Horizon Scan 2016

Developments, trends and consequences up until 2030

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NAV-report 2016:3

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1 Main conclusions

The Horizon Scan 2016 deals with the most important societal trends that will affect the labour and welfare field up until 2030, and what consequences they will have for NAV.

More users

Up until 2030, we expect to see continued strong population growth, particularly among the elderly and immigrant populations. The number of NAV users will increase, and retirement pensions, daily living aids and international cases are areas that are expected to see the strongest growth. If NAV is not compensated for this growth, we will have to do more with fewer resources through digitalisation, modernisation, rationalisation and tougher prioritisation. This can be achieved through self-service solutions, increased automation and more knowledge-based service development.

A faster pace of change

As a result of globalisation, technological development and the change in the oil price, we expect restructuring in the labour market to take place faster and to be more extensive than previously. Employees will probably have to change jobs and update their expertise more often than before. We may experience periods of higher structural unemployment and there is a risk that more people will become permanent benefit recipients. It will vary between industries, occupational groups and regions how strongly they are affected. This will make greater demands on NAV's labour market know-how and our ability to contribute to occupational and geographical mobility.

The labour market could become more differentiated. We expect low unemployment among highly educated people and skilled workers, and a big shortage of skilled workers is expected in particular. Three out of ten drop out of upper secondary school, and unskilled youth and immigrants with little education will be particularly vulnerable in the labour market. NAV will therefore have to cooperate more closely with employers and the education and health sectors.

NAV must be capable of quickly changing its priorities. This will be a consequence of the faster pace of change in the labour market, the possibility of sudden changes in the number of refugees and other unforeseen events.

Digitalisation offers new possibilities

Through digitalisation, NAV can develop better services based on self-service solutions, automation and decision support. The development of good services must be based on the users' situation and needs. Users expect personally adapted services that support them in their current situation, and they expect physical and digital channels to be interlinked so that they do not have to provide the same information more than once. New technology, better data acquisition and advanced analysis will enable NAV to develop better services and to focus its efforts on areas where they produce the best results. This will require big investments, and it will change what expertise we need and the way we work.

2 Summary

The Horizon Scan 2016 deals with the most important societal trends that will affect the labour and welfare field up until 2030, and what consequences they will have for NAV. The analysis is based on external research and NAV's own publications, as well as on input from workshops.

Population growth leading to more NAV users

Population growth will continue to be strong. From 2016 to 2030, Norway's population is expected to increase by 13 per cent, and the number of NAV users is expected to increase by approximately as much. If NAV is not compensated for this growth, modernisation, digitalisation, rationalisation and prioritisation will be required in all areas. This can be achieved through self-service solutions, increased automation and more knowledge-based service development. The above-67 age group will increase most (by 40 per cent). This means that retirement pension and daily living aids will be the two areas with the greatest increase in the number of users in the next 15 years.

Even though we expect lower net immigration, we nonetheless expect the immigrant population to increase by 55 per cent by 2030. Both the labour market and NAV will probably have to deal with more people with inadequate Norwegian language skills. In 2016, we estimate that one out of eight case officers in the benefits administration will deal with international cases, i.e. cases where the user lives abroad or where the case requires information to be exchanged with social security authorities abroad. By 2030, this could have increased to one out of five case officers. This will also result in new control challenges in connection with case processing. Moreover, rapid changes and uncertain forecasts as regards the influx of refugees and immigrants in general will require better contingency plans. We must be prepared for sudden changes in our priorities and allocations.

The population is expected to increase in all counties as a result of labour migration. The increase will be greatest in Oslo and Akershus. Even though it has decreased somewhat, we still expect relatively high labour migration, although it will fluctuate with the economic situation. This will help to reduce the effect of fluctuations in the labour market.

Users expect seamless and adapted services

NAV's user groups consist of personal users, employers and partners. More people in work and fewer on benefit is the core of NAV's social mission. If we are to succeed in our social mission and create good services, then services must be developed based on the users' situation and needs.

Users expect to be met in the channel they themselves prefer, that digital and physical channels are coordinated and that NAV takes steps to ensure that each individual user understands '*what's happening with my case and why*'. More digital self-service solutions will contribute both to users being better informed about their own cases and to NAV being able to deliver better services more efficiently.

The users also expect NAV to re-use information about them across public agencies, so that they do not have to report the same information more than once. More re-use of information means that regulations, processes and technology will have to be developed.

Social media will increasingly become a channel where users share information and influence each other, and where user experiences are shaped. Through the formation of networks, users will become more self-reliant, and organisations' information and knowledge monopoly will be challenged.

Technological development gives NAV new possibilities

Technological development opens up new possibilities for NAV, at the same time as it affects the society we are tasked with serving. Digitalisation is often described as the fourth industrial revolution – possibilities we are only able to glimpse the outlines of at present will influence us in ways we have difficulty envisaging. This development is very rapid. Machine learning and artificial intelligence are no longer science fiction, but technology that will probably play a key role both in the labour market and in our private lives.

Digitalisation will enable NAV to offer its users better and more personally adapted services. Many of NAV's work processes are suited to automation, and decision support systems will give us a better basis on which to make good decisions through analysing data about our users. This will result in a strong need for investment, while at the same time having a significant rationalisation potential. Digitalisation could also make NAV more goal-oriented by enabling us to increasingly direct our resources to where they can produce the best results. Data about the labour market and users can be a source of innovation for both NAV and external parties, among other things because they will help us to better understand users' needs. Ethics and protection of privacy regulations will affect the extent to which we can utilise these possibilities.

Digitalisation leads to new challenges as regards security and protection of privacy. As a result of technological development, traditional crimes can be committed in new ways, and ICT crime is becoming a serious problem for society. Today, more people are victims of cybercrime than of traditional crime.

Faster pace of change in the workplace

In recent years, the global economy has grown by a good three per cent a year and increased growth is expected going forward. The most important reasons for this are higher growth in emerging economies, technological development and continued globalisation. Developments in Europe and the USA are particularly important to Norway because they are our most important trading partners. A situation characterised by increased international unrest – politically and in terms of national security – can lead to more protectionism, less trade and lower growth. That will be especially negative for a small, open economy like Norway. An ageing population and an increasing burden on the working population (the number of non-working people in relation to the working population) both in Norway and internationally also pulls in the direction of lower growth.

In Norway, we expect the biggest growth in the period up until 2030 to take place in the building and construction industry and the service sector. Employment in the petroleum industry is expected to fall by 50 per cent from 2013 to 2030. The shift from oil and gas to other industries will probably lead to large regional differences in the labour market. It will be an important task for NAV to contribute to increased geographical and occupational mobility.

Technological development and globalisation will increase the pace of restructuring in the labour market. New technology will create new possibilities, while at the same time changing demand for expertise and labour. The introduction of new technology is happening very quickly and much faster than before, and the result will probably be that employees have to change jobs and update their expertise more often. In the next 20 years, as many as a third of jobs in Norway could be automated. Low-pay and low-skilled occupations are most at risk, but many tasks performed by highly educated labour will also be affected. Over time, the labour that is freed up will move to other industries and occupations, but we could experience periods of greater structural unemployment and an increased risk of more people becoming permanent benefit recipients.

The sharing economy is still modest in size, but it could come to play a bigger role in the labour market. In the long-term, it could give vulnerable groups better opportunities to participate in employment. For NAV, it could also challenge the positions of ordinary workplaces as arenas for work-related

measures, because the sharing economy and digital transaction platforms could lead to more self-employed people in the longer term.

High labour immigration and international mobility of goods and services could make it more difficult for vulnerable groups such as unskilled youth, refugees with little education and people with impaired work capacity to enter the labour market. Almost three out of ten drop out of upper secondary school, and almost half of those taking vocational subjects fail to complete their studies. At the same time, however, we expect the biggest labour shortage in the period up until 2030 to be among skilled workers. The shortage will be particularly great among health care workers.

Up until 2030, unemployment among unskilled workers is expected to be clearly higher than among people with higher education or vocational training. It will be necessary to change measures and policy instruments targeting the most at-risk groups, which will increase the need for cooperation between NAV and other sectors – particularly the health and education sectors. Because a high proportion of people with refugee backgrounds do not have upper secondary education, this challenge will largely involve work on integration, and thereby adapted adult education.

Young adults and immigrants most at risk of low income

The proportion of youth and young adults with persistent low income is increasing. Fourteen per cent of young adults (18–34 years) have an income below the EU's low-income limit, while the proportion of older people with low income is decreasing.

Immigrants are also strongly overrepresented in the low income group. Thirty-six per cent of people with a country background from Eastern Europe, Asia, Africa and Latin America have persistent low income. Immigrant children account for more than half the children in low-income households, and the proportion is increasing. Technological development and globalisation could make it more difficult for at-risk groups in the labour market, and it will probably lead to increased income differences in the time ahead.

Even though the proportion of the population with persistent low income has increased, the risk of poverty in the form of the inability to satisfy material needs has been reduced in recent years. The main strategy for combating low income and poverty is to help as many people as possible into paid employment. If we do not succeed in increasing labour market participation among immigrants in general, the differences between immigrants and the rest of the population will persist. This development will require NAV to use more targeted measures in order to increase the transition to employment among the most at-risk group.

Before we can implement work-related services, immigrants without basic schooling will need a combination of adapted educational programmes in primary/lower secondary schools and language tuition. Together with the municipalities and the educational authorities, NAV should establish cooperation models with a view to drawing up suitable qualification paths for these groups.

Shift to greater use of health-related national insurance benefits

Even though public health in Norway has remained stable and good, there has been a clear shift in the past 20 years towards increased use of health benefits, such as work assessment benefit and disability benefit. This could be due to an increased medicalisation of social and work-related problems for people in the grey zone between unemployment and health problems. This shift will probably continue if the regulations are not changed. As a result, NAV's follow-up work will have to be more independent of the diagnosis and benefit, and NAV will have to advocate amendments of the regulations that underpin this. Cross-sector cooperation will also be necessary, particularly with employers and the health and education sectors.

A clear increase in the incidence of mental health problems has not been found in the population as a whole, but the prevalence of such problems has increased among youth and young adults (15–24). Like most European countries, Norway has seen an increase in the payment of national insurance benefits due to mental health problems. This could be because doctors certifying illness use mental health diagnoses more than before, because of more openness about mental illness and because of greater demands on mental health in the workplace. Mental health problems will probably continue to increase as the grounds for granting benefits. It is particularly among young people that this group of illnesses dominates completely. Compared with other OECD countries, labour market participation among people with mental health problems is relatively low in Norway. Measures targeting this group often require extensive cooperation with the mental healthcare services.

It is also a trend that more and more people now survive serious illnesses such as heart disease and cancer. This can increase the need for graded benefits.

Restructuring and challenges relating to funding the welfare state will affect labour and welfare policy

Norway's labour and welfare policy will be influenced by a need for major restructuring in the labour market, and by the fact that it is becoming more and more challenging to ensure the sustainability of welfare schemes. There is broad agreement on an active labour market policy that re-qualifies unemployed people for new jobs, and the main principles of our labour and welfare policy are expected to be retained. Debate must be expected about NAV's structure and its partnership with the municipalities in the period up until 2030, depending on the outcome of the municipal reform and goal attainment in the labour and welfare field.

The importance of labour market participation to the integration of immigrants and the sustainability of the welfare state will have high priority, and this will make demands on NAV's work in this area. Mobilising young people who drop out of upper secondary school and/or have impaired work capacity will also be given high priority.

Ordinary workplaces will to an even greater extent than today be seen as arenas for the qualification and inclusion of labour. NAV and the employers will in such case have to cooperate even more closely in order to ensure better and more adapted follow-up of individuals. If this is to be efficiently implemented, it will be necessary to clarify the role of NAV offices and how social enterprises are to be used. It will be necessary to increase the use of pay and subsidies/benefits in combination. Long-term wage subsidies must be designed to ensure that job seekers and employers have clear incentives to increase the proportion wages constitute.

A demanding situation for government finances could lead to demands for more redistribution and means testing of welfare schemes, and it will also lead to constant high expectations as regards digitalisation and rationalisation of the public sector. We nonetheless expect support for universal welfare schemes to continue to be high.

3 Introduction

NAV must keep up with developments

Society is changing, the pace of change is increasing and NAV's services must reflect and respond to these developments. The Horizon Scan deals with the *most important* societal trends relating to the labour and welfare field up until 2030, and what consequences they will have for NAV. Greater focus on the challenges we are facing will help to make future strategies and measures better and more targeted.

The scan is based on external research and NAV's own publications. It has been necessary to involve the whole NAV organisation in order to ensure support and relevant input. Twenty-eight workshops have been held in different parts of the organisation at which external partners such as the Norwegian State Educational Loan Fund (Lånekassen), the Norwegian Tax Administration, the county governors and the Norwegian Association of Local and Regional Authorities (KS) have participated. NAV's central user committee, the employees' unions and representatives of the County Governors have also been involved. The approach has been based on expert assessments, where the participants have selected the most important trends going forward and discussed what consequences they will have for their respective areas of responsibility.

The Horizon Scan is based on what we believe to be the most probable development. In some areas, there are forecasts that we can use with a reasonable degree of certainty, while there is great uncertainty in others. Chapter 10 differs from the rest of the report. Here, the objective is to use two different scenarios to investigate this uncertainty and thereby illustrate the range of possible outcomes for the labour market of the future.

Lift your gaze – see the main trends

The scan is general in nature. NAV covers large and complex areas where societal trends do not necessarily all pull in the same direction or at the same pace. Developments can vary from place to place and from area to area. We encourage units in the agency to prepare more local and detailed horizon scans where expedient.

NAV's first horizon scan was published in July 2014 (NAV 2014) and it is updated regularly. The work on this edition has been carried out by the Labour and Welfare Directorate. The editorial team has consisted of: Ole Christian Lien (chair), Ingunn Helde, Ragnhild Kongsvoll, Stein Langeland, Øyvind Møklebust, Håkon Røstad and Terje Wagelid. In addition to the editorial team, Søren Brage, Therese Dokken, Jorunn Furuberg, Erik Oftedal, Hanne Røvig Schjold, Mathilde Seeberg Skjelbostad, Johannes Sørbø and Kari Tollersrud have contributed.

4 Demographic developments

This chapter is largely based on Statistics Norway's most recent population statistics as of 1 January 2016, and population projections from June 2016 (Tønnessen et al. 2016).

4.1 Continued strong population growth, especially among the elderly

High population growth leading to more NAV users

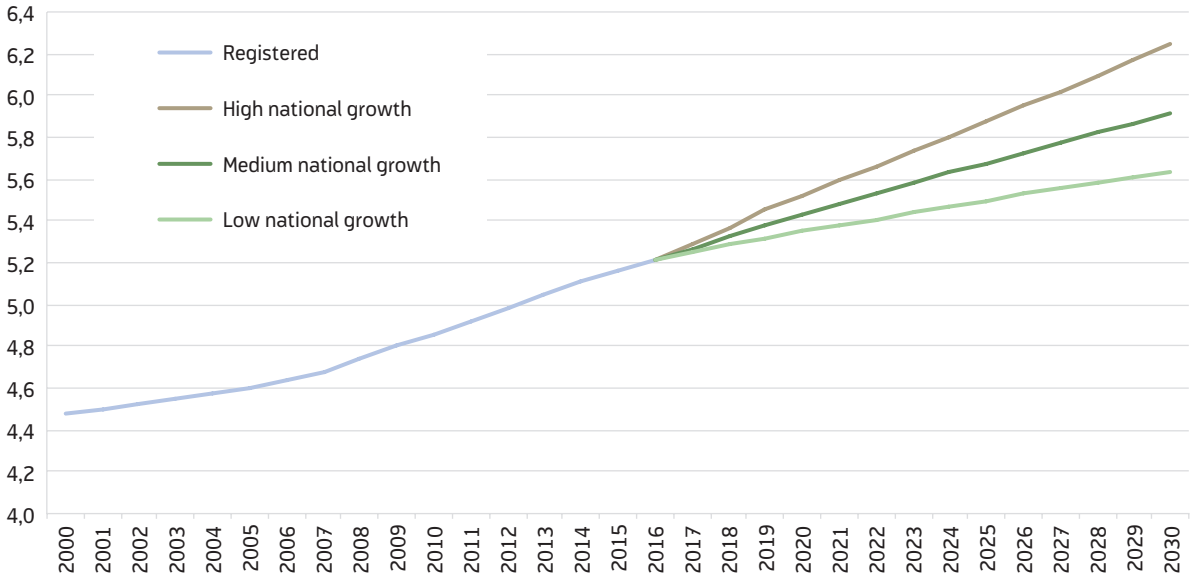
At the beginning of 2016, Norway had around 5.2 million inhabitants. Since the turn of the millennium, the population has increased by 1.0 per cent a year on average. In its medium alternative, Statistics Norway expects the same growth up until 2030.

In the three alternatives outlined in Figure 4.1, we can expect the population to be between 5.6 and 6.2 million in 2030. The medium alternative predicts that the population will increase by 700,000 compared with the present level, corresponding to an increase of around 13 per cent. If this proves true, Norway will have around 5.9 million inhabitants in 2030.

The rest of the chapter builds on estimates based on Statistics Norway's medium alternative.

A population increase means that NAV will have more users. If we assume that the current operating allocation remains unchanged, this will mean that we will have to focus more strongly on modernisation and rationalisation of the services we offer. This can be achieved through self-service solutions and more automation and by being more critical about what works – more knowledge-based service development. According to the Productivity Commission (Norwegian Official Reports, NOU 2016:3), the public sector has a considerable potential for rationalisation, among other things through digitalisation and better prioritisation. Moreover, it is not certain that NAV's areas of responsibility will remain unchanged until 2030. The municipal reform and the possible regional reform could lead to NAV being assigned fewer tasks, and the funding will probably follow the tasks (see also section 9.3).

