 2021, 11.3 percent, or 110,700 children, belonged to a household with persistent low income. This share is the same as in 2018, and 0.4 percentage point lower than in the highest level, in 2019 and 2020. After a period of somewhat strong growth in the share of children in households with persistent low income, this is the first time in ten years that we are seeing a decrease (Normann and Epland 2023). Children with immigrant backgrounds and children in households with a sole provider are over-represented among those with low income. Adults in low-income families are characterised by a weak connection to the labour market. They work few and short-term jobs, earn low wages and have short working hours (Grini and Pettersen 2021). Children in low-income families have worse living conditions than other children in several areas (Fløtten and Nilsen 2020). Among other things, they often experience a lack of material goods, they do not participate in leisure activities as often, and their housing conditions are often less good. Children who grow up in families with persistent low income are less likely to complete upper secondary school and to find jobs themselves. However, Norwegian-born children with immigrant parents in the low-income group complete upper secondary school more often than do other children in the low-income group (Ekren and Grendal 2021).

Immigrants are over-represented in the low-income group. The share of low income increased among all

Figure 7.3. Share with persistent low income (EU-60) by country of origin. Three-year periods. Percentage



Source: Statistics Norway

people with an immigrant background in the period 2011–2018, after a small decrease in the years since 2007 (Figure 7.3). From 2018 to 2020, the share of persistent low income in this group was stable, at the highest level we have figures for, at 29 percent. In 2021, the share of persistent low income among all with an immigrant background dropped to 27 percent, which is the same level as in 2013.

The share of people with persistent low income is highest among those with origins from Africa, Asia, Eastern Europe outside of the EU, Latin America and Oceania outside of Australia and New Zealand. From 2014 to 2020, the share of persistent low income was stable, at 32 percent in this group, and in 2021, there was a decrease to 30 percent. There is, however, considerable differences between different countries of origin. The low-income share is highest among immigrants from countries where a lot of refugees come from, and this share varies with duration of residence in Norway. Many recently arrived refugees will be dependent on introductory benefit and financial assistance during their initial years in Norway. Figures from 2020 show that 47 percent of immigrants with a residence period of three years lived in households with persistent low income, whereas the share was 21 percent for those with a long period of residence, defined as ten years or more. Some immigrant groups have a high low-income share, despite long periods of residence. Among immigrants from Somalia, the share is 59 percent, Syria 42 percent and Iraq 41 percent (Hattrem 2022).

Development of the share of immigrants with low income will, in particular, depend on how many refugees come to Norway and which countries the refugees come from. Since the war in Ukraine started in March of last year, 41,600 Ukrainian refugees have applied for collective protection in Norway (UDI 2023a, figures as at 6 March 2023). It is common for refugees to participate less in the labour force, compared to the rest of the population, for the first few years after arrival. It is uncertain how the influx of Ukrainian refugees will affect the number of low-income earners in the years to come. This will depend on many factors, including how long the refugees remain in Norway, and how long the war will last. In any event, it will be important for NAV to contribute to the integration of refugees in the labour market in the years to come. Many will need follow-up and measures from NAV even after they complete the introduction programme.

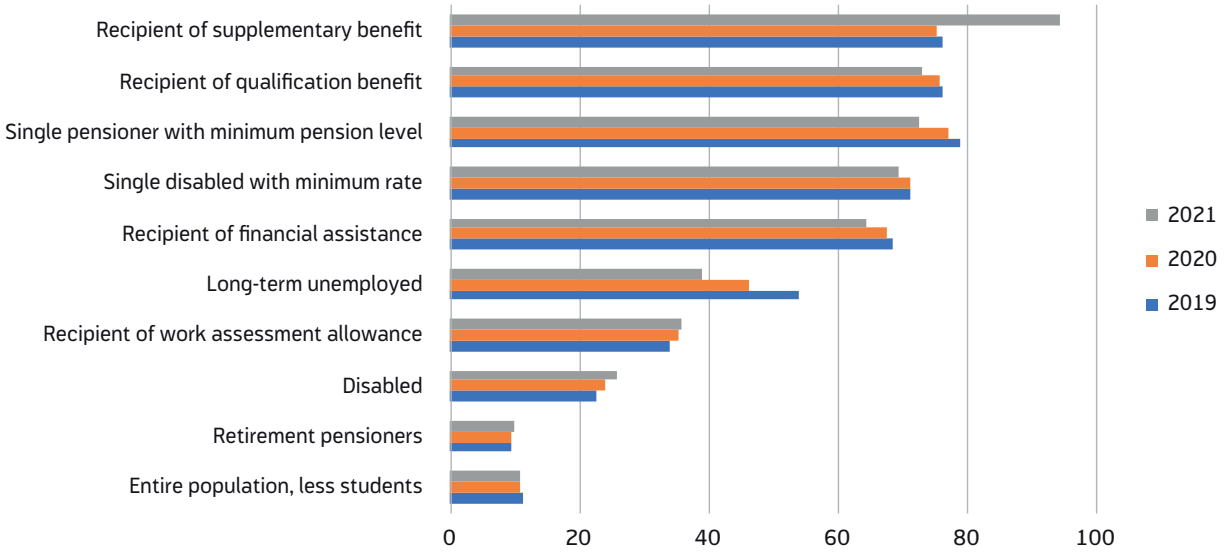
7.4. Share of low income among those with a stable connection to the labour market

Among all persons aged 25–65 who belonged to a household with no connection to the labour market in the three-year period 2018–2020, 48 percent were in the low-income group (Hattrem 2022). Among households with one member who had a connection to the labour market for at least one of the three preceding years, the low-income share was also high, i.e. 40 percent. In households where one member had a connection to the labour market for all three years, the share of persistent low income was 6 percent. This indicates that enduring employment is a factor that can prevent persistent low income. From 2011, we see a stronger correlation between low income and lack of connection with employment. It is unclear what the reason is, but it could be related to the fact that recipients of social security benefits now, more often than in the past, have a weaker connection with the labour market and their accumulated rights are not as high. In addition, some minimum rates for work assessment allowance have been reduced (applies to persons under 25 years of age and persons who previously received so-called "young disabled" supplements). Another explanation could be that more people now live alone (Sørlien 2022). For persons living in households with a stable connection to the labour market, there are minimal changes in the low-income share in this period. To prevent standard of living issues as a result of low income, NAV's work-oriented services are central in assisting those who need measures or other services from NAV to find or keep employment.

7.5. High share of low income among recipients of NAV benefits

Recipients of various benefits from NAV are among those most likely to experience low income. This must be viewed in light of the fact that households with a

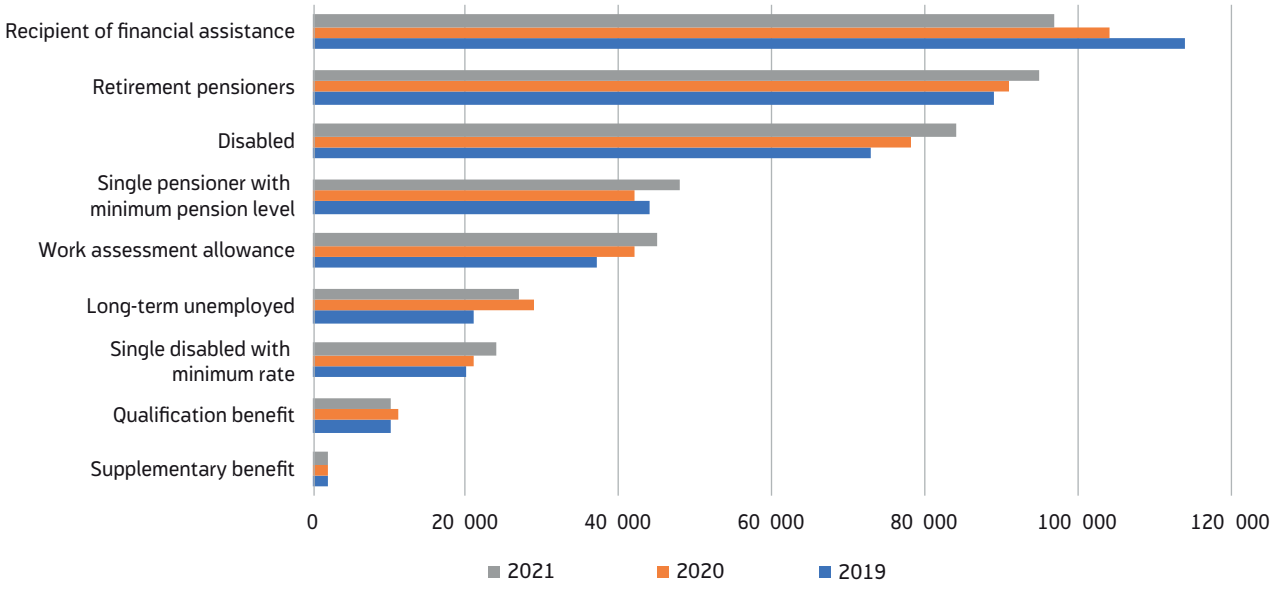
Figure 7.4. Share with annual low income by status of main income earner. Percentage



Source: Statistics Norway

weak connection to the labour market are highly over-represented among low-income households. Many of NAV's benefits are short-term, which means that for NAV's users, it is most useful to consider annual low income, i.e. how many are below the low-income threshold in a given year, rather than persistent low income, where income over a 3-year period is considered. The annual low income share will, among other things, depend on the composition of the group, whether they have other income in addition to benefits (such as earned income), and for how much of the year they received the benefit. The share is highest among persons in households where the main income earner receives supplementary benefit and qualification benefit (Figure 7.4). Among retirement pensioners, we saw a significant decrease in the low-income share in the period up to 2017, when 9.5 percent of retirement pensioners were in the low-in-

Figure 7.5. Number of persons with annual low income by status of main income earner



Source: Statistics Norway (2022a)

come group. The annual low income share among retirement pensioners was 9.8 percent in 2021, which is 0.9 percentage points lower than the population average. Among retirement pensioners who live alone and receive the minimum benefit, the low-income share is high. The low-income share is also high among recipients of financial assistance. One group where the annual low income share decreased in 2020 and 2021, is households where the main income earner was unemployed long-term (Statistics Norway 2023a). This share fell, from 54 percent in 2019, to 46 percent in 2020, and even further, to 39 percent, in 2021. This is likely due to a combination of factors: long-term unemployment increased during the pandemic, and those who faced long-term unemployment had a higher income base than before, and at the same time, the unemployment benefit rates were increased and the requirement for prior earned income was reduced.

Among households where the main income earner is a recipient of work assessment allowance (AAP), 36 percent were in the low-income group in 2021. In the past ten years, the low-income share among AAP recipients has increased by 10 percentage points. In households where the main income earner receives a disability benefit, the low-income share has more than doubled, from 12 percent in 2010, to 26 percent in 2021. Since 2012, average income in households where the main income earner receives a disability benefit, has increased more slowly than average income within the overall population (Hattrem and Dalen 2022). One central reason for this is that there has been a decrease in other income and transfers in these households; the disability benefit has not changed that much. The share of young people, with fewer household supplemental sources of income and a weaker connection to the labour market, has increased, among other things because more disability benefit recipients now live alone.

While the share of low income is high among persons living in households where the main income earner is a recipient of benefits from NAV, we get a different view when we consider the number of persons in households with low income (Figure 7.5). We find the highest number of persons earning a low income in households where the main income earner receives financial assistance, but we also see a high number of persons earning a low income in households where the main income earner is a retirement pensioner or recipient of disability benefit.

7.6. Vulnerable groups lack social and material goods

Among low-income households, 29 percent owns their own home in 2022, compared to 63 percent among households overall (Statistics Norway 2023a). Despite fewer people owning their own home, and actual housing costs being lower for the low-income group, housing costs account for a higher relative share of the income among low-income households (Statistics Norway 2022b).

In 2021, 44 percent of households with persistent low income stated that they lack at least one of the material goods Statistics Norway asks about in the survey EU Statistics on Income and Living Conditions (EU-SILC) (Hattrem 2022). Most common was not being able to afford access to a private car (30 percent of low-income households, compared to 7 percent of the population overall), and not being able to afford replacing worn furniture (23 percent of low-income households, compared to 7 percent of the population overall).

29 percent of low-income households also report lacking access to at least one of the social goods the survey covers, in the population overall, the same figure is 8 percent. The most commonly reported social good low-income households lack, is the ability to afford to go on a one-week holiday over the course of the year. This is true for 24 percent of households in the low-income group, compared to 6 percent in the population overall. The low-income group is also four times more likely than the population overall to report that they cannot afford to spend a little money on themselves once a week. The EU-SILC survey was completed before the high inflation and electricity crisis in 2022.

SIFO has completed sample surveys regularly in the period 2017 to 2022 (Poppe and Kempson 2022). This

survey shows a stable share of households who are financially struggling until 2021, and then a sharp increase, to 16 percent, in the last survey from August 2022. This is twice as high as the share recorded in the period 2017 to 2021. Low-income households, or households receiving benefits from NAV, are especially likely to report experiencing financial insecurity. Overall, almost 7 out of 10 households reported having to take measures to make ends meet, and the most common measures include cutting food and electricity consumption. Interest rate hikes, and the extraordinary price inflation, which began in 2022, is expected to cause more households to experience financial problems in the near future. How long this period of high cost of living will last, is dependent on many different factors, including developments in the war in Ukraine and other international issues.

7.7. Decrease in number of recipients of financial assistance in recent years

Financial assistance is considered our society's ultimate social safety net for those who need it. Persons who do not have sufficient means to subsist, can apply for financial assistance. The applicant will have had to have exhausted all other available means of supporting themselves, such as employment, personal funds, social security rights, or other financial rights, before financial assistance can be granted. Services regulated by law are largely needs-based rights. This means that a specific and individual assessment must be made in every case. The services shall support the purpose of the act and promote self-help. The needs of children and young people shall be heavily emphasised.

In the last four years, we have seen a decrease in the number of recipients of financial assistance, and in 2021, an average of 53,700 people received this assistance every month. One reason why this decrease continued through the pandemic, when unemployment rates were periodically high, could be that other welfare schemes became more generous and inclusive during the pandemic period. This is true, for example, of unemployment benefits. Compared to the population overall, immigrants are more likely to be recipients of financial assistance. In 2021, 3.8 percent of working-age immigrants received financial assistance, compared to 1.5 percent of the population overall for the same age group. This is the lowest share since 2012. Much of this decrease can be attributed to less immigration in recent years among persons who are entitled to participate in the introduction programme.

Developments in statistics for financial assistance are closely related to developments in the labour market, demographics, such as the number of new refugees, and changes in other benefits, such as the unemployment benefit. Preliminary figures for financial assistance show that the number of recipients increased by 9 percent from 2021 to 2022 (Statistics Norway 2023b). Most likely, the number of recipients of financial assistance increased most sharply towards the end of the year. The sharp price increase and high interest rates have, as previously mentioned, led to increased costs for many households, and more households report experiencing financial insecurity. A survey among selected NAV offices shows that applications for financial assistance increased by 18 percent from October 2021 to October 2022 (Furuberg et al. 2022). Municipalities report that an influx of refugees from Ukraine has led to an increase in the number of applications for financial assistance, but there has also been an increase in the demand for financial assistance among other groups, such as young and single people, and families with children.

For those who are unemployed and new job seekers, and who therefore have not accumulated a right to unemployment benefit, financial assistance could be a relevant benefit. Economic developments in the years to come will affect how many people apply for financial assistance, but demographic factors also play a role. It is common to see a high share of refugees needing financial assistance in the initial period after arriving in the country, before they have been integrated into the labour market. If global unrest and the war in Ukraine continue, we could see that more people will need NAV's services, including financial assistance.

7.8. Questions for reflection

- Who are NAV's key partners in terms of improving living conditions for vulnerable groups, and how should we approach this issue in practice?
- How can NAV provide good social services to refugees, to ensure their subsistence and promote a transition into employment?
- How can NAV contribute to high social mobility among children and youths who grow up in low-income families?

7.9. Trends associated with the greatest uncertainty

There is considerable uncertainty associated with developments in the purchasing power of households in the years to come.

In the past year, price inflation and increased interest rates have led to increased costs for households. Price increases have been especially high for electricity, fuel and food. More households, which previously were able to manage, have struggled to make ends meet. If prices continue to increase more than household incomes, be these earned income or benefits, more households at the bottom of the income distribution may be forced to apply to NAV for assistance. This will lead to an increase in the number of users who need social services from NAV, such as financial assistance, financial counselling and help finding housing.

There is also considerable uncertainty associated with the global situation going forward. Increased unrest internationally does not only affect prices here in Norway. The war in Ukraine has led to many Ukrainians fleeing the country, and some of them have come to Norway. As previously described, the Directorate of Immigration has registered more than 41,600 Ukrainians who have applied for protection in Norway, and we are expecting to see a record-high number of refugees in 2023 (UDI 2023b). It is common for refugees to need various forms of assistance from NAV in their first few years after arriving in Norway. If the war in Ukraine continues, we expect that NAV will need to allocate considerable resources to help refugees integrate into the labour market and society in general.

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8. HEALTH

By: Jon Petter Nossen

Summary: Better public health, expecting stable development for health-related benefits

Life expectancy has increased steadily in Norway over the past 20 years, and we are expecting the increase to continue towards 2035. In the same time period, public health has also improved markedly, especially for men. This is indicated by the disease burden in the population, which includes loss of health in the form of both death and health impairment. We have seen a significant decrease in this burden.

For the population as a whole, we expect to see a small increase in the disease burden towards 2035, despite expected improvements in almost all age groups. This can be attributed to the strong increase in the number of elderly persons. An ageing population will lead to increased demand for health and care services, including, among other things, assistive technology from NAV. There is considerable uncertainty associated with communicable diseases, due to the potential for future pandemics, consequences from climate and environmental issues, and the risk of increased antibiotic resistance.

For the working-age population (in this context age 20–69), we expect the disease burden to continue to decrease towards 2035, but the trend may not be as strong. This age group is especially important for NAV, because this is the age group that primarily receives health-related benefits and that often gets comprehensive follow-up in connection with these, with the aim of returning to work. The reduction in disease burden is especially significant for cardiovascular diseases, as well as cancer. We expect the disease burden to remain stable for musculoskeletal diseases and psychological disorders. The prevalence of psychological disorders in the population has been stable for some time, even though the share of the population interacting with mental health services has increased somewhat. Even so, psychological disorders as the reason for receiving health-related benefits from NAV has increased. It is possible that this trend will continue, as it may be attributable to a more demanding worklife, increased openness about mental health and an increased tendency to use health problems to explain complex issues.

In the last 10 years prior to the pandemic, we saw a clear decrease in the share of the population aged 18–66 who received health-related benefits from NAV. This decrease is often explained by improved public health, a higher education level and more migrant workers, as well as more stringent rules for work assessment allowance from 2018. During the pandemic, this share has increased, and is now almost back at the level it was previously, and by the end of 2021, almost 18 percent of the population aged 18–66 received health-related benefits. For young people under age 30, this share was stable prior to the pandemic, but even so, the share of people on disability benefit increased sharply, while fewer people were receiving sickness benefit and work assessment allowance. The increase in disability benefit recipients among young people can be attributed to an increase in new recipients of disability benefit under age 25, especially among persons aged 18–19. This increase is attributable to an increased number of young people with diagnoses including disabilities and autism. One key explanation could be that more children are born with disabilities, because women have children later in life, and/or because more children born prematurely survive, but with neurological and psychological delayed injuries.

Projections that, among other things, take into account demographical changes, suggest that the share of the population aged 18–66 receiving health-related benefits will remain stable towards 2035. On its own, improvements in public health could potentially contribute to a decrease. High demand for labour, leading to improved workplace inclusion, would also support this development. An increasing number of disability benefit recipients and the risk of labour market restructuring leading to workplace exclusion, are factors that could have the opposite effect. Projections are uncertain.

In order to promote a high degree of employment and reduce the number of benefit recipients, we will need more systematic knowledge about the effect of follow-up, as well as a more targeted use of various measures. Follow-up approaches should, to a greater extent, be independent of benefits and diagnoses, and be provided in collaboration with the individual user, employers, and the health and education sectors.

8.1. Introduction

According to the World Health Organization (WHO), good health is characterised by physical, mental and social well-being, and not simply the absence of disease. This definition is reflected in the Norwegian Public Health Act, which defines "public health" as the state and distribution of health in the population, and public health work as society's efforts to promote the health and well-being of the population. The purpose of the act is to "(...) contribute to societal development that promotes public health and reduces social inequalities in health. Public health work shall promote the population's health, well-being and good social and environmental conditions, and contribute

to the prevention of mental and somatic illnesses, disorders or injuries."

This broad perspective has two key implications. First, the factors that affect health seemingly become integrated with the concept of public health. These include a good childhood, environmental factors, working environment, and economic and material resources. Second, public health work becomes the responsibility of a much broader segment of society than simply health institutions. Municipalities and various national bodies also pay a key role.

While NAV is not a health institution, we do play a role in promoting public health. This role is perhaps most prominent in NAV's responsibilities related to social services, employment-related follow-up, income protection for people who are not working, and prevention of absences due to sickness and follow-up of sick leaves. In this context, it is especially relevant that many of NAV's users receive services and/or benefit as a result of health challenges ("illnesses, disorders or injuries" in the National Insurance Act) and the consequences this may have for their ability to work and earn an income.

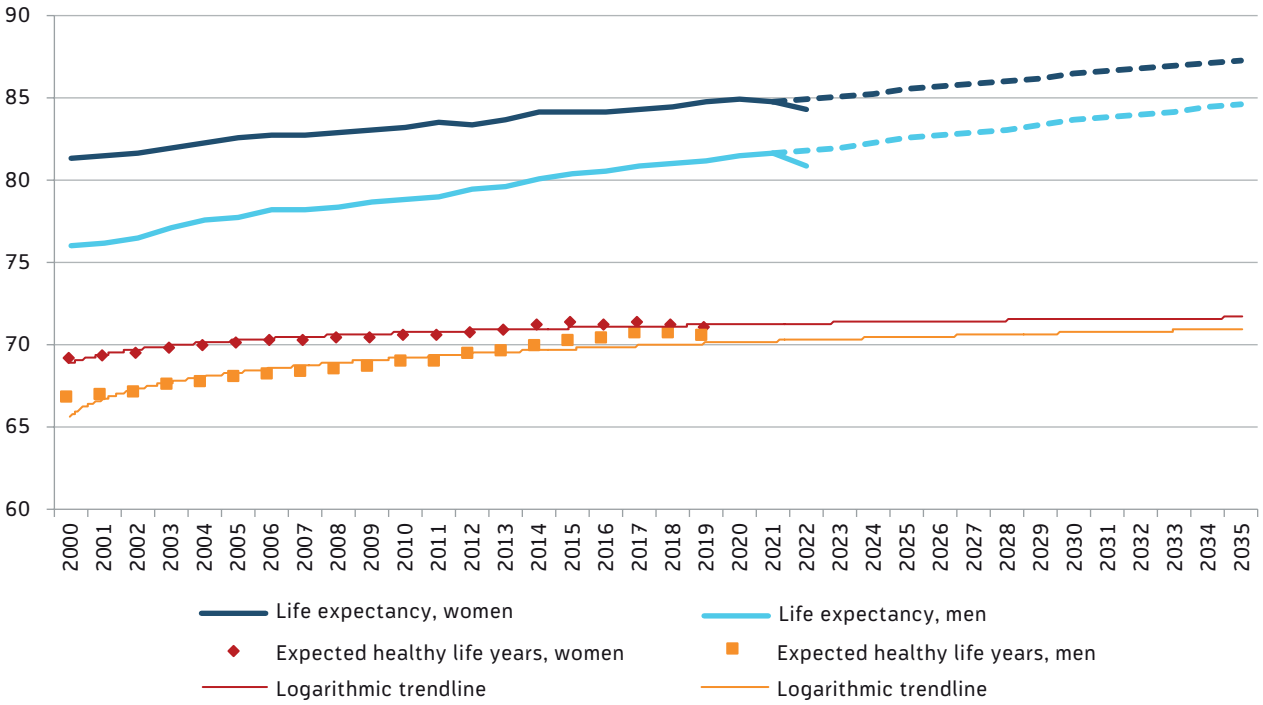
Naturally, we cannot here discuss everything NAV does that is related to health. The first part of this chapter discusses some indications of developments in public health. The second part focuses on what we can expect towards 2035 in terms of health-related benefits, based on expectations for developments in public health, demographic developments and some other factors. In the third part, we briefly discuss some methods for workplace inclusion aimed specifically at groups that are at risk of long-term exclusion and whose needs have not traditionally been meet by the health service. Other chapters, such as the ones focusing on living conditions and the labour market, also touch on health factors, even though these chapters do not have an explicit health perspective.

8.2. Improvements in public health counteracted by ageing

One of the most commonly used measures of public health is life expectancy, i.e. how long a person born a certain year is expected to live, provided mortality for each cohort remains constant throughout its entire life span. Figure 8.1 presents developments in life expectancies in Norway for women and men born until 2022, as well as projections to 2035 (Statistics Norway's middle alternative), which was prepared before the figures for 2022 were available. From 2021 to 2022, there was a marked break in the development: The life expectancy went down by 0.7 years for men and 0.4 years for women. Overall, for the period from 2000 to 2022, the life expectancy for men increased the most, by 5.0 years on average, compared to 3.0 years for women. Even so, the life expectancy for women is more than three years longer than it is for men.