Figure 4.1. Population growth projection for Norway with three alternatives until 2030. Figures for 1 January of each year in millions



Source: Statistics Norway

Older age groups are increasing most

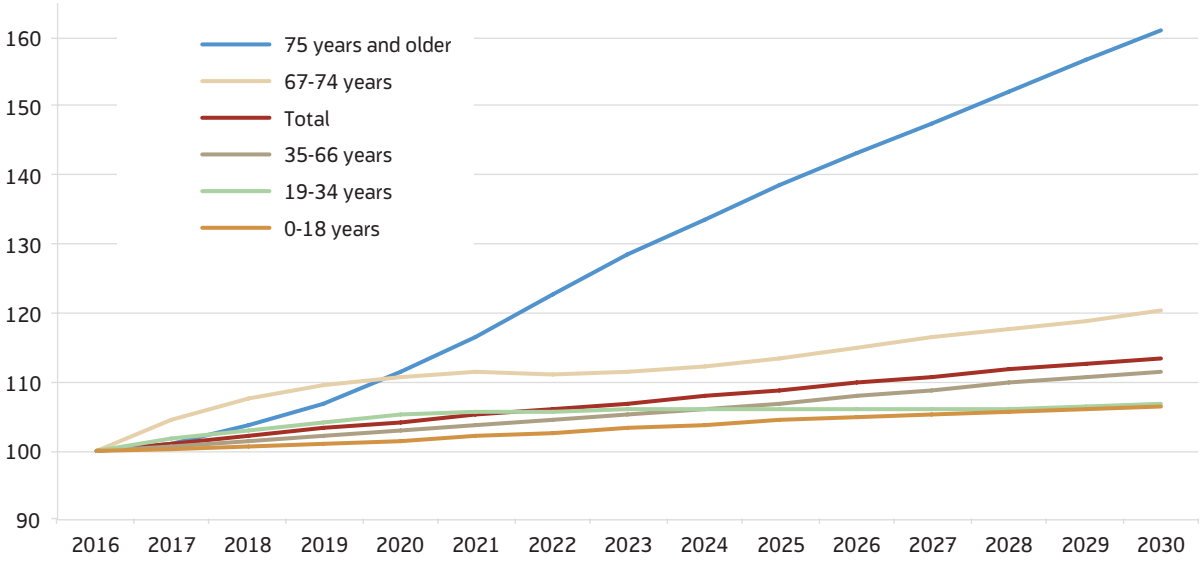
Population growth in the coming years is expected to be very unevenly distributed between age groups. From 2016 to 2030, Statistics Norway expects an increase of only 6 per cent in the number of children and young people up to the age of 18, while the number of young adults aged 18 to 34 is expected to increase by 7 per cent. The youngest age groups are thereby expected to increase by much less than the average population growth. The opposite is true of the oldest age groups. While the 67–74 age group is expected to increase by 20 per cent, the oldest group aged 75 and older are expected to increase by as much as 61 per cent (see Figure 4.2). In total, the group aged 67 and older is expected to grow by around 40 per cent, and there will thereby be around 300,000 more people in this group in 2030 than in 2016.

Even if we were to succeed in increasing labour market participation among the older age groups, the population growth will mean that the burden on the working population – the number of non-working people in relation to the working population – will increase in the years ahead.

Figure 4.3 shows that the age wave started around 2010. Until then, we had a favourable demographic development, where the population between the ages of 20 and 66 increased more quickly than the population over 67. This was due to a low birth rate in the interwar years. Because the birth rate started to increase from 1943 onwards, the trend reversed in 2010, and the percentage over the age of 67 is now increasing as the large birth cohorts from the post-war years reach the age of 67. It is actually misleading to talk about an age wave, since Statistics Norway expects the proportion of elderly in the population to continue to increase substantially until 2100. While the group aged over 67 currently makes up around 14 per cent of the population, it will be 18 per cent in 2030, according to the medium alternative. Statistics Norway also expects life expectancy at birth to increase by around 2.1 years from 2016 to 2030. It is nonetheless the big birth cohorts from the post-war years that are the main reason for the increase in the older age groups in the period up until 2030.

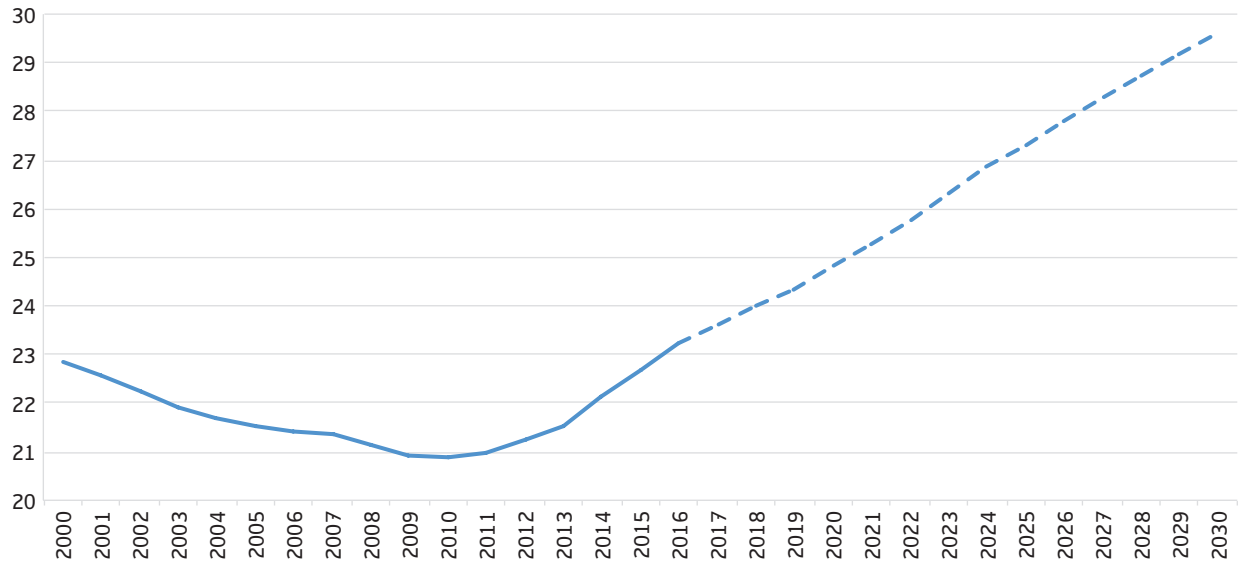
Even though there is a pronounced ageing of the population in Norway, we are nonetheless in a somewhat more favourable demographic situation than many other European countries. The ageing of

Figure 4.2. Population growth in Norway projected until 2030 by age group, cf. the medium alternative. 2016=100. Figures for 1 January each year



Source: Statistics Norway

Figure 4.3. The population aged 67 and over as a percentage of the population aged 20–66. Figures for 1 January each year. Percentage



Source: Statistics Norway

the Norwegian population will also follow a less steep curve than in many of our neighbouring countries. On average, roughly 24 per cent of the population in the EU will be over the age of 65 in 2030 (Eurostat), compared with roughly 20 per cent in Norway (not shown). Norway also has money in the bank in the form of the Government Pension Fund Global. The challenge of funding welfare schemes will thus be somewhat less problematic for Norway than for the EU countries.

Biggest increase in users with retirement pensions and daily living aids

The fact that the population is growing most in the oldest age groups has various consequences:

More people employed, but a shortage of labour
We must reckon on strong demand for labour and continued high employment going forward. A projection of the number of people employed based on Statistics Norway's long-term forecasts indicates a 14 per cent increase up until 2030. However, NyAnalyse (2015) estimates that, if labour market participation among the elderly remains at its present level, the ageing of the population could lead to a labour shortage of more than 200,000 people by 2030.[1] Despite extensive reforms in recent years aimed at getting employees to stay longer in employment (including the pension reform), we can still expect changes and adjustments to be made to pension schemes and other welfare schemes in order to motivate users for high participation in employment (see also section 9.2).

Forty per cent more old age pensioners
For many of NAV's benefit schemes, we can expect the increase in the number of recipients up until 2030 to be fairly close to the medium alternative of 13 per cent growth in the general population. With an estimated increase in employment of 14 per cent during the same period, we can roughly expect most employment-related benefits to show corresponding growth.

However, the change in the age composition of the population will lead to large differences in the need for different benefits. We expect the number of old age pensioners to increase strongly up until 2030, by more than 40 per cent (see Figure 4.4). Even though

[1] This presumes a public sector that resembles today's public sector and trend growth in private sector employment. Given this, labour will be in shorter supply in the next 15 years.

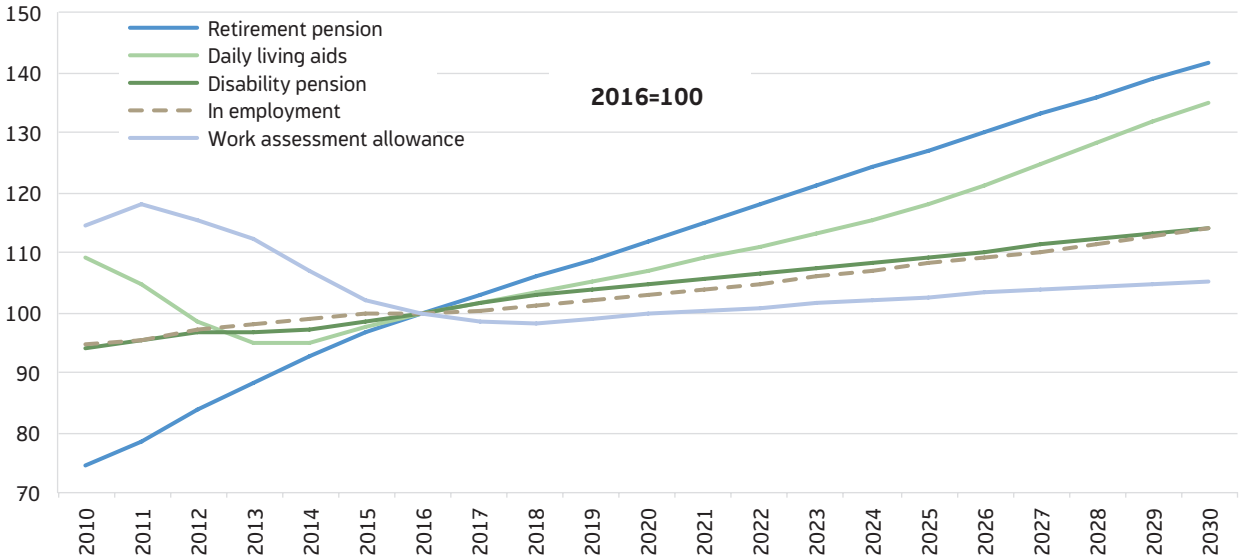
the number of old age pensioners is increasing strongly overall, we expect the number of new pensioners per year to decrease somewhat from the present level. This is because the cohorts reaching retirement age will be somewhat smaller than in the last five years, and because the introduction of a flexible age for drawing retirement pension resulted in very many people drawing their retirement pensions in the first few years.

For work assessment benefit, we expect a decrease in 2016 and 2017 because we expect fewer new recipients than the number leaving the scheme. This has to do with the phasing in of the scheme after its introduction in 2010, and because many recipients are still expect to transfer to disability benefit over time. Moreover, we have based our figures on a demographic projection, according to which the estimate of the number of recipients in 2030 is expected to be at roughly the same level as in 2014. Even though there may be a labour shortage in the years ahead, there is nonetheless a risk that the growth in work assessment benefit may be higher than estimated going forward. This is a result, among other things, of possible growth in the number of people with inadequate Norwegian language skills, a high proportion not completing upper secondary school and increased use of benefits as a result of mental health problems (see the discussion in sections 4.2, 7.6 and 8.2).

Forty per cent more with daily living aids

Since the population growth is strongest in the oldest group, we also expect a strong increase in the number of users of daily living aids from NAV. A purely demographic projection shows that the number of users of daily living aids through NAV will increase by almost 40 per cent up until 2030. The Government's Care Plan 2020 (the Ministry of Health and Care Services, 2014) states, however, that '*... it is desirable that more people live longer at home, and live active and independent lives – with individually adapted services, security and dignity*'. This can also contribute to an increase in the number of users of daily living aids from NAV, since the need for help in the home can increase, and because living aids for residents in institutions will be provided through the municipalities (not including the projections in Figure 4.4). Improved health among the new generation of elderly people can perhaps reduce this estimate somewhat, but it is also conceiv-

Figure 4.4. Projection of the number of people in employment and the number of recipients of selected NAV benefits and daily living aids. 2016=100. Annual mean for each year



Source: Statistics Norway, NAV

able that more and more people will survive serious illnesses and live for more years with illness and functional impairments.

Technological development is another factor. Welfare technology is often described as assistive technology for use in the home that is intended to make the user's everyday life easier or to organise care tasks better. This technology is now being introduced in health and care services. However, the operation and funding of such solutions is currently a grey zone in which NAV and the municipalities both have key roles. It thereby remains to be clarified whether NAV will be a provider of welfare technology solutions. In any case, we must expect a strong increase in users of living aids after 2025, because it is the 80 and above age group that uses daily living aids most.

4.2 Increase in the immigrant population

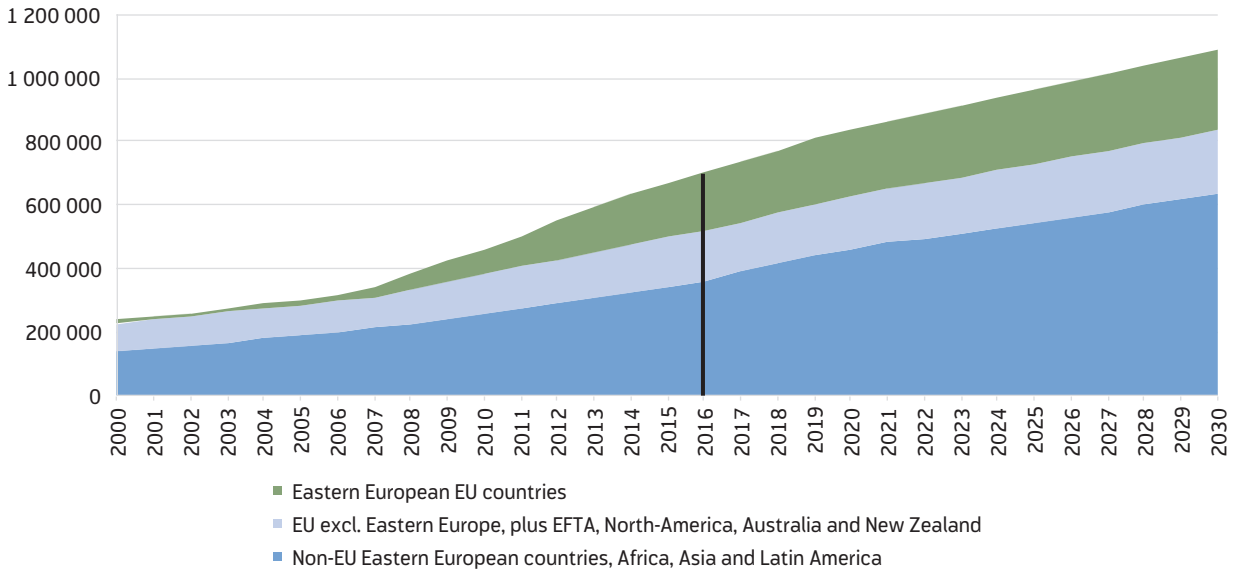
Lower net immigration

In 2015, the figure for net immigration to Norway was barely 30,000 people. That was far lower than in the preceding years and was due to lower immigration and higher emigration by European nationals, which, in turn, may be related to the economy and labour market in Norway. Growth in net immigration was relatively moderate until the early 2000s. In 2005, annual immigration had reached 18,000 persons. During this period, more than half the net immigration comprised non-Europeans. This figure then rose rapidly, mainly because of labour migration from the new EU member states in Eastern Europe. During the period 2007 to 2014, we had annual net immigration of between 38,000 and 48,000 persons every year, more than half of whom were European nationals.

The high number of asylum seekers who arrived in autumn 2015 has had little impact on the statistics so far because most members of this group did not have their asylum applications processed before the turn of the year. The statistics only comprise residents, i.e. immigrants with legal residence. Many asylum seekers who arrived in 2015 can be expected to be granted residence, however, and they will be included in the immigration statistics in 2016 and 2017.

In its medium alternative, Statistics Norway therefore expects net immigration to be a little over 37,000 persons in both 2016 and 2017, before decreasing in subsequent years. During the period 2025–2030, the net immigration figure is expected to

Figure 4.5. Development of the immigrant population and projection until 2030 by country background. Figures for 1 January each year



Source: Statistics Norway

be around 27,000 people a year. For the period as a whole, net immigration is expected to account for more than half the population growth. That is nonetheless much lower than the corresponding percentage during the past ten years. In the high alternative, net immigration will increase strongly in the next few years before decreasing somewhat. After that, this alternative shows increasing net immigration up until 2100.

When immigration is high, emigration is also higher. Emigration is particularly influenced by greater labour mobility across national borders. While Norwegians work abroad for periods more often than before, some labour immigrants move back to their home countries after a period in Norway.

Statistics Norway expects annual emigration to be around 35,000 in the next 15 years. This is on a par with developments in the last few years, and much higher than emigration in the period 2000–2010.

A more than 50 per cent increase in the immigrant population in the period up until 2030

Even though net annual immigration will be somewhat lower, the immigrant population[2] will nonetheless increase significantly. Statistics Norway expects the immigrant population to increase from almost 700,000 in 2016 to just below 1.1 million in 2030 (see Figure 4.5).

This means that, up until 2030, the immigrant population will increase by more than 55 per cent, while the rest of the population is expected to increase by 7 per cent. Immigrants will amount to 18 per cent of the population in 2030, compared with 13 per cent today. Around 58 per cent of the immigrants will come from Asia, Africa, Latin America and non-EU Eastern European countries, just under 23 per cent from Eastern European EU countries and just under 19 per cent from Western Europe, North America, Australia and New Zealand.

[2] People resident in Norway, but who are born outside Norway to foreign-born parents.

Three out of four immigrants in recent years are in the 16–66 age group. This means that, at least in the short term, immigration will contribute to the burden on the working population being slightly lower than it would otherwise have been (cf. Figure 4.3, section 4.1).