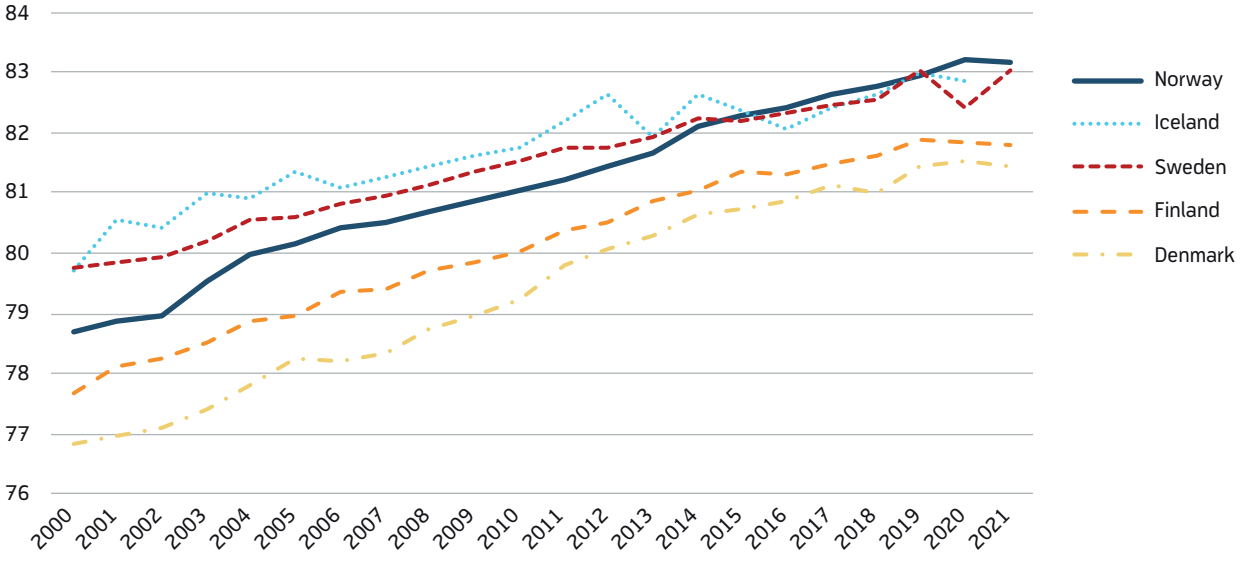
It does not necessarily follow that we get healthier as our life expectancy increases. Better treatments for serious diseases, such as cancer and cardiovascular diseases, may mean that we live longer, but with health problems. Calculations for expected healthy years of life show that this indicator has not increased as much as the life expectancy, and in the years prior to the pandemic, it was stable for men and decreased slightly for women (we have no figures beyond 2019, see Figure 8.1). As a result of this, the difference between life expectancy and healthy years of life has increased. If this trend continues over time, as suggested by the trend lines of the figure, it will mean more years of living with disease and disability. For NAV, one key consequence could be that the need for assistive technology could increase even more than the increase in the number of elderly people. However, how many healthy years of life we can expect is calculated based on a wide range of health data, including self-reported date, and this measure is associated with a higher level of uncertainty than is life expectancy. Other studies show a positive development (see discussion in Syse and Strand 2022). As an example, the HUNT study from Trøndelag shows an increase in "disability-free life expectancy" from 1995 to 2017 among elderly persons older than 70. In this case, however, we cannot rule out the possibility that a gradually decreasing response rate over time has led to selection, in that healthy people have gradually become more and more over-represented (Storeng et al. 2021).

Figure 8.1. Life expectancy in Norway for the period 2000–2022 with projection for 2022–2035 (prepared before figures were available) (Statistics Norway's middle alternative), as well as healthy life expectancy for the period 2000–2019 with a logarithmic trendline towards 2035. By gender



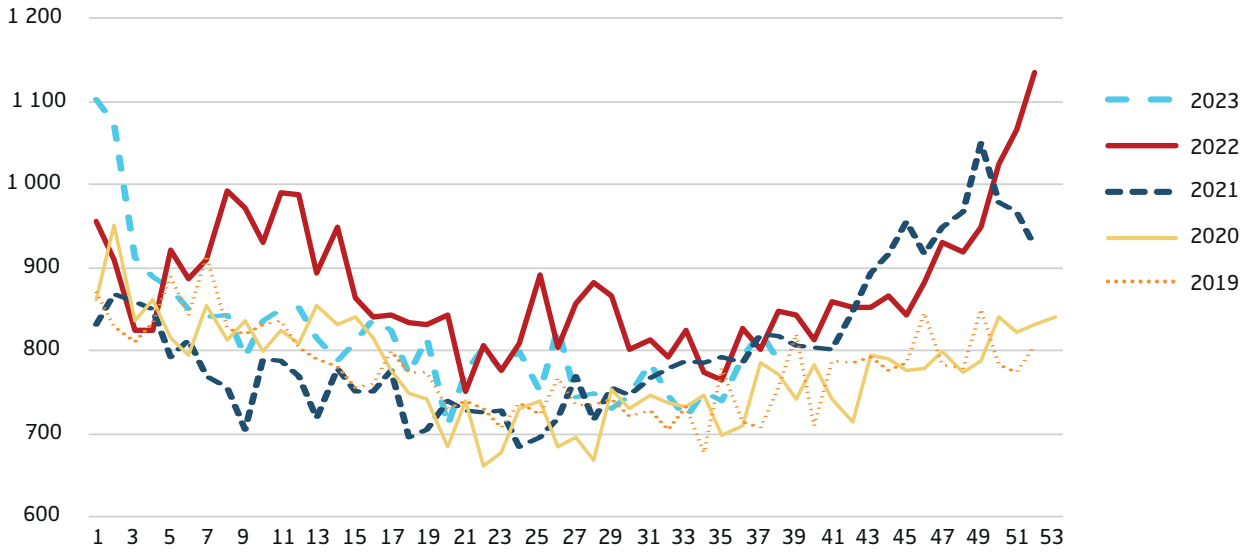
Source: Human Mortality Database, SSB og Global Burden of Disease Project.

Figure 8.2. Life expectancy in Nordic countries, 2000–2021.



Source: Human Mortality Database

Figure 8.3. Deaths in Norway, 2019–2023, by week. Preliminary figures.



Source: Statistics Norway

Norway is among the countries in the world with the highest life expectancy. This indicator has also strengthened somewhat more in Norway in the period 2000–2021, compared to the other Nordic countries, with the exception of Denmark (Figure 8.2). In 2000, Norway was in the middle of the pack, whereas in 2021, we were at the top, with Iceland and Sweden.

Effect of Covid pandemic on public health

The Covid-19 pandemic is considered one of the biggest public health crises in recent times. According to the Norwegian Institute of Public Health, Norway had fewer deaths and hospitalisations than most countries we normally compare ourselves with (Tvedten et al. 2021). The number of deaths were somewhat lower than normal for part of the first year since the initial lockdown, but from late 2021 to early 2023, figures have been slightly higher than before the pandemic (Figure 8.3).[10] By year, the mortality rate (measured as deaths per 100,000 population) went slightly down in 2020, in line with previous years. But then, mortality increased from 7.5 to 7.8 in 2021, and further to 8.4 in 2022. This is equivalent to a total increase of 12 percent for these two years, and the increase was approx. the same for both women and men.[11] Most of this excess mortality can be attributed to deaths related to Covid-19.[12]

While mortality rates in Norway probably increased less than in other countries, the pandemic and infection control measures have had considerable impact on public health. Among other things, having been infected with Covid-19 entails an increased risk of various sequelae and chronic conditions, known as "long covid". A recent review of research in this area concludes that at least 10 percent of all Covid-19 patients develop "long Covid", and more than 200 symptoms, affecting a wide range of organ systems, have been identified (Davis et al. 2023). Symptoms may be long-lasting, and in some cases, permanent. However, the degree to which sequelae of Covid-19 are more severe or long-lasting than those of other viral infections has not yet been determined.[13] The risk of long-term symptoms is highest for patients who were hospitalised, and especially so for patients that required intensive care and/or treatment with a respirator.

[10] https://www.ssb.no/befolkning/fodte-og-dode/statistikk/dode/artikler/her-finner-du-ukentlige-tall-pa-antall-dode

[11] https://www.ssb.no/befolkning/fodte-og-dode/statistikk/dode/artikler/forventa-levealder-falt-i-2022

[12] https://www.fhi.no/nyheter/2022/overdode-lighet-pa-7-prosent-i-2022/

[13] https://www.fhi.no/publ/2022/senfolger-etter-covid-19-og-ny-oppstatt-sykdom-etter-covid-19/

According to the Norwegian Institute of Public Health, periods with stringent infection control measures led to an increase in mental health disorders and a reduction in quality of life, but there is little evidence to suggest that these measures had a permanent detrimental effect on the population's mental health. Some groups, however, may be more vulnerable than others, perhaps especially children and teenagers, due to their schools and universities closing, and the use of remote teaching.

Absences due to illness increased by 9 percent from 2019 to 2021. Nossen (2022) shows that the increase in certified sick leaves during this period was not caused by an increase in the number of absences due to sickness, as one might expect due to the many, usually short-term, Covid-related absences (including suspected/confirmed Covid-19 and absences due to mandatory quarantine). The increase was primarily due to increased *duration* of certified sick leaves. Part of this can be explained by a reduced need for short-term absences, due to people working from home or being laid-off, but this does not explain why the number of long-term sick leaves increased. The causes are probably complex, but it does seem likely that at least some of the increase can be attributed to long Covid.

In the 2022–2023 winter season, the strain on Norway's health services was considerable, due to the double burden of both Covid-19 and unusually high infection rates for influenza, RS virus and other viral infections, which is likely due to the population having less resistance to these diseases compared to previous years. How the pandemic will continue to develop is still uncertain. Among other things, the risk remains that the virus could potentially mutate in dangerous ways.

Sharp reduction in burden of disease in recent decades[14]

A global project has prepared statistics up to the end of 2019 and projections for the period 2020–2050 of the burden of disease in various countries, and the figures for Norway have been discussed in a report prepared by the Norwegian Institute of Public Health.[15] The term burden of disease aims to include health loss both in the form of death (mortality) and in the form of health loss (morbidity). Here, we summarise what the historical development of the burden of disease and the projections for the future can tell us about the Norwegian population's expected health in the years towards 2035.[16]

From 2000 to 2019, we see a marked decrease in the burden of disease in the population (Figure 8.4, solid lines). This is true whether we look at total figures (no age-adjustment) or just the working-age population (age 20–69). The decrease has been larger for men than for women, thus evening out the difference between the genders in this period. Based on these data, we can say that the health of the Norwegian population increased from 2000 to 2019. The last observations, however, suggest a break in development just prior to the pandemic, as the burden of diseased hit its lowest point in 2017 and increased somewhat in 2018 and 2019.

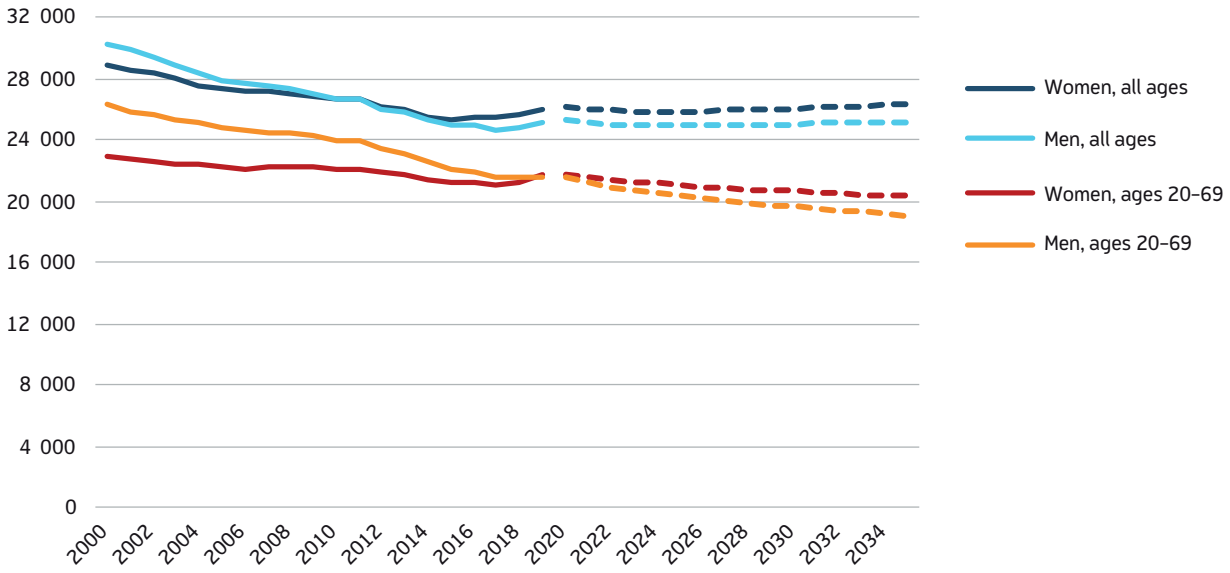
We have seen the biggest decrease in the burden of disease for injuries and accidents, as well as in communicable diseases. But even non-communicable diseases, which account for the majority of the burden of disease, has decreased significantly. In the latter category, we have seen an especially large decrease in cardiovascular disease. If we distribute the burden of disease for 2019 across disease groups, cancer and cardiovascular diseases make up the largest shares (18% and 14%, respectively). Then follows musculoskeletal diseases (10%), psychological disorders (8%), other non-communicable diseases (8%) and neurological disorders (8%).

[14] We want to thank Ann Kristin Skrindo Knudsen at the Norwegian Institute of Public Health for help with the burden of disease, including access to data and projections.

[15] https://www.fhi.no/nettpub/fremtidens-utfordringer-for-folkehelsen/del-1-3/sykdomsbyrde-i-norge-i-2050/?term=&h=1.

[16] More precisely, burden of disease includes deaths, lost years of life and years living with health loss. The sum of the last two is called Disability-Adjusted Life Years (DALY) in the Global Burden of Disease project, and in this report, we call it burden of disease. The calculations in this project provide an overview of how the burden of disease is distributed across various diseases, injuries and risk factors, as well as changes over time and distributions by geography, age and gender. The same source data is used to calculate the expected number of healthy years of life (see Figure 8.1.).

Figure 8.4. Burden of disease measured as the sum of lost years of life and non-fatal health loss per 100,000 population, by gender. Total and age group 20–69 years. Observed (2000–2019) and projected (reference scenario 2020–2035)



Source: Global Burden of Disease Project

Ageing is expected to make the burden of disease increase slightly...

Development in the burden of disease is expected to be less favourable in the coming decades. Projections indicate that overall (population average), we should expect to see a slight increase in the burden of disease from 2019 to 2035, for both women and men (Figure 8.4, dotted lines).[17] The main reason is that we have an ageing population, which can be attributed both to increased life expectancy and to the large cohorts from the post-war era starting to reach the age of 75, While these, on average, are healthier than previous cohorts, a higher average age in the population will, among other things, entail that a larger share of the population live with chronic illnesses.

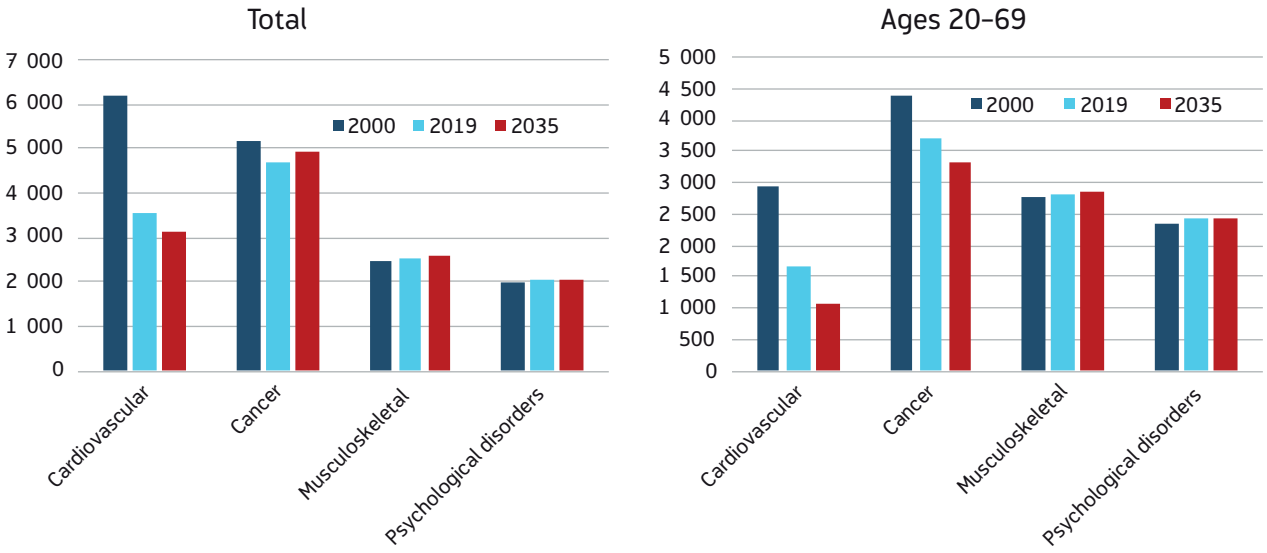
... but the burden of disease is expected to go down for the 20–69 age group

We see that the expected development for the 20–69 age group is quite different than for the population as a whole. This age group ("working-age population") is expected to see a significant decrease in the burden of disease, which is somewhat in contrast with the observed development from 2017–2019, and again: the decrease is strongest for men. Projections indicate a decrease in the burden of disease for all ten-year age groups, with the exception of people over 90 years old. Age-adjusted projections for the population overall also show a clear decrease for both women and men (not shown), but this is not enough to counteract the fact that our population overall is ageing, and that our burden of disease increases.

For the 20–69 age group, the burden of disease decreased by 18 percent for men and 5 percent for women from 2000 to 2019, and projections towards 2035 clearly suggest that this decrease will continue. Again, the decrease is somewhat larger for men than for women, with 11 and 7 percent, respectively. The fact that the burden of disease for this age group is expected to continue to decrease, is important from NAV's perspective, as the recipients of health-related

[17] This description is based on point estimates from the reference scenario, which is considered to be the most likely. We have disregarded the alternative scenarios and specified intervals of uncertainty.

Figure 8.5. Burden of disease measured as the sum of lost years of life and non-fatal health loss per 100,000 population. Selected disease groups. Total and age group 20–69 years. Observed (2000–2019) and projected (reference scenario 2035)



Source: Global Burden of Disease Project

benefits primarily belong to the 20–69 age group[18], and this age group also often receives signficant follow-up aimed at workplace inclusion.

Small increase in cancer and musculoskeletal disorders, psychological disorders stable

For the population overall, we expect a small increase from 2019 to 2035 in the part of the burden of disease attributable to non-communicable diseases, and a slightly larger increase for communicable diseases, even though these figures are associated with significant uncertainty. We expect to see a decrease for accidents and injuries. When we distribute for disease groups, we expect to see a small increase in the burden of disease attributable to cancer and musculoskeletal disorders (+5% and +4%, respectively), but a decrease in the burden of disease attributable to cardiovascular disorders (-11%) and psychological disorders (-2%) (Figure 8.5.). Projections for psychological disorders show no significant increase for any 5-year age groups, but these projections are perhaps the most uncertain of all (see separate section psychological disorders below).

When we limit the projections to the 20–69 age group, we expect to see a significant reduction in the burden of disease attributable to cardiovascular disorders and cancer (-34% and -11% respectively), but a virtually unchanged burden of disease attributable to musculoskeletal and psychological disorders.

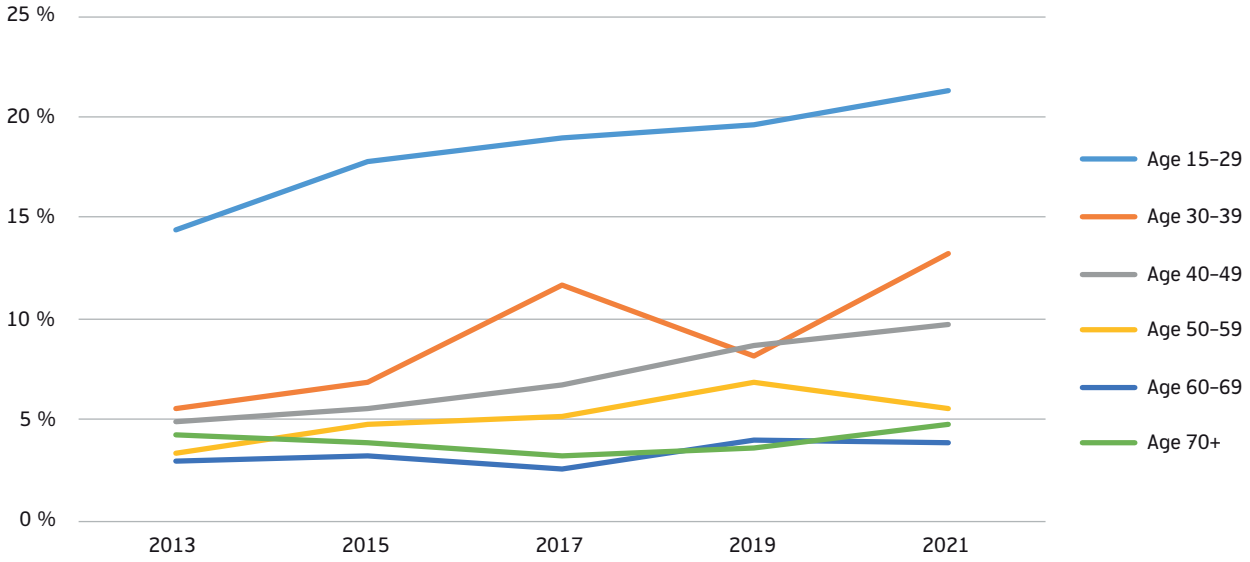
Morbidity may change quite suddenly

Morbidity caused by infections account for only a small share of the total burden of disease in Norway, but as the Covid pandemic has shown us, we cannot take this situation for granted. Risks and uncertainty are particularly associated with potential future pandemics and increased antibiotic resistance, but also food and water contamination. Infectious diseases may increase the burden of disease, as they may be fatal and recovery can be a lengthy process, especially if the bacteria are resistant to antibiotics.[19] In addition,

[18] People in the 18-66 age group are primarily the ones eligible for health-related benefits, but we use a somewhat diverging age group here, as the source data is based on fixed age intervals.

[19] https://www.fhi.no/nettpub/fremtidens-utfordringer-for-folkehelsen/del-1-3/3.-mulige-trusler-fra-smittsomme-sykdommer/?term=&h=1

Figure 8.6. *To which degree have you experienced each of these symptoms in the last week (including today)? - Sense of hopelessness in regard to the future.* Percentage who responded "high degree or very high degree"



Source: Norsk Monitor (Ipsos)

we cannot discount the possibility that Norway's public health may be negatively affected by climate and environmental change, or by war and terrorism. The considerable suffering inflicted on the population in Ukraine by Russian warfare, and the many refugees from this war, are reminders that a positive development for public health can never be guaranteed.

Limited evidence to support increased prevalence of psychological disorders in the population

Psychological disorders are relatively prevalent in the population and have major implications for NAV's use of resources. These disorders often require long-term and close follow-up in order for the person to enter or return to the workforce, and long-term income protection is also often necessary. As we now are seeing people be more willing to open up and talk about psychological disorders than before, not least in the media, one could easily get the impressions that the prevalence of such disorders is increasing, but according to the Norwegian Institute of Public Health, the prevalence of psychological disorders in the adult population has generally been stable since 2000 (Reneflot et al. 2018). Figures for developments in the burden of disease in Norway, as well as projections of this towards 2035 (as discussed above), support this conclusion. The share of the population in contact with health services for such disorders, however, has increased somewhat. In 2020, approx. 22 percent of all women aged 15–64, and 15 percent of all men in the same age group, were in contact with primary health services for mental health symptoms and issues, compared to 17 and 12 percent, respectively, in 2010. The share of the population who were in contact with the specialist health services for psychological and behavioural disorders has increased less, from 6 and 4 percent, respectively, in 2010, to 7 and 5 percent in 2020. The Norwegian Institute of Public Health claims the Health Care Interaction Reform is the reason for this, and suggests that psychological disorders may have been undertreated in the past. They also point out that the biggest increase has been observed for less severe psychological disorders.[20]

Young people, and especially young women, increasingly report experiencing mental health symptoms and

[20] https://www.fhi.no/nettpub/hin/psykisk-helse/psykiske-lidelser-voksne/?term=&h=1. As some people do experience psychological disorders without contacting health services, the true prevalence in the population will be slightly higher.

contact health services with their problems. The Ungdata survey shows an increase in the share of young girls who report mental health symptoms, but the pandemic did not lead to an additional increase (Bakken 2022). International studies suggest that the prevalence of psychological disorders is higher among young adults than among the elderly.[21] Data on self-reported mental health symptoms show that approx. 1 in 5 young people (age 15–29) struggle with a sense of hopelessness in regard to the future (Figure 8.6.). Among young women, 28 percent report that they experience this to a high or very high degree, whereas the share among young men is 15 percent. The share who report experiencing such symptoms is increasing for all age groups under 50, but the same trend is not seen for the older age groups. There is also an increase in the share of young people who claim to experience sadness and depression, who feel useless or unworthy, and who feel that everything is a struggle (Norsk Monitor, figures not shown). There is reason to believe that mental health symptoms and issues can be especially detrimental for young people who are trying to complete their education and find their place in the workforce. It is therefore important for NAV to monitor developments in mental health among young people.

Significant social inequality within health

Despite the fact that Norway has less income inequality and a higher level of education than most other countries in Europe, many health indicators vary by social status in Norway.[22] Those who have a long education and a high income live longer and have better health than those who have a shorter education and lower income. For example, life expectancy after age 35 is 5–6 years longer for people with a university degree than it is for people who only have only completed compulsory education. This difference has increased in the past 20 years among women, but not among men.

Many different factors contribute to create and maintain social inequality in health. These include childhood living conditions, housing conditions, education level, occupation and workforce participation, as well as risk factors, such as smoking, diet and physical activity, and obesity. In this regard, we have seen positive developments in recent decades, especially in terms of the number of people who smoke daily. The use of substances (drugs and alcohol) comes in addition to this. The most common substance-use disorders can be attributed to the harmful use or addiction to alcohol.[23] Other substances also have significant harmful effects, including addictive pharmaceuticals, cannabis, amphetamines, heroin and other opioids. Developments in substance use are difficult to quantify, and we will therefore not go into this in any further detail in this report.

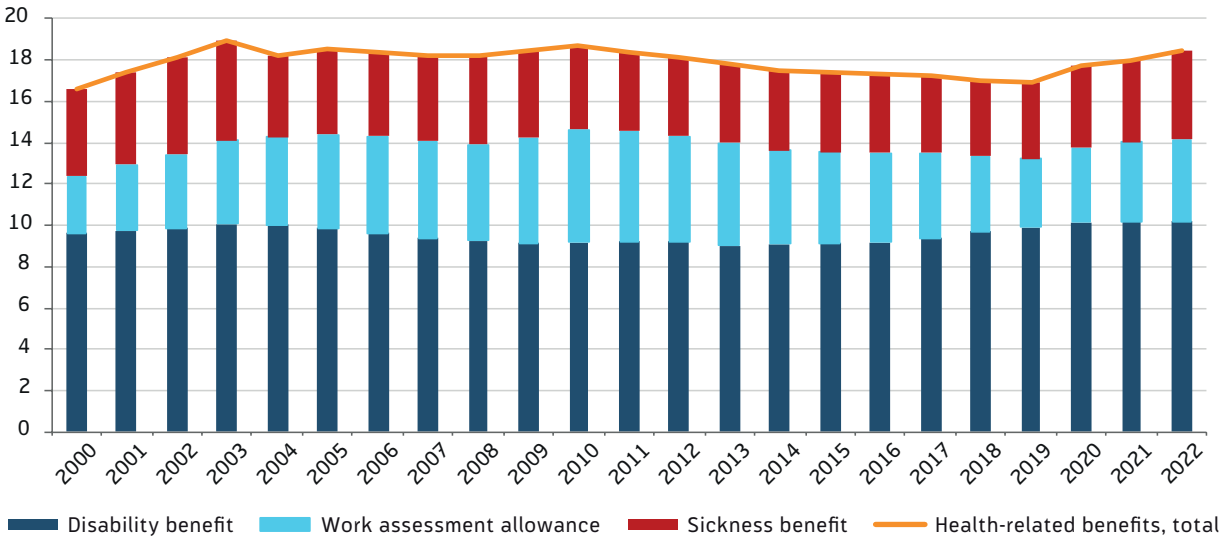
Social inequalities in health also affect NAV, among other things, because a relatively large share of those who apply for health-related benefits often have limited education and therefore also somewhat limited options in the labour market. This is something we must take into account in our employment-oriented follow-up and in our contact with potential employers.

Immigrant health

Our knowledge of immigrant health in Norway is relatively limited. This is because people with immigrant backgrounds are a heterogeneous group. On average, immigrants are younger than the population overall, and some diseases and health risks are less prevalent in some immigrant groups than in the population overall.[24] This includes several forms of cancer and the consumption of alcohol, for example. Other diseases and health risks, on the other hand, are more prevalent in some immigrant groups. This includes obesity, musculoskeletal disorders, type 2 diabetes and smoking. Immigrants from the Middle East, Africa and South Asia are especially at risk of vitamin D deficiency, which may have significant health implications. Immigrants are also more likely to suffer from psychological disorders, including post-traumatic stress disorder, depression and anxiety. Experi-

[21] https://www.fhi.no/nettpub/hin/psykisk-helse/psykiske-lidelser-voksne/?term=&h=1
[22] https://www.fhi.no/nettpub/hin/samfunn/sosiale-helseforskjeller/
[23] https://www.fhi.no/nettpub/hin/psykisk-helse/rusmiddellidelser/?term=&h=1
[24] https://www.fhi.no/nettpub/hin/grupper/helse-innvandrerbakgrunn/

Figure 8.7. Share of population aged 18–66 receiving disability benefit, work assessment allowance and sickness benefit, and share receiving health-related benefits, total. By end of year 2000–2022. Percentage. *) **)



*) Some persons receive two benefits at the same time, this has been corrected in the figures for health-related benefits, total.
**) Only resident refugees in Norway have been included. The figures for disability benefit are therefore somewhat lower than official statistics indicate.

Source: NAV

ences involving racism and discrimination may also have detrimental effects on mental health. Refugees and elderly immigrants are groups that may be especially at risk of poor health.

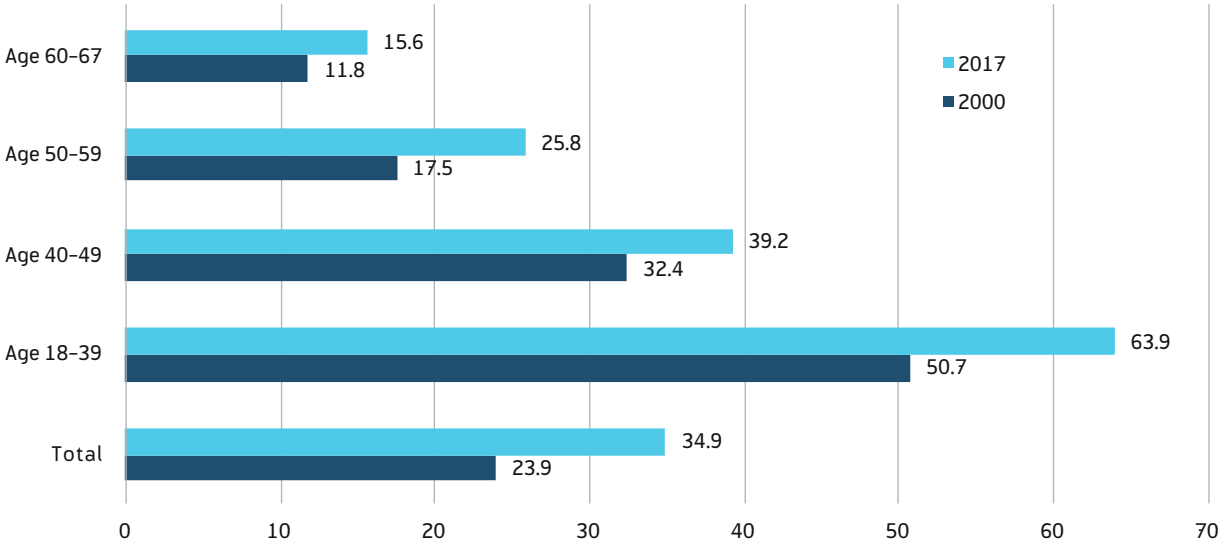
8.3. Health-related benefits: Developments contingent on more than health

The main health-related benefits that NAV is responsible for include sickness benefit, work assessment allowance (AAP) and disability benefit. All of these benefits are aimed at the so-called working-age population. It is difficult to predict how the need for these benefits will develop towards 2035. In order to outline potential developmental trends, we must first consider developments in health-related benefits in the past 20 years, as well as some other factors that may affect the need for these benefits, in addition to developments in public health (see section 8.2). Finally, we will attempt to summarise what we can conclude in terms of expected developments based on these factors. Other factors we have not considered in this report include developments in how illness is perceived among the population and among medical professionals, as well as workplace requirements for health and work capability.

Decrease in health-related benefits, but increase during the pandemic

In the period from 2010 to 2019, we saw a reduction in the share of the population aged 18–66 who received health-related benefits: from NAV (Figure 8.7.). This share was reduced from more than 18 percent in 2010, to less than 17 percent by the end of 2019. The reduction can primarily be attributed to a reduction in the number of AAP recipients; disability benefits saw a small increase, and sickness benefits a small reduction. During the pandemic, the share of the population receiving health-related benefits increased again, to just under 18 percent in 2021. The pandemic increase was largest for AAP (+15%), but sickness benefits and disability benefits also increased (+7% and +3%, respectively). The increase in sickness benefits was caused, as previously mentioned, by an increase in long-term sick leaves, whereas the increase in AAP can be attributed to many recipients having their AAP periods temporarily extended.

Figure 8.8. Share of new disability benefit recipients with diagnoses within psychological and behavioural disorders, by age. 2000 and 1st half of 2017. Percentage



Source: **NAV**

The decrease in health-related benefits from 2010 to 2019 coincided with a significant improvement in public health, both overall and for the working-age population, and this is likely a contributing cause. The development is also influenced by other factors, however, and this is clear when we consider developments from 2000 to 2010: In this period, the share of recipients of health-related benefits increased, even though public health significantly improved. It is possible that this is related to the improvement in public health being especially great for cardiovascular disorders, which do not account for a large share of health-related benefits. In any event, this highlights that there is no simple correlation between public health and the need for health-related benefits.

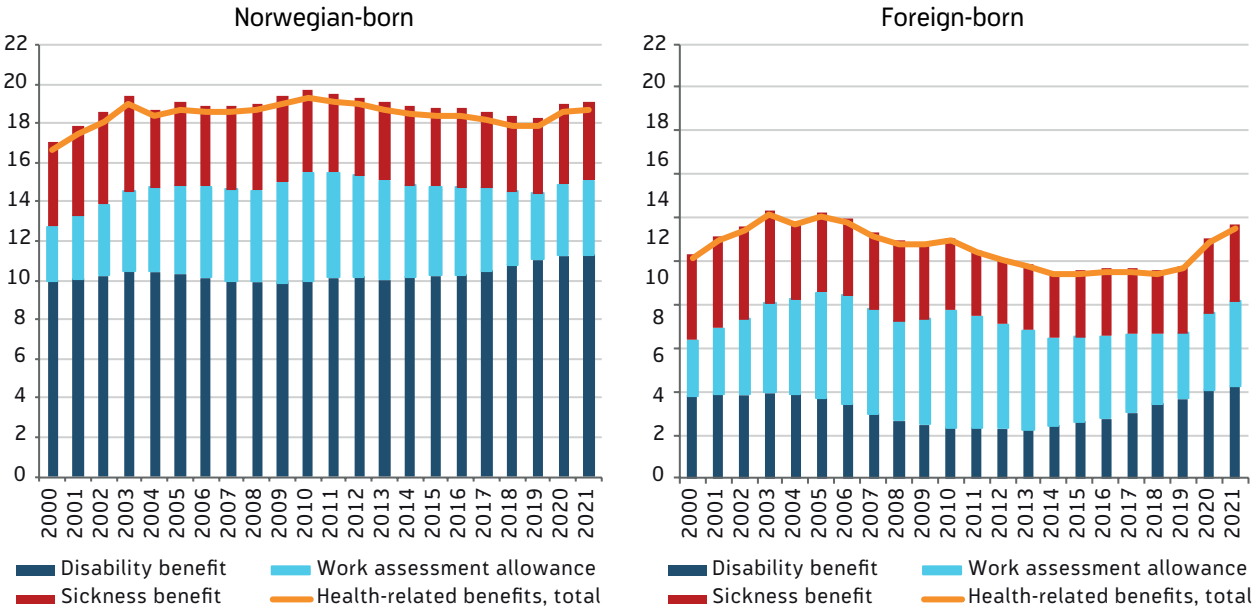
Significant gender differences

There are significant gender differences in who the recipients of health-related benefits are (not shown). While men had a larger percentage-wise decrease from 2010 to 2019, the difference between men and women remained stable, at approx. 7 percentage points. At the end of 2021, 21 percent of the female population aged 18–66 received a health-related benefit, whereas the figure for men was 14 percent. The largest difference can be found for sickness benefit. While some of the gender differences in absence due to sickness can be explained (i.e. high rates of absence among pregnant women), a considerable part of this must be considered to be unexplained (see for example Mastekaasa 2016; Nossen 2019). There are considerable gender differences for AAP and disability benefit as well.

Biggest decrease among the elderly, increase for young people

The decrease in the share of the population receiving health-related benefits up to 2019 came primarily in the age groups over 50, and especially in age groups over 60 (Kann and Sutterud 2017). We assume that much of this decrease can be attributed to the general improvement in public health and increasing education levels. But some of it can also be explained by the pension reform and the introduction of a more flexible retirement age, which means that many more people have started collecting retirement pension than what was previously the case (Jacobsen 2014). That means disability benefit has become a less relevant alternative for many who are 62 years old or older. Even so, the share of the population overall that is receiving disability benefit has increased, which is related to the fact that an increasing share of young people have started receiving disability benefit. We will return to this later.

Figure 8.9. Share of health-related benefits among Norwegian-born and foreign-born, aged 18–66. Percentage. *) **)



*) Some persons receive two benefits at the same time, this has been corrected in the figures for health-related benefits, total.
**) Only resident refugees in Norway have been included. The figures for disability benefit are therefore somewhat lower than official statistics indicate.

Source: NAV

More people are receiving disability benefits due to psychological disorders

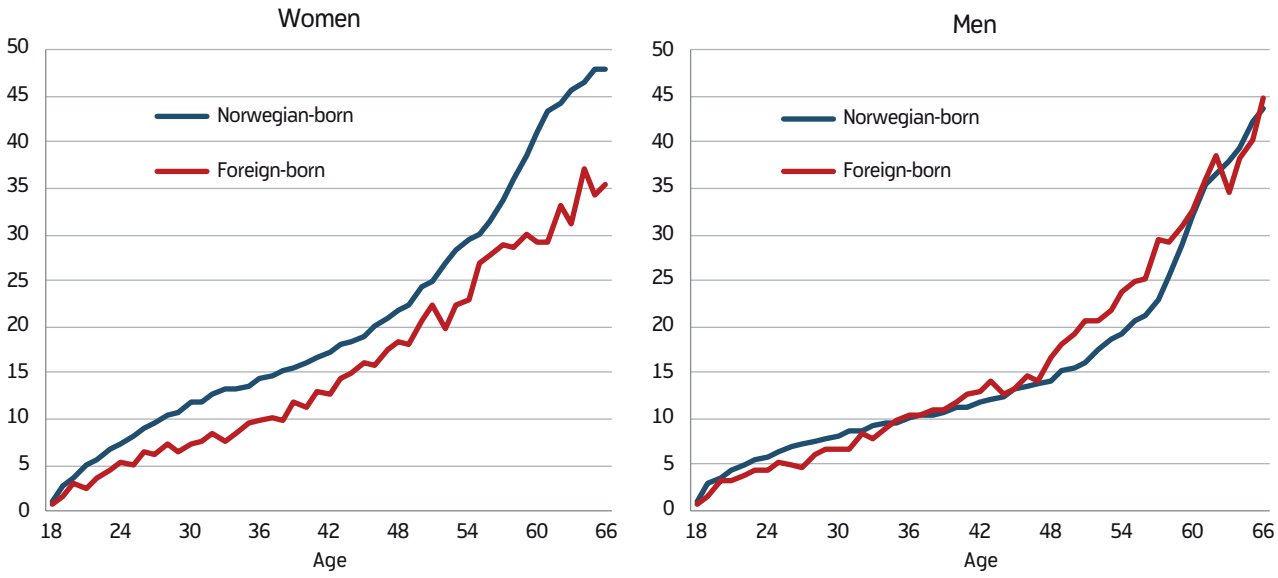
To explore whether, and if so, to what degree, there has been an increase in psychological disorders, we will in this report limit our consideration to developments in new recipients of disability benefit, where the relevant diagnosis group is "psychological and behavioural disorders". The share of new recipients of disability benefit with a diagnosis of a psychological and/or behavioural disorder has increased, from 24 percent in 2000, to 35 percent in 2017, which is the last year for which we have diagnosis statistics (limited to the first half of the year) (Figure 8.5.). This means psychological disorders as the reason for being granted disability benefit has increased significantly. This is related to the fact that younger people (under age 40) account for an increasing share of new recipients of disability benefit. Overall, psychological and behavioural disorders have increased by 11 percentage points from 2000 to 2017. For younger recipients, the increase is even larger (13 percentage points), whereas it is significantly lower in the other age groups. Even so, we see an increase of between 4 and 8 percentage points here as well. A shift towards granting disability benefit at a younger age can explain some of the increase, but far from all of it.

More recipients of health-related benefits in times of high unemployment

Developments in the labour market affect how many people receive health-related benefits (see, e.g. Nossen 2014; Kann and Kristoffersen 2015; Kann et al. 2016; Lima 2016). This correlation is complex, however, and transitions between various schemes, and regulatory changes, makes it difficult to quantify the overall effect on the labour market. From Figure 8.7, we can see that the overall share of recipients of health-related benefits has peaks that correspond to peaks in unemployment, but the differences are minor.[25] This could be due to the fact that the figures used in the table refer to the end of each year, and may therefore not capture all fluctuations in the labour market.

[25] We can see "peaks" corresponding roughly to peaks in unemployment rates in 2003, 2009 and 2020, but not so much for 2016.

Figure 8.10. Share of health-related benefits among Norwegian-born and foreign-born, aged 18–66, by gender and age. 2021. Percentage.



Source: **NAV**

Immigrants less likely to receive health-related benefits than Norwegian-born

Immigrants are significantly less likely to receive health-related benefits than those born in Norway. Among the foreign-born population aged 18–66, 13.5 percent received health-related benefits at the end of 2021, compared to 19 percent among the Norwegian-born population in the same age group (Figure 8.9). Most of this difference can be explained by fewer foreign-born people receiving disability benefit. In percentage points, the difference has remained relatively stable over the past decade, though it was somewhat reduced during the pandemic. In the period 2005–2010, the share of recipients of health-related benefits among the foreign-born population was significantly reduced. This is a result of increased labour migration from Eastern European EU countries, which changed the composition of the immigrant population. The fact that immigrants are less likely to receive health-related benefits can partially be explained by residence requirements for AAP and disability benefit, as well as by health-related benefits primarily being aimed at those who are or have been part of the labour force. Employment rates are low in some immigrant groups, especially among women. In addition, immigrants as a group, are relatively young.

Fewer recipients among immigrant women

Figure 8.10 shows the share of health-related benefits among Norwegian-born and immigrants in 2021, by age and gender. In this context, the difference between Norwegian-born and immigrants appears to be smaller, and this may be because the immigrant population tends to be younger than the Norwegian-born population. We also see that immigrant women are primarily the ones who account for the lower share of recipients of health-related benefits. This is true for all age groups, and may be related to a lower rate of employment among immigrant women than among Norwegian-born women. For men, the difference between Norwegian-born and immigrants is small, but from the late 40s to around age 60, a greater share of immigrant men are recipients of health-related benefits compared to Norwegian-born men.

Increase in disability benefit recipients correlates with increasing residence time in Norway

Since immigrants are less likely than Norwegian-born people to be recipients of health-related benefits, increased immigration (especially labour migration) will, on its own, contribute to a reduction in the share of the population receiving health-related benefits. Bratsberg et al. (2014) have shown,

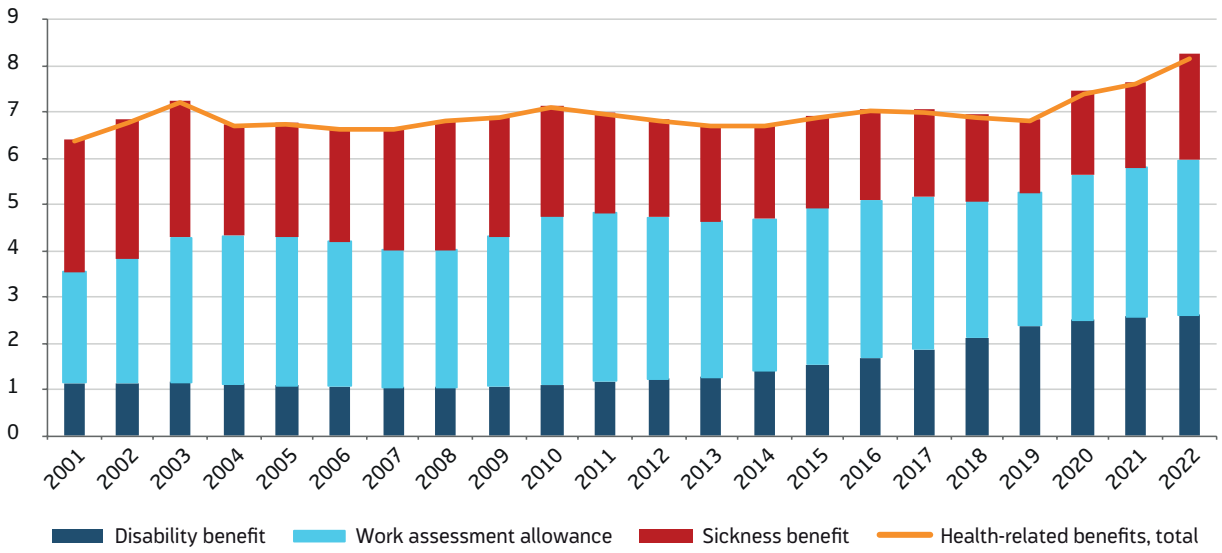
however, that the share of immigrants who receive disability benefits (in this context AAP and disability benefit) increases as their residence time in Norway increases, which must be seen in light of the residence requirements for receiving these benefits. Among the first migrant workers in Norway, from Pakistan and Turkey, there is, after 10-15 years of high employment, a large and increasing share receiving disability benefits. Immigrant groups arriving later from the same countries, due to family reunification or as refugees from Bosnia and Kosovo, follow a similar pattern. For other refugee groups, the effects do not appear to be as strong. As for migrant workers from Eastern European EU countries, employment was high until 2012, but this data period is too short to shed any light on this group receiving disability benefits. We cannot rule out that many immigrants experience major health problems after some years in Norway, see earlier discussion of immigrant health. In light of this, one may ask whether NAV's knowledge of minority health concerns is good enough. But it would appear that there are mechanisms of exclusion in the workplace and/or characteristics to welfare schemes that lead to reduced employment among immigrants and a greater likelihood of receiving health-related benefits the longer they have lived in Norway. We note that this process often seems to be triggered by an economic downturn, and that these do tend to affect immigrants harder than Norwegian-born.

Strong increase in share of under 30 population receiving disability benefit

Since 2008, we have seen a persistent increase in recipients of disability benefit in the 18–29 age group (Figure 8.11). In the same age group, the share receiving health-related benefits has nevertheless remained stable, at just below 7 percent, but it increased in the last two years of the pandemic, to almost 8 percent.

In the same period, the share of recipients of sickness benefit in the 18–29 age group has decreased sharply. The share of recipients of AAP increased from 2008

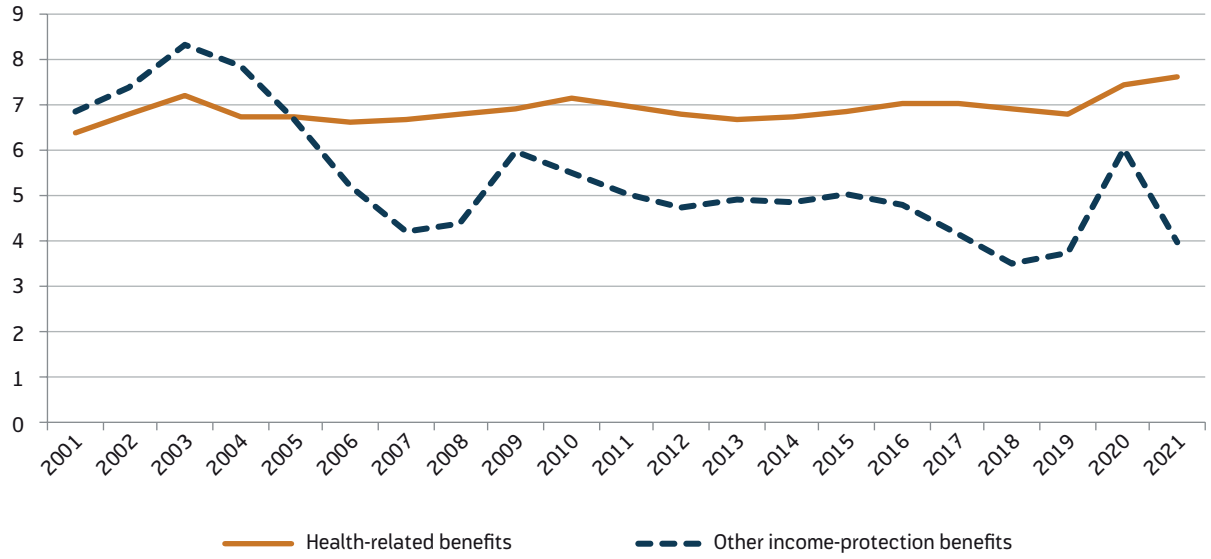
Figure 8.11. Share of population aged 18–29 receiving disability benefit, work assessment allowance and sickness benefit, and share receiving health-related benefits, total. By end of year 2001–2022. Percentage. *) **)



*) Some persons receive two benefits at the same time, this has been corrected in the figures for health-related benefits, total.
**) Only resident refugees in Norway have been included. The figures for disability benefit are therefore somewhat lower than official statistics indicate.

Source: NAV

Figure 8.12. Share of population aged 18–29 receiving health-related benefits and other income-protection benefits* from NAV. By end of year 2001–2021. Percentage



* Other income-protection benefits include, in this context, unemployment benefit, transitional benefit, employment scheme benefits and financial assistance.

Source: **NAV**

to 2010, but has since gone down.[26] This means the share of recipients of both of these benefits has gone down among young people, even though the introduction of a minimum benefit under the AAP scheme with no qualification requirements may, on its own, have led to more recipients of AAP and less recipients of sickness benefit (Kann and Grønlien 2021). At the same time, it is conspicuous that the share of young recipients of disability benefit has increased sharply since AAP was introduced. One key factor in the increase of young recipients of disability benefit, is that more applicants are now granted disability benefit at age 18–19. This increase could be attributed to an increased number of young people being diagnosed with intellectual disabilities and autism, but it does not explain why they are being granted disability benefit at a younger age (Bråten and Sten-Gahmberg 2022; Bragstad 2018; Brage and Thune 2015). We don't know the reason for the increase, but one key explanation could be that more children are born with disabilities, which may, in turn be because women have children later in life, and/or because more children born prematurely survive, but with neurological and psychological delayed injuries. Some researchers also believe that environmental toxins may be a trigger for autism. This increase in young people being granted disability benefit before age 24 has been consistently present since the 1970s (Brage and Thune 2008; Brage and Thune 2015).

So, while the share of people under 30 who receive health-related benefits has remained relatively stable, there has been a marked shift towards permanent disability benefit. In addition, especially in the 1990s, but also later, to some degree, there has been a shift away from non-health-related income protection benefits (in this context: unemployment benefit, financial assistance, transitional benefit and employment scheme benefits) to health-related benefits in the same age group (Figure 8.12). This development has, among other things, been explained with more stringent rules for unemployment benefit and single parent benefits in the period 2005–2010 (Kann and Sutterud 2017). Both of these "shifts", then, point in the same direction: Young people who receive benefits are increasingly receiving long-term health-re-

[26] AAP figures from before 2010 are compiled figures for the former rehabilitation benefit, rehabilitation allowance and time-limited disability allowance.

lated benefits, such as AAP and (especially) disability benefit.

It is difficult to say how things will develop in this age group towards 2035, but it seems likely that the current situation will continue, in the sense that health-related benefits will continue to be more common among young people than non-health-related benefits. To help more young people enter the workforce or complete an education, NAV should emphasise close follow-up of this group, and measures and approaches should, to a larger degree, be based on the individual's needs, rather than on the type of benefit or the individual's diagnosis.