More people with inadequate Norwegian language skills and more international cases

The labour market and NAV's services must be prepared to deal with more people with inadequate Norwegian language skills and more people without basic qualifications

In the low and high alternatives, the immigrant population will amount to 17 and 20 per cent, respectively, of the population in 2030. Despite uncertainty, it is therefore highly probable that the immigrant population will increase in Norway, regardless of which projection alternative is correct. Given that the immigrant population has increased and is expected to increase so quickly, we can probably expect more users to have inadequate Norwegian language skills. This challenge has already materialised in connection with the increase in unemployment in recent years, since a large proportion of labour immigrants from Eastern European EU countries still have inadequate Norwegian language skills. This demographic development thereby raises the question of whether services and information from NAV should be offered in other languages to a greater extent than at present.

Without adequate Norwegian language skills, more people could experience problems using NAV's self-service solutions or making use of work-related measures. For NAV, this could mean a greater need for interpreting and translation services. At the same time, it is not improbable that, with time, new technological solutions could make these services more easily available throughout the country (see Chapter 6). It is conceivable, for example, that new digital technology, such as voice recognition, synthetic speech and automatic interpreting, will be useful tools for both NAV and our users.

Since language tuition is not among the services NAV can offer, this will increase the need for cooperation with other sectors, particularly the education sector (see also section 7.6). More people in the immigrant group

than in the rest of the population also lack other basic qualifications. Since the strong influx of asylum seekers in autumn 2015, measures have therefore been initiated that can help immigrants to utilise education and work experience from their home countries to a greater extent on the Norwegian labour market, so that they can contribute and be a positive economic resource for society (Report No 30 (2015–2016) to the Storting).

Continued strong growth in international cases – among users both in Norway and abroad
We estimate that international cases account for 12 per cent of the resources spent on administering NAV benefits.[3]

By *international cases* is meant cases where:

- the user claims a benefit
- the user has changed his/her country of residence, country where he/she is staying and/or country where he/she works, to or from Norway
- the case processing requires the exchange of information with foreign social security authorities, or where the user is resident abroad.

A further increase in the immigrant population will lead to an increase in the number of international cases involving users resident in Norway where the case processing requires the exchange of information with foreign social security authorities. In the case of benefits that can be received abroad (referred to as the export of benefits), higher emigration will result in more NAV users who are resident abroad.

For example, the number of old age pensioners resident abroad almost doubled from 24,000 at the end of 2005 to 46,000 at the end of 2015. We assume an increase of around 2,000 a year going forward, to approximately 76,000 in 2030. The number of people on disability benefit living abroad increased from 8,000 to 12,000 during the period 2005–2015.

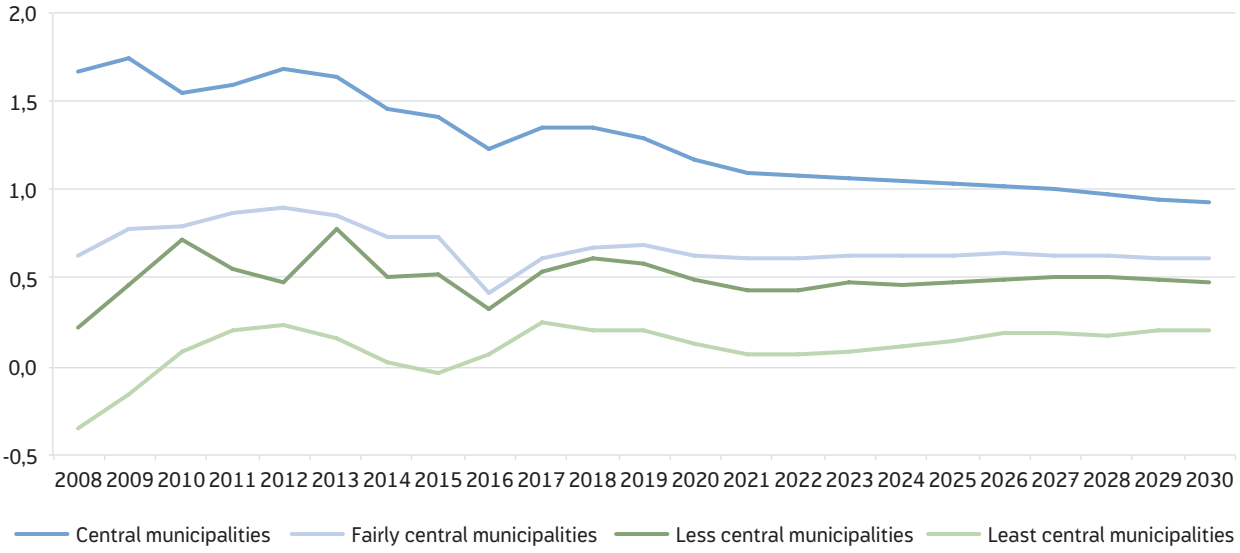
[3] This is the figure for September 2016. It refers to the number of full-time equivalents used on international cases in the benefits administration. It is estimated that NAV currently uses slightly more than 300 full-time equivalents on such cases. This does not include the consideration of appeals and control activities.

Based on the development during the period 2010–2015, we estimate that the number of full-time equivalents used on international cases will increase by around 5 per cent a year in the years ahead. While the proportion of resources spent on international cases was 12 per cent in 2016, such an increase will mean that the proportion will increase to around 19 per cent in 2030. This means that, during the period 2016–2030, we could see a doubling of the number of case officers working on international cases. This is based on the assumption that the number of international cases involving users resident in Norway will increase more strongly than cases involving users resident abroad. Since the average population growth up until 2030 is estimated to be about 1.0 per cent per year, we can assume that, all else being equal, national cases will increase by around 14 per cent from 2016 to 2030.

The estimated increase in international cases may seem high. Even though we expect lower net immigration in the years ahead than during the period on which the forecast is based, the immigrant population is nonetheless expected to grow significantly. This will lead to international cases becoming a very dominant part of NAV's case processing going forward. The expected development is also the reason why NAV has already reorganised its processing of international cases by discontinuing NAV International and integrating the processing of international cases and national cases in the ordinary administrative units.

There is generally less system support for the processing of international cases than is the case for national cases. Contact with foreign social security authorities also means that system support cannot be automated to the same extent, at least not in the short term. It is therefore probable that the ongoing modernisation of the system solutions will have a bigger rationalisation effect on national cases than on international cases. Unless changes are made to how such cases are processed, the resources required for international cases could therefore increase more in the years ahead than the growth rates for the amount of cases would indicate. International cases are generally more demanding to check and can lead to an increased risk of benefit fraud.

Figure 4.6. Population growth projected until 2030, by the centrality of municipalities. Percentage growth from the preceding year as of 1 January each year



Source: Statistics Norway

Table 4.1. Total population growth 2016–2030 and the proportion of the population above the age of 67, by county. Percentage

County	Population growth	Proportion of the population above the age of 67, 1 Jan. 2016	Proportion of the population above the age of 67, 1 Jan. 2030
The whole country	13	14	18
Oslo	20	11	13
Akershus	18	13	16
Vest-Agder	16	14	17
Rogaland	16	12	15
Aust-Agder	16	15	19
Buskerud	16	15	18
Hordaland	15	14	17
Østfold	14	16	19
Vestfold	13	16	20
Sør-Trøndelag	13	14	17
Møre og Romsdal	9	16	20
Nord-Trøndelag	9	17	21
Hedmark	8	18	22
Troms	7	15	19
Oppland	7	18	22
Telemark	7	17	21
Sogn og Fjordane	5	17	21
Nordland	4	17	21
Finnmark	4	14	19

Source: Statistics Norway

Increased risk of benefit fraud
Most benefits from NAV require recipients to live in Norway. However, employees, job seekers, employers and benefit recipients all move across national borders more frequently than before. This results in new control challenges for NAV. Some people circumvent the rules by moving to or staying for a long time in other countries without reporting this to NAV. Pensioners are allowed to move abroad, but it is challenging to check whether recipients are alive and a great deal of manual cooperation with other countries' authorities and the Norwegian foreign service is required.

4.3 Strongest growth in central areas, but growth in rural areas as well

Growth in both central and more outlying municipalities

The population has increased in both central and more outlying areas in recent years. Even though the most outlying municipalities have seen their populations decrease for large parts of the post-war period, taken together, they have also seen population growth since 2010. This is largely due to immigration from abroad. There is considerable variation, however. According to Statistics Norway, more than three out of ten municipalities experienced a decrease in the number of inhabitants in 2015.

An increasing proportion of the population live in central areas. The proportion who live in the most central municipalities has increased from just over 60 per cent in the mid-1980s to almost 68 per cent at the beginning of 2016. Statistics Norway expects this proportion to increase slightly – by two percentage points – up until 2030. There is great uncertainty associated with these projections, and it is not unlikely that centralisation will be stronger than expected. We can also expect considerable local variation.

The population is increasing in all counties – most in Oslo and Akershus

The population will probably grow in all counties in the next ten years. The increase will probably be greatest in Oslo and Akershus (18–20 per cent), while least growth is expected in Finnmark and Nordland (4 per cent). Fairly low growth (5–7 per cent) is also expected in Troms, Oppland, Telemark and Sogn og Fjordane.

The age composition varies considerably between counties. Oslo and Rogaland currently have the lowest proportion of elderly, while the inland counties of Hedmark and Oppland have the highest proportion. The proportion of elderly will increase in all counties in the next ten years, but the differences between counties will largely persist.

Regional differences in population development will affect how NAV is organised

As previously mentioned, the composition of NAV users is changing. Even though the ageing of the population will affect the whole country, some less central regions will have a high proportion of elderly people in future. Seen in isolation, this will not have major consequences for us, since old age pensioners are a group that has little need for help from NAV locally. However, particularly after 2025 (cf. section 4.1), NAV will also see an increased need for assistance for recipients of daily living aids, and this will apply in particular to counties with a high proportion of elderly people.

Regions with a strongly ageing population will experience a shortage of labour in the years ahead, for example in the health and care sector. This can present increasing challenges for NAV in its employment agency role. Since it is especially Norwegian-born people who move away from rural areas, however, it is conceivable that immigrants will fill some of the labour shortage in these areas.

Regional differences in population development will also affect how NAV works and how we are organised. Greater cooperation between NAV offices across municipal boundaries could be necessary, as well as changes in our presence in rural areas. Technological development is another important driver with respect to how NAV works and how we are organised (see Chapter 6). An increasing need for expertise in the agency will probably also make bigger and more robust competence environments necessary.

5 User behaviour

NAV's big user groups consist of personal users, employers and partners. Users' expectations of NAV will change as society develops, and technological and demographic developments will be key drivers. Young users will have completely different expectations of digital services than older users.

Figure 5.1. NAV's user groups

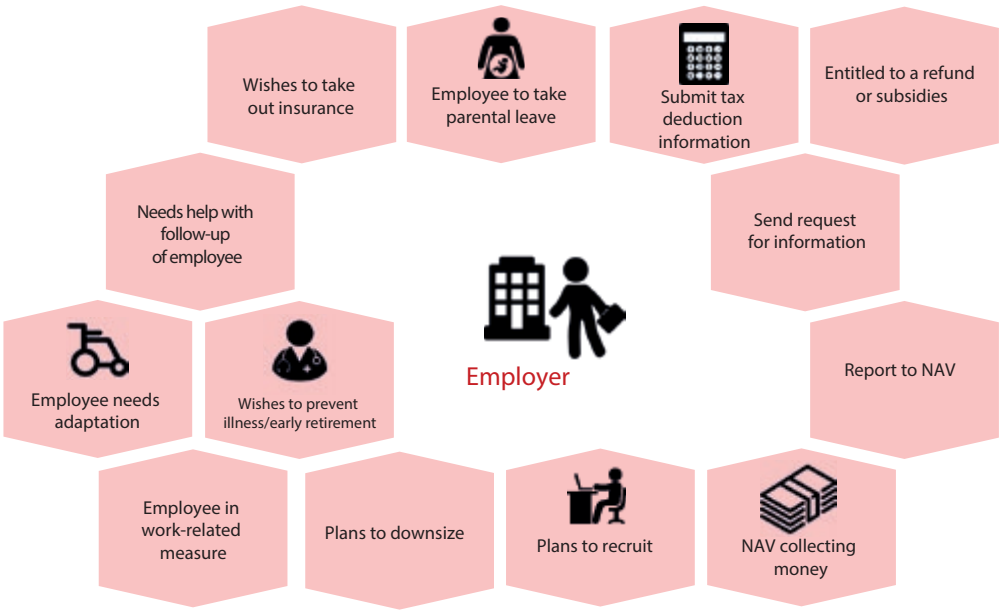
Source: NAV

NAV has more than two million personal users, while more than 190,000 registered enterprises cooperate with us or are potential users (ssb.no). As a result of new industry structures and technological changes, the labour market will be more affected by restructuring going forward. Norway will have more inhabitants and the population will be both older and more multicultural. At the same time, many users have become used to very good digital services from both public and private providers, which will also affect their expectations of NAV.

NAV's user surveys and the Population Survey from the Agency for Public Management and eGovernment (Difi) show that people are increasingly satisfied with services provided by public agencies. The results from Difi's survey also show that young people, immigrants and people with mental health problems find that they are more often badly treated by public service providers.

Employers are in contact with NAV in many different situations – they are both users of NAV and our

Figure 5.2. Examples of employers' needs in contact with NAV



Source: NAV

most important partner in relation to getting people into employment.

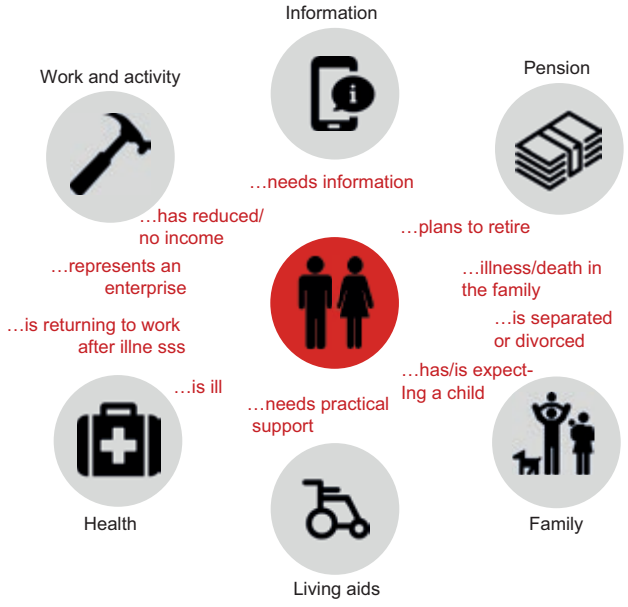
NAV cooperates with other parties in order to create good services, and our partners are also an important user group. They comprise doctors, other agencies, enterprises and authorities in other countries. We are dependent on increasing and improving our cooperation with others if we are to fulfil our social mission.

5.1 Users expect seamless and adapted services

Users' expectations of public services are shaped, among other things, by technological development. Today, the use of channels in NAV is affected by users having problems understanding the different processes, and they find contact with NAV time-consuming and bureaucratic.

The multi-channel approach is about how public agencies should communicate with users (Gartner, 2016). Important elements of a multi-channel strategy are that we must meet citizens in the channel they themselves prefer, that users must be able to switch channels and that users perceive digital and physical channels as coherent. Users expect to be able to switch from one channel to another without having to provide information again and without the provision of services being affected.

Figure 5.3. Examples of personal users' needs in contact with NAV



Source: NAV

As users get used to good, adapted solutions in other parts of society, they will also expect services from public agencies to be explained in understandable language and to be adapted to their current life situation. Despite the fact that NAV has been working on the use of plain language for several years, we find that many groups still have problems understanding the content of our information. This is particularly challenging in the case of young users and users from immigrant backgrounds. There is reason to believe that technology will make it easier to communicate across language barriers by using speech recognition, synthetic speech and automated interpreting services. In addition, communication will be increasingly based on visual aids, while written language is expected to become less important. But technology will not solve all the challenges of establishing dialogue with groups that are not in employment. This will be a challenge for NAV seen in light of the high drop-out rate from school and the fact that the youth employment rate is lower than for other groups.

The digital workplace is a trend that underpins the multi-channel approach. NAV staff must be given tools that make it possible for them to work efficiently and that support mobility and different types of cooperation (Gartner, 2016). NAV is dependent on being an attractive employer for future employees, and new generations of employees in particular will expect NAV to use efficient tools. Seen from the perspective of the future, a NAV office is not necessarily the most natural arena for contact between users and NAV. Meetings will to a greater extent take place via the internet, in workplaces, educational institutions and work placement locations.

5.2 Users will manage their own cases

Analyses commissioned by Difi show that, for most services, user adaptation and service are most important if we want to increase overall user satisfac-

tion. If we want to increase satisfaction with and improve services, we must involve both users and staff. Users are experts on their own lives and know where the shoe pinches, while members of staff often have know-how about the users that is not made good enough use of. The Population Survey shows that services must go via staff in order to increase the service level, user adaptation and thus also overall satisfaction. Moreover, NAV has a lot of data about cases, users and outcomes that put us in a position to make data-driven decisions in order to improve quality and efficiency.

NAV shall ensure that users can easily understand '*what is happening in my case and why it is happening*'. This will create a sense of security, ownership and motivation. Users should experience progress and development in their situation, and that they are in the driving seat. NAV must obtain information from its own or joint public sources, present the information to users and comply with the principle that no one shall have to provide the same information several times.

We must ensure that our digital services comply with ethical standards and protection of privacy and security requirements, so that sensitive personal data can be exchanged securely. This trend will challenge ethics and rules that are often based on a paper-based reality.

5.3 Social media are changing user behaviour – which, in turn, is changing NAV

In many areas, social media are an integral part of an organisation's value chains and business services. Social media will probably increasingly become a channel where user experiences are shaped, and where users influence and share with each other.