Health-related benefits in an international perspective

In Norway, relatively few people are unemployed or otherwise not part of the workforce without receiving unemployment benefit or some other benefit. A large share of those who are not part of the workforce are receiving health-related benefits. Pedersen et al. (2019) present figures from Eurostat 2015, which show that the share of the population aged 30–54 that receives disability benefits (in this context disability benefit and work assessment allowance) is significantly higher in Norway than in seven other European countries, including the Nordics. The share of the same age group that receives unemployment benefit is low in Norway, whereas the share that receives some form of benefit is highest in Norway and Finland. This is explained by the fact that many people in these two countries combine benefits with earned income. Finland also stands out with a high share of people whose only source of income is benefits, whereas Norway is in the middle of the pack in this regard.

Norway also has a high rate of absence due to sickness compared to other countries. International comparisons of sickness absence are normally based on labour force surveys from different countries. Based on labour force survey data, Norway has a higher rate of absence due to sickness than countries we normally compare ourselves with. A report by Statistics Norway (Berge et al. 2012) concludes that labour force surveys are conducted in relatively similar ways in these countries, and that this, therefore, does not explain the differences in absence rates. Workforce composition, however, could contribute to a higher absence rate in Norway. Differences in sick pay schemes and other institutional circumstances could also affect how sickness absence is measured, but Gleinsvik et al. (2014) concluded that Norway's high rate of sickness absence in an international context cannot be explained by how such absence is measured, differences in maximal duration or other rules pertaining to sick leave.

It cannot be ruled out that more people receive health-related benefits in Norway, compared to other countries, due to the way our benefit schemes are designed. Health-related benefits require that the person's ability to work or earn an income is impaired, and that sickness is the reason. In contrast to unemployment benefit, there is no requirement of former earned income to qualify for work assessment allowance or disability benefit. Minimum benefit rates also entail that work assessment allowance and disability benefit yield markedly higher payments for low-income workers than does unemployment benefit. When a medical diagnosis is the qualification criterion for a benefit, and a key criterion for getting the benefit period extended, it could promote medicalisation of unemployment and other social problems (Brage and Hernes 2010). In this context, it means that the individual and their surroundings develop an understanding that the primary reason for their problems in terms of unemployment and a lack of income primarily is medical in nature, and that they therefore "lock in" to the idea that they are too sick to work (at least without effective treatment).

Two Norwegian studies are relevant in this regard. Andersen et al. (2019) found that a weak local demand for labour significantly affected later rates of disability benefits (in this context AAP and disability benefit). This is interpreted as there being a significant grey area between unemployment and disability. Schreiner (2019) explored whether local variations in the granting of AAP v. unemployment benefit or financial assistance affected employment rates and benefit collection rates for young people aged 18–30 registered with NAV. The analysis concluded that being granted AAP instead of unemployment benefit

or financial assistance led to lower earned incomes five years later, as well as increased benefit collection rates and increased risk of transitioning to disability benefit. This is interpreted as s form of medicalisation, and the risk of this happening is especially high in economic downturns. While this study may indicate that medicalisation is not unusual, it is uncertain whether the method actually captures a causal effect of NAV granting one benefit or another.

An OECD report on workforce inclusion of people with disabilities has come to a different conclusion. It shows that the share of people with disabilities aged 15–29 who receive income protection benefits is higher in Norway than the EU average, and that the difference can largely be attributed to health-related benefits. The OECD has interpreted this as the income protection system in Norway being better suited for young people with disabilities than those in other European countries, something they attribute to Norwegian schemes offering more "generous and accessible disability benefits" (OECD 2022:86–87). The OECD wrote that income protection for young people with disabilities is a necessary condition for them realising their potential, but that it is also important to have incentives for them to be self-sufficient (OECD 2022: 61). The OECD wrote that Norwegian young people with disabilities aged 15–29 have an employment rate that is 13–14 percentage points lower than other people of the same age, which is slightly higher than the OECD average (OECD 2022: 94).

High employment rates for some vulnerable groups

In a country with low income inequality and a generous welfare system, there is some risk that people with limited qualifications and poor health may have a lower rate of employment. Barth et al. (2015) used data from large international surveys of people's competencies (so-called PIAAC data) to calculate employment rates in various age groups for people with "poor" or "less good" health, as well as for people with poor arithmetic skills. Compared to other European countries, Norway has very good employment rates for both of these groups, though the rates were higher for people with poor arithmetic skills than for people with poor health.

People with disabilities want to contribute

Employment rates among people who report having reduced functional ability has remained stable and low for many years. The labour force survey shows that 37.5 percent of people in this group were employed in 2021.[27] This is lower than previous years, but this could be because the data for this year only includes people with long-term health issues who also have reduced functional ability, whereas the data previously included all people who reported to have a disability. The last survey using the old method (Q2 2020) showed that the employment rate for people with disabilities was 41 percent, and in the same quarter, there were 100,000 non-employed people with disabilities who wanted to enter the workforce. This is equivalent to 17 percent of all people with disabilities.[28]

As there is currently a labour shortage in many industries, and we expect to see weak growth in the working-age population in the years to come, the conditions should be good for including more people with disabilities in the workforce. NAV should make it a priority to facilitate for this in the years to come. It also looks like many employers want to contribute: In NAV's employer survey, 34 percent of respondents said they would be willing to hire a person who would need permanent workplace adaptations (NAV 2022a). This was a small increase from 2021, when 31 percent of respondents said the same.

Activity requirements as an alternative to limiting benefits

Making activity a requirement for welfare benefits, including health-related benefits, is a common European trend, aimed at making the welfare system more sustainable. Activity requirements mean that the right to welfare benefits is contingent upon the recipient participating in some form of activity, but where exceptions may be made. This will largely take the form of work-oriented activity, such as (part-time) work (including partial sick leave), active job seeking or qualification measures in the form of education and

[27] https://www.ssb.no/akutu
[28] There are no more recent figures for this.

training, but medical treatment could also be considered a form of activity (ref. AAP rules). The intention behind this type of legislation is for benefits to function as assurance against a loss of earning ability through no fault of one's own, while, at the same time making sure it is profitable for the individual to work, among other things to prevent over-consumption of welfare schemes. In light of this, activity requirements could be seen as an alternative to low benefits with stringent qualification requirements. This approach, however, could have a negative impact on the individual and on the perception of NAV, if the requirements are unreasonable, inappropriate or difficult or impossible to meet (Hagelund et al. 2016).

Several surveys show that introducing activity requirements for health-related benefits has had some effect. One example is the sharp decrease in sickness absence in connection with the 2004 introduction of an activity requirements within 8 weeks of the start of a sick leave in order to retain the right to sickness benefit. In addition, the use of partial sick leave was encouraged (Markussen 2010). These regulatory changes appear to have had a significant impact on certification practices among physicians, because they aligned with new medical research, which shows that activity is beneficial for many health issues, as long as it does not make pain worse. A trial project in Hedmark in 2013, with a more consistent enforcement of the activity requirement within 8 weeks, also contributed to a significant reduction in sickness absence and transition to AAP, and it was later implemented nationwide (Lima et al. 2017; Kann and Lima 2015; Hernæs 2018).

Activity requirements for people on sick leave and others with health issues do not only impose requirements on the individual, but they also trigger a right to adaptations in the workplace. To make it possible for as many people as possible to enter and remain a part of the workforce, it is important that the employers' obligation to provide adaptations is enforced. Providing public grants, or to pay for replacement workers covering for the person who is on sick leave, could be potential ways to handle this, but assistive technology can also be useful (see chapter 3.1).

Tightening the AAP rules to achieve clarification more quickly

From 1 January 2018, substantial changes in the rules for work assessment allowance (AAP) took effect. The goal was to achieve clarification of work capability more quickly and promote a return to the workforce. Among other things, the maximum benefit period was reduced, from 4 to 3 years, for new AAP recipients, rules for extension of the benefit period were made more stringent, and a one-year waiting period before a person could reapply for AAP were introduced. In addition, the qualification criteria were limited slightly, by more clearly defining the requirement of a causal link between the health condition and the reduced capacity for work.

Several analyses have been made on the effect of the various elements of this regulatory reform.

Lima and Grønlien (2020) analysed the effect of more stringent rules for benefit period extension. As expected, there was a sharp decrease in the number of recipients beyond the 4 years. In response to this decrease, there was also an increase in disability benefit recipients, as well as in recipients of financial assistance. While the share of the population who are employed and do not receive AAP or disability benefit also increase, the transition into the workforce did not increase. Instead, the increase in the employment rate was the result of people who previously combined AAP with work, and who lost their AAP, continuing to work. Myhre and Kann (2022) explored the effect of the maximum benefit period being reduced, by comparing new AAP recipients in December 2017 and January 2018. They saw that, among new AAP recipients once the new rules had taken effect, more people had returned to work after the three-year benefit period had expired, compared to the control group, while at the same time, more people had also been granted disability benefit. It would therefore appear that the reduction of the maximum benefit period led to quicker clarification, both in terms of returning to work and in terms of transitioning to disability benefit. At the same time, more people are neither part of the workforce nor receiving AAP or disability benefit. We see the biggest transition to disability benefit for young people aged 18–29, but even for this group, it

would appear that workforce participation has increased.

Lande (2021) explored potential effects of the regulatory changes, especially the clarification of the requirement of a medical issue as the causal effect, on the number of applications for AAP and on how many have their application granted. It turns out that the more stringent practice of qualification requirements implemented in 2018 led to more applications being rejected, but the practice appears to have been reversed again in 2019. In 2019, the number of applications for AAP also increased, and this increase can only partially be explained by applicants re-applying after having completed the waiting period. The majority of the increase in applications came from people who had not previously received AAP. The development is difficult to explain, as sickness absence rates were stable and the labour market was good, with unemployment rates going down. One potential reason for the increased number of applications could be the relaxation of practices for granting AAP.

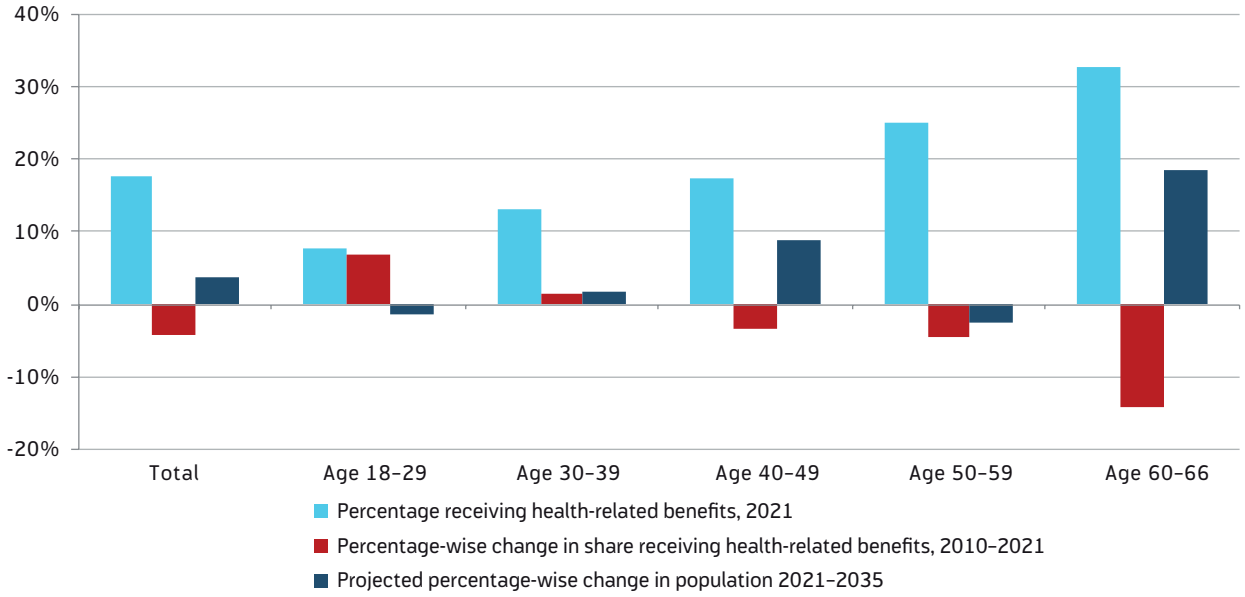
Health-related benefits in the years to come

From 1 July 2022, the rules for AAP changed again. Now, the possibility of having the benefit period extended beyond the maximum is increased, and the waiting period has been eliminated, which means it will be easier to apply for AAP again after the benefit period has expired. The maximum benefit period without extension is still 3 years. It is too soon to tell what the effect of these changes will be. In evaluating the changes (including the ones from 2018), it is important to take into account how the rules affect young people, who often will not have had the time to find their place in the workforce, and may be at higher risk of medicalisation. This must also be seen in light of the fact that the minimum annual benefit for young people under 25 was reduced, from 2 times the National Insurance basic amount (G) (2 G), to 2/3 of 2 G from 1 February 2020. We should also expect other changes in the rules for health-related benefits in the years to come (see chapter 9). A relevant aspect to consider in this regard, is that a randomised, controlled trial with a so-called "second dialogue meeting" for people on sick leave found that this mandatory meeting had no statistically significant effect on the person's return to work (Alpino et al. 2022).

At the same time, a wide range of factors affect how many people receive health-related benefits, and the most important of these may be demographic developments and public health. As discussed above, we expect that public health to continue to improve in the working-age population (age 20–69 in this context). Viewed on its own, this would suggest a reduction in the need for health-related benefits. Within this age group, then, we do not expect the effect of an ageing population to cancel out the expected improvement in public health for each age cohort. The burden of disease is primarily expected to improve for cardiovascular diseases and cancer, which do not account for a large share of health-related benefits, whereas we expect minimal changes in musculoskeletal and psychological disorders, which are the two largest diagnosis groups in this context. In addition, projections for public health are uncertain, among other things due to considerable uncertainty in regard to potential future pandemics, antibiotic resistance and risk of an increased number of refugees due to climate change, conflict and war.

Another relevant question is whether the increase in health-related benefits seen during the pandemic will be reversed quickly. The most important aspects in this regard are perhaps the increase among young people under 30 and the increase in long-term absence due to sickness. In addition, there is considerable uncertainty associated with whether the prevalence of psychological disorders will increase. Developments in the labour market could also affect the demand for health-related benefits. This is true in the short-term, in connection with economic fluctuations, but more structural changes may also play a role. On the one hand, high demand for labour could lead to greater workplace inclusion and thus fewer recipients of health-related benefits. But the opposite may also come to be – a more rapid rate of restructuring in the labour market may increase the risk of exclusion from the workforce.

Figure 8.13. Percentage receiving health-related benefits in 2021 and percentage-wise change in share 2010–2021, as well as projected percentage-wise change in population 2021-2035 (main alternative). By age.



Source: NAV and Statistics Norway

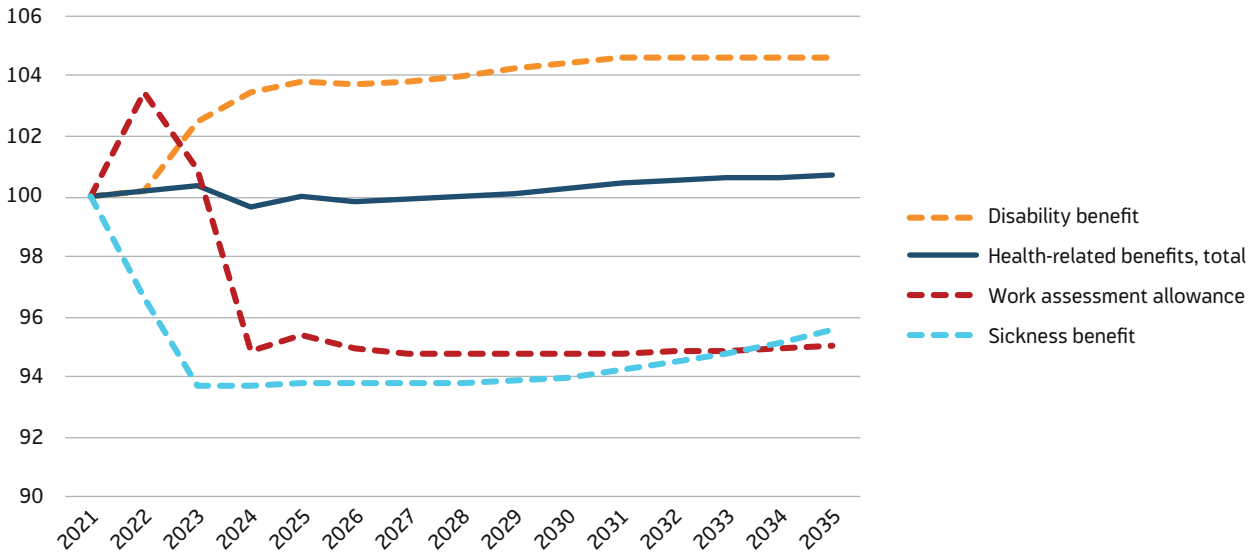
Age group over 60 increasing the most – also more likely to receive health-related benefits

Traditionally, the 60–66 age group has been the group most likely to use health-related benefits. The percentage of people who receive health-related benefits increases relatively steadily with advancing age (Figure 8.13, light blue columns). But when we examine the *change* in the percentage of recipients of health-related benefits in the period from 2010 to 2021, the situation is reversed: Among the older age groups, the percentage of recipients of such benefits went down, whereas the percentage increased in the 18–29 age group (Figure 18.3, red columns). This means that age differences in the use of health-related benefits have been reduced in this period. In the years towards 2035, we expect to see the biggest population growth in the over-60 age group (see chapter 4 Demographics and Figure 8.13, dark blue columns). As this is the group with the highest percentage of recipients of health-related benefits, this would, on its own lead to an increase in the use of such benefits. This could to some degree be counteracted by a decrease in the percentage of recipients of health-related benefits in the over-60 age group, provided this trend continues.

Projection of health-related benefits to 2035

In connection with preparing projections for national insurance costs up to 2031 (NAV 2022b), projections have also been prepared for the share of the population aged 18–66 receiving health-related benefits up to 2035. This is presented here in the form of indices, where 2021 (the last year with actual figures) is defined as 100 (Figure 8.14). The projections for health-related benefits total show considerable stability. For the period 2021–2035 overall, the projections estimate an increase of 1 percent. This means that the increase observed during the last two years of the pandemic is not expected to fade. The reason for this is in part that the increased use of work assessment allowance during the pandemic is expected to result in a permanent increase in the number of disability benefit recipients. In addition, the reversal of the waiting period for work assessment allowance in 2022 led to a high number of new recipients that year. Furthermore, ageing within the 18–66 age group will increase the share of the group receiving health-related benefits. Within each age group, we do, nevertheless, expect to see a small decrease compared to the years of the pandemic. In addition, we are expecting a somewhat different development for the three benefit types. For disability benefit, we estimate an increase of 5 per-

Figure 8.14. Projected share of population aged 18–66 receiving disability benefit, work assessment allowance and sickness benefit, as well as share receiving health-related benefits, total. Average per year 2022–2035. Index (actual figures for 2021 = 100).



Source: NAV and Statistics Norway

cent, whereas we expect to see a decrease of approx. 4–5 percent for both sickness benefit and AAP.

The expected decrease for sickness benefit and AAP is, among other things, due to the fact that we assume the increase observed during the pandemic to be temporary. For AAP, there have also been regulatory changes, where changes in maximum time periods from 2018, which were partially reversed again from 2022, have yet to take full effect. The expected increase for disability benefit is the result of the same causes that lead to a decrease in the use of AAP, lead to a higher number of recipients than expected of disability benefit.

Please note that these projections are uncertain and based on the share of each age group receiving health-related benefits in 2021, combined with population projections and adjusted for the effects of recent regulatory changes and the effects of the pandemic. The fact that we have more young people who are recipients of disability benefit could lead to a higher share of disability benefit recipients in older age groups as they age, and it could mean that the share of the population who receive disability benefit and health-related benefits overall is higher than what is estimated here.

8.4. Closer collaboration with the health sector; methods and challenges

There is a pressing need for a new approach to collaboration between NAV and the health sector. In the past, both sectors have taken a sequential approach to user groups with health challenges, who are at risk of being excluded, or who have already been excluded, from the workforce. Only once treatment has been completed in the health services, can NAV initiate follow-up and offer help to return to work. The Directorate of Health and NAV agree that it is necessary to develop more streamlined and concurrent services and a closer collaboration between the sectors.

In addition to established structures of collaboration in connection with the follow-up of sick leaves, health institutions and NAV have, in recent years, worked together to develop new methods for workplace inclusion. These new methods have two features in common. First, they are aimed at users who are receiving, or have received, treatment in the health sector. Second, work is included as a part of the treatment. These methods constitute a paradigm shift of sorts, where work is considered to be a health-promoting activity and included as part of the treatment. In other words, this is a shift from "train then place" to "place then

train". Generally, methods that follow a "place then train" logic are called supported employment (SE) (Frøyland and Spjelkavik 2014).

According to a number of international studies, one of the methods within SE, individual placement and support (IPS), has had a positive effect on transition to employment for the target group, which is individuals with psychological disorders and/or addiction disorders (Hegelstad et al. 2014). In Norway, the method was tested out in the period 2012–2016, and project evaluations show a positive effect (Reme et al. 2016). Even subsequent long-term studies show that the method has had positive outcomes in Norway (Holmås et al. 2021). As for SE in general, findings are unclear and contested, which could be because target groups, institutional contexts and the specific methods used, may vary between studies (Dahl and Lima 2022).

IPS requires committed and close collaboration between NAV's "IPS job specialists", the specialist health service and municipal health services, as well as close collaboration with employers. The goal is to help the target group find a place in regular employment.

Awareness of SE, and in particular IPS, has increased in recent years. IPS is highlighted as a good example of systematic collaboration between NAV and the health sector in the National Health and Hospital Plan 2020–2023 (Ministry of Health and Care Services 2019), and there has been an increase in the use of IPS and SE in municipal health services (Ose and Kaspersen 2022). At the end of 2022, NAV had approx. 350 IPS job specialists and instructors, and approx. 6,500 people benefitted from the service throughout the year. This includes a trial project with IPS for young people under 30, where the goal is for the participants to complete their education before they find employment.

We have good experiences from working with the health sector on IPS. At the same time, this is a resource-heavy approach, and structural barriers may impede further development of collaboration between NAV and the health sector. A recent legal opinion concludes that the services provided by job specialists are not considered health care (Directorate of Health 2022). The Ministry of Health and Care Services recommends that IPS job specialists from now on be employed by NAV. Until now, it has been up to the individual local health service whether or not to prioritise collaboration with NAV. Research indicates that conflicting objectives and priorities between the different sectors could make it difficult to get support for the idea of work as part of treatment (Skogstad 2022). These challenges are partly in conflict with the users' (chapter 5 User expectations) and the employees' (chapter 10) expectations for requirements of more cross-sectoral collaboration.

It is difficult to predict how the scope of IPS and similar methods will develop towards 2035. The challenges mentioned above could entail some risk that the service is not expanding as quickly as before, especially if they are not resolved in constructive ways. On the other hand, positive results could still, especially if they are considered socially and economically profitable, indicate further expansion.

In the health sector, there is also a need to look closer into NAV's three-party collaboration with the education sector and the health sector. We need to design measures and education programmes that meet the needs of users and figure out how the sectors can achieve their goal of concurrent, comprehensive services. One barrier, for example, is the fact that times for enrolling in education programmes are usually not very flexible, even though module-based structures could solve some of these problems.

8.5. Which trends are associated with the greatest uncertainty?

The health area is diverse and complex, and major changes in this area could affect our entire society. The prime example of this is the Covid pandemic – a health crisis that strongly affected the labour market as well as the national and global economy, and that required adaptations to welfare benefits at a rate we have never seen or experienced before. There is a risk that similar events may occur in the years to come, such as a new pandemic, increased antibiotic resistance and contaminated food or water supply. Such events may hit local communities hard, or be more national or global in

nature, and they could occur as a result of unfortunate developments in bacterial flora, climate or environmental changes, war or terrorism. It is difficult to predict if, or when, such events will occur, as well as how long they will last and what scope they will have. If serious events occur, NAV may have to help protect more citizens with their subsistence needs than NAV normally does, such as by providing income protection or housing. In other words, NAV plays a key role in the country's preparedness.

In connection with NAV's benefits and contact with health services, we have seen an increase in psychological disorders in recent years. Even so, the prevalence of psychological disorders in the population has not increased, according to the Norwegian Institute of Public Health. Possible explanations include increased openness about such disorders, a lower threshold for what is considered (minor) psychological disorders, or that it has become more difficult for people who have psychological disorders to enter the labour market. In addition, complex issues could now be more likely to be classified as a health problem (ref. so-called "medicalisation"). It is not unlikely that the current trend of more people receiving health-related benefits due to psychological disorders will continue towards 2035. This could require an increased demand for follow-up from NAV, possibly in collaboration with health services, as well as increased payment of health-related benefits. For NAV, it will, in any case, be important to intercept young people with psychological disorders and provide them with close and appropriate follow-up, as such problems could hold them back from completing their education or realising their potential in the workplace.

8.6. Questions for reflection

- How will an ageing population, in combination with improvements in public health, affect NAV?
- How can NAV contribute to prevent exclusion of young people with psychological disorders?
- Which new methods will be important in 2035, and what will they require in terms of competence (e.g. SE (supported employment) and IPS (individual placement and support))?
- How can NAV better collaborate with the health sector?

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9. POLITICAL TRENDS

By: Jørgen Daroische Holbæk-Hanssen, Ole Christian Lien, Håkon Røstad and Tor Erik Nyberg

Summary: Restructuring, inclusion and sustainability of the welfare state likely to become political challenges

In recent years, the political landscape has undergone a rapid transformation, with the pandemic, an ongoing war in Ukraine and increased inflation. The geopolitical situation is uncertain, and we see the consequences of this in the form of changing international framework conditions and greater emphasis on security and preparedness.

The Norwegian labour market and welfare model is depending on the population having a high level of trust in policy-makers and institutions. Internationally, decreasing political trust, increased polarisation and populism have been subject of much debate in recent years, but these developments have not been present in the Norwegian discourse to the same degree. Increased energy costs and high prices make it difficult for many to make ends meet, with increased inequality and a sharper discourse climate. This leads to increased polarisation and policies that arise as a response to crises and acute situations. For NAV, this could mean more frequent regulatory changes and greater unpredictability. In the short term, we may get more political governance and more expansive policies, whereas in the long term, it is unlikely that labour and welfare policies will get bigger budgets and better framework conditions.

Trust reforms in several neighbouring countries, followed by the ongoing Norwegian trust reform, reflect a trend with less centralised governance and a stronger focus on local service development in an attempt to reach the goals set for public administration. This promotes greater expectations for NAV's local and national service development efforts to have documented social and economic effects. This requires a knowledge-based approach, with trials followed by evaluations.

Relations with Europe will likely become more important in the years to come. The EU is taking a more active role in policies that are relevant for NAV, such as labour and welfare policies, skills policies and ICT/digitalisation policies. This is achieved partly by binding regulations for all member states and often also Norway, through the EEA Agreement, and partly by an indirect approach in the form of recommendations for member states.

A key political challenge towards 2035 will be to ensure the sustainability of the welfare state. In weighing safe welfare schemes against economic sustainability, policy-makers must make some difficult prioritisations. Their options are reduced benefits/service offerings, increased taxation, measures to increase employment rates and/or making the public sector more efficient.

Skills policies will likely become even more central in the years to come, especially considering technological developments and the green transition. We expect to see a stronger focus on further and continuing education. Inclusion of those who are currently not part of the workforce will also remain a high priority, to prevent poverty and manage labour demands. This is especially relevant for some immigrant groups and young people who do not have a formal education. Immigration often requires both integration and skills development, where better and earlier access to upper secondary education and vocational certification may be appropriate measures. Measures aimed at young people who are at risk of being permanently excluded from the workforce include easier access to training and better follow-up.

The main objectives of labour and welfare policies are a well-functioning labour market, income protection schemes that provide financial security while also providing incentives to work, workforce inclusion of vulnerable groups, and good living conditions for the most disadvantaged groups. We expect to see strong cross-party support for these objectives, but some lines of conflict will probably still remain:

- Increased demand for health and care services and limited budgets will likely intensify the debate over **public or private solutions**, even for NAV. Among the population, there is a long-standing wariness of privatisation of public services, while, at the same time, many are positive towards private welfare services as a supplement to public offerings.
- Comprehensive, universal schemes are expected to remain, but there will presumably be some level of disagreement concerning **universal benefits versus means-testing** or adaptations to specific target groups.
- The balance between **benefit levels and incentives** – there is political debate over how high benefits should be to counteract poverty and inequality without becoming a negative incentive to work. This debate focuses on where to draw the line on the ambition of workfare policy and the scope of activity requirements.

Other policy conflicts will also intersect with labour and welfare policy. This includes **climate policy**, which will have consequences for the rate and means of restructuring, as well as **trade and foreign policy**, where the risk of downscaling of broad international cooperation could result in more regional cooperation between countries and a discussion of Norway's ties to the European Union. In the **immigration** area, we expect continued debate on the scope of immigration, integration measures and qualification requirements for benefits. In addition, sudden changes may create situations where central authorities and NAV again need to accommodate high numbers of recent arrivals, which will

require greater coordination efforts. Persistent labour shortages may also lead to policy changes in regard to labour migration from countries outside the EU, as we have seen in some other EU countries.

With increased centralisation and an age boom that will hit rural districts the hardest, it is likely that **centre-periphery** issues may also become a source of political conflict. In this context, municipal mergers and centralisation of NAV offices and other NAV units may become focal points of discussion.

As for digitalisation policies, we expect ambitions of uniform public services, customised for the individual's circumstances, and increased automation to remain in the years towards 2035. These ambitions will require data sharing, legislative development and better financing. They will be challenged by principles of governance, such as sectoral boundaries and municipal autonomy, considerations of ethics and privacy, and demand for means-testing and targeted benefits.

9.1. Global unrest: Pandemic, war in Ukraine and inflation

The Covid pandemic, an ongoing war in Ukraine and many refugees fleeing the country, increased energy costs and inflation, has led to a period of global geopolitical uncertainty. This has had consequences for many policy areas. Internationally, Norway is facing challenges as a result of changes in framework conditions: More conflict, more rivalry and less cooperation (Meld. St. 14 (2020–2021)). Combined with lessons learned from the pandemic, digitalisation and cyberattacks becoming more common – we need a stronger focus on security policy and preparedness.

Energy and food prices have increased all over Europe, due to increased costs in all parts of the value chain. The main reason is Russia's invasion of Ukraine, which has led to increased prices on a wide range of commodities, as well as unusually high energy prices (Whist 2023, see also chapter 7). This has caused many people in Norway to struggle financially, and may lead to increased poverty and inequality.

It is possible that policy changes may be increasingly affected by circumstances, as a response to crises and acute situations. This will require that authorities are able to adapt quickly to new changes. Experiences from the Covid pandemic – with heavy strain on the health sector and a need to handle sudden and record-high unemployment – are recent examples.

It is possible that the labour and welfare policy will take a back seat to other policy areas. Prioritising defence and security (Notaker, 2023a) and increased costs due to an ageing population could lead to increased pressure on benefits and welfare services. This is, however, not given – in the short term, we may, as a response to ongoing crises, see stronger political governance and a more expansive economic policy (see also 9.2 on developments in the EU). In the labour and welfare area, this would especially involve measures to prevent poverty and inequality. In the long term, however, we consider it unlikely that labour and welfare policies will get bigger budgets and better conditions.

It is difficult to say how deep and long-term the consequences of war, pandemic and inflation will be. It is likely that the war in Ukraine will have implications for defence and security policy for many years to come. In other areas, including labour and welfare policy, the consequences may be more short-term in nature. Long-term trends and prioritisations in regards to climate, the green transition, energy and digitalisation will probably crystallise in the coming years IEA 2022).

9.2. International trends and influences

The EU will become more important for Norway

In a more uncertain world, we believe the EU will come to play a more important role for Norway. The pandemic showed us how much we need strong ties to trade partners, with the European vaccine-sharing collaboration as a recent example (Meld. St. 14 (2020-2021)). It turns out that Norway, which is a small country, will have much to gain from forming strong ties to the EU in terms of preparedness for future international crises. A potential security policy development, where there is increased rivalry between world powers as well as increased pressure on democracy and liberal values, could lead to a desire for a stronger cooperation with the EU.

The EU is taking a more active role in several policy areas that are relevant for NAV, such as labour and welfare policies, skills policies and digitalisation policies. Some of this work takes the form of regulations that are binding on all member states, but many policies remain a national responsibility. These are sought coordinated and influenced through recommendations and action plans.

An employment policy has been on the European agenda for a long time. Now we are seeing policies for reducing poverty and economic inequality being put higher on the list of priorities, such as in the European Pillar of Social Rights Action Plan (European Commission 2021) and subsequent recommendations to member states on how to follow up on the action plan (European Commission 2023a). Two recent surveys among EU citizens show that 7 in 10 believe the EU should support national governments in their efforts to reduce economic inequality (European Commission 2023b). Young Europeans aged 15–24 (European Commission 2022) believe that combatting poverty and social inequality should be the highest political priority.

We can divide EU policies into three categories in terms of how they affect Norway:

1. **EU regulations (directives and legislative acts) that are binding for Norway through the EEA Agreement:** Examples include the General Data Protection Regulation (GDPR) from 2018 and the Digital Services Act, adopted in 2022. The latter aims to protect consumers using digital platforms, among other things, by requiring that platforms protect basic rights, such as children's rights and preventing hate speech, and by requiring transparency on how algorithms work.
2. **EU regulations that only apply to EU member states and are not included in the EEA Agreement:** One recent example is the recently adopted Directive on adequate minimum wages (Government 2022a), which would require member states with a statutory minimum wage to define these in accordance with given criteria, including living costs and purchasing power. It has not yet been determined whether or not this directive will be incorporated into the EEA Agreement.
3. **"Soft politics":** These are recommendations to member states. They are not binding, but will be followed up in requirements for national objectives and action plans. This type of recommendation only applies to EU member states. Some examples include:
   - European Pillar of Social Rights Action Plan (European Commission 2021). This defines certain targets: for least 78% of the population aged 20 to 64 to be in employment by 2030, for at least 60% of all adults to be participating in training every year by 2030, and for a reduction of at least 15 million in the number of people at risk of poverty or social exclusion.[29] The member states are free to define national targets and design policies for how to reach these targets.
   - European Skills Agenda (European Commission 2020). This is in effect until 2025 and includes initiatives for lifelong learning through individual learning accounts and certification of small education modules (so-called *micro credentials*).
   - Council recommendation on minimum income (Council of the European Union 2023). This gives recommendations on a means-tested benefit to people without sufficient income to support subsistence (equivalent to financial assistance in Norway). Among other things, it is recommended that the minimum benefit by 2030 should be equivalent to the national poverty threshold, or be based on national figures for necessary subsistence costs.

While EU policies in the two last categories are not binding for Norway, they could offer inspiration and have indirect consequences for Norwegian policy. One example is that the EU poverty threshold is being actively used, even in the Norwegian political discourse, to discuss measures to reduce economic inequality (see chapter 7).

[29] Measured by the so-called AROPE indicator, which is comprised of three smaller indicators, one of which is the share of the population living in a household with an income below the risk-of-poverty threshold.

UN Sustainable Development Goals

The UN adopted 17 Sustainable Development Goals (UN 2015) to be fulfilled by 2030. These goals seek to achieve a sustainable development economically, socially and environmentally, and most of the goals are relevant for policy areas that affect NAV. In Norway, these goals function as a superstructure for the Government's policies (Meld. St. 40 (2020-2021)). In the national action plan for the Sustainable Development Goals (Meld. St. 40 (2020-2021)) it was decided that all strategies, action plans, reports to the Storting and propositions from the Government shall include an account of effects on the Sustainable Development Goals. A wide range of plans and strategies, such as municipal or corporate strategies, make reference to these goals. This includes NAV's strategy (NAV 2022a). The Sustainable Development Goals will therefore have both direct and indirect impact in many different areas of society.

9.3. Challenges and opportunities for the welfare state towards 2035

For many years, the so-called "workfare policy" has been a pillar in Norway's labour and welfare policies. This specifies that the individual should, to the greatest degree possible, be able to support themselves and contribute to the creation of economic value in society (Meld. St. 35 (1994-1995)). The overall goals of the current labour and welfare policy, as defined in Prop.1 S (2022–2023), include: a well-functioning labour market with good workforce utilisation, reducing absence due to sickness and workforce dropout, income protection schemes that provide financial security while also giving incentives to work, inclusion of at-risk groups into the workforce, and decent living conditions for the most disadvantaged groups. The proposition also states that good welfare schemes are important for the individual as well as for the labour market's ability to adapt.

The Norwegian labour market is characterised by a high rate of employment, relatively small income inequality and a strong restructuring capacity (Ødegård et al. 2020). Norwegian economic policy has long strived to achieve full employment and social equalisation. This has led to the development of universal welfare schemes in central areas: education, health and income protection for those who, for various reasons, are unable to support themselves by working. This policy has paved the way for a highly educated population, high rates of employment for both genders and high social mobility (Ødegård et al. 2020). In addition, the Norwegian labour market model is characterised by a strong collaboration between the employers and employees (Barth et al. 2015).

Means to a sustainable welfare state

A key political challenge towards 2035 will be to ensure the sustainability of the welfare state. In the years to come, there will be fewer and fewer workers for each retirement pensioner. The State's costs will increase, without an equivalent increase in revenue. At the same time, we are expected to continue the green transition (Meld. St. 14 (2020-2021)). How can we balance the population's expectations for what the welfare state should provide against an economically sustainable welfare policy? It will come down to financing, but also to the population's perception of welfare schemes. As recipients of national security benefits, many will expect benefit levels that make it possible to maintain a high standard of living (Haugsgjerd and Segaard 2020).

Reduce costs and increase revenues

Long-term, known developments, as well as a more uncertain global situation, could make it more difficult to preserve and further develop the welfare state. It will require action to reduce public expenditures, and tighter public sector budgets will leave less economic wiggle-room. There is reason to believe this will make Norway more like other countries, in the sense that we cannot, to the same degree, "buy our way" out of social problems and "cover up" political divides with the help of oil revenues. This will require stricter prioritisation in terms of welfare state expenditures and/or higher taxes, fees and charges on the revenue side (Ødegård et al. 2020). National insurance benefits, which are considered expenditures in the National Budget, are actually a redistribution of funds, which affects the resource allocation of the economy, from those who pay taxes, to those who have less and benefit more from these funds. Even so, the benefits have a tax-financing cost of around 20 percent (DFØ 2018).

The development of services and benefits has an impact on welfare state financing. In recent decades, policies have been expanded (e.g. in family policy), limited (i.e. by reducing benefit periods and introducing activity requirements) and reformed (e.g. pension reform) (Ødegård et al. 2020). Generally, policies and reforms have, for many years, been implemented to increase the restructuring capacity and sustainability of the economy and the welfare system (e.g. transport reform, municipal reform and the so-called ABE reform to reduce bureaucracy and increase efficiency) (Meld. St. 14 (2020-2021)). The coverage requirement of the National Budget means that either revenues must be increased, or expenditures must be reduced (Meld. St. 14 (2020-2021)).

These developments mean policy-makers are faced with the following choices in the years to come:

1. **Reduce welfare state expenditures** by eliminating or reducing benefits and/or changing service offerings. National insurance benefits will be weighed against funding of other welfare services, such as education, health services and care for the elderly. Different political majorities may prioritise differently, both in terms of which areas to prioritise, and in terms of the degree to which recipients are expected to contribute in the form of self-financing. The Pension Committee recently recommended gradually increasing the retirement age (Official Norwegian Report 2022: 7). Another possibility would be to have benefits that are partially funded by someone other than the public sector. This could be self-funding, the establishment of various insurance schemes, or by increasing employer's contributions. Some benefits may also be eliminated entirely (Ødegård et al. 2020). The Perspective Report from 2021 mentions both "private co-funding of some services" and "adapting and renewing welfare schemes" as part of the Government's strategy for a sustainable welfare system (Meld. St. 14 (2020-2021)). These are topics that will likely be the subject of much political debate along the traditional right/left axis in the years to come.

2. **Increase welfare state revenues** by increasing tax revenues and expanding tax bases. The expert committee *Norway towards 2025* emphasises that we "must avoid having interim measures permanently weaken tax bases, the tax system's ability to generate revenues for the community and the tax system's contribution to income equalisation (Official Norwegian Report 2021:4, p. 16). The committee proposes appointing a dedicated tax committee to examine (1) how the existing tax base can be better utilised, (2) opportunities for new tax bases, and (3) economically profitable tax shifts[30], such as green tax shifts. Some of these proposals have later been followed by proposals from the Tax Committee (Official Norwegian Report 2022: 20).

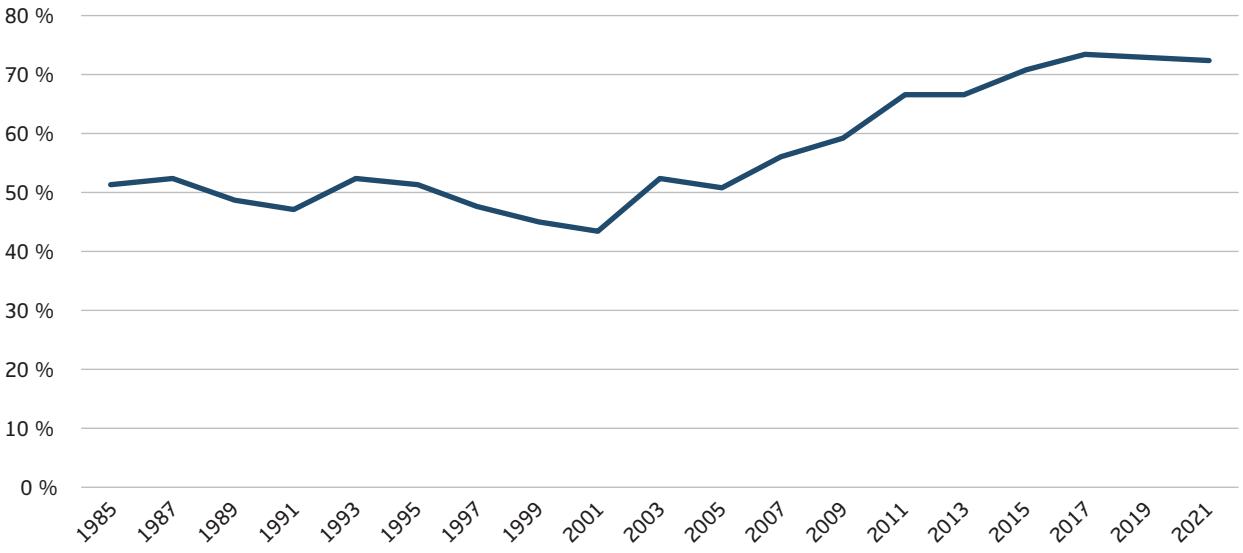
   Tax policy is one area where political divides are quite distinct. Increasing the tax burden would not automatically lead to more money for welfare benefits, as there will be many other items of expenditure competing for these funds (Ødegård et al. 2020). At the same time, there are limits to how much the tax burden can be increased before increased taxation weakens incentives to work, thereby reducing the tax base (Meld St. 29 (2016-2017)).

   The population's willingness to pay tax has been increasing since 2000 and has remained stable in the last 5–6 years (Figure 9.1). If the quality of public services is considered poor, or if welfare schemes are abused or benefits other parties than those who need them, however, this could weaken support for the welfare state (Kumlin and Rothstein 2005; Nannestad 2008) and, in turn, the willingness to pay tax.

3. **Increase workforce participation** and thus also tax revenues. The Perspective Report from 2021 emphasises that strategies for increasing employment rates should include fewer people on disability benefit, reduction of absences due to sickness, more people transitioning from part-time to full-time employment, increased employ-

[30] These are increases in some taxes and reductions in others, so that the overall tax burden does not increase, but changes are effected to prevent the taxes from having unwanted effects.

Figure 9.1. To what extent do you agree or disagree with each of the following statements? *A heavy tax burden is necessary to preserve important public services* Share of respondents who said agree completely or partially. Representative population selection



Source: Norsk Monitor (Ipsos)

ment rates among immigrants, more elderly people working and young people entering the workforce earlier (Meld. St. 14 (2020-2021)). One option could be to increase labour migration. While there is generally cross-party agreement in favour of increasing workforce participation, proposed strategies may lead to political conflict regarding the means with which to achieve it.

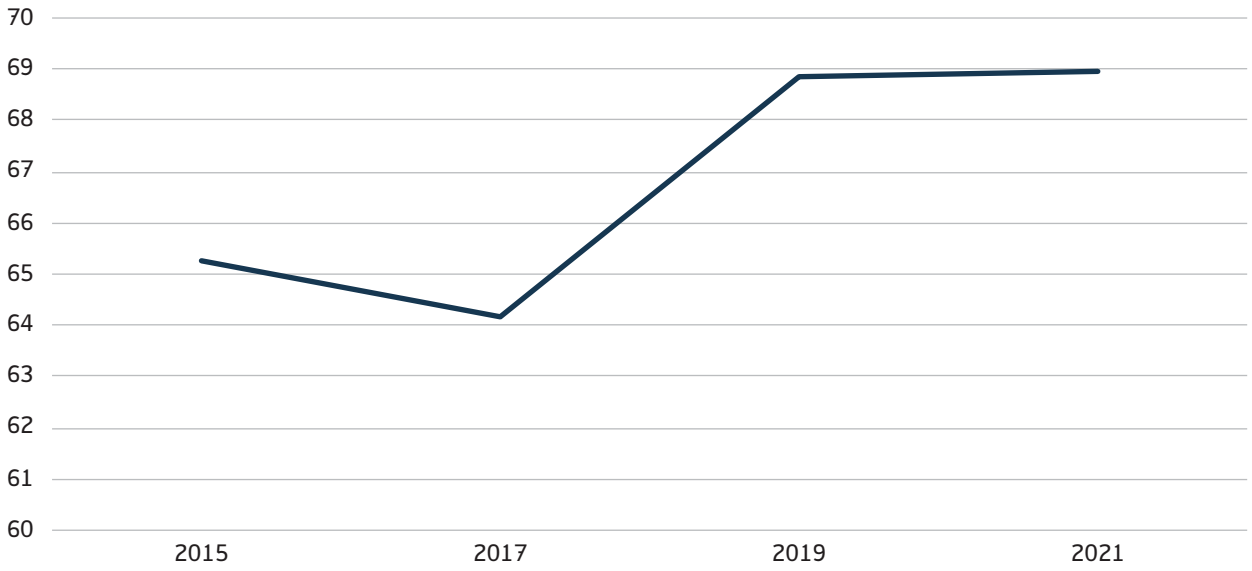
4. Reduce welfare state expenditures by **making the public sector more efficient**. The welfare state must take into account considerations of both redistribution and efficiency, and an expanding centralised bureaucracy has for many years been the subject of political debate. In recent years, this debate focused on the so-called ABE reform to reduce bureaucracy and make the public sector more efficient, which resulted in annual cuts to the operating budget for all central bodies and enterprises. The reform was discontinued from 2022, but it was partially replaced by more targeted cuts to property costs and consultancy services. A more efficient public sector as a result of technological development has considerable potential, provided that the benefits can be realised (chapter 6). There is cross-party support for implementing technology to an even greater degree in both case processing and the administration's communication with users (Ødegård et al. 2020).

Increase retirement age

Many countries, including Sweden, Finland and Denmark, have decided to increase retirement age significantly in the coming years, to ensure a more sustainable pension system (OECD 2021). An ageing population both challenges the funding of the welfare state and contributes to labour shortages, which means the issue of retirement age has been put on the political agenda in Norway as well.

The pension reform from 2010 introduced both life expectancy adjustments and new pension regulations. The intention was to "improve the economic sustainability of the pension system, improve incentives for work and increase flexibility" (Official Norwegian Report2022:7, p. 11). The Pension Committee, which presented its report in 2022, concluded that the need for a pension reform is even greater now than it was when the previous pension reform was adopted. The committee recommended gradually increasing retirement ages within the pension system, starting from

Figure 9.2. At what age should regular workers fully retire from the workforce, provided they are in good health? Average. Representative population selection



Source: Norsk Monitor (Ipsos).

2026. In addition, the committee made several suggestions for how to reinforce the redistribution effects of the pension system. These included: better retirement pension for people with disabilities, better regulation of minimum pension rates and protection of the interests of those who are unable to work any longer, by increasing the upper age limit for income protection schemes, such as unemployment benefit and disability benefit. It is likely that these proposals, or at least their main features, will be adopted in a broad political settlement, so as to ensure trust in the system and predictability over time. Changes will also depend on how the population's perceptions develop – currently there seems to be increasing support for increasing the retirement age. Where the average for the population's view on when people should retire was 64 years in 2017, this had increased to 69 years in 2021 (Figure 9.2).

Universal basic income

Another approach to the discourse concerning welfare benefits and the sustainability of the welfare state is universal basic income, which is a guaranteed basic income paid to all citizens without means-testing, or similar models with various forms of means-testing. This is not a very prominent topic in the discourse surrounding the welfare state of the future, but every now and then, someone will argue in favour of radical new welfare models, such as Moen and Fasting (2022). The reason behind such arguments could be increasing awareness of social inequality and distribution, or thoughts on how technological developments affect the labour market.

There is not widespread support for universal basic income/guaranteed income in the population. In a survey from 2016, 37 percent of respondents said they thought universal basic income was a good idea, a significant decrease from 2003 (Bay and Hellevik 2022). Researchers argue that a universal basic income represents a break with the workforce principles of welfare policy. They believe many are sceptical of an income without activity requirements, which may have worse outcomes for people who are not part of the workforce than the schemes we have today. We consider it unlikely that guaranteed income or universal basic income will become a central topic in political discourse in Norway towards 2035.

Development of the public sector and governance through a trust reform

Some of the discourse surrounding the welfare state

of the future is focused on organisation and approaches. In 2021, the current Government announced it was working on a new trust reform. The reform would encompass the entire public sector, and the goal is to give public sector employees time and trust to provide better services for their users (Government 2021). This entails less micromanagement and more autonomy for public sector employees who work with user-oriented services. The Government's goal is that this will give users more welfare and better services (Government 2022b).

This is part of a trend towards less centralised control and a stronger focus on local service development – a trend we have also observed in our neighbouring countries. In Danmark, trust reforms have been implemented in certain sectors, with key words like "co-creation" and "autonomy reform", whereas Sweden has conducted several evaluations into the best way to approach a trust reform (DFØ 2023a).

This trend could entail a partial reversal of governance principles known from New Public Management (NPM). Key characteristics in the NPM reforms that have been implemented in many countries in the past 30–40 years "include profit centre organisation, transfer pricing, prospective payments system, incentive schemes and reward mechanisms, competitive bidding and privatisation" (DFØ 2023b). Much of the criticism against NPM focuses on there being too much performance management and control, which is detrimental to the employees' professionalism, autonomy and motivation. This could, in turn, lead to reduced service quality for users (Nosrati et al. 2022).

The trust reform is currently in the initial phase, where the public sector is set to implement trials to see how best to organise its activities. The Government asked NAV to initiate work on a trust reform in 2022. The most relevant measures, both for NAV and other parts of the public sector, include "delegation of tasks and authorities, less micro-management, reviews of goals and performance requirements, reviews of laws and regulations, reviews of internal procedures and reporting requirements, facilitation of better dialogue between parties, and a more trust-based approach to management" (Government 2022c).

We believe the trend towards decentralisation and more autonomy for employees who work closely with users will continue. For NAV, this will require transparency and a knowledge-based approach in the form of trials, followed by evaluations and skill-building at all levels of the organisation.

Restructuring, skills and inclusion

Restructuring, skills policies and inclusion have been high on the political agenda for several years. Labour market restructuring is necessary to ensure the sustainability of the welfare state, and the Norwegian labour market has a high capacity for restructuring. It is relatively easy for businesses to downscale as needed, and we have a well-equipped welfare system to protect workers who are affected. This, along with an active labour market policy, ensures social security and promotes restructuring (Meld. St. 14 (2020-2021)).

This model has proven to be quite robust through various shocks and crises, most recently during the Covid pandemic. In the years towards 2035, we will be facing considerable changes, not least as a result of technological developments, the green transition and an ageing population (chapters 3 and 4). These are strong, underlying forces, which, in all likelihood, will continue, regardless of military conflict, security issues and an unstable geopolitical global situation.