Through the formation of networks, users will become more self-reliant, and organisations' information and knowledge monopoly will be challenged (Klouman, 2015). This makes different demands on how public organisations should work to reach citizens with relevant information. There are good and bad examples of public agencies' presence in social media and the effect such presence has. NAV has enjoyed great success with posting information about parental benefit on Facebook, and we are also making active endeavours to test channels such as Snapchat to reach young job seekers.

Social media comprise different platforms with different strengths and weaknesses. What works on one platform will not necessarily work on another. In other words, if we use all channels in the same way, we will not make good enough use of them. There is reason to believe that social media will be one of the most important channels for public agencies going forward. It can therefore be necessary for us to make services available on external platforms in one way or another.

6 Technology

Technology will give NAV new possibilities, at the same time as technological development will affect the society we are tasked with serving. We will point to four areas of technological development and what consequences they will have for NAV:

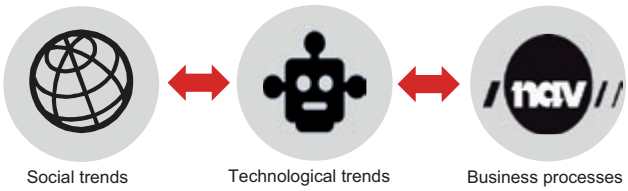
1. Digitalisation is radically changing society
2. Digitalisation will influence demand for NAV's services – and thereby also the services NAV offers
3. Digitalisation increases participation and innovation
4. Technology and business development will change what industries operate in Norway

6.1 Digitalisation is radically changing society

The digitalisation of society has been called the fourth industrial revolution. It is said that we tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run.[4] New possibilities that we only have a vague idea of today will affect us sooner than we think, in ways we hardly understand the implications of. Machine learning and artificial intelligence are no longer science fiction, they are technologies we can expect to play a key role in our lives and in the labour market.

[4] A statement often referred to as Amara's Law after Roy Amara, scientist and former president of the Institute for the Future (source: Wikipedia).

Figure 6.1. Reciprocal influence between technological development, societal development and business processes



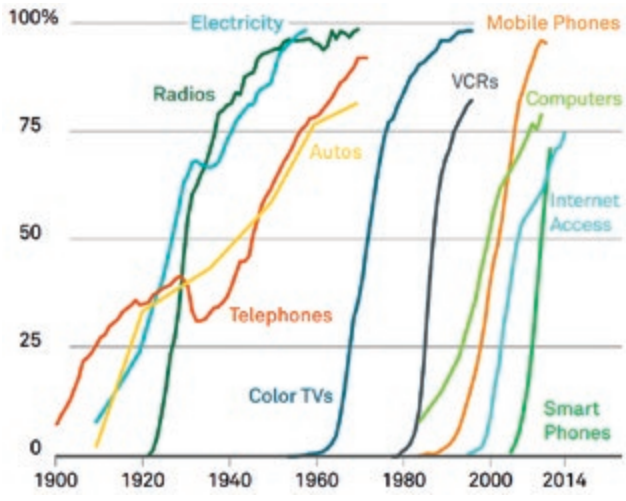
Source: Gartner (2016)

Technological trends influence society, and societal development will influence technological trends. Technology will influence strategies and business models in both the private and public sectors. NAV will find that these changes will influence its social mission, at the same time as technology will become a means NAV can use to create better and more efficient services. Technology also gives us new possibilities to cooperate better with others.

Figure 6.2 shows that society starts using new technology more quickly than before. It took many years from cars and electricity were invented until they were used by most people, while, for example, smartphones and the internet have become very widespread in a very short space of time. Many of these technological innovations have become essential tools in the workplace, while also being used privately. The rapid introduction of new technology demands swift adaptation in the workplace and will require many employees to adapt swiftly.

Digitalisation comprises areas such as artificial intelligence, machine learning, big data, the internet

Figure 6.2. Proportion of the US population that has started using new technology over time



Source: BlackRock Investment Institute (2014)

Concepts in digitalisation

Artificial intelligence and machine learning	Artificial intelligence is intelligence exhibited by machines. An ideal 'intelligent' machine is a flexible rational agent that perceives its environment and takes actions that maximise its chance of success at some goal. Machine learning is a category of artificial intelligence that gives computers the ability to learn without being programmed. In traditional programming, rules are programmed in order to produce a result based on the data received. In machine learning, the computer is able to make rules itself based on data and results. Machine learning makes it possible to make 'intelligent' assessments and decisions based on large amounts of data.
Cloud computing	Cloud computing is a type of internet-based computing that provides shared computer processing resources and data to computers and other devices on demand.
Blockchains	A blockchain is a distributed database that maintains a continuously increasing amount of data called 'blocks' that cannot be altered or manipulated. The technology can, for example, enable the direct transfer of values in a network without a third party like a bank being involved.
The internet of things	Consumer items, clothes, household products and machines are equipped with built-in sensors that enable them to collect data because they are connected to the internet.
Big data	Big data is about utilising large quantities of data, often in real time, across enterprises, data sources and formats. Big data is a technology that includes the whole value chain – data collection, storage, processing, analysis and visualisation of results. Big data can be used to rationalise decision-making processes, improve the quality and topicality of decisions, and to react faster to deviations.
3D printing	3D printing is a technology that makes it possible to create a three-dimensional object using a printer that builds the object layer by layer. Today, 3D printing is used in product development and industrial design, architecture and other model building, orthopaedics and technical aids, as well to produce complicated objects such as aeroplane turbines.

of things, cloud computing, blockchains, 3D printers etc. (see the fact box).

6.2 Digitalisation will influence demand for NAV's services – and thereby also the services NAV offers

Digitalisation will influence users' expectations of NAV, and it will also influence demand for NAV's services from employers and employees. New cooperation arenas such as social networks will also affect demand.

Users' expectations of NAV will change as society around us starts using new technology, and it will be important for us to be able to communicate with our users across channels. We must be able to meet users in their preferred channel and we must make sure that the services offered in the different channels are coherent. Intelligent systems with natural dialogue can contribute to NAV's dialogue with users largely being handled using technology. NAV staff will want to have access to mobile and flexible solutions that support this type of multi-channel approach.

There is an expectation from our surroundings that users should not have to think about how the public sector is organised, and that they should not have to report the same information several times to public agencies. This will make new demands on cooperation and sharing, within NAV, between agencies and between administrative levels in both the central government and municipalities.

The labour market will be affected by digitalisation, increased use of digital communication, machine learning, 3D printing and robots, and this will affect nearly all employees to some extent. It is no longer just routine work that can be automated. Digitalisation will change many knowledge-based occupations, also in the health and finance sectors.

The degree of automation will depend on many factors in addition to what is possible technologically. They include the cost of automation, pay levels, access to qualified labour and the consequences for capacity and quality. Social acceptance of automation, as well as laws and regulations are also important factors, as seen, for example, in the current debate about Uber. Automation does not necessarily mean that demand for labour will decrease. It could, for example, mean that Norwegian business and industry will increase its competitiveness and thereby create jobs, or that demand for a product will increase.

Social technology will change how services can be produced, and social platforms will create new types of cooperation and new cooperation arenas that can affect how working life is structured. Social technology has found a natural place in our everyday lives in a short space of time. Value creation is characterised by 'the network effect', i.e. that solutions become more valuable the more people who use them. Telephony is clear example of this – telephone services are more valuable if everyone can be reached by phone than if only a handful of people have a phone. Facebook, LinkedIn, Finn, Apple, Google, Airbnb and Uber offer platforms and social networks where users are offered services that are more valuable for each individual user the more people use the platform.

The sharing economy is based on a form of social technology that offers marketing of time or assets via a platform, such as Airbnb, Nabobil or Uber. The sharing economy can also change the relationship between employees and employers, and it is already challenging traditional business processes in many sectors, such as transport, hotels and other service provision.

6.3 Digitalisation increases participation and innovation

Processes relating to the consideration of decisions, applications and follow-up of users in NAV can be digitalised, and in many cases fully or partly automated. In recent years, NAV has done a lot of work on digitalising benefit administration, and more digitalisation of work-related services can be expected in the time ahead. Systems for decision support will provide a better basis for making good

decisions based on knowledge about users and results. Technology can contribute to NAV going from being a rules-oriented agency to becoming more result-oriented, with a greater degree of personal adaptation based on individual users' needs. Digitalisation makes it possible to change the division of labour between NAV and its users, by users using self-service solutions and thereby taking over tasks.

NAV collects a lot of data about users that can be a source of innovation for both NAV itself and external parties. Through advanced analysis, we will gain a better understanding of user needs that can be used to create better services for users. For example, it is conceivable that commercial players in the staffing industry could develop new services for employers and job seekers. At the same time, NAV's use and sharing of data is based on ethical standards and regulations relating to the protection of privacy. This will also influence the extent to which NAV can exploit the possibilities data analysis offers.

Open innovation combined with social technology leads to social innovation. Wikipedia is a good example of how collective intelligence, engagement, openness and technology have created concrete value. We have access to updated information of high quality everywhere we have internet access.

A clear strategic direction and a structured innovation process are required to achieve innovation. The organisation must build a culture that gives it innovative power and the ability to deal with the risk situation.

Investments in financial technology have increased in the past year. Blockchains have attracted a lot of attention, and it has been predicted that they will have a big impact on many sectors, including the public sector, banking and finance, film and music distribution etc. Blockchains can become a key technology for benefits such as pensions. At the same time, however, it is expected to be some time before the technology becomes very widespread.

3D printing and the internet of things can change how many types of daily living aids are manufactured, maintained and distributed. It can also affect business and industry by moving production closer to consumers.

Cloud computing makes it possible for NAV to use standardised solutions and realise economies of scale relating to the operation and development of solutions. This could free up resources and give the agency better systems that can be changed in step with the development of technology and needs.

Automation in the private and public sectors will also give NAV new possibilities in connection with its control work, in the same way as it may present new challenges relating to benefit fraud. As a result of technological development, traditional crimes can be committed in new ways, and ICT crime is becoming a serious problem for society. Today, more people are victims of cybercrime than of traditional crime (NOU 2015:13).

Digitalisation will give rise to new challenges relating to protection of privacy and ethics. The Norwegian National Security Authority (NSM) has warned that cyber-attacks against important Norwegian institutions and organisations are on the increase and are becoming more advanced and organised (NRK, 20 Aug. 2016). NSM believes that the authorities must do more to address this threat in a better way.

As with challenges in other areas, developments related to digitalisation will require a coordinated approach by various public bodies, for example the health, education and municipal sectors. Given NAV's position in the Norwegian welfare model, it will be natural for NAV to play an active role in this context.

6.4 Technology will change what industries operate in Norway

Through the Dream Commitment (Innovation Norway, 2016), Innovation Norway has pointed to six areas of opportunity for business development.

These are areas that cut across existing boundaries between industries and sectors, where Norwegian expertise, technology and commodities can help to solve the challenges the world is facing, and thereby give us new market opportunities. The six areas are:

- The ocean space
- Clean energy
- The bioeconomy
- Health and welfare
- Smart societies
- Creative enterprises and tourism

Projections from the OECD show that global value creation in the ocean space will double during the period 2010–2030. Some researchers point out that it might be possible to achieve an even higher growth rate in Norway, perhaps as much as a sixfold increase (Innovation Norway, 2016). Norway is a world-leading supplier of marine technology, and the Research Council of Norway has launched a major initiative to realise the big potential for knowledge and technology transfer between the marine-based industries of petroleum, renewable energy, shipping, fisheries and aquaculture (Research Council of Norway, 2016).

Norwegian research communities and industry have great expertise in solar power and wind power, and they have long experience of hydroelectric power and power transmission cables. The research communities also have expertise in the next generation of batteries and other ways of storing energy. Norway has also invested heavily in carbon capture and storage.

The bioeconomy has to do with the sustainable and profitable exploitation, production and processing of biomass from ocean to land, for food and animal feed, materials and chemicals, and bioenergy (heat and fuel).

Welfare technology has attracted increasing attention in recent years. The field is deemed to be crucial in dealing with challenges in the health and care sector caused by demographic developments, which could be particularly relevant to NAV's activities relating to living aids. Welfare technology is a relatively new concept. It denotes technological solutions that individuals can make use of to improve their ability to cope by themselves and participate in society, and their quality of life (NOU 2011:11).

Smart societies have common denominators such as transport and logistics, energy-efficient buildings and housing, municipal technical infrastructure and administrative services. Cooperation and connections between the different areas are key.

The creative enterprises and tourism area is related to the possibilities that are triggered at the intersection between art, culture, nature and leisure activities. Travel and tourism is one of the fastest growing industries in the world, and more than nine per cent of all jobs worldwide are related to travel and tourism. More than 40 per cent of foreign tourists in Norway are cultural tourists. Their consumption is 26 per cent higher than the average tourist in Norway.

7 Developments in the labour market

There is great uncertainty about how the labour market will develop in the long term. NAV's forecasts usually apply to a period two years ahead. In its database, the IMF (International Monetary Fund) has produced forecasts for how the global economy will develop up until 2021. In Figure 7.1, we see that the IMF expects even growth in the final years of the forecast period, which will therefore be identical to the trend growth.

As regards the development of the Norwegian economy, we use the forecast that forms the basis for Statistics Norway's projection of supply and demand for labour by educational level in the period up until 2035.

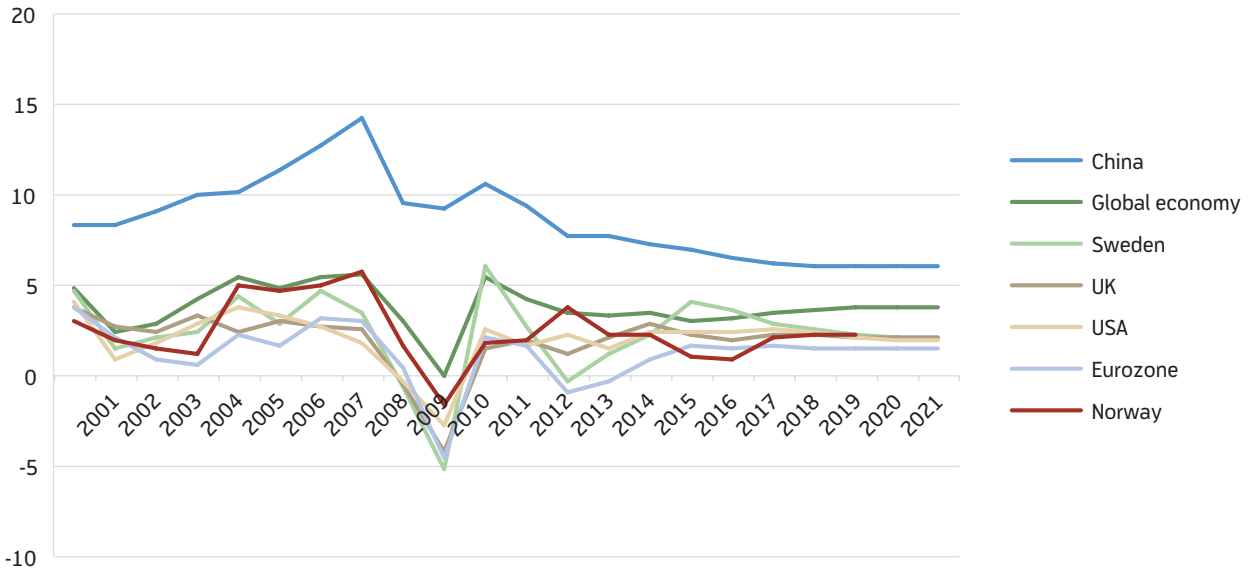
7.1 Growth in emerging economies leads to higher growth in the global economy

Growth in the global economy has been a good three per cent per year in recent years. That is somewhat lower than we have generally seen during the period after 2000. This is due, among other things, to a decrease in growth in China, a country that saw very high growth during the period 2000–2010. The IMF assumes that growth in China will stabilise at around six per cent per year during the period up until 2021.

A strong drop in the oil price in the last two years has also affected how the global economy has developed. In oil-exporting countries such as Russia, Brazil and Venezuela, the fall in the oil price has contributed to a strong economic downturn. For many other countries, the lower oil price will contribute to increased growth. The IMF estimates that growth in emerging economies and developing countries will pick up somewhat up until 2021, which will also result in higher growth in the global economy overall.

Economic growth has been low in the Eurozone in the years since the international financial crisis in 2008–2009. The situation has been characterised by high sovereign debt and economic crisis, particularly in Greece. Growth picked up somewhat in the Eurozone from 2013, but it is still at a moderate

Figure 7.1. Percentage growth in GDP. Estimate from 2016



Source: IMF, Statistics Norway's forecast for Norway from September 2016

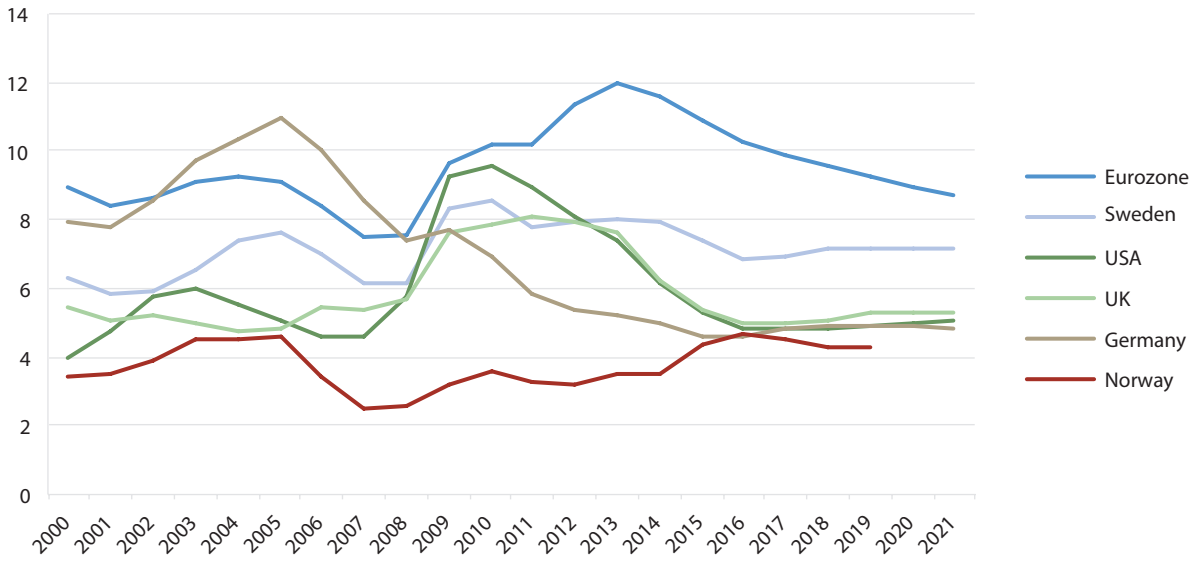
level. Growth has been very high in Sweden in recent years, but it is expected to decrease in the next few years. In June 2016, the UK voted to leave the EU. This contributes to increased uncertainty about how the economy will develop in both the UK and the EU in the years ahead. The forecast in Figure 7.1 is from before Brexit, and the increased uncertainty could lead to lower growth than these estimates going forward. A lot depends, however, on how the leaving process pans out and what kind of agreements will replace today's EU membership.

The IMF also estimates somewhat lower economic growth in the USA in the years ahead. Lower growth in Europe and the USA will reduce growth in Norway as well, since they are important trading partners for us. Strong growth in China and other emerging economies has also made a positive contribution to Norway's economy, among other things because high demand for commodities in these countries has driven up the price of the commodities we export. Lower growth in China could reduce this effect somewhat, at the same time as increased growth in other emerging economies can contribute to continued strong growth in demand for commodities.

In Norway, the years 2015 and 2016 were characterised by an oil-driven economic downturn, with falling oil investments and low growth. Growth has picked up, however, in the first six months of 2016, among other things because the weak exchange rate for the Norwegian krone and low interest rates have resulted in better conditions for traditional exports, the tourism industry and increased growth in building and construction. Statistics Norway's forecast from September 2016 estimates that we will enter a period of moderate economic upturn in 2017 that will continue until the end of the forecast period in 2019.

The financial crisis hit the Eurozone very hard, and in Figure 7.2, we see that the unemployment rate increased from 7.6 per cent in 2008 to 12.0 per cent in 2013. The increase was especially strong in Southern Europe, while unemployment has fallen in Germany during the period and is now at its lowest level since East and West Germany were reunited. Since 2013, unemployment has also fallen in the Eurozone as a whole, and the IMF estimates that it will continue to fall until 2021. However, it will still be higher in 2021 than it was before the financial crisis if the IMF's forecasts prove correct. Unemployment has also decreased strongly in the

Figure 7.2. Unemployment as a percentage of the workforce. Estimate from 2016. Percentage



Source: IMF, Statistics Norway's forecast for Norway from September 2016

UK and the USA since 2010, and the IMF estimates that unemployment will now stabilise in these countries. Continued high unemployment in the EU will lead to continued pressure on national budgets, and continued high migration from the countries where the labour market is weakest.

Brexit and increased protectionism?

Recent decades have seen a strong focus on increased globalisation, with various trade agreements, the dismantling of customs barriers, free movement of labour in the EU etc. This contributes to more trade and increased growth in the global economy, at the same time as the Norwegian labour market has been subject to stronger international competition. Globalisation has also contributed to increased technological development, at the same time as many jobs have been lost because they have been outcompeted by industries in other countries. This development has also led to a shift in the competitiveness of highly educated labour and labour with less education. Demand has increased for higher education, while many with little education have had to compete more for low-paying jobs. These trends have led to strong opposition to globalisation in several countries.

On 23 June 2016, the UK voted to leave the EU, a decision that has become known as Brexit. The immediate response was a strong fall in the value of the pound and a drop in share prices in many countries. Stock exchanges have picked up since then, but there is still uncertainty about how things will develop and about how Brexit will affect the economies of the UK and the rest of Europe. We also see a strong EU-sceptical presence in other EU countries, for example France. At the same time, we see that leading politicians in several countries are advocating increased protectionism in the form of higher customs barriers, the renegotiation of trade agreements and less immigration. This was a key issue, for example, in Donald Trump's campaign to be elected President of the USA. If we see a change in this direction in more countries, this could lead to lower growth in global trade in the long term. In this kind of scenario, growth in the global economy could be lower than outlined in Figure 7.1.

Figure 7.3 shows the development in global trade since the turn of the millennium (measured by volume, not prices). We see that trade fell strongly during the financial crisis in 2009, but this was compensated by strong growth in 2010 and 2011.

Figure 7.3. Development of trade in goods and services globally. Estimate from 2016. Percentage growth from the preceding year

Source: IMF

After that, global trade has increased by around 3 per cent a year, although it fell to 2.8 per cent in 2015. The IMF estimates that growth will pick up somewhat towards 2021 and that growth will be around 4.3 per cent a year. A scenario with more protectionism and less trade will be especially negative for a small, open economy like Norway's. Exports accounted for almost 40 per cent of Norway's gross domestic product in 2015, and Europe and the USA are our most important markets.

The past few years have also been strongly affected by the war in Syria and unrest in several other countries in the Middle East and North Africa. This has contributed to large migration flows to Europe. How these conflicts develop in the time ahead will also have major consequences for developments in Europe.

Demographic challenges

The demographic challenge we are facing in Norway, with more and more elderly people per employed person, is also a challenge in many other countries, and, in some cases, to a much greater extent than in Norway. This will also affect growth in the global economy in the long term (beyond 2021). Most European countries are facing a situation where the number of elderly people will increase strongly, and the same applies to China and Japan. This has several consequences, for example that national budgets will be more demanding because tax revenues decrease in relation to expenditure when there are fewer people in employment for every person outside the workforce. Prospects of poorer pensions can also contribute to more people choosing to save more, with the result that consumption and investments will decrease and thereby also economic growth. An increasingly ageing population can result in lower economic growth than we have become used to in recent decades. At the same time, technological development will continue to contribute to economic growth, although it is difficult to say how large this component will be.

7.2 Norway's economy will see faster restructuring

NAV only produces short-term forecasts for the Norwegian economy. In 2015 and 2016, Norway's economy was affected by an oil-driven economic downturn and large geographical differences arose in the labour market. During 2017, we expect the Norwegian economy to start on a new upturn and that unemployment will again decrease somewhat. When looking as far as 10 to 20 years ahead, however, it is impossible to say when economic upturns and downturns will occur. We do know that the economy and the labour market will continue to see such fluctuations, however. In projections that extend so far ahead, we disregard short-term economic fluctuations and endeavour to project the underlying trend development. Here, we use Statistics Norway's projection of the supply and demand for labour from 2016 as our main scenario (Dapi et al., 2016). In addition, we will briefly discuss the possible effects of robotisation and automation, as well as possible consequences for Norway's economy of the transition from oil and gas to other industries as a result, among other things, of the climate agreement, less oil and gas resources, the rapid development of renewable energy and non-fossil fuel cars.

One out of every three jobs to disappear because of robotisation and automation?

As many as one of every three jobs in Norway will be affected by automation in the next 20 years, according to Ekeland et al. (2015). That is roughly on a par with what has been found in Finland, but lower than in Sweden and the USA, where almost 50 per cent of all jobs are at risk. Despite the fact that many jobs can disappear because of automation, the authors do not believe that we will experience mass unemployment. Jobs have disappeared because of mechanisation ever since the Industrial Revolution, and in recent decades because of digitalisation. However, we have seen that, over time, the labour that is freed up moves to other industries and occupations. In Norway, jobs in industry fell by almost 30,000 (10 per cent) from 1990 to 2015, while employment in agriculture and forestry fell by more than 50,000 (50 per cent) in the same period, without this having led to a strong increase in unemployment.

Bye and Næsheim (2016) point out that there are several factors that are not taken into consideration in the method used by Ekeland et al. The tasks involved in a given occupation will often change when new technology is introduced, so that the occupation does not disappear, it changes. This can, in turn, also lead to higher productivity, so that the price of a product can be reduced. This can increase demand for the product and contribute to higher employment. Demographic changes, policies and income growth are other factors that can affect which occupations will be needed in future, something Ekeland et al. do not take into account.

Bessen (2016) has looked at US data and found that occupations that involve using computers have seen a significantly higher increase in employment than other occupations during the period 1980–2013. This also applies to occupations that involve many routine tasks. He finds that computers have removed some jobs, but that they have created more new ones, so that the net effect is positive.

Even though it is very unlikely, in our view, that automation will lead to mass unemployment, we could experience periods with higher unemployment before labour is absorbed by other industries or sectors. This is reinforced by the fact that, according to Ekeland et al. (2015), it is particularly low-paid and low-skilled occupations that are at risk of being replaced by automation. According to the report, 44 per cent of jobs that require little education are at great risk of being replaced by automation, while the same applies to 14 per cent of occupations where higher education is required. Occupations that require little or no education already have higher unemployment and stronger competition for jobs than occupations that require higher education. At the same time, many immigrants also compete for these jobs.

Ekeland et al. (2015) also find that it is mostly men who work in jobs that are at risk of disappearing because of automation. If, in the next 20 years, we enter a period where occupations disappear faster because of technological developments, this will also have consequences for NAV. Even if we do not see mass unemployment, more people will be unemployed for a period between jobs and will need to be followed up by NAV. This applies in particular to people who have worked in occupations where little education is required.

We also know that higher unemployment results in more people receiving health-related benefits and that more people may therefore be permanently excluded from employment. Kann, Yin and Kristoffersen (2016) show that there is a strong correlation between the unemployment rate in a municipality and the number of people applying for work assessment benefit. Bratsberg et al. (2013) find that the probability of ending up on disability benefit when becoming unemployed increased by 121 per cent for men and 48 per cent for women from 1992 to 2007 (see also section 8.2 on the shift towards increased use of health-related benefits). Lima (2016) finds that the oil-driven economic downturn (2014–2016) led to an increase in the number of people using up their entitlement to sick pay in the hardest hit counties, and that applications for work assessment benefit also increased in these counties.

The sharing economy

Another factor that will affect the labour market in the time ahead is the development of the sharing economy. The sharing economy is not a new phenomenon as such. We have, for example, long been able to let a room to others, but it has become much easier as a result of new platforms on the internet. Companies like Uber (taxis) and Airbnb (competes with hotels etc.) have received a lot of attention. They can offer cheaper services than established companies and thereby capture market shares. New car hire services, cleaning services and tools and equipment hire have also emerged. So far, however, such services only have a very small market share. According to Juel (2016), Airbnb accounted for about 2 per cent of guest nights in Norway in 2015, the rest being provided by hotels, campsites etc.

People who offer their services via sharing economy companies are not employees of these companies, they are self-employed. This development can be a challenge for the established structures in the labour

market. Self-employed people do not have the same rights as employees, for example as regards sickness benefit and pensions. People with income from self-employment as their main income source can thus be more dependent on other national insurance benefits, for example if they become ill. So far, however, we have not seen an increase in the number of self-employed people in Norway.

It is conceivable that sharing economy services will outcompete established businesses. They can thereby contribute to higher unemployment among employees with ordinary pay and working conditions, and among other self-employed people. Uber, for example, is planning to offer driverless cars. If this service achieves a high market share, many of today's taxi drivers and Uber drivers will risk losing their jobs.

On the other hand, the sharing economy could give marginalised groups better opportunities to participate in employment. Juel (2016) cites surveys that have shown that 25 per cent of Uber drivers in Paris were unemployed before starting to drive for Uber, and that many people who let rooms via Airbnb would be unable to keep their house without this income.

Strong growth in the sharing economy could have major consequences for the labour market in Norway. It will probably lead to fewer trade union members and to organisations such as the Norwegian Confederation of Trade Unions (LO) and the Confederation of Norwegian Enterprise (NHO) becoming less important. It could also make it more demanding to ensure responsible wage settlements, and it may be more difficult to introduce major reforms in which the social partners in Norway have traditionally played an important role (for example the Pension Reform).

The green transition

The oil price fell from more than 110 dollars per barrel in summer 2014 to under 30 dollars at the lowest in January 2016. Even before this, the oil companies had signalled that costs had become too high and had to be cut, but the downturn in the oil industry has been reinforced by the falling oil price. Oil investments fell by 34 per cent from the third quarter 2013 to the second quarter 2016. This has contributed to a decrease in employment and higher unemployment. At the same time, however, it has affected the Norwegian economy less than expected. Norges Bank reduced the interest rate, and, combined with the fall in the oil price, this contributed to a substantial weakening of the Norwegian krone. Together with an expansive fiscal policy and moderate wage settlements, this has helped to reduce the effects of the downturn. The downturn in the oil industry has primarily affected the labour market in the counties of Rogaland, Hordaland, Møre og Romsdal and Vest-Agder. In many other parts of the country, on the other hand, unemployment has fallen during this period, among other things because of the weakening of the Norwegian krone.

The downturn in the oil industry has also led parts of industry to start looking in other directions, for example shipyards taking on assignments for the aquaculture industry. In future, we must expect that the climate agreement, the strong growth we see in renewable energy, developments in transport technology etc. will mean that we must make the transition from oil to new industries. The oil-related economic downturn we have experienced in 2014–2016 can thereby be an indication of something we will see more of in coming decades. The experience gained during this period tells us that we have an adaptable economy where some major stabilisers (the exchange rate for the Norwegian krone, the interest rate etc.) have a great impact. At the same time, we see that the transition from oil-based industry to other business and industry leads to huge geographical differences. In counties where the oil industry has been most dominant, the situation is demanding, with a sharp rise in unemployment in some places. In other parts of the country where the oil industry is less dominant, on the other hand, we see that the effect of the exchange rate and interest rate is far more important, and that unemployment has decreased. This will also affect how NAV handles the situation. Geographical mobility is becoming more important, while general changes to regulations intended to alleviate the situation in areas in a difficult situation can have unfortunate results in

other parts of the country. NAV must probably also be prepared to be met with greater expectations that it should contribute more to the restructuring of enterprises (funds for in-house training) and to helping unemployed people into new industries.

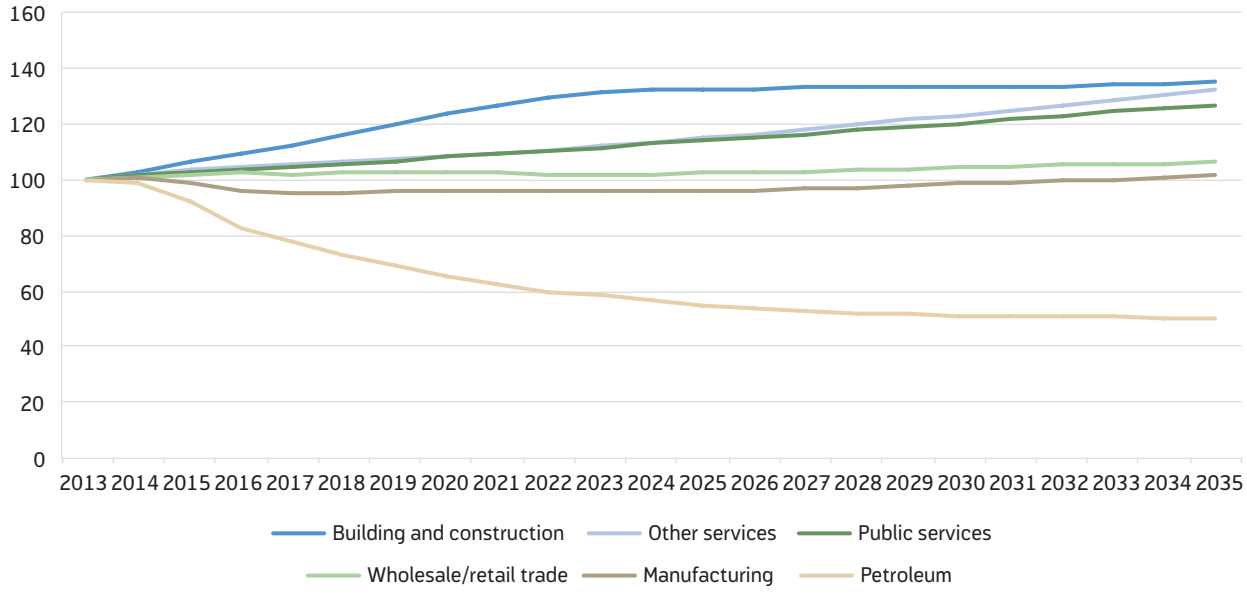
Structural changes and reorganisation will have significant consequences for NAV

The development trends we have described show that the labour market will undergo major structural changes in the years ahead. Globalisation and an increasingly open European labour market will mean that a larger part of the labour market will be exposed to international competition. Technological development will cause many of the jobs we know today to disappear, at the same time as new ones are created. Structural unemployment may increase, and more people may become long-term unemployed. This can lead to more people becoming NAV users in some periods and entail a risk of more people becoming permanent benefit recipients. As a consequence of globalisation, NAV must also increasingly look to the global labour market to find jobs for its users.

The increasing age wave means that a decreasing proportion of people of working age must finance an increasing proportion of elderly people. More elderly people will also increase demand for health and care services. In addition, there will be changes in the industry structure in Norway as a consequence of the gradual downsizing of the petroleum sector. We must also be prepared for a more turbulent world, where large-scale migration and new groups of asylum seekers can give rise to bigger integration challenges in the labour market. At the same time, the use of NAV's measures and services must be designed so that we are able to handle cyclical changes as they arise. Constant, extensive changes make it challenging for NAV to use policy instruments and methods in a targeted manner. If more people become self-employed, this will challenge the position of ordinary enterprises as arenas for work-related measures. Technological development can also make it difficult to ensure that labour and welfare regulations keep pace with developments.