Focus on skills

The demand for restructuring will require industries that create both value and jobs, a well-functioning labour market and a focus on skills (Official Norwegian Report 2021: 4). In the spring of 2020, the Government presented a report to the Parliament on the skills reform "Lifelong Learning". The goal of this reform is to make sure nobody "expires" as a result of lacking necessary skills, and to ensure that the labour market has access to the skills and competencies it needs (Meld. St. 14 (2019-2020) (see also discussion in chapter 4.2). This will help prevent social and occupational exclusion.

Digitalisation and the green transition also reinforces the demand for new and updated skills among workers (see chapter 4.2). In industries where specific skills

are needed and the general education level is low, this transition could be especially challenging. Examples of such industries include warehousing, logistics and some occupations in industry and construction. In these areas, policies that support skills and competence enhancement and further education will be even more important (Olberg et al. 2017).

People with little or no formal qualifications are over-represented in unemployment and as recipients of health-related benefits. If a person is not working, they also do not have access to the skills development that occurs in the workplace. If the skills development in the population does not meet new demands, it could lead to reduced value-creation and increased occupational exclusion. Exclusion and weak skills could therefore become mutually reinforcing factors (NOU 2020: 2), and we therefore need political intervention to break this cycle.

The expert committee *Norway towards 2025* emphasised that we need a stronger focus on further and continuing education. A stronger collaboration between industry and the education sector is a key factor to success (Official Norwegian Report 2021:4). A development where the demand for skills is higher and the distinction between those who are part of the workforce and those who are (entirely or partially) outside the workforce is sharper, will demand more of labour, skills and education policies, not to mention stronger coordination between these policies. This, and the follow-up of users with complex needs at the intersection of health, education and work, will require that NAV works closely and well with the health and education sectors, and that we have enough resources available to provide closer follow-up to those who need it. This is particularly true for young people who have not completed upper secondary education, especially vocational programmes (Official Norwegian Report 2021: 2).

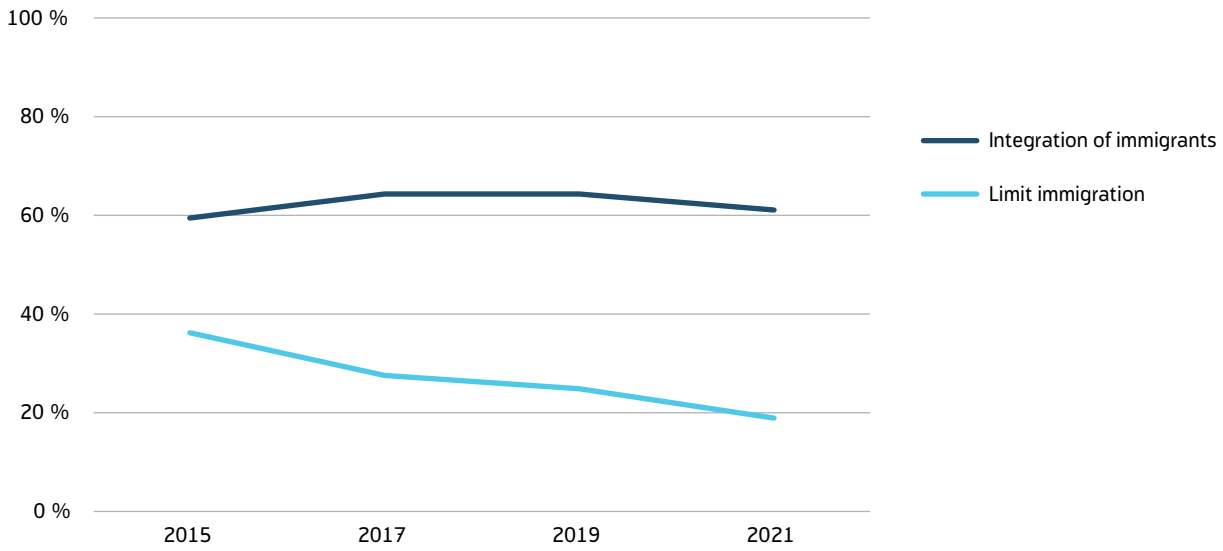
Towards 2035, we are likely to face greater expectations for follow-up and measures to be effective. This will require more research into the effect of labour market schemes, and for NAV to consistently have a research- and knowledge-based approach. The Employment Committee points out that research carried out so far indicates that the effects of further and continuing education vary, and that this approach must be combined with other measures. The committee proposes, among other things, to increase the educational capacity, strengthen upper secondary education, step up training measures and wage subsidies, focus more on career guidance, increase the resources NAV has allocated for closer follow-up, develop new profiling tools for NAV (see chapter 6.5) and include and re-educate or retrain people who, for health reasons, are unable to continue working full-time or keep the jobs they used to have (Official Norwegian Report2021: 2), Many people in this last group may have some residual capacity for work. Re-including these individuals in the workforce would be valuable and health-promoting, both for themselves and for the society. In this context, we will most likely see increased use of activity requirements and graded benefits, in combination with adaptation and follow-up. This is particularly relevant for young people who are at risk of permanent exclusion from the workforce, especially those who have mental health problems (see chapter 8.2). Closer collaboration between NAV and the health sector will be important in order to provide comprehensive follow-up (see chapter 8.4) (Meld. St. 14 (2020-2021)).

Integration and inclusion

Measures to promote integration and inclusion of vulnerable groups will become more important in the years to come. This is especially true for different immigrant groups. Overall, immigrants have an employment rate 11 percentage points below that of the general population. However, there are considerable variations based on country of origin.(Statistics Norway 2023). Former refugees are strongly over-represented in the group that lacks a stable connection with the Norwegian workforce Olsen and Bye 2020). This is also the group with the highest share of children living in households with persistent low income (see chapter 7.5).

Even so, participation in employment and community activities among refugees does increase over time, and the children of immigrants are more successful in terms of both education and employment, than their parents (Ødegård et al. 2020, see also chapter 7.7). At

Figure 9.3. "Below is a list of some sociopolitical issues. Please read through the list slowly and indicate all the issues you believe it is especially important for Norway to solve." Selected issues



Source: Norsk Monitor (Ipsos)

the same time, there are some indications of a split among first-generation Norwegians: While this generation is over-represented among those who do well in education, they are also over-represented among school dropouts (Institute for Social Research 2019).

Better integration through skills enhancement is a policy area that will become even more relevant in the years to come. The Norwegian Committee on Skill Needs pointed out that a lack of formal qualifications is one of the main causes of low employment rates, especially among refugees. At the same time, education completed abroad is often given less credit in the Norwegian labour market than education completed in Norway (Official Norwegian Report 2017: 2), The Integration Act[31] took effect in 2021, and the purpose of this act is to ensure earlier integration, improved language and civics proficiency, formal qualifications and a sustainable workforce participation (Integration Act 2021). There is consistently broad agreement in the population on the importance of integration, and the share that believes it is important to limit immigration is decreasing (Figure 9.3). In the Perspective Report (Meld. St. 14 (2020-2021)) the Solberg Government claimed that the integration of immigrants into the workforce was not good enough. The report shows that we need more education, qualification, skills enhancement, language training, employment schemes for adult immigrants and early intervention in schools and kindergartens. This means that a closer collaboration between NAV, the education sector, employers and other partners will become even more important. Among other things, NAV's schemes and measures can be used to provide modular vocational education.

Vulnerable young people

The inclusion of young people into work and education has been a central political issue for many years, and it will probably only become even more important in the years to come. In the Perspective Report, the Government mentioned that it would fulfil the UN Sustainable Development Goal (UN 2015, see also 9.2) through, among other things, early intervention in kindergartens and schools, having more young people complete and pass upper secondary education, and providing a sound compulsory education with good opportunities for further skills enhancement (Meld. St. 14 (2020-2021)).

[31] Act relating to integration through training, education and employment.

Many young people are not part of the workforce and lack education and qualifications, or they have health problems – or both, even though the share of young people not in education, employment or training (NEETs) is lower than in many other countries (see chapter 4.7). Around half the people aged 15–29 report that they greatly or to some degree fear that their knowledge and skills will be insufficient in the labour market of the future (Norsk Monitor). The main concern is that young people with no formal qualification may be permanently excluded from the labour market (Ødegård et al. 2020), Many young people have complex problems, which makes it very important for NAV to work closely with the health sector and the education sector (Official Norwegian Report 2021: 2, see also chapter 8.3).

The Productivity Commission (Official Norwegian Report 2016: 3) pointed out the importance of getting more young people to complete upper secondary education. Labour market demand for young people with no formal vocational or academic qualifications will become even lower in the years to come. The dropout rate is especially high among youths who chose a vocational education programme in upper secondary school, among other things due to a lack of apprenticeship positions (Barth 2019). One proposal that has been repeatedly presented is to make apprenticeships a statutory right. The main argument for this approach is that it will strengthen pupils' rights and ensure that they have the opportunity to complete the education they started. Establishing this type of statutory right is expensive, however, and private businesses may find it over-reaching. Reasons for the shortage of apprenticeships include that the framework conditions and collaboration in the application process are unsatisfactory, and businesses have indicated that they do not find the applicants sufficiently qualified (Directorate for Education and Training 2019). To remedy this situation, the expert committee *Norway towards 2025* proposes to test out arrangements where the risk to and liability of employers are relieved when they hire someone from a prioritised group (Official Norwegian Report 2021: 4),

We could also mention that several public sector bodies require businesses to have apprentices in order to submit bids for competitions. At the same time, getting an apprenticeship is not enough, the candidate must complete the training. Test projects have shown that more candidates will be able to complete their training if they are allowed to use more time and are provided with closer follow-up during training (Ødegård et al. 2020). This could take the form of a scheme involving wage subsidies and an assigned workplace mentor. Research into this issue indicates that mentoring and contact with a regular workplace environment are especially promising (Official Norwegian Report 2021: 4).

A mentoring scheme could also entail supporting young job seekers who face barriers when they are trying to enter the workforce(Official Norwegian Report 2021: 4), An increasing number of young people struggle with psychological disorders (see chapter 8.2). This could be especially challenging for those who struggle to complete their education and/or those who struggle to enter the workforce on a more permanent basis. Potential measures to combat this could be schemes that provide comprehensive support and guidance for young people with low social and emotional competence (Official Norwegian Report 2021: 4), Increased use of the individual placement and support (IPS) scheme, where the health sector and NAV work together, as mentioned in chapter 8.4, could also be an option.

As discussed above, one main concern is that many young people end up being permanently excluded from the workforce. An increasing percentage of young people are becoming recipients of disability benefit (Kalstø and Danielsen 2022). The social benefit of being part of the workforce instead of collecting disability benefits is greater for young people, as they potentially have more years left before retirement than someone older would have (Lamøy and Myhre 2021). In addition, this kind of exclusion is quite difficult for the people involved. The Employment Committee proposes, among other things, to provide young people with individual follow-up regardless of whether or not they are a recipient of a benefit, to increase the resources allocated to work-oriented follow-up within NAV and early work-oriented assistance where NAV, the education sector and health

services work closely together. They also recommend that young people under age 30 who are granted disability benefit get an explicit assessment of whether it will be possible to increase their capacity for work at a later date, and that work-oriented disability benefit become the norm (Official Norwegian Report 2021: 2), In 2023, NAV has been asked to prepare a trial project for such a model, where it will be easier to combine disability benefit with work (Ministry of Labour and Social Inclusion 2023).

Poverty reduction

Inclusion of vulnerable young people, immigrant groups with low workforce participation and generally all those who are not part of the workforce, will be especially important in the years to come to ensure decent living conditions and reduce poverty. Young adults, immigrants and people with weak ties to employment are most at risk of low income, as seen in chapters 7.3 and 7.4. In the EU, poverty reduction is high on the agenda (see also 9.2), and poverty reduction is also the UN's sustainable development goal (UN 2015).

In the years to come, we expect to see more political discourse on the level of NAV's targeted benefits (e.g. financial assistance, disability benefit and single parent benefit) and benefits that are more universal in nature (e.g. child benefit). In this context, we are likely to see the debate touch on the balance between incentives and distribution, and where we draw the line for the workfare model (read more on this in 9.4).

A strong focus on skills, (further) education and inclusion will be key measures for poverty reduction in a long-term perspective. As part of the discourse surrounding more targeted and short-term measures to fight poverty, we believe we will see greater expectations for NAV to be available to people who have an acute need for assistance. Many poor people who receive help from charitable organisations believe that the threshold for getting help from NAV is too high (Fløtten et al. 2023), In a report by the Norwegian Board of Health Supervision, NAV was criticised for its social services being too difficult to access (Norwegian Board of Health Supervision 2022). The recommended measures primarily concern organisation and procedures internal to NAV, but the criticism garnered considerable political and media attention. The Parliament already asked the Government to prepare a proposal to ensure that the least competent users are ensured access to NAV, and that the NAV Call and Service Centre has sufficient capacity to handle incoming enquiries (Stortinget 2021).

9.4. Political conflict lines towards 2035

While the times may be volatile, Norwegian society has many qualities that promote political stability. The Norwegian economy is robust, and we have cross-party agreement on a majority of the fundamental aspects of labour and welfare policy. The Norwegian political landscape has, over time, become somewhat more fragmented, in that the historically major parties have become smaller, and new, smaller parties have gained a foothold among voters. Even so, candidates for government will most likely be based on blocs (government constellations), which will likely neutralise outliers. There is reason to expect continued broad support for knowledge-based policies, e.g. in connection with major reforms (Ødegård et al. 2020), In light of the challenges of ensuring the sustainability of the welfare state, and the general unrest of the times, political fronts may become more staunch, particularly if economic inequality continues to increase (chapter 7).

Election researchers often emphasise five dominant dimensions along which opinions are divided in Norwegian politics: immigration, growth/conservation, public/private, religious/secular, and centre/periphery (Bergh and Aardal (eds.) 2019). These persistent lines of conflict will continue to be relevant in the years to come. Policy moves made in the next few years will depend on which of these lines of conflict come to the forefront, and which parties claim the strongest ownership of various issues.

Lines of conflict in labour and welfare policy

We can be fairly certain that the underlying, strong trends – an ageing population and the green transition – will influence the political discourse. The latter will ensure that climate policy remains high on the agenda. Potential costly climate measures could come into

conflict with the funding of other areas, such as welfare policy, or they could come into conflict with the rights of indigenous populations, environmental conservation or land use. The green transition will require considerable restructuring, and for policy makers, the determining factor will be which measures are best suited to ease the transition (Ødegård et al. 2020), The funding and organisation of tomorrow's labour and welfare policy will be affected by different views on which measures are best suited to ensure welfare state sustainability.

Public v. private

Opinions on some of the issues will be split along the *public v. private* line of conflict. This concerns the distribution between public and private solutions and the degree of public regulation. We recognise this as the traditional right/left axis in politics. Tough prioritisations will likely lead to debate over cutting costs by increasing self-financing, increased use of private insurance schemes, reduction or elimination of benefits and potential privatisation of health and care services. In tax policy, we can expect polarised political discussions of potentially increasing taxation (especially for some groups) as part of the funding strategy for welfare services, and in this debate there will be a marked division between the right and left.

Among the population, there is a long trend of scepticism towards privatisation of public services. However, a majority of people are positive of private welfare services as a supplement to public service offerings.[32] Based on this, it is likely that the political discussion will focus on the use of private providers within the framework of a public welfare state, including the degree of competitive tendering, the use of commercial or non-profit providers, and who should be responsible, economically and organisationally, for the increased restructuring and skills enhancement demand in the labour market.

Incentives v. distribution

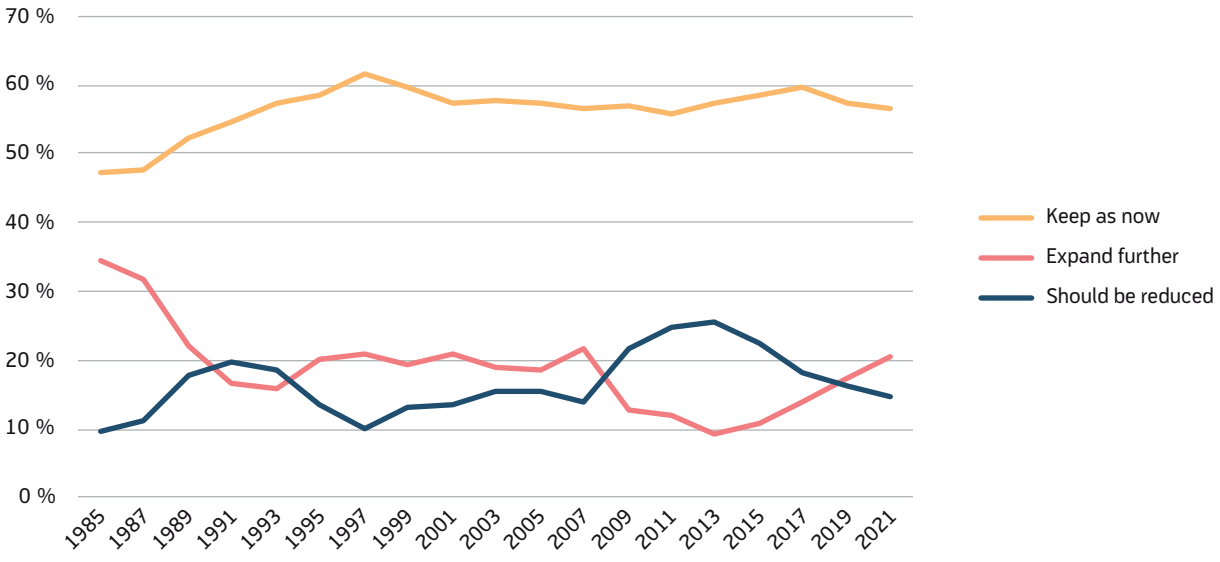
We will probably see proposals where expenditures are reduced by cutting and changing benefits. Tightening the sickness benefit scheme, reducing disability benefits and other measures aimed at increasing workforce participation, are areas of conflict that will bring traditional "stick and carrot" dilemmas to the forefront of discussion. Much of this has to do with striking the right balance between incentives and distribution, and where to draw the line on the workfare policy. There will probably be political disagreement on how high benefits can be without disincentivising people from working – and how low they can be without increasing poverty. The same applies to activity requirements and measures aimed at people who are not part of the workforce (Ødegård et al. 2020), This debate will likely intensify over time, in line with an increasing urgency to ensure welfare state sustainability and mobilise labour.

A majority of the population do not want reductions or further expansions of welfare schemes, as seen in Figure 9.4. At the same time, an increasing percentage of people believe national insurance schemes should be expanded. If this pattern of opinion persists for the next 15 years, it would support relatively stable policies, with minor reforms, rather than radical interventions. This could also mean it will be difficult for policy makers to build support for proposals that in some way entail a reduction of benefits.

The discourse also concerns whether inclusion measures could undermine existing wage and employment conditions. If wages and employment protection is weakened to get more people to join the workforce, the outcome could be that many will be forced to combine low-income work and various targeted benefits (so-called working poor). One option could be for someone, NAV for example, to provide more support and assistance to employers, so that it will be easier to hire people from vulnerable groups. Another option is to let go of the ambition to bring "everyone" into the ordinary labour market and instead build up a larger sheltered sector. In any event, it is likely that the discourse on exclusion and the limits of workforce will become even more relevant as the age boom leads to increased expenditures and fewer people of working age (Ødegård et al. 2020).

[32] This is based on data from Norsk Monitor (Ipsos), including questions concerning positions on government regulation and use of private welfare services.

Figure 9.4. Many believe we have more than enough benefits, and that we should try to limit this in the future, whereas others believe we should maintain our current benefits and expand on them if necessary. What is your opinion?



Source: Norsk Monitor (Ipsos)

Universalism v. selectivism

It is also likely that political discourse will focus on *universalism v. selectivism*. Various forms of means-testing (including financial and discretionary), self-financing, formalisation of rights and ear-marking are political issues that could become relevant in the years to come. Political micromanaging, where rights in selected areas or for certain groups are formalised in statute, could be forced, if policy makers feel the need to "fix" individual issues (Ødegård et al. 2020). Findings from research literature shows both that universal schemes are less resource-demanding to manage and that countries with more such schemes also have more political trust (see, e.g. Rothstein and Uslaner 2005). This does not mean, however, that changing the schemes that are currently means-tested on a discretionary basis will automatically build trust, as the different schemes *within a national context* constitute a whole, intended to meet different needs (Øverbye 2017).

Other policy conflicts that intersect with labour and welfare policy

Labour and welfare policy also intersects with other policy conflicts This includes climate change and the *growth v. conservation* conflict, where the pace of restructuring, tools use and distribution of responsibility between the commercial sector and the authorities (Ødegård et al. 2020).

Uncertain times, where we risk international cooperation and trade being downscaled, also puts the *global v. national* conflict on the agenda. This is largely to do with positions on international cooperation and the tension between national and international orientations. If trends towards increased protectionism and regionalisation continue, it could have a dampening effect on small, open economies, like the Norwegian economy. This could, for example, lead to a loss of export-oriented jobs and labour shortages in other industries (see also chapter 4). The Norwegian labour market is dependent on how things develop globally, and further polarisation between big actors in the global market could have detrimental consequences for the Norwegian economy (Ødegård et al. 2020), We believe that the EU will become even more important, and we can already see the EU assuming a more active role in several policy areas that are relevant to NAV (see 9.2). This will lead to debate over Norway's ties to the EU. The intensity and outcome of this debate will largely depend on how public opinion shifts. A majority of the population has been against

Norway becoming a member of the EU, but recent surveys have shown that the percentage in favour of joining the EU is increasing (Sandvik 2022). Among young people (aged 18–30), a majority is in favour of EU membership (Berge and Heldahl 2022). If this trend continues, we expect the issue of Norway joining the EU rising higher on the political agenda.

In the *immigration area,* sudden developments could lead to situations where the authorities and NAV once again have to prepare to welcome large numbers of refugees[33], like we currently see in connection with the war in Ukraine. Current and future refugee crises, labour migration and the integration of immigrants into the workforce will be subject to political debate, and may highlight disagreements between parties and among the population. There is reason to believe that the general immigration practice will remain relatively restrictive. At the intersection of immigration and integration policy and labour and welfare policy, policy makers have introduced an increasing number of requirements on immigrants before they can qualify for benefits from Norway (Djuve og Kavli 2019), and requirements imposed on benefit recipients have gradually been made more stringent (Kildal 2006). This trend could demand more of NAV in the years to come, and may require greater coordination between NAV, immigration authorities, employers, educational institutions and other parties involved.

Demographic developments, such as increased centralisation and the age boom, which will hit rural districts the hardest, suggests that *centre-periphery* issues will become a source of political conflict in the years to come. We are likely to see debates over basic welfare services in connection with district policy. The conflict centres, among other things, on how far people have to travel to access good services. The trend of having fewer and larger NAV offices limits in-person access. An ageing population leads to increased demand for health services and forces difficult prioritisations (Ødegård et al. 2020).

Municipal and regional reforms are also a political hot button. The Solberg Government initiated and implemented these, but the Støre Government has allowed for a reversal of municipal and county mergers. We expect continued political debate over the degree of centralisation in general, and these reforms in particular. On the one hand, district policy considerations may prevent restructuring that could ensure efficient resource utilisation and ensure that we have competent knowledge communities both within NAV and within other service areas. On the other hand, a single-minded focus on this could reduce how close users feel to the services. We also expect to see political debate in connection with the actualisation and implementation of the trust reform in the public sector, as this could entail a decentralisation of authority and decision-making (read more on this in chapter 9.3).

The direction this development will take, will depend on political majority and experiences gained from various types of mergers. The trend of centralisation among the population is expected to continue (see chapter 3.3), but the centre/periphery line of conflict has become a topic of much debate in recent years. If this continues, it is possible that we will see some form of counter-reaction to centralisation. In the past 10–12 years, the population has become more positive to localising central enterprises around the country.[34] The allocation letter to NAV for 2023 is in line with this: "*The Labour and Welfare Administration shall consider the administration's options for increased use of decentralised activities, for the purpose of achieving greater decentralisation of government jobs and strengthening local communities for a district policy benefit*" (Ministry of Labour and Social Inclusion 2023, p. 25). The consequences for NAV could, for example, be expectations of a greater local presence over merging NAV offices into larger units.

[33] See for example Cicero (2017).

[34] This is based on data from Norsk Monitor (Ipsos), questions asking for position on moving more central enterprises out of Oslo to other parts of the country.

9.5. Digitalisation policy

Technology has often been used to make existing processes more efficient or better, often referred to as "power on paper". But new technology and new combinations of technology will also make it possible to create entirely new solutions for processes that currently seem too difficult, too expensive, or simply impossible. In cases where structures and regulations prevent us from taking advantage of these possibilities, we imagine these being changed and developed, provided the intention is in line with political ambitions.

Ambition of continuous and uniform public services

The Government wants public administration to provide even better services to the public, to businesses and to non-profit organisations, and create a more efficient public sector. This is not possible within individual public sector enterprises or municipalities. We expect the ambition to have public services be perceived as continuous and uniform, independent of who is providing them, to remain in the years towards 2035, see also chapter 5.3). This is expressed in in many different documents and strategies, such as Hurdal platform, Digitalisation Strategy, Innovation Report , Perspective Report, report on data-driven economy and the ministry strategy "Good separately. Best together".

The private sector often implements new technology sooner than the public sector. Laws and regulations determine how the public sector is organised, who does what, which information can be shared, what data can be used for, and how processes must be. The rapid pace of digitalisation in the rest of society will highlight the need for legislative development in the public sector in the years to come. Good incentives for innovation and effective resource utilisation will be critical, so that the public sector can implement new technology and work smarter. Furthermore, we must actively strive to reap the benefits of innovation and new technology, both to maintain high quality of services and to make the administration as efficient as possible (Meld. St. 14 (2020-2021)). In a letter to the Ministry of Local Government and Regional Development, Skate[35] offers recommendations to the Government on what it will take to achieve the desired change of pace in the digitalisation process, such as funding and governance mechanisms to promote innovation, flexible development cross-sectoral initiatives, and a clear placement of responsibility to meet the need for swift clarification, common direction and legislative development. The Covid pandemic showed us what it is possible to achieve in a crisis situation, but also that a democratic society needs democratic processes and consultation rounds.

The Government's ambition of continuous services will require statutory authority to share more data between enterprises and administrative levels. Increased use of artificial intelligence will require statutory authority to use more data to train algorithms. If the user's current life circumstances are to be the starting point for public services, it will require more collaboration between public bodies, municipalities and private enterprises, and changes in methods and structures to do more digitally. It will also require skills enhancement among public sector employees to develop and use digital tools (Official Norwegian Report 2021: 4). Digital interaction with the private sector is likely to increase, as already seen in the so-called DSOP cooperation (Public-Private Digital Cooperation) with the finance industry (Bits undated). Among other things, this will lead to a discourse on value-creation, the role of the public sector and how data-sharing will be financed. NAV's role as a provider of data to other parties could become even more important towards 2035.