Both the Productivity Commission (NOU 2016:3) and the Cappelen Committee (NOU 2016:15) recommend meeting the extensive structural changes in the labour market with competence-raising

Figure 7.4. Projected employment by industry. Indexed, 2013=100



Source: Statistics Norway

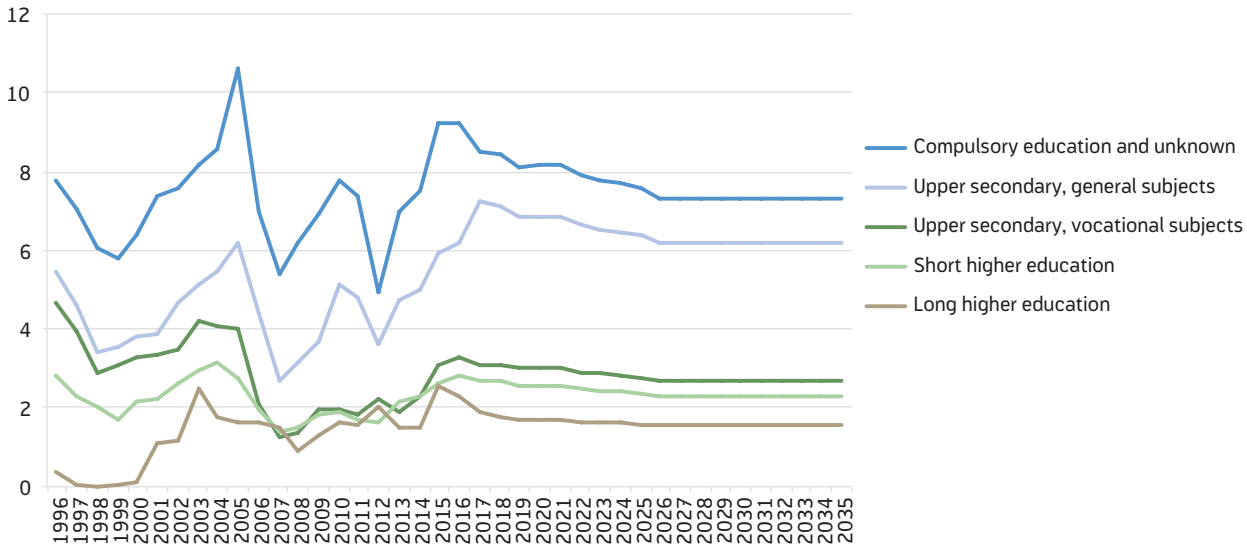
measures. This must be achieved by strengthening and further developing the policy instruments used in educational and labour market policy. They point in particular to solutions that entail using ordinary enterprises as arenas for qualification and education (as described in section 9.1). At the same time, the apprentice scheme, labour market measures and welfare schemes must be designed so that they do not have unforeseen consequences and unfortunate displacement effects. This will require closer cooperation between the education sector, employers and NAV.

In this connection, it can be mentioned that the Government has decided to prepare a national competence policy strategy in cooperation between the ministries, the social partners and others engaged in the competence field. The strategy is intended to help Norway to succeed in restructuring its economy so that, in the years ahead, we will continue to have competitive businesses, an efficient public sector and as few people as possible not in employment (Vox, 2016). The need for a concerted effort is pointed out here as well, and more sectors and agencies must be involved and must coordinate their activities better than today.

7.3 Increased employment rate in service industries

Dapi et al. (2016) have prepared employment projections for some aggregated groups of industries up until 2035. The projections show the highest employment growth in the building and construction industry, other services and public services. By other services is meant services other than building and construction, public services, the wholesale and retail trade and the petroleum sector. The employment rate in building and construction is estimated to be about 35 per cent higher in 2035 than it was in 2013. That corresponds to almost 90,000 more employees in this industry. In public services, employment has grown steadily in recent decades, primarily due to growth in health and care services. This trend is expected to continue, so that the employment rate in public services in 2035 will be 27 per cent higher than in 2013. In health and care services alone, there were more than 550,000 employees in 2013, so that a growth of 27 per cent means 150,000 more people

Figure 7.5. Projected unemployment by level of education. Percentage



Source: Statistics Norway

employed. Schools, kindergartens etc. come in addition.

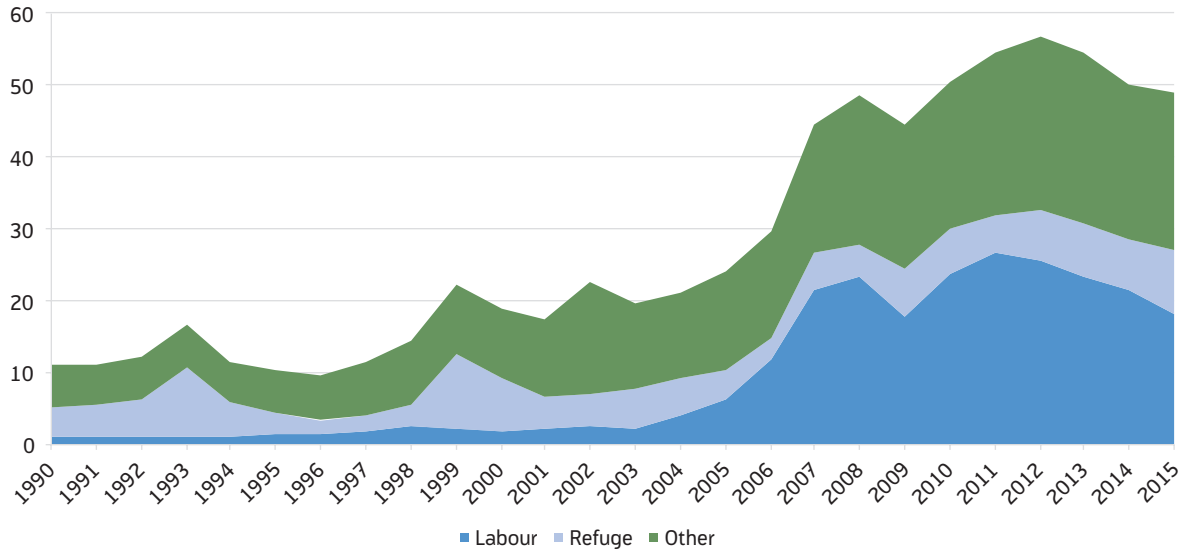
The wholesale and retail trade is also one of the biggest industries in Norway. In 2013, 370,000 people were employed in this sector, and employment has been fairly stable in recent years. Statistics Norway projects a fairly stable development also in the next few years, before the employment growth improves somewhat in the second half of the 2020s. The projections estimate that there will be 22,000 more people employed in the wholesale and retail trade in 2035 than in 2013.

Because of the oil-driven economic downturn, there was a steep drop in employment in the petroleum industry during the years 2014–2016. The oil price fell from more than 100 dollars per barrel in spring 2014 to under 30 dollars per barrel at the lowest at the start of 2016. There are many indications that employment in the petroleum sector will continue to fall, among other things because of the climate agreement and the green transition. It is also assumed that the oil price will probably not regain the level it was at before 2014. Dapi et al. (2016) assume that the oil price will increase to 63 dollars per barrel in 2020 and that it will then increase in line with general inflation. Figure 7.4 shows that the projection nonetheless indicates a 50 per cent decline in employment in the petroleum sector up until 2030, which means approximately 30,000 fewer people employed. The downturn in the oil industry has also affected manufacturing, especially sectors that provide services to the oil industry, for example the engineering industry and the shipbuilding industry. At the same time, low oil prices lead to a weak exchange rate for the Norwegian krone, which is favourable for other areas of manufacturing. The figure shows a decline in employment in manufacturing during the years 2013–2016, but that it will gradually pick up, so that it is slightly higher in 2035 than it was in 2013. This means an increase in employment in manufacturing of about 20,000 people from the estimated low point in 2017.

Geographical and occupational mobility will become more important

A continued decrease in employment in the petroleum sector and the oil-service industry will mean that there could still be relatively large geographical

Figure 7.6. Immigration by reason for immigration. Excluding Nordic nationals. Thousands of persons



Source: Statistics Norway

differences in the labour market. In counties with a great deal of oil-related enterprises, it will be important to focus on restructuring the labour force. At the same time, the decline in these industries will primarily affect some regions, while others will see increased employment and a lower unemployment rate. This means that geographical and occupational mobility among job seekers will become an important part of the follow-up from NAV.

Table 7.1. Immigration according to Statistics Norway's population projections, the medium alternative

	Immigration	Net immigration
2016	71 000	38 000
2020	61 000	26 000
2040	63 000	26 000

Source: Statistics Norway

7.4 Highest unemployment among people with little education

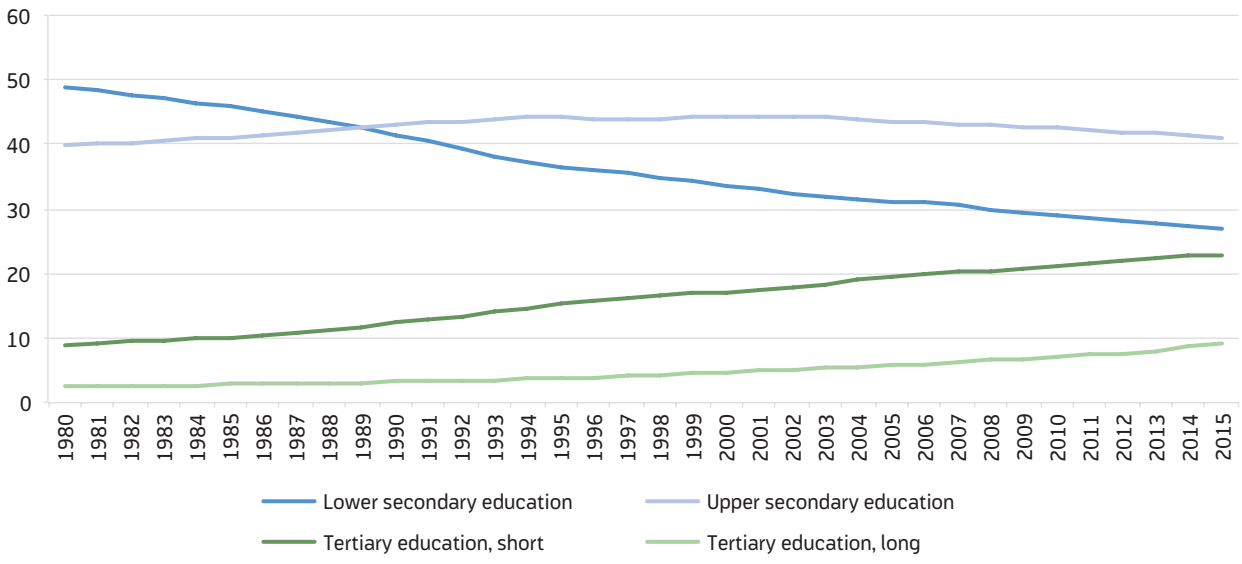
During the period 2014–2016, unemployment measured by the labour market survey (AKU) increased considerably, and this applied to all levels of education (Figure 7.5). Statistics Norway's projections indicate that unemployment will fall somewhat in the period up until 2025, while an unemployment rate of 3.7 per cent has been assumed for the subsequent period, which is considered to be the equilibrium unemployment level based on the labour market survey. We also see that unemployment will fall for all educational levels, but most for people who only have lower secondary education or upper secondary school with general subjects.

However, these are the two groups where the unemployment rate is already highest by far, and unemployment will remain far higher throughout the period for these two groups than for people with vocational qualifications or higher education.

NAV must handle sudden changes in the labour market

During the period 1996–2016, we see in Figure 7.5 that the unemployment rate has fluctuated considerably for all educational levels, especially among those with a low level of education. Although the figure suggests a more stable development going forward, such cyclical changes will also occur in future. The projection must be regarded as reflecting an average unemployment level, not a specific

Figure 7.7. The population over the age of 16 (excluding persons with unknown education) by year and highest completed education. Percentage



Source: Statistics Norway

development. This means that NAV must be able to handle sudden changes in the labour market, which means that the workload can increase considerably in a short space of time, as we saw during the financial crisis or in Rogaland in 2014–2015. This concerns both the processing of applications for unemployment benefit and follow-up of unemployed people. In addition, we know that, during periods of higher unemployment, more people also receive health-related benefits such as sickness benefit and work assessment benefit.

We also see that unemployment is expected to remain far higher for people with low levels of education than for people with a trade certificate or higher education. These are groups that often require more follow-up from NAV and who need various forms of labour market measures to a greater extent.

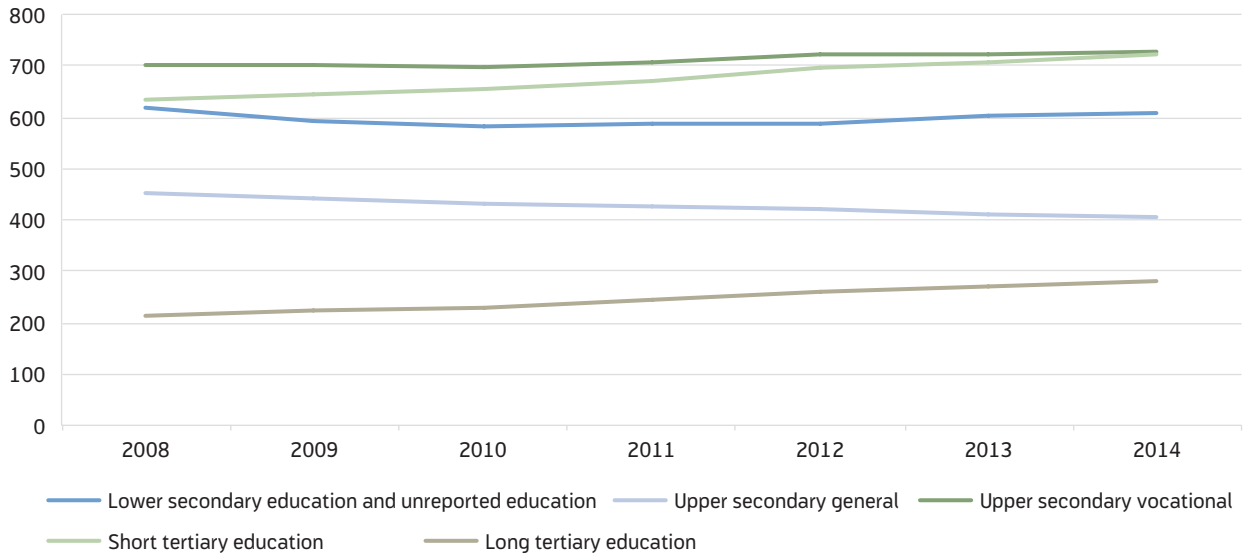
7.5 Lower labour immigration

Immigration to Norway has increased strongly in recent decades (also discussed in section 4.2). The increase has been particularly great since the EEA expansion in 2004. During the period 2004–2011, labour immigration accounted for an increasing share of immigration to Norway, particularly from Eastern European countries such as Poland and Lithuania. Figure 7.6 shows that labour immigration from non-Nordic countries went from 12 per cent of immigration in 2003 to 49 per cent in 2011. After the peak year of 2011, labour immigration from non-Nordic countries has decreased somewhat, but it is still at a high level in terms of both numbers and as a proportion of total immigration. In 2015, 18,000 non-Nordic nationals stated that they came to Norway for work purposes.

Statistics Norway publishes three different alternatives for immigration to Norway, one with high, one with medium and one with low immigration. The alternative with medium immigration is the main scenario, but there is great uncertainty as regards immigration.

Statistics Norway makes assumptions about a number of variables in order to project how immigration to Norway will develop (Tønnessen et al., 2016). The countries of the world are divided into three groups, and separate projections have been prepared for immigration from these

Figure 7.8. Employment by educational level, 2008–2014. Thousands of persons



Source: Statistics Norway (annual national accounts)

groups of countries. An econometric model is used to estimate immigration based on differences in income between Norway and the immigrants' area of origin, unemployment in Norway and the area of origin, the number of people from the area of origin who already live in Norway and the expected population development in the area of origin. The medium immigration alternative assumes that immigration and emigration will increase by approximately the same amount, so that net immigration for most of the forecast period will be between 25,000 and 30,000 a year.

It is assumed that continued high labour immigration will lead to increased competition for jobs that could be particularly relevant for young people who have not completed upper secondary school (see section 7.6).

7.6 High drop-out rate from upper secondary school and shortage of skilled workers

Nearly 3 out of 10 do not complete upper secondary school

During recent decades, demand for labour with specialised education has increased as a result of specialisation and new technology. The educational level of the population has increased strongly during the same period. Figure 7.7 shows that the proportion with higher education has increased in particular, at the same time as fewer and fewer have only completed lower secondary education.

In 2015, 92.2 per cent of the population aged 16–18 were in education, according to figures from Statistics Norway. Most young people, about 98.0 per cent in 2015, start upper secondary school right after completing lower secondary school. Of those who started their upper secondary education in autumn 2010, 73 per cent had completed it five years later. That is two percentage points more than the year before, but still low. There are big differences between study programmes, counties and genders, however. The percentage not completing upper secondary education is highest among men and in vocational study programmes. In this group, only 55 per cent of those who started an education in 2010 had completed it by 2015, which was more or less unchanged from the year before.

More people complete higher education

In 2015, 34.9 per cent of the 19–24 age group were in higher education, compared with 21.8 per cent in 1992. Student numbers increased particularly strongly at the beginning of the 1990s as a result of the downturn in the Norwegian economy. The proportion who complete higher education has increased in recent years. A total of 35.3 per cent of students who started higher education in 2007 had not completed a degree within eight years. The corresponding figure for students who started ten years earlier was 40.5 per cent. There has been an increase in the proportion of students who take a higher-level degree (more than 4 years) or a doctoral degree, but a decrease in the number who take a lower-level degree (2–4 years). The completion rate appears to be related to conditions in the labour market. Those who are students when there is low demand for labour complete their education to a greater extent than those who are students in periods when it is easier to find work.

Figures from Statistics Norway show that fewer adults participated in training in 2015 than in 2008. There has been a decrease in both formal and informal education, among both employed and unemployed people. In 2015, 64 per cent of all employees were in training, compared with 72 per cent in 2008. Fifty-seven per cent of the unemployed participated in training in 2015, compared with 58 per cent in 2008. Among those employed, people with a high level of education participate more often in informal training. This may be because it is easier for people who already have an education to acquire new knowledge.

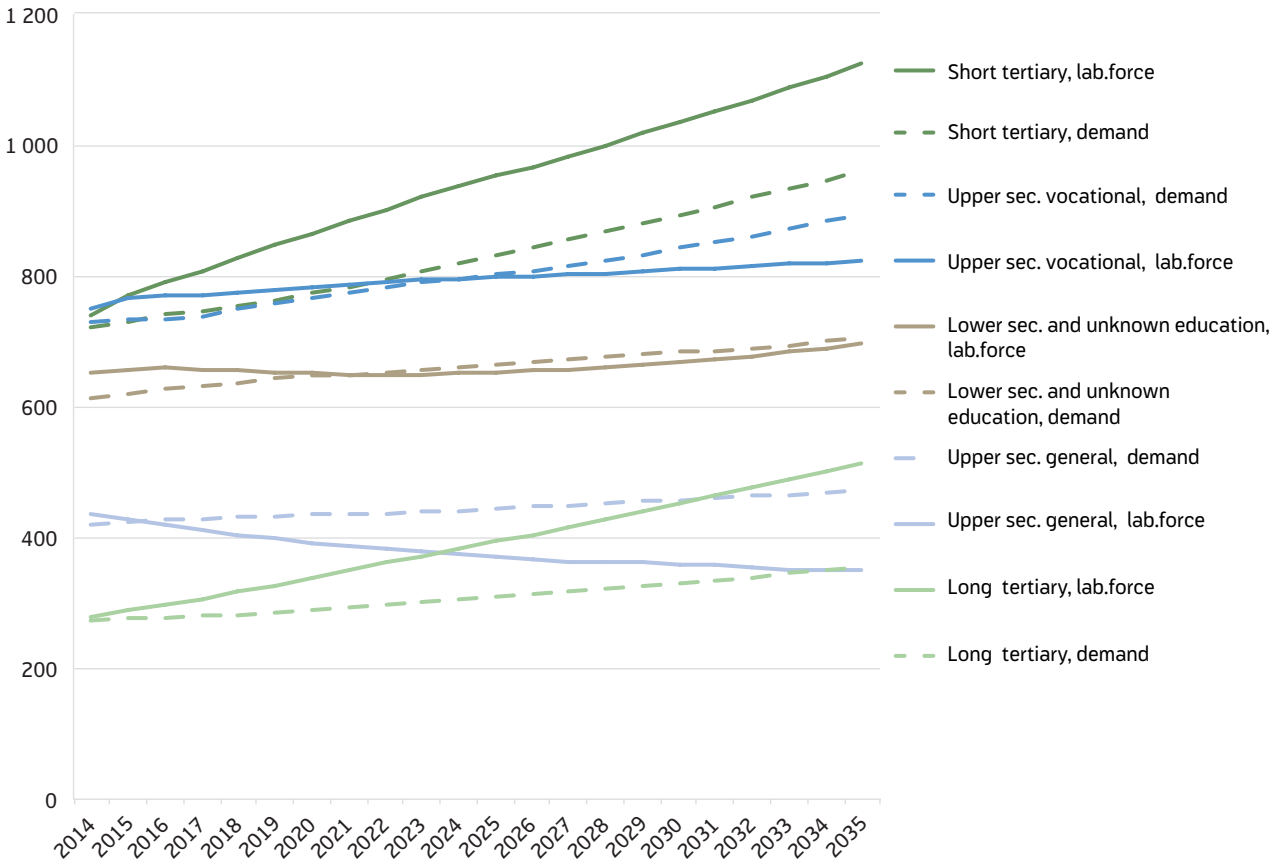
From 2008 to 2014, total employment increased by 129,000 persons, or 5 per cent. The number of employed persons who have not completed an education beyond lower secondary level, or whose educational background is unknown, fell by 2 per cent in the same period. The decrease occurred among persons who have not completed an education beyond lower secondary level, while there was

an increase in the number of employees with unknown education. The increase in the number of employees with unknown education is due to increased immigration, because many immigrants have no registered education in Norway. The number of employees with a specialisation in general studies at upper secondary school fell by 11 per cent from 2008 to 2014. Part of the decrease can be explained by a decrease in the number of people in this educational category in the population, especially in the age groups with high labour market participation. The number of employees who have completed a vocational education at upper secondary level and the number with higher education have increased during the same period. The increase was strongest among those with four years or more of higher education.

7.7 High demand in health and care subjects

Statistics Norway has prepared projections for the supply of and demand for labour by educational level and field up until 2035 (Dapi et al., 2016). Supply and demand are projected in two separate models that are both based on the current population and Statistics Norway's most recent population projection. Demand for labour is modelled on the basis of assumptions about the economic development in Norway. This means that demand for different types of labour depends on how the Norwegian economy develops. The projection of labour supply, i.e. the labour force, is independent of assumptions about the future economic development and is based on the population's educational choices in the past five years, and the observed labour market participation in the population by age and level of education.

Figure 7.9. Projection of supply and demand for labour with different educational levels, 2010–2035. Thousands of persons



Source: Statistics Norway (Dapi et al., 2016).

Important to interpret the projection with caution

It is important to interpret Figure 7.9 in light of the fact that the projection of the labour force is based on the assumption that those who choose an education in the time ahead will make the same educational choices as corresponding persons have done in the past five years. In reality, this will not be the case. Young people who make educational choices will take into account the demand for different types of education. When recruiting, employers will also take into account what types of education the available labour has. If there is an imbalance between supply and demand, employers may for example increase the pay level for the type of labour they need. They can also change the composition of the labour force by hiring employees with a higher or lower level of education than they actually want. The projections in Figure 7.9 are significantly changed compared with corresponding projections made in 2014 (Gjefsen, Gunnes and Stølen, 2014), which were discussed in NAV's previous horizon scan (NAV, 2014). This further underlines the great uncertainty associated with the figures.

Analysts from Samfunnsøkonomisk analyse have looked at how different scenarios could affect demand for different types of labour (Bjørnstad et al., 2016). In particular, they have looked at how uncertainty about the Nordic model and about the signing and follow-up of an ambitious, binding climate agreement might lead to demand for different types of labour. The Nordic model has, for example, ensured low wage dispersion in Norway. If this model is weakened, wages for unskilled workers may fall. This will make it relatively cheaper for employers to hire unskilled rather than skilled workers, which will lead to increased demand for unskilled workers.

Increased demand for labour with upper secondary vocational education

For persons with an upper secondary vocational education, lower demand for labour in the petroleum industry is expected in the first years of the forecast period. This development will be counteracted by growth in service industries and in building and construction, and, over time, demand for labour will exceed supply. This is also because a lower proportion of young people now start a vocational education, at the same time as many drop out before they are finished. Many skilled workers will reach retirement age in the years ahead, which will further increase the need for new labour. Demand will be particularly great for skilled labour in the building and construction industry, and in service industries such as health, care and nursing.

Statistics Norway's projections also show an increase in the supply of and demand for labour with unknown education. This must be seen in conjunction with the fact that the population projections show high immigration to Norway, and that many immigrants are registered with an unknown educational background. Many labour immigrants whose educational background is not registered in Norway actually have a vocational education that can compete with Norwegian vocational education at upper secondary level. The projections are also based on the assumption that wage differences will increase in the time ahead, and that employers, as a result of a shortage of skilled labour, will recruit unskilled workers to a greater extent. This is uncertain, and it is also a realistic scenario that there will be a surplus of unskilled labour. The level of unemployment is highest among persons with a lower secondary education or unknown education (as shown in Figure 7.5), and they will probably continue to be a disadvantaged group in the labour market.

High demand for teaching-related subjects and health and care subjects

In the time ahead, we will see strong growth in the proportion of employees with higher education. This is because the proportion with higher education is lower among those who are retiring than among those starting their career. Although demand for employees with higher education will increase, the supply will increase even more. It is especially in economics and administrative subjects, social science, the arts and some health subjects at bachelor's level that the projections show higher supply than demand. This may mean that some people have to take jobs that require lower qualifications than

their education indicates. As regards nurses, social educators and teaching subjects, the projections show that the number of graduates will not be sufficient to meet demand. In all, there is little doubt that it will pay to take an education, and that highly educated people will be in a strong position in the labour market. Figure 7.5 shows that the unemployment rate decreases in step with the level of education, and a similar trend is also likely to continue in the time ahead.

Uncertainty about the future need for labour means that more labour market know-how is required on NAV's part. It will also be increasingly necessary to monitor the labour market. There will also be a need for increased cooperation with other sectors (the education sector, the health sector, the municipalities and local employers) to help young people who drop out of upper secondary education. This could make it necessary to change measures and policy instruments targeting users without a completed education and/or with complex problems. Because a high proportion of people with refugee backgrounds do not have upper secondary education, this challenge concerns work on integration to a great extent, and thereby adapted adult education. See also section 8.1 on living conditions challenges among immigrants.

Statistics Norway's projections are uncertain, but there are many indications that there could be a shortage of labour in the health and care sector in particular. This could make it more challenging for NAV to supply the sector with labour.

7.8 More vacancies are publicly advertised, but fewer are registered by NAV

In NAV's enterprise survey from autumn 2012, enterprises were asked about what recruitment channels they used in their most recent recruitment. We found that 58 per cent had used a public channel (Sørbø and Ørbog, 2013). In a survey conducted by the national employment service in 2005, we found that 40 per cent of vacancies were publicly advertised. The figures are not fully comparable because the 2005 survey took jobs as its point of departure, whereas the enterprise survey in 2013 was based on a sample of employers. Use of the internet as a recruitment channel increased from 2005 to 2012, and it has become the most important channel for the recruitment of labour. In the enterprise survey for 2016, we repeated the question from 2012. The results are roughly the same, but the use of newspapers and other print media seems to have become slightly less common.

Even though the internet is more widely used as a recruitment channel than before, NAV appears to have fewer of the vacancies registered in its vacancies database. NAV gathers all jobs that are publicly advertised (employers also have a duty of notification pursuant to Section 7 of the Labour Market Act), but because social media have become an important arena for both employers and job seekers, it has become challenging to gain an overview of vacancies. The result is that NAV now has a poorer basis for job matching and acting as an employment agency, and a poorer overview of the labour market.

This trend will probably be reinforced. This will place greater demands on NAV's labour market know-how, and it will be more important for us to know about different ways of applying for jobs. We must establish close cooperation with employers in order to be able to help those who need extra help to find work. There may be debate in future about what role NAV should have as an employment agency in the ordinary labour market.

8. Living conditions and health

8.1 Young adults and immigrants most at risk of low income

Norway is one of the richest countries in the world, with real earnings having increased for many years. Compared with other countries, we have largely succeeded in maintaining an even income distribution, with relatively small differences in living conditions. Economic growth has been higher than in most countries in recent years, and the proportion of inhabitants on low income is relatively small. Most of Norway's inhabitants have also experienced a positive development in their real income in recent years. This is due to prolonged high employment and a low unemployment rate, as well as to the fact that the tax system, welfare schemes and the collaboration on income policy continue to contribute to an income distribution that results in smaller differences than in other countries.

Comparisons of the extent of poverty in different countries or over time often use an income-based definition of poverty. The development as regards low income provides a basis for studying and assessing how developments in demographics and employment contribute to data on more complex poverty problems. There are also important living condition factors that are not captured by the income measure. Examples include information about health, housing and other material conditions. The extent to which these factors are influenced by income varies between different countries because publicly financed services and welfare schemes differ.

Low income is defined in two different ways: by using an absolute or a relative approach. Absolute poverty is defined on the basis of the amount of money required to obtain an essential selection of basic goods and services. One example is 'one dollar a day', which the World Bank launched in 1990 as a measure of the proportion of the global population living in extreme poverty. Relative poverty is defined on the basis of the general income level in the country. It is common to use the median income for the entire population as the point of departure. EU-60 is a measure widely used in Norway. It sets the limit for defining low income at 60 per cent of the median household income per consumption unit. In addition, a distinction is often drawn between annual and persistent low income. Annual low income means having income under a low-income threshold at a given point in time (an income year), while persistent low income means having income under a low-income threshold for a prolonged period (often three years).

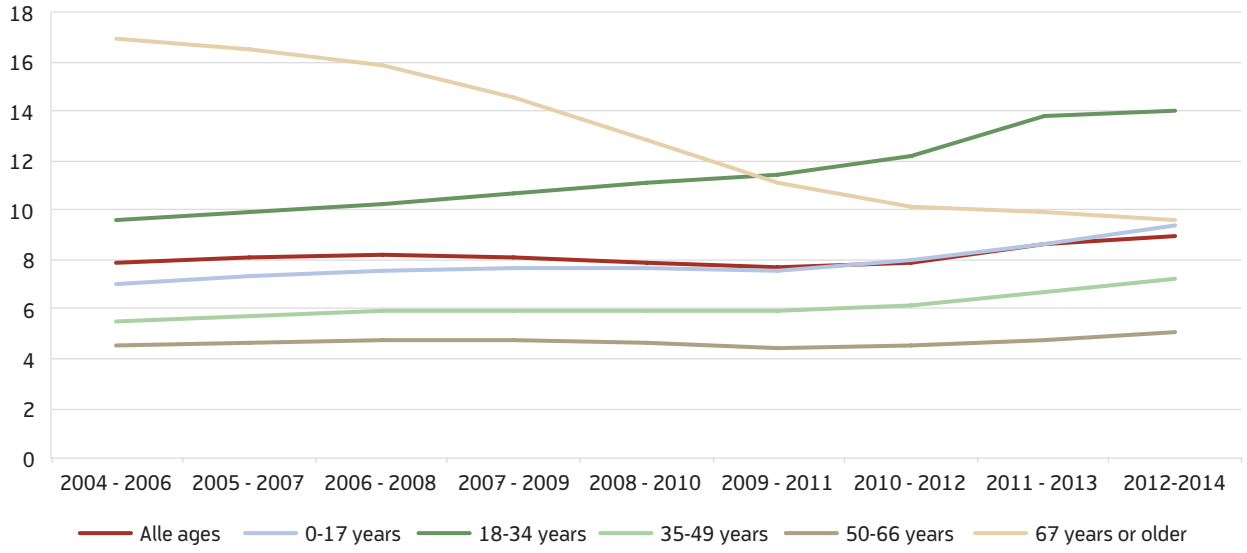
Despite the development in real income being positive for most inhabitants, the number of inhabitants with persistent low income has increased in recent years, from 7.7 per cent during the period 2009–2011 to 9 per cent in 2012–2014. This indicates that changes are taking place over time in the relative income situation of different population groups. Here, we discuss the most important of these trends.

The proportion of young people and young adults with low incomes is increasing, while the proportion of elderly is decreasing

Previously, the elderly were at particular high risk of low income, but the demographic composition of the low income group has changed. The proportion over the age of 66 with low income has fallen significantly in recent years. Figure 8.1 shows that the proportion with low income is now higher among young people between the ages of 18 and 34 (not including students) than among those over the age of 66. If we take wealth into account, the proportion of elderly with low income falls further.

Young people living alone, young couples without children, families with small children and single parents had the weakest growth in real income during the period 2009–2014. The increase in these groups' household income was lower than the general wage growth in society (Statistics Norway, 2015a). This development is due to several factors, including that the proportion of young people who are not in

Figure 8.1. Proportion of persons with persistent low income (EU-60).[1] Different three-year periods. Percentage



Source: Statistics Norway. Available from: http://www.ssb.no/tabell/10 498

[1] Students living alone have been excluded.

employment because of mental health problems is increasing (see section 8.2), at the same time as the drop-out rate from upper secondary school remains at a stable, high level (see section 7.6). The decrease in the proportion of elderly people with low income must be seen in conjunction with the fact that the minimum pension level has increased by more than general wage growth (particularly during the period 2008 to 2010). At the same time, the increase in employment among people over the age of 60 contributes to higher income and pension entitlements for the elderly.

We must expect this tendency to increase because of further growth in employment among people over the age of 60. This is due, among other things, to increased life expectancy, a higher educational level and that pension reform in the public sector can be expected to pull in the same direction.

Immigrants are overrepresented in the low income group

In 2014, 36 per cent of all persons in households where the main provider was an immigrant with a country background from Eastern Europe, Asia, Africa or Latin America had an income below the low income threshold, if we use the EU's definition of annual low income (Statistics Norway, 2015b). There are big differences between immigrants from different countries. The differences between immigrant groups and persons born in Norway can largely be explained by differences in labour market attachment. The proportion of households with no labour market attachment is higher among immigrants, and there are also significantly more households with only one income among many of the immigrant groups. The likelihood of being poor decreases with length of residence, but many remain at a low income level even after a long period of residence. This applies in particular to immigrants with a background from Turkey, Pakistan, Iraq and Somalia (Statistics Norway, 2016a). This suggests that the differences between immigrants and Norwegian-born

nationals will persist unless we succeed in getting more immigrants into employment.

Many women and men from immigrant backgrounds without a basic education from their home country or the requisite Norwegian language skills will not benefit from work-related measures from NAV. This has been the experience of NAV offices in connection with the implementation of various work-related measures for this group. The issue was addressed in the Fafo report '*Når aktivering blir ydmykelse*' ('When activation becomes humiliating' – in Norwegian only) (Friberg and Elgvin, 2014). These groups need adapted education at primary and lower secondary school level, and language tuition before they are offered work-related services under the auspices of NAV. Together with the municipalities and the educational authorities, NAV should establish cooperation models with a view to shedding light on these issues and drawing up suitable qualification paths for these groups.

Children of immigrants make up an increasing proportion of children in low income households.

The proportion of children in households with persistent low income has increased significantly in the past 15 years. The increase was particularly strong from 2001 to 2004, followed by a few years of weak growth before increasing again from 2011. The most important reason for this increase is that we now have a higher proportion of families with children from immigrant backgrounds and weak labour market attachment. This is due, among other things, to high and increasing immigration and some growth in unemployment in recent years. Another contributory cause is that financial support in the form of child benefit has been reduced, both in absolute and relative terms, from the late 1990s until the present (Epland and Kirkeberg, 2016).