Policy work involving security, ethics and privacy

We expect political attention on issues like security, ethics and privacy will increase with increasing digitalisation and automation. Access to large quantities of data and data power provides opportunities for

[35] Skate (a Norwegian acronym for Management and Coordination of Services in E-Government) is a strategic cooperation and advisory council to the Norwegian Digitalisation Agency and the Minister of Local government and Regional Development. Skate aims to contribute to a coordinated digitalisation of the public sector (digdir.no 2023).

increased value-creation and more efficient processes, but at the same time trust and legitimacy may be challenged, and the relationships between residents, public sector employees and public administration may change (Arnesen and Johannesson 2022). See also chapter 9.7 for more on security threats.

Digitalisation requires policy makers to balance considerations of value-creation, control, privacy and ethics. When we increase the State's ability to compile data on its citizens from different sources, this also increases the State's ability to understand, classify and predict how citizens will behave. This means this development could have considerable impact on the power balance and relationship between citizens and the State (Reutter, 2023). Ambitions of data sharing and automated services will require data sharing and cooperation between public sector bodies at a scope the current legislative framework does not permit, and that is a challenge to privacy (Government 2021) and requires the legislative framework to be updated. Ethical considerations must be weighed against considerations of privacy and a potential surveillance society.

The laws that regulate the processing of personal data are rarely designed to allow personal data to be used for machine learning in the development of artificial intelligence. This indicates that lawmakers in the years to come should facilitate for a responsible development of artificial intelligence in the public sector (Norwegian Data Protection Authority 2022). Other barriers include the fact that funding models for digital development rarely facilitate for continuous services, and that simplifying legislation to facilitate for increased digitalisation and automation could come into conflict with considerations of targeted benefits and means-testing.

The EU will play an important role in the digitalisation policy

We believe the EU will become a key premise provider even in Norwegian digitalisation policy (see also chapters 6.6 and 9.2). In this area, the EU is more restrictive and responsible, compared to the United States and China, among others, and much of the European digitalisation and ICT policy will also become Norwegian policy, through the EEA Agreement. In addition, these policies will have considerable impact, even outside the EU/EEA. EU policies provide regulations for data protection (GDPR), artificial intelligence, governance and the sharing of data (Data Governance Act), digital services, digital markets and data security. Norway and the EU also invest in the Digital Europe Programme, which focuses on high-performance computing (available on super computers), cloud technology, cyber security, digital skills, use of digital technology and European digital innovation hubs. A digital wallet (Digdir 2022) is one of these initiatives. As mentioned in chapter 6.5, this can be used for identification across borders and to store and share information about driving licences, health certificates, diplomas and passports. Implementation of EU policies will demand a lot of enterprises in the public sector, and these initiatives often do not come with a lot of funding.

9.6. Preparedness and public safety

Greater emphasis on preparedness and security policy

As briefly discussed in chapter 9.2, it would seem that people in many countries are losing faith in the concept of international cooperation. Less support for international agreements have put preparedness higher on the public agenda. For Norway, this could lead to greater integration with the EU in future international crises, recently exemplified by the vaccine cooperation during the Covid pandemic. The pandemic served as a reminder of the importance of planning and a strong and flexible preparedness (Meld. St. 14 (2020-2021)). NAV's role in contributing to Norway's preparedness in case of war or other catastrophe could become even more important in the years to come.

As a result of increased digitalisation, the risk of cyberattacks and more advanced forms of social security fraud has increased – thus also increasing privacy and security vulnerability. We expect this to become even more of a challenge in the years to come (chapter 6.5), and it emphasises the importance of making sure civil protection is adapted to the new technological reality (Meld. St. 14 (2020-2021)).

The war in Ukraine has placed defence and security policy higher on the agenda. The security policy situation is more unpredictable (NSM 2023). This could lead to other policy areas, such as labour and welfare policy, becoming less of a priority. On the other hand, if security becomes more important, to the detriment of economic efficiency, it is possible that compensation measures for vulnerable groups, such as benefit levels and minimum rates in welfare schemes, will also be placed higher on the agenda. Furthermore, the need to prepare against cyberattacks and considerations of data protection are also relevant for labour and welfare policy. The new Security Act[36] from 2019 has, among other things, made security policy play a bigger role in politics and other parts of society, such as in the evaluation of reforms (Notaker 2023b).

Researchers often mention *hybrid warfare*[37], where different forms of attacks are initiated by government or non-government actors. The goal is often to weaken trust in society, such as trust in election or democratic institutions (Bjørgul et al. 2022), NAV and other public bodies may be affected by attacks as part of hybrid warfare, such as by spreading misinformation through social media, or by attacks that temporarily affect the ability to make payments or that leak sensitive personal data (Notaker 2023b). Several measures may be implemented in parallel and coordinated attacks, and while the physical and digital security may be good, threat actors may take advantage of subproviders that have less protection (NSM 2023).

Such attacks may undermine trust in policy makers, the system or NAV. The role NAV and other parts of the public sector play in preparedness will increasingly involve being on guard against and reporting security breaches, unexpected changes and anomalies. When such events are reported, it will be possible for authorities to put these into context and gain a comprehensive understanding of the situation. In this way, it is quicker and easier to detect both whether an attack is taking place, as well as its extent (Notaker 2023b).

Cyberattacks and (dis)information wars are, however, not the only threats Norwegian authorities will face in the years to come. The Norwegian Directorate for Civil Protection (2019) emphasises a wide range of possible, unintended events that may pose risks to our society. Some of the events that may have consequences for NAV include pandemics and drug shortages, various types of natural disasters, nuclear disasters and extreme weather events. Many of these could become more of an issue in the years to come due to climate change, and when the trend is towards greater integration of preparedness and security in other areas of society, it stands to reason that we should expect a greater emphasis on preparedness within NAV as well.

Benefit fraud and work-related crime increase threats

Threats associated with benefit fraud and work-related crime could increase, as nation borders have become less important, and crimes committed in one location could have local consequences somewhere else. Digitalisation of society and integration of economies and labour markets make cross-border crime, with far-reaching consequences, more of a possibility (read more about digitalisation and crime in chapter 6.5). We need cross-border cooperation to prevent such crime. NAV's collaboration with the Tax Administration, the police and the Norwegian Labour Inspection Authority to prevent and fight work-related crime and reduce benefit fraud, will also become increasingly more important.

In terms of work-related crime, industries with a high percentage of workers with low formal qualifications are considered especially vulnerable, and it is likely that criminal organisations will increasingly commit tax crimes, wage theft and fraud, and exploit workers, in these industries (Norwegian Police 2022a). At-risk industries include the delivery van service, aquaculture and fisheries, where risk factors, such as the use of foreign labour and subcontractors and a low rate of organisation, are common (NTAS undated) (Norwegian Police 2022b).

[36] Act relating to national security

[37] Hybrid means combined, and hybrid warfare is about manipulating the one that is attacked. This entails so-called *horizontal escalation*, where new areas of society are attacked: military, political, economic, civic and/or information. The attacks may be difficult to recognise for the party that is being attacked.

The execution of such crimes will likely also increasingly use professional facilitators, such as lawyers, banking and finance employees, and health sector employees. These professional facilitators are often part of larger networks, which have been working together for years (Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime 2021).

Large-scale fraud and crime could undermine trust in the social security system.

9.7. Trust and polarisation – what is happening with the population's trust in NAV?

Trust can be understood as the degree to which individuals trust that the other party act in accordance with what has been agreed or what can be reasonably expected, given society's norms and rules (Gulbrandsen 2000; Putnam, 1993). Trust can be shaped by the individual's previous experiences with a particular party, be it acquaintances or a specific NAV employee. This is called *specific* trust. In the public sector, these actual experiences are often referred to as user satisfaction. Trust, however, can also be more *general* in nature, in the sense that an individual trusts other individuals, enterprises or institutions based on their reputation or context. Nosrati et al. (2022) calls this trust in public institutions and enterprises *political trust*.

Trust levels in Norway and the Nordics are normally higher than in other countries (Delhey & Newton, 2005). This is often attributed to a universal welfare state, a non-discriminating public administration and closeness between people and politicians. This means that everyone is entitled to help in certain situations, and there is little distrust between groups that some may take advantage of the system (Nosrati et al. 2022; Meld. St. 14 (2020-2021)). At the same time, we see indications that trust is decreasing in Norway, and people with a low socioeconomic status often have less political trust than others. Increasing economic inequality in Norway could, therefore, undermine trust, even if we, in an international context, still are a society with a high degree of equality and equalisation.

Trust greases the wheels of society's machinery

While trust is considered an important characteristic in a society, it is rarely pointed out *why* trust is important. One could argue that high levels of trust means "society's machinery" runs more smoothly and is more sustainable ((Boix og Posner 1998; Luhmann 1999; Nyberg et al. 2016; Putnam 1993; Meld. St. 14 (2020-2021)). It is made more sustainable in that the willingness to pay for universal welfare goods is likely to increase when people trust that taxes are collected and distributed fairly and sensibly (see also Figure 9.1). Interactions with public administration also presumably be more smooth when people trust that decisions are correct and the advice given is sound and reasonable. For example: a rejection on an application in a well-functioning state based on the rule of law is more likely to be accepted than if the opposite is true. Another good example is that the Norwegian people were more likely than the people of other countries to comply with the authorities' recommendations for infection control during the Covid pandemic (Meld. St. 14 (2020-2021)). One of many positive consequences of a "well-oiled machinery" is that more resources can be allocated to value-creation instead of to control measures, which could explain why countries with high levels of trust are also often rich countries (Knack and Keefer, 1997).

In user surveys, 71 percent of users and 85 percent of employees report that they have trust in NAV (NAV 2022b; NAV 2022c). Trust in NAV, especially among users, is significantly lower than trust in some other institutions. This shows that NAV has a potential in terms of building trust. User surveys show that people who are struggling, often have less trust in NAV than others, but these results also indicate that a good relationship with their NAV counsellor also helps build trust in NAV. People who have a positive personal experience with universal welfare schemes, such as pensions and parental benefit, are more likely to report a high level of trust. Selective, means-tested welfare schemes, such as financial assistance, are often associated with negative personal experiences, which is associated with less trust (Folkestad 2017).

Interestingly, it would appear that public trust in NAV was not diminished in the wake of the so-called EEA case, even though "NAV" was often mentioned in connection with "trust" in the media (NAV 2020, p. 8), Trust did go down significantly in response to long processing times at the start of the pandemic, but it quickly recovered. This indicates that user satisfaction is very important for trust, and that trust in institutions are not necessarily affected, even in the wake of major, serious single events. There is reason to believe that poor performance on the part of NAV, such as negative user experiences or long processing times, and a lot of negative press over time will negatively affect trust, thus making interaction with users more difficult. Good user experiences and a perception that NAV performs well, will have a positive effect on trust.

While high trust is good, sometimes some level of mistrust is also good. Bad personal experiences, user appeals succeeding, or public administration falling short of expectations, could lead to a critical look at the administration. This in turn can contribute to transparency and verifiability, which is important for democratic institutions (Van De Walle and Six 2014). In addition, we have "institutionalised mistrust" in the form of various control mechanisms to ensure good and fair processing. However, the latter may lead users to believe that NAV does not trust them, which may, in turn undermine trust in NAV. At the same time, general and universal control mechanisms could help build trust, in that they promote equal treatment (NAV 2021). This could require that the control mechanisms are perceived as reasonable, simple and non-invasive, though. An automatic check of income levels by use of public records is probably perceived as a reasonable control measure, whereas some might perceive requirements for bank statements etc., as more invasive.

It is only when mistrust takes over and morphs into mistrust of "everything and everybody" that it becomes destructive. So-called "fake news", disinformation and "echo chambers", where people are not confronted with the tenability of their own views, could be contributing factors to such development. Digitalisation possibly increases the risk of more people seeking out and spending time in echo chambers, and actors actively generating disinformation aimed at the general population or specific groups (see also 9.6). It is also possible that people who, for various reasons, experience long-term exclusion are more likely than others to experience apathy and distrust in the "support system".

This shows that multiple mechanisms can lead to different groups developing widely differing perceptions of reality, which could foment polarisation (read more below). To counteract this, the European Commission is working on an action plan, among other things, and

Table 9.1. Factors that may positively and negatively affect trust in the public sector in the years to come

Positive effect	Negative effect
• Global agreements, standards and frameworks implemented • Minimal economic inequality maintained • Strong democracy • Independent and critical press with a high level of trust among the population • Freedom of expression among the best in the world • Closeness with policy makers (perceived or real) • Protection of citizens' digital rights • Safe processing of data • Transparency and ethical reflection	• Increased protectionism and greater inward focus in global politics • Increased economic inequality • Instability – democracy weakens and erodes • Conspiration theory-fuelled fear and "echo chambers" • Political polarisation • Resistance to elites – distance to policy makers • Era of privacy is gone • Irresponsible use of data • Lack of transparency and ethical reflection

Source: Official Norwegian Report 2021: 2

Norwegian school curricula increasingly emphasise source criticism (Meld. St. 14 (2020-2021)).

Trust going forward

How will the levels of trust in NAV and public institutions develop in the years to come? If inequality increases, and/or the public sector falls short of its goals, we can expect to see trust starting to decrease. On the other hand, a more efficient public administration could help build trust. As a *general* construction, however, trust must also be seen in a bigger context. Official Norwegian Report (2021: 2) lists a range of factors that may positively and negatively affect trust (Table 9.1).

Increased polarisation or loud agreement?

Polarisation can be defined as a sharpening of opinion in the population, so that two opposing views become more prominent. The term is also used to describe a situation where voters increasingly vote for radical or extreme parties (Store norske leksikon). As mentioned, different perceptions of reality could contribute to unnecessarily staunch opposition. Polarisation can also reflect increased disagreement on how best to solve societal problems.

Traditionally, debates involving immigration and integration have seemingly been quite polarised, in that a fairly high number of people are clearly in favour or opposed, and in that extreme positions often gain a lot of attention (see for example Brekke et al. 2020), Recently, debate over the energy crisis and cost of living crisis has also been described as polarised, but there seems to be broad agreement that prices have unfair effects. It is therefore possible that these debates are characterised by agreement, rather than disagreement. Insofar as the debate is polarised, it has more to do with different views on what caused the situation, than what the potential long-term solutions are, and how far the public sector should go to mitigate the negative consequences for the population.

Potential increased polarisation could have consequences for NAV in the long term, whereas political agreement could have consequences for NAV in the short term. Unison "popular demands" from the population and organisations could lead to policy makers implementing urgent measures. Before Christmas in 2022, for example, it was decided that recipients of financial assistance would get an extra payment of NOK 1,000, which created extra work since the systems are not well equipped for this type of urgent decisions. Frequent and unexpected societal changes may entail that NAV is increasingly expected to be able to quickly implement policy decisions. This requires both the capacity for strong governance when needed and that NAV's systems are flexible enough to be able to handle both ad hoc cases and rapid changes in rules and rates.

Polarisation is likely not to be increased in Norway

We have tried to assess whether polarisation has increased in Norway. First, we looked at use of the word "polarisation" in Norwegian media. The figures show that the word has been used with increasing frequency in the last 15 years. This shows, at the very least, that *talk* of polarisation has increased.

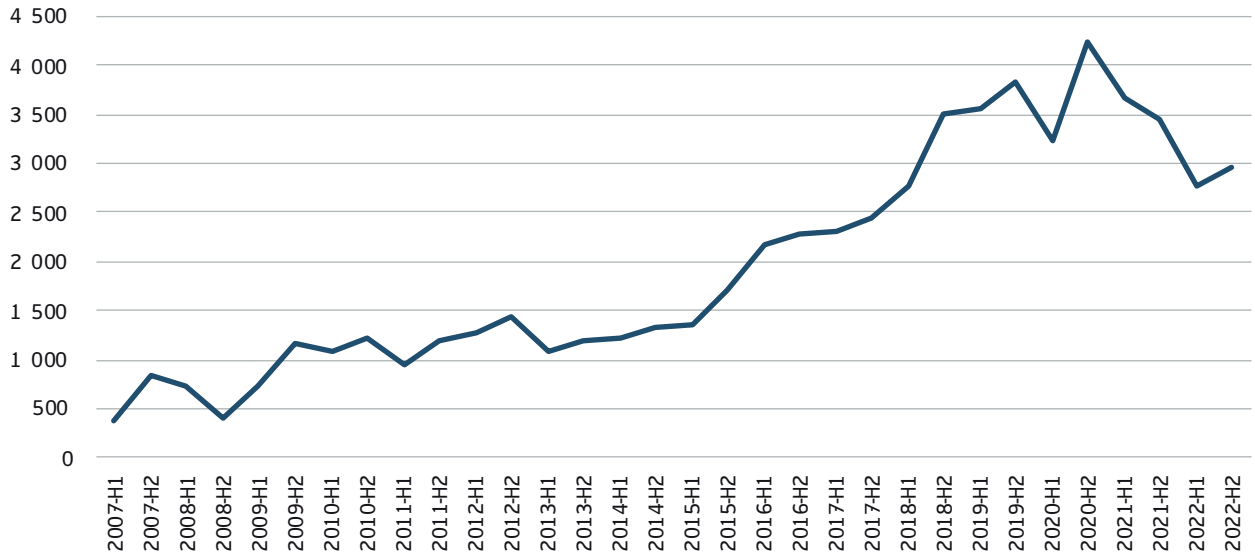
Prebensen (2018) has attempted to quantify whether polarisation has increased in Norway, based on the first definition above. We have included part of this analysis here.[38] Standard deviations in different questions of opinion have been used as measures of disagreement (breadth of opinion) in the population. These are questions where the response options are numbers (e.g. 1 to 4, where 1 is agree completely and 4 is disagree completely). A standard deviation of 1 will then be equivalent to the distance between two options.

Table 9.2 shows the results for selected questions of opinion[39] from 2011 to 2021. Increases in standard deviations mean greater disagreement, whereas reductions in standard deviations mean greater agreement.

[38] The analysis is based on data from Norsk Monitor (Ipsos).

[39] We used the same questions as in Prebensen (2018), except we eliminated four questions about trust in public institutions. The reason for that is that we believe a narrow breadth of opinions in this context is not necessarily a good measure of low polarisation if, for example, the majority has low trust. Even if these questions were included, though, the outcome would be virtually identical (we found, on average, an increase in standard deviations of 0.01, which is insignificant).

Figure 9.5. Use of the word "polarisation"[1] in Norwegian media



Source: Infomedia

[1] In practice, we have searched for the use of words beginning with "polaris...", though in Norwegian this would be "polariser...".

In addition, the table shows average responses for 2021 and the change from 2011. Here, higher figures show greater agreement/satisfaction, and we see, for example, that people have become more satisfied with how things are in the Norwegian society and how our democracy has functioned during the last ten years.

We find that the degree of polarisation, when measured in this way, has remained unchanged from 2011 to 2021. We also do not find any changes if we analyse changes from later surveys, conducted in 2013, 2015, 2017 and 2019.

Is the risk of polarisation higher now than in the past?

The other definition of polarisation is based on support for radical or extreme political parties. In a system like the Norwegian one, with intersecting political lines of conflict that go beyond the traditional right/left axis, it is difficult to define which parties are radical "wing parties". When the different lines of conflict are taken into account, many different parties could be considered wing parties. It would therefore be inappropriate to measure polarisation by the support these parties receive. We will therefore settle for the point we made in 9.4: The Norwegian political party system has become more fragmented over time, because new and/or small political parties have gained more support, in part to the detriment of large, established political parties.

The analysis above indicates that Norwegian society has not become more polarised in the last decade. We do, however, believe there is increased risk of polarisation towards 2035. The reason for this is that, in an international perspective, polarisation is often observed in conjunction with increased inequality. A potential development with increased inequality, poorer living conditions and greater social unrest could bring this trend to Norway as well. In addition, developments in new technology and (social) media could lead to increased risk of manipulation of public opinion and more time spent in "echo chambers" instead of engaging in the open public debate. When combined, these trends increase the risk of instability, staunch fronts and reduced trust in authorities.

At the same time, though, the Norwegian political culture is characterised by stabilty and broad agreement on central issues. The Norwegian multi-party

Table 9.2. Disagreement on political issues/questions of opinion, measured by standard deviations, from 2011 to 2021.

Question/claim (response scale in parenthesis, where higher figures mean greater agreement/satisfaction)	Standard deviation 2021 (change from 2011)	Average 2021 (change from 2011)
How satisfied are you with how things are in Norwegian society today? (1-5)	0.90 (0.01)	3.81 (0.10)*
Overall, are you very satisfied, somewhat satisfied, not very satisfied or not satisfied at all with the way democracy works in Norway? (1-4)	0.72 (0.03)	3.20 (0.11)*
Many tasks could be handled better and at a lower cost if they were transferred from the public sector to private businesses (1-4)	1.07 (0.00)	2.78 (0.25)*
Private schools or hospitals are a good thing. That means those who want to, can get a better education or better health care by paying extra (1-4)	1.15 (-0.03)	2.87 (0.21)*
To ensure economic growth, we need continued industrial expansion, even if this were to conflict with considerations of environmental protection (1-4)	1.12 (0.06)*	2.43 (0.15)*
We should increase the price of all energy (gasoline, oil, kerosene, electricity, etc.) to reduce consumption and thus also environmental pollution (1-4)	1.03 (-0.08)*	2.81 (-0.06)*
One should be able to expect that foreigners who come to live in Norway live like Norwegians (1-4)	1.04 (-0.01)	2.66 (0.40)*
Being unwilling to criticise minorities and disadvantaged groups impedes the discussion of important social issues (1-4)	1.04 (0.10)*	2.69 (-0.20)*
We must do everything we can to prevent loss of the distinct qualities of different regions, such as dialects or foods (1-4)	1.00 (0.00)	2.96 (-0.06)*
Men and women should share the burden of housework and child rearing equally (1-4)	0.72 (-0.06)*	1.35 (-0.14)*
There are many opinions that should never be allowed shared on radio or television (1-4)	1.14 (-0.01)	2.64 (-0.04)
Average	0.99 (0.00)	

Source: Norsk Monitor (Ipsos).

* The change is significant, $p<0.05$.

system promotes diversification of power, consensus and inclusion of different interests (Lijphart, 1999). This, in combination with a well-developed welfare state, acts as a barrier against polarisation. The same barriers are not as common in some other countries.

9.8. Political trends associated with the greatest uncertainty for NAV

Political trends are by nature uncertain, in that they are heavily influenced by other societal trends. Some trends are more certain than others, however. Demographic developments, technological advances and climate change are mega-trends that will dictate the measures and tools available in the welfare state of the future.

The global geopolitical situation, with war in Ukraine and increasing rivalry between world powers, contributes to a more unpredictable situation. We do not know how long the war will continue, and it is uncertain how the global power balance will look a few years down the line. There are some indications that Norway will establish tighter bonds with the EU, but it is not yet clear which form this will take. The Norwegian population rejected a Norwegian membership in the EU in two referendums, however, and tighter bonds with the EU are less likely to happen if scepticism towards international cooperation increases in favour of protectionism and inward-facing policies.

Defence and security policy will become more prominent in the time to come, but it is uncertain how long and to which degree this will take precedence over other policy areas, such as the labour and welfare policy. If prices continue to increase, it could have major consequences for Norwegian society, including the potential for increased poverty, a shrinking middle class and more social unrest. This could, in turn, negatively affect trust in policy makers and authorities and lead to increased

polarisation. For NAV, such a situation may make follow-up and benefit management more difficult, as the welfare schemes and services NAV provides are largely based on, and require, mutual trust.

Trust may also be affected by cyberattacks, disinformation, politically motivated manipulation and more advanced forms of benefit fraud. This is a potentially major vulnerability for NAV, especially if NAV's ability to make payments is affected. The scope and severity of threats in the years to come will depend both on the international threat level and what our preparedness looks like.

There are clear aspects of uncertainty in the intersection between immigration and integration policy and labour and welfare policy. Both recent and current refugee crises have shown us that we need flexibility and the capacity to restructure to handle high numbers of new arrivals. This is traditionally a controversial policy area, which will generate political debate, and the risk of a polarised debate is relatively high, especially if considerations of immigrants and refugees conflict with considerations of welfare state sustainability.

While centralisation among the population continues (chapter 3.3), we do see some movement towards decentralisation and greater emphasis on district policy considerations. For example: the Government has opened the door to a potential reversal of municipal and regional reforms. In the big picture, this may be a short-term trend that cannot counteract the effect of centralisation in the long term. However, decentralisation may come as a more fundamental and permanent response to central authorities and "elites", as we have seen in the United States and in connection with the Brexit in the UK.

Both this and the ongoing trust reform in the public sector could have consequences for NAV, especially in terms of local presence and accessibility – but the scope and timeline of this is not yet clear.

9.9. Questions for reflection

- How can we ensure a sustainable welfare state in the future?
- Which changes are required to include more young people and immigrants into the workforce?
- What can NAV do to manage increasing poverty and inequality?
- Is NAV sufficiently prepared for future crises and cyberattacks?
- How will the trust reform affect NAV?

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10. HORIZON SCAN – FROM THE PERSPECTIVE OF NAV EMPLOYEES AND USER REPRESENTATIVES

By: Tor Erik Nyberg and Sverre Friis-Petersen

Summary: Horizon Scan from the perspective of NAV employees and user representatives

NAV employees and user representatives take part in the preparation of the Horizon Scan through workshops and presentations at several stages in the process. In the early stage, we asked all employees and user representatives to partake in a survey on the Horizon Scan. Responses to this survey, which we conducted in July 2022, showed that both employees and user representatives believe that a wide range of societal trends will affect NAV in the next ten years.

Of all the trends affecting the public sector, digitalisation is emphasised as most significant. Demands for greater efficiency, expectations for cross-sectorial collaboration, user involvement, effective services and the public being able to handle unforeseen situations are also considered important. Both employees and user representatives, therefore, believe digitalisation, service innovation and knowledge work will change NAV in the years to come. Our analyses show that employees see these developments in context. Service innovation and knowledge work, for example, are closely related to digitalisation.