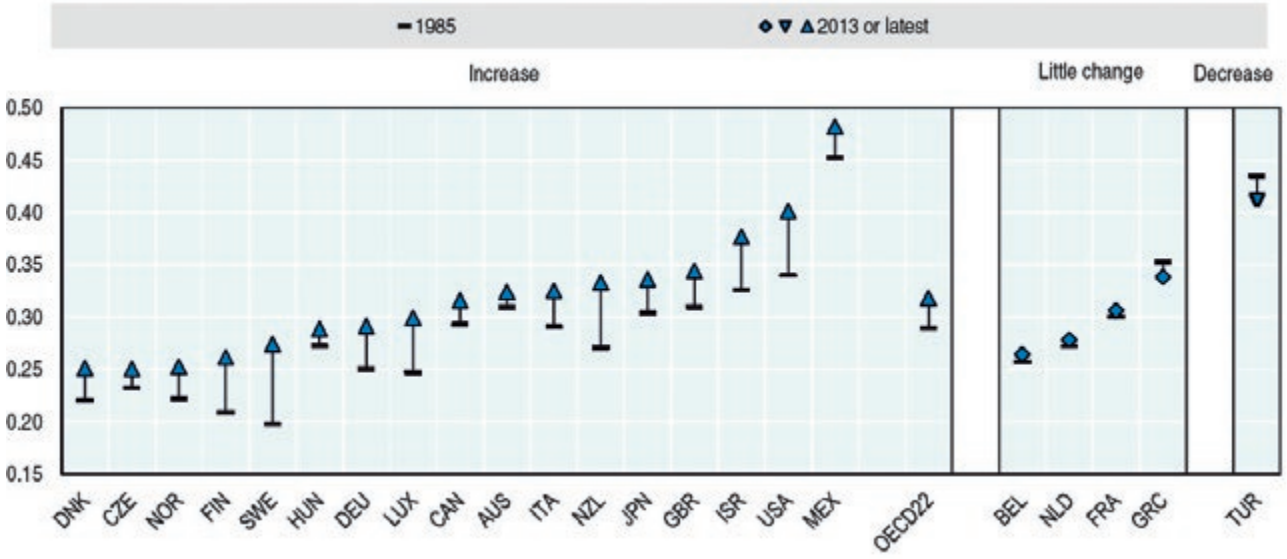
More than half of all children in the low income group are from immigrant backgrounds. There are significant regional differences in the prevalence of low income in families with children. It is particularly in some parts of Oslo and some of the other big towns in Eastern Norway that the prevalence is high. Children from immigrant backgrounds from Somalia, Iraq and Afghanistan are strongly overrepresented, and the proportion is increasing. Children with a background from Somalia are in a unique position: in 2014, three out of four Somali children belonged to a family with persistent low income (Epland and Kirkeberg, 2016).

Low income groups have poorer health and are materially and socially disadvantaged

Norway has a well-developed welfare system, meaning that people with modest financial means have access to health services, schools and other public services. The surveys of living conditions nonetheless show that low household income leads to many groups being materially and socially disadvantaged. They also show that people with low income often have poorer health, that they more often live alone and have less social interaction than those who are above the low income threshold. Children in low income families attend kindergarten and before and after-school facilities and participate in leisure activities to a lesser extent than other children. This reduces their opportunities to develop language understanding and social skills, which are important prerequisites for participation in education and employment (Langeland et al., 2014: section 2.5). At the same time as the educational level in the population is increasing, we see signs of social reproduction in education, in the sense that people's social background influences how they fare in the education system. Children of parents with high education perform better in primary and lower secondary school, and a larger proportion take higher education (Ekren, 2014).

The risk of poverty and social exclusion has been reduced compared with 2005. Women, young adults, unemployed people and people with low education have a higher risk of poverty and social exclusion compared with the rest of the European population. This is also the case in Norway (Sandvik, 2015). Nonetheless, it is important to note that developments over time in Norway appear to differ from the low income measure alone. While the proportion with low income has increased somewhat, the risk of poverty and social exclusion has decreased. This is

Figure 8.2. Development in income differences in different countries from 1985 to 2013. Gini coefficient



Source: OECD (2015)

because there are few materially disadvantaged people in Norway. The proportion of materially disadvantaged people was more than halved in the period 2006 to 2014, whereas it increased from 2014 to 2015 (Eurostat, 2016).

Families with children are particularly disadvantaged in the housing market

Even though more and more people enjoy secure and stable housing conditions that form the basis for increasing prosperity, 122,000 people are nonetheless defined as disadvantaged in the housing market (Statistics Norway, 2014).[5] These are people who live in cramped accommodation, have a high debt burden or income under the low income threshold. The proportion of disadvantaged people increases with the number of children in the household, and single parents with young children are particularly disadvantaged. Immigrants are also a particularly disadvantaged group. The reasons for this are complex. At the same time as individual causes such as a high debt burden and the breakdown of a relationship can be part of the explanation, structural characteristics of the housing market – the composition of the housing stock, a shortage of housing and price growth – can be very important (Sørvoll and Aarset, 2015).

The number of applications for municipal housing has increased. From 2014 to 2015, the increase was nearly 3 per cent (Statistics Norway, 2016b). The number of dwellings at municipalities' disposal has also increased, also as a proportion of the population. This includes both municipally owned and rented accommodation.

New technology and globalisation can result in greater income differences

Income from paid employment is the most important and most common source of income for Norwegian households. The connection between labour market participation and an individual's income and living conditions is shown in the income statistics. The statistics show that people aged between 25 and 65 with no labour market attachment have a five times greater risk of having persistent low income than the age group as a whole. More detailed studies show that there is a very close link between the development of employment and low income for different groups.

[5] Figures from the population and housing census, 2011.

Norway has high employment and relatively small wage differences compared with other countries. These two characteristics make a significant contribution to preventing large income differences and poverty. The government-appointed Commission on Income Distribution pointed out that Norway and the other Nordic countries have contributed to this through universal and generous income security arrangements, coordinated wage formation through tripartite cooperation (i.e. even income distribution before tax), relatively high and progressive income tax (i.e. even more even income distribution after tax), comprehensive provision of publicly funded health and education services, and an active labour market and macroeconomic policy that ensures high and stable economic activity and employment (NOU 2009:10).

The even income distribution is being challenged, however, by the effects on the labour market of long-term structural changes relating to globalisation, demographic trends, migration and technological developments.

High labour migration can lead to increased competition for jobs that require fewer qualifications. This can make it more difficult for vulnerable groups to enter the labour market, for example people with impaired work capacity, young people who neither have a job nor are in education, or established immigrants who fail to find employment. At the same time, this development can put pressure on wages and the system of collective agreements, and put the Nordic model's social and economic sustainability to the test in the years ahead.

Figure 8.2 shows that a shift towards increasing differences took place during the period from 1985 to 2013 in most OECD countries, as measured by the development in the Gini coefficient.[6] The general trend is that people with the highest income have had very high wage growth, while those with the lowest income have had weaker wage growth in times of prosperity and a reduction in difficult times. The illustration shows that, even though Norway is in a unique position, with high employment and small wage differences, long-term structural changes in the Norwegian economy and in the labour market will contribute to increased income differences over time.

Work is the main strategy for combating low income

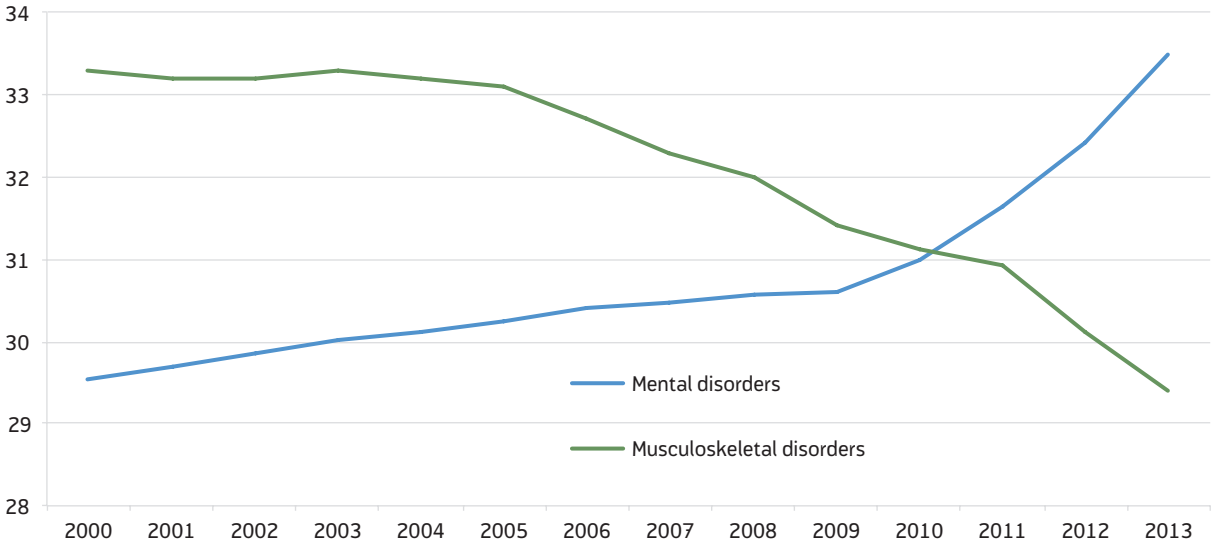
Increased income differences can lead to more NAV users. Given that lack of a labour market attachment is one of the main reasons for low income among young adults and immigrants, NAV's main strategy will be to get as many people as possible into employment. This may require new, changed measures that can increase the transition to employment, particularly for groups at risk of low income. The challenge will be to ensure that the individuals in question meet the requirements of the labour market as far as possible. As previously mentioned, this will place greater demands on NAV as regards cooperation with other agencies across sectors, such as the education sector and the health sector.

There are big regional differences in living conditions challenges and child poverty, with a strong concentration in towns and cities in Eastern Norway and a particularly strong concentration in certain city districts, especially in Oslo. This means that it may be a challenge to organise and coordinate the central government and municipal follow-up services for low income groups, and a substantial effort will be needed to ensure that poverty-related problems are combated as effectively as possible by the NAV offices in question.

One possible means of combating child poverty would be to establish models for comprehensive measures targeting low income families with children. This means following up whole families in several different areas concurrently – in relation to health, housing, education and work-related services. In NAV offices in areas with major challenges relating to living conditions, it will also be relevant

[6] A Gini coefficient of 0 means that income is perfectly equally distributed, while a coefficient of 1 means that one person receives all the income. It is common for poor countries with low GDP per capita to have a generally more unequal income distribution and a high Gini coefficient, often between 0.40 and 0.70. Rich countries have a more even income distribution and a lower Gini coefficient, often between 0.24 and 0.40. In the EU and the Nordic countries, the Gini coefficient is generally lower than 0.30.

Figure 8.3. Proportion of all people on disability benefit with mental or musculoskeletal disorders as the primary diagnosis. Percentage



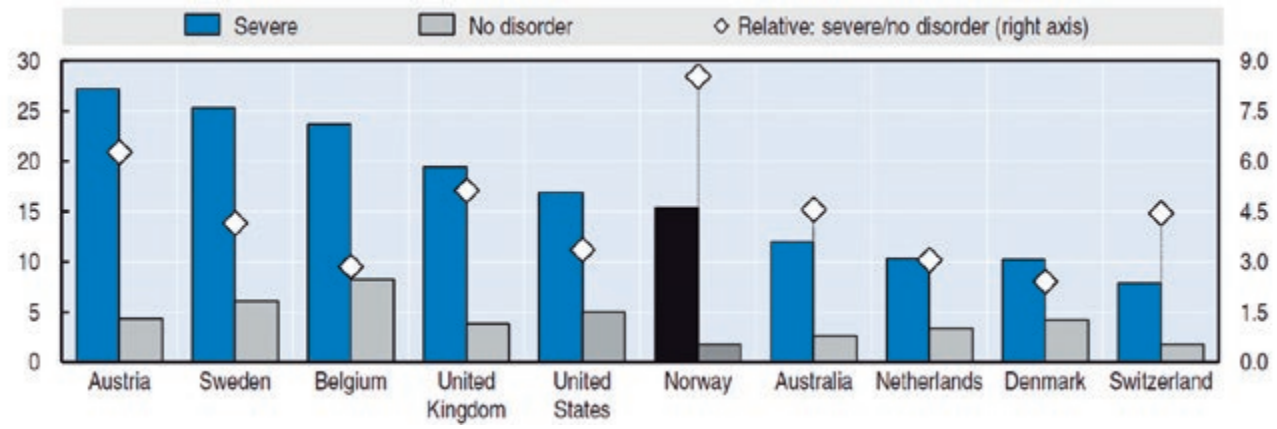
Source: NAV

to develop different methods and models for cooperation between the municipalities and the central government.

8.2 Shift from work-related to health-related benefits

Innovations in medical and surgical treatment will lead to major changes in the health of the population. Higher survival rates in connection with serious illnesses such as heart disease and cancer influence how many people need health-related benefits. Improved treatment means that more people survive, but some of them will suffer long-term effects in the form of impaired functional ability and work capacity. We have also seen that perceptions of and definitions of illness have changed in the population, the health service and the national insurance system.

Figure 8.4. Unemployment rate among people of working age with and without a serious mental disorder (percentage), and relative difference. Figures for the late 2000s



Source: OECD

This has led to a shift from work-related benefits towards more health-related benefits, especially among young people. Such changes affect the work of NAV's counsellors.

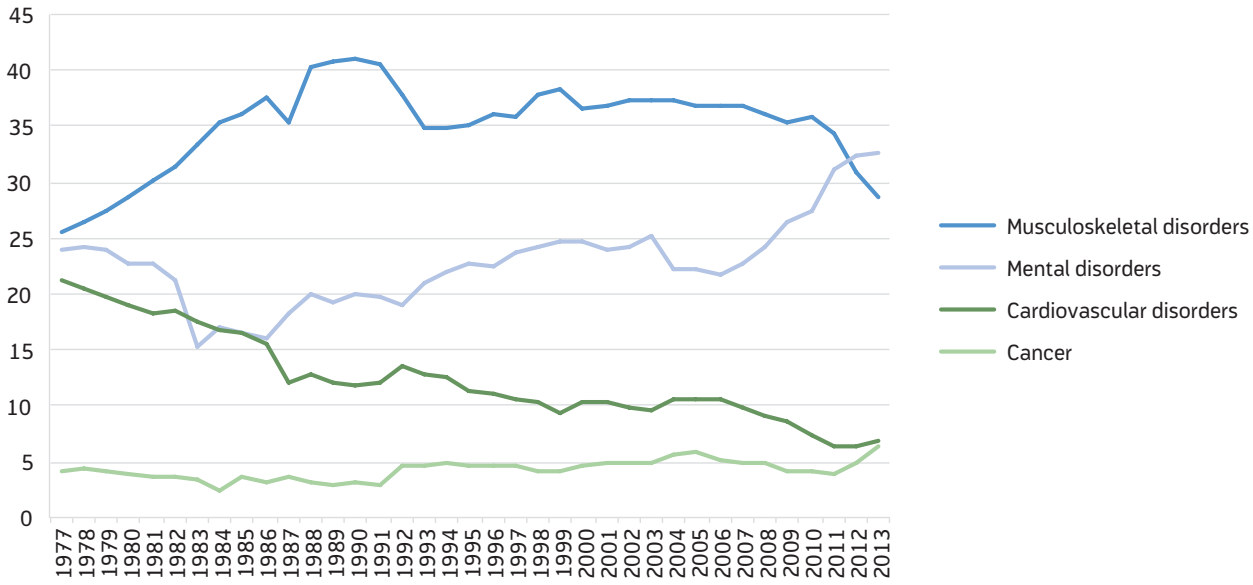
Increased use of benefits because of mental health problems

Between 30 and 50 per cent of the Norwegian population will experience mental health problems during their lifetime. A clear increase has not been found among the population as a whole, but the prevalence of mental health problems has increased among youth and young adults (aged 15–24) (the Norwegian Institute of Public Health, 2014a). Like most European countries, Norway has seen a considerable increase in the use of national insurance benefits as a result of mental health problems. During the period 2000–2011, GP-certified sickness absence relating to mental health problems increased by 20 per cent (Brage et al., 2012), while mild mental health problems increased by 145 per cent. The proportion who receive disability benefit due to mental health problems increased from 30 to 34 per cent during the same period. Mental health problems are now a more common reason for disability benefit than musculoskeletal disorders (Figure 8.3).

There are probably several reasons why mental health problems have become more common as the medical grounds for health-related benefits. It could be because doctors certifying illness use mental health diagnoses more than before. Greater openness about mental health problems could lead to such problems being cited as the cause of sickness absence to a greater extent than before. It may also be because of greater demands on mental health in the workplace, for example in the form of social competence or cooperation.

While the prevalence of mental health problems in the population is roughly on a par with what we find in other Western countries, surveys show that Norway, relatively speaking, has the highest proportion of people with mental health problems not in employment (OECD, 2013). Figure 8.4 shows the unemployment rate in ten different countries for people with a serious mental health disorder (blue column: percentage on the left axis) and for people without a mental health problem (grey column: percentage on the right axis). In Norway's case, the unemployment rate was 15 per cent for people with a serious mental health disorder (figures for 2008), and around 2 per cent of those without a mental health problem. At 8.8, the ratio between the two (the

Figure 8.5. New recipients of disability benefit by diagnosis, 1977–2013. Percentage



Source: NAV

diamond symbol in the figure) is clearly highest in Norway.

Increased use of benefits because of mental health problems and complaints is something most countries in Europe have in common, and there is no sign that this trend will cease. The development in Norway has been particularly worrying as regards temporary benefits such as work assessment benefit, where an increasing proportion are people under the age of 30 with mental health problems (Bragstad and Sørbø, 2014). This is a group that will need more help from NAV in the future.

More young people on disability benefit

While the number of elderly people on disability benefit has shown a clear downward trend, the opposite has been the case among young adults. In the last ten years, the number of people under 30 on disability benefit has increased by 87 per cent (6,400 persons). This