Our respondents also believe that several trends associated with public health and the labour market will affect NAV in the years to come. This includes more people with somatic and psychological disorders, increased exclusion of young people, increased demands for restructuring and shortages of requested expertise among job seekers. In addition, the respondents do believe an ageing population will affect NAV overall, but that this development will probably not affect their own tasks very much. To summarise, respondents believe a wide range of factors will affect NAV in the years to come. For a large public body, which provides a wide range of welfare services, the number and complexity of the highlighted trends are perhaps not very surprising.

Even so, there are some trends which our respondents believe will have limited impact on NAV, including international conflict, increased labour migration, increased political polarisation and reduced trust in the public sector. What these trends have in common is considerable uncertainty associated with whether they will occur at all, and if so, how and to what extent. If one or more of these trends do happen to hit us with "full force", however, they could have major consequences for how NAV works.

Among employees, feedback on the Horizon Scan is largely positive. In recent years, the report has become more widely known in the organisation. The work is most often familiar to executives, but more and more regular employees are also familiarising themselves with the report. The Horizon Scan is used both in planning and strategy work, in collaboration with other bodies and in guidance work.

10.1. Introduction

In connection with the new edition of the Horizon Scan, we sent out a survey to all NAV employees in June 2022. An identical survey was also sent to user representatives in NAV's central and local user committees. The surveys focus on how employees and user representatives imagine how future challenges will affect NAV, and how they will affect their own work tasks. In addition, the survey explores the degree to which people are aware of the Horizon Scan, and how beneficial it is.

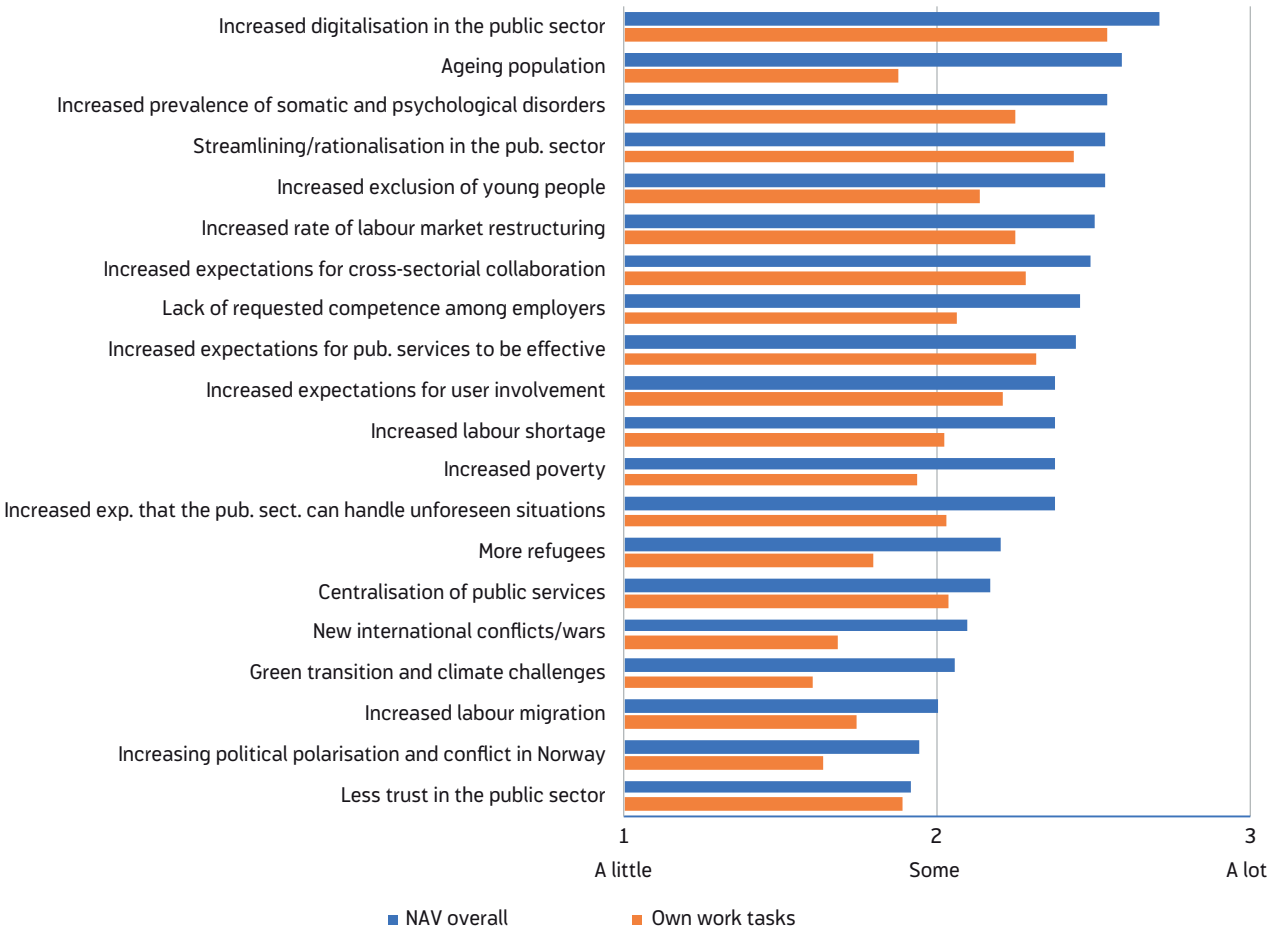
This chapter presents and discusses selected results from these surveys. In the last section, we discuss methods and data collection.

10.2. Both labour market changes and service innovation will affect NAV in the years to come

In the survey, employees and user representatives were asked to consider the degree to which 20 potential societal trends would affect NAV overall, as well as their own work tasks, in the next ten years. For user representatives, the survey specified that responses should focus on the work tasks of the user committee. The respondents used a three-point scale to submit their responses: 1 "a little", 2 "some", and 3 "a lot".

On trends that are likely to affect NAV in general, the employees' and the user representatives' assessments were largely in agreement. As for work tasks, the out-

Figure 10.1. NAV employee assessments of how various societal trends may affect NAV and their own work tasks in the next ten years. Average on a scale from 1 to 3



Source: **NAV**

come is much the same, except that the user representatives generally believe that the user committee's work will be more affected by trends. This is not surprising: Employee work tasks are often specialised, whereas user committees may process a wide range of cases that concern different aspects of NAV's areas of responsibility (Nyberg mfl. 2021). For simplicity, this discussion is based on employee assessments, and we will return with a section on significant differences towards the end.

Employee assessments are presented in Figure 10.1. None of the societal trends have been found to only have "a little" impact on NAV. This could be because the 20 potential societal trends had already been considered relevant for NAV beforehand, but it could also be because, in the employees' experience, NAV is often affected, directly or indirectly, by societal trends, such as public sector reform and labour market changes. In the following, we comment on the results, both based on the figure and on a factor analysis. The factor analysis makes it possible to link the responses from the survey to underlying factors. In the factor analysis, most of the assessments are divided into four large dimensions, which we then use to fit individual trends into a larger perspective.

The first dimension concerns how NAV must develop to fulfil its social mission. Among the identified trends, *digitalisation* of public services is presumed to have the biggest impact on NAV in the years to come, both in terms of NAV in general, but also in terms of own work tasks (Figure 10.1). Digitalisation affects how users contact NAV, employee work methods,

and interaction. The factor analysis indicates that digitalisation is part of the same dimension as rationalisation of the public sector, and increased expectations for cross-sectorial collaboration, user involvement, effective services, and the public sector being able to handle unforeseen situations. In practice, this means that employees often mention many of these trends at the same time, so we can conclude that employees expect to see major changes going forward. Digitalisation is perhaps the most obvious change. At the same time, many emphasise collaboration with other bodies, and believe that we will see increased expectations for effective services. In other words, digitalisation is linked to other forms of service innovation and knowledge work. Digitalisation will naturally play some role in all aspects, but this trend is not "only" about digitising existing solutions (chapters 5 and 6).

One would perhaps expect centralisation of public services to be part of the situation described above, but employees do not believe that this (potential) future societal trend will have much of an impact on NAV. Furthermore, this trend also does not have much in common with the other trends. This could be because many NAV units have already gone through large centralisation processes in recent years, which means there are fewer ongoing processes now than there used to be. In addition, the current government has not emphasised centralisation to quite the same degree as the last one. In chapter 3, however, we discuss what changes in settlement patterns may mean for NAV's organisation.

An *ageing* population is also high up on the list of factors that will affect NAV overall, but significantly lower than factors that will affect own work tasks. This is perhaps the societal trend that is the least uncertain (chapter 3). It will affect both the demographic composition of the labour market and the economic sustainability of the welfare state. This could explain why employees believe ageing will have such a large impact on NAV in the years to come. Even though retirement pensioners are among NAV's largest user groups, we have relatively few employees working with this service. This could explain why so few employees believe an ageing population will affect their own work tasks. Employees in NAV Assistive Technology and Adaptations and employees who work in units that process retirement pension and disability benefit applications were more likely to respond by saying their work tasks will be affected by an ageing population. This trend is independent of the others — it is not included with other trends.

The second and third dimensions are health and the labour market, respectively. The health dimension is concerned with more people experiencing somatic and psychological disorder and increased exclusion of young people, which is high on the list of factors likely to affect NAV. This dimension is also related to increased poverty, which could be a consequence of exclusion. Employees who believe these trends will have a strong impact, also have a tendency to be concerned about decreased trust in the public sector. This makes sense, because increased poverty and exclusion could lead to increased inequality, a more polarised discourse and less trust in the public sector being able to cope with challenges. These trends are discussed in more detail in chapters 8 and 9.

Restructuring, insufficient competence and labour shortages are part of the labour market dimension. An increased rate of restructuring is the highest rated among these, but one would naturally assume that restructuring will have consequences both for the mismatch and shortage of labour, at least when the labour market is tight (chapter 4). Many trends related to both health and the labour market are therefore believed to have consequences for NAV's activities in the years to come.

Towards the bottom of the figure, we see some trends that employees believe will have less of an impact on NAV in the years to come. These include international conflict, the green transition, increased labour migration, increased political polarisation and reduced trust in the public sector. These are part of the fourth and last dimension. What these have in common is that it is highly uncertain whether they will be important in the years to come, and if so, in what way (chapters 4 and 9). As an example, increased international conflict does not *necessarily* mean more refugees coming to Norway. The green transition will presumably

affect the labour market more than it will affect NAV directly. This is reflected in the fact that the green transition is among the trends NAV employees believe will have the least impact on their own work tasks. If one or more of these trends do come to pass, they could, however, have major consequences for NAV's activities. One example could be a major refugee crisis in Europe. A big recession in Europe, but not in Norway, could lead to increased labour migration. Respondents who put these factors high on their list were also more likely to believe we will see increased poverty and increased political polarisation. This could, as discussed above, again be tied to increased inequality in society.

As mentioned, the assessments of the employees and user representatives were largely aligned in terms of which societal trends they believed would have the greatest impact on NAV in the years to come, though with some exceptions. User representatives were more likely to believe that labour shortages and decreased trust in the public sector would affect NAV. Employees were more likely to believe that rationalisation would affect NAV. User representatives can be said to serve as the link between users and NAV in terms of user involvement at a system level (Nyberg mfl. 2021). Many of them are well-informed about NAV's operations, strategies and ambitions, as well as about how users perceive NAV. It is therefore interesting to note that the representatives are more concerned about reduced trust in the public sector than employees are. That said, this concern is also quite low on the list of the user representatives' assessments. The most conspicuous aspect of employees' and user representatives' assessments therefore, is not these small variations, but the degree to which they agree on what is likely to affect NAV in the years to come.

As we are using a new method (see final section), we do not have time series for the analysis this time. We are therefore not able to determine whether any trends are deemed more or less important since the last survey from 2020 (NAV 2021). A rough comparison, however, does indicate that we have many "repeat offenders" among the societal trends at the top of the list, such as digitalisation, an ageing population and labour market challenges. It would also seem that increased expectations for cross-sectorial collaboration and user involvement have become more important, compared to the last report. Three societal trends that were not part of the previous survey also seem relatively important: increased expectations for public services to be effective, for the public service to be able to handle unforeseen situations (preparedness), and increased poverty.

10.3. The Horizon Scan affects NAV's priorities

One of the purposes of the Horizon Scan is for it to be used in NAV's internal work and planning processes. Here, we take a closer look at what employees know about the Horizon Scan, how they learned of the report, how useful they perceive it to be, and whether they believe it influences NAV's prioritisations.

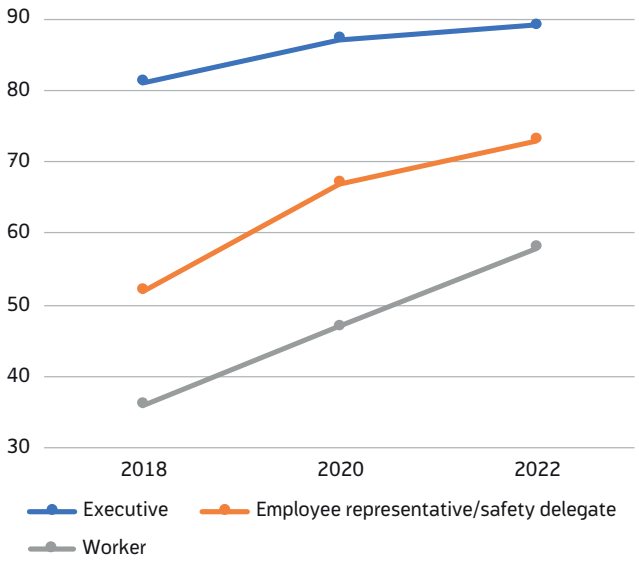
Overall, 63 percent of employees respond in the affirmative when asked whether they are familiar with NAV's Horizon Scan (4–6 on a six-point scale). The figures for 2018 and 2020 were 43 and 52 percent, respectively. This means employees are becoming increasingly more familiar with the report. The increase is observed in most parts of NAV's organisation. The report is most well-known in the Directorate of Labour and Welfare and within NAV's county units. The report is also relatively well-known in the various NAV offices. If we only consider responses from NAV office employees in a multi-level analysis, we see that knowledge of the Horizon Scan varies by county and office affiliation (the levels account for 3 and 4 percent of the variation, respectively). This indicates that the report is emphasised somewhat differently in different areas and in different NAV offices.

On the one hand, it is not surprising that more and more employees gain knowledge of a report that comes out every two years. On the other hand, we could have expected to see a decrease or at least no increase, if new editions of the report were not met with interest within the organisation. This could be interpreted as relatively strong interest in the Horizon Scan among NAV employees. This view is supported

by the fact that the increase in the share of employees who are familiar with the Horizon Scan is significantly larger than the increase in the share of employees who are familiar with the NAV publication MEMU and the periodical Arbeid og Velferd. The Horizon Scan is the most well-known out of all of these.

The Horizon Scan is best known among executives: 89 percent respond in the affirmative. Then follows employee representatives and safety delegates (73%) and regular employees (58%). Given that the Horizon Scan aims to contribute to more accurate strategies and plans, it is only natural that the report is more widely known among executives. In recent years, it has also become more widely known among regular employees (Figure 10.2.). This could be because regular employees have become more involved in strategic and planning processes, that the Horizon Scan is increasingly being used in such processes, and/or that the Horizon Scan is being used in other contexts. For example, some employees responded that the Horizon Scan is being used in their work to guide users (see below).

Figur 10.2. Percentage of employees who are aware of the Horizon Scan, by year and position



Source: NAV

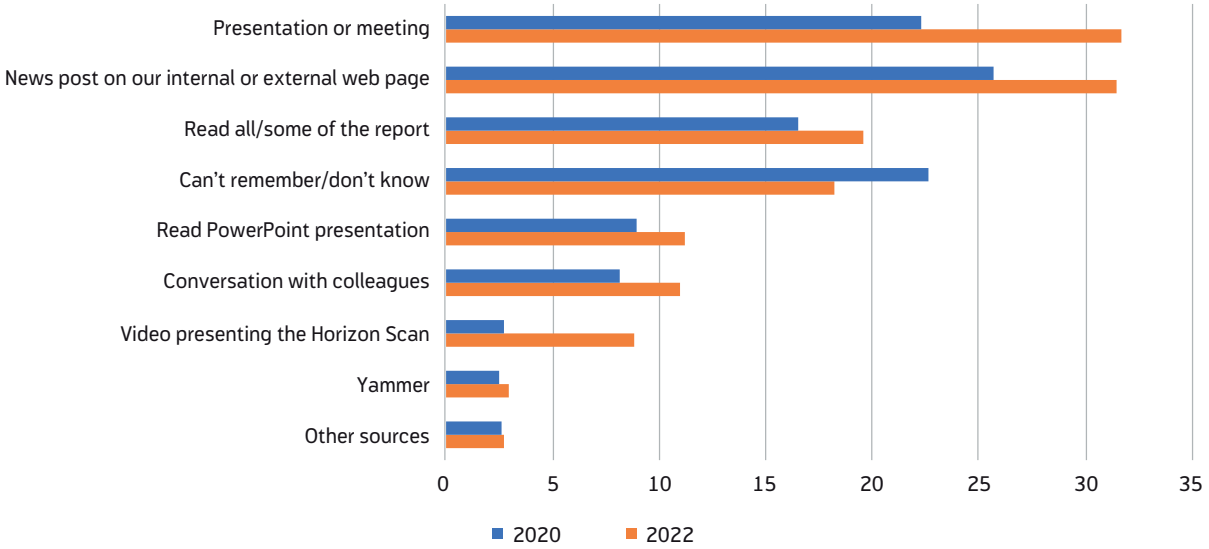
65 percent respond in the affirmative when asked if the Horizon Scan is useful for their workplace, up from 52 and 54 percent in 2018 and 2020, respectively. The share is highest among executives (90%), and somewhat lower among regular employees and employee representatives (73–76%). Not surprisingly, the units where the Horizon Scan is most widely known, are also the units that find the report most useful: NAV's county offices (80%) and the directorate (70%). Here, we have included the "don't know" responses in the calculations, as it is at 12 percent. The share of respondents who responded "don't know" used to be larger, at 26 percent. That means more employees are now considering the usefulness of the report.

We asked respondents who responded in the affirmative to the question of whether they found the Horizon Scan useful, to write down *how* they found it to be useful for their work. It turns out it is being used in several different contexts. Many say it is useful for staying informed, that it provides direction for planning and prioritisation, and that it can be used as indication of developments in future case loads and internal competence needs. Some say it is being used to share knowledge with partners, and that it is being applied in various application processes (e.g. for project funds). Some also say it is a useful document for gaining a wider perspective, to "rise above the nitty gritty of everyday work and gain a better understanding of the big picture". While the report is definitely geared more towards planning and strategy, some also say that they use the report in their work-oriented follow-up of users, to give advice on measures, education and career choices.

61 percent of employees say they believe the Horizon Scan informs NAV's priorities, up from 45 percent in 2020. The "don't know" group is even larger for this question: 21 percent. The "don't know" group used to be 38 percent, however, which means that perhaps it has become more clear for respondents how the report affects NAV. Among executives, only 6 percent respond with "don't know", and 81 percent respond in the affirmative. The latter percentage was 73 in 2020.

Naturally, familiarity with the report, its perceived usefulness and its perceived impact on NAV's priorities are all related. It is probably relevant for usefulness and

Figure 10.3. How employees learned of Horizon Scan, percentages

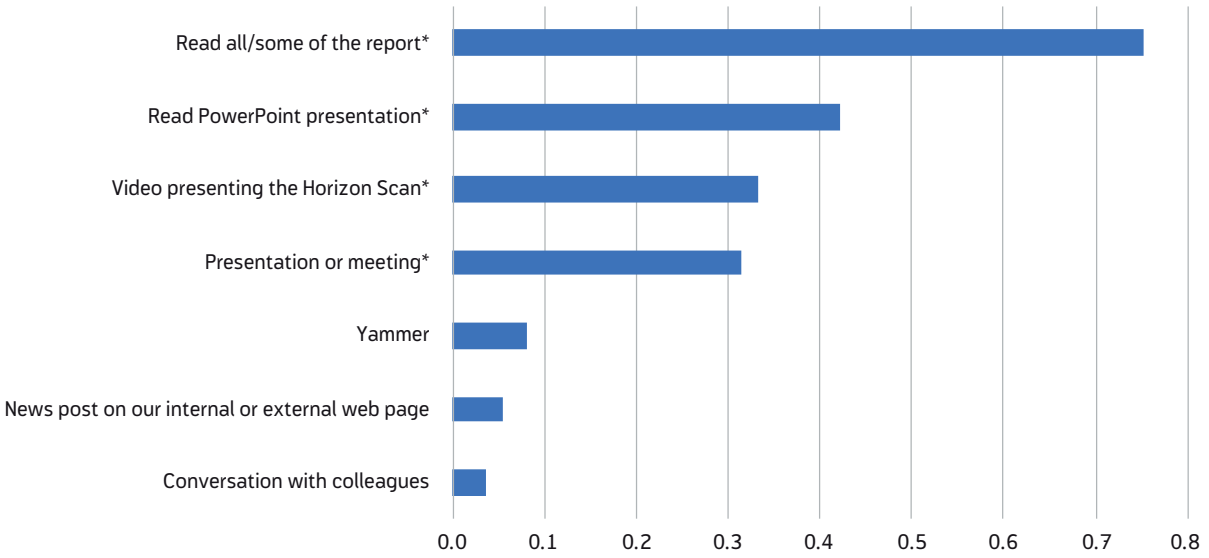


Source: **NAV**

prioritisation that many employees are aware of the content of the Horizon Scan, so that it can be applied in relevant planning and strategy work as needed. This further supports the argument that dissemination of the report is important for the report to have an impact.

Employees have learned of the Horizon Scan in many different ways (Figure 10.3). The most frequently reported are presentation in a meeting and news post (both approx. 30%), whereas approx. 20 percent said they have read the report. A significant percentage say they can't remember. Compared to the previous survey, presentation, news post and video are the channels of dissemination that have increased the most. The respondents who say they "have very little knowledge" about the report, were not asked this question.

Figure 10.4. Correlation between channel of dissemination and knowledge of Horizon Scan. Regression coefficients indicate average increase on six-point scale for knowledge of Horizon Scan (R^2=0.16)



* *P*<0.05.

Source: **NAV**

If we disregard the don't remember/don't know group, employees have, on average, learned of the Horizon Scan through 1.6 of the above methods of dissemination. Those who claim to be very familiar with the report, have, on average, used slightly more than two different sources. If we consider channels of dissemination in light of the degree to which employees say they are familiar with the report, we find that those who read the report claim to be more familiar with it (Figure 10.4). Naturally, the report has high value to those who would like to take a deep dive into the details of the Horizon Scan, whereas the other channels are more suited to providing an overview of what the report is about.

10.4. Advice to those who update the Horizon Scan

In the survey, we asked employees and user representatives to comment on the preparation of the Horizon Scan. Among those with limited knowledge of the report, several commented that the report should be more widely disseminated, be easier to comprehend and be used more actively in their unit. Some wonder whether users should be sent a similar survey (an equivalent survey was, in fact, sent out to user *representatives*). Some say it is difficult to predict the future, and that the questions in the survey should be rephrased.

Among those who are familiar with the report, many provided positive feedback on the work. At the same time, many request more infographics, and for figures to be broken down to smaller geographical areas than the national level. Some suggest that the report should include more examples and highlight how these trends could affect people's lives. Some suggest we take deep dives into different topics each year, instead of updating "everything". Some point out that there are considerable uncertainties associated with the report, perhaps even to a greater degree than before, and that other potential developmental characteristics should be highlighted.

Some request tools, so that individual NAV offices can do their own horizon scans, and others believe we should highlight how the report is being applied throughout our organisation. Some believe executives do not take into account, or discuss, the report with their subordinates, and some suggest that the results should be better reflected in strategies, objectives, allocations and administration. Several respondents suggested we "keep the report warm" between publication dates, so that it is better suited for application in day-to-day work tasks.

10.5. More about methods

The findings in this chapter are based on surveys that were sent out to employees and user representatives in June 2022.

The employee survey was sent out to 23,146 employees in the beginning of June. Like in 2020, no reminders were sent out to those who did not respond. The response rate is 16 (not corrected for absences). The response rate is lower than the 21 from the previous survey. This could be because the 2022 survey was sent out right before summer holidays, whereas the 2020 survey was sent out in the autumn. But it could also be because of a general downward turn in the response rate of surveys. The response rate was highest among employees at NAV Control, NAV County and NAV Appeals (23–28%), and lowest among employees at NAV Call and Service Centre, the Directorate of Labour and Welfare, and NAV offices (13–17%). This is approximately the same pattern as in previous surveys. The analysis results are not weighted. Despite a lower response rate, responses from NAV office employees will be the dominant group in the analysis. Employees at NAV offices make up 59 percent of survey recipients and almost half of the respondents.

It is difficult to say how representative this survey is of all NAV employees. Different variables, such as age, leadership positions and area, seem to account for approx. 11 percent of the variation in the question concerning familiarity with the Horizon Scan. A weighting of these characteristics could yield slightly different results, but nothing significant. A potentially bigger problem for representation could be if the odds of responding varies systematically with whether or not the employee is familiar with the Horizon Scan

(Hellevik 2015). We know little about the size of this potential effect. For example, those who are more familiar with the Horizon Scan may be more likely to respond, thus making themselves over-represented in the data. That could be an alternative explanation for why the Horizon Scan is becoming more widely known among employees. Even so, this potential effect would not, in itself, be sufficient to explain the positive findings above.

NAV does not have a central register of user representatives. In 2020, the user representative survey was distributed to e-mail addresses collected in advance, in connection with another survey. This time, the survey was distributed by NAV units being asked to forward a link to the user representatives. This method of distribution has many weaknesses. For example, it is likely that many in the target group did not receive an invitation to participate, and it is not possible to send reminders. That explains why we only have 62 responses from user representatives this time, down from 222 last time. While the uncertainty is considerable, we see that the representatives' responses largely align with the employees' responses.

As mentioned above, we have changed the method of data collection for the two main questions of the survey, i.e. the degree to which the respondent believes the selected trends will affect NAV and their own work tasks in the years to come. Previously, we asked the respondent to pick up to three societal trends, and we later ranked them, based on responses. This time, we have asked for an assessment of each individual trend, which has been presented to the respondent with the help of randomisation. This means we cannot directly compare this year's responses to the previous survey. This new method, however, will in the future allow us to add and remove societal trends, without breaking the timelines. As a result, this new method brings greater flexibility.

10.6. Sources

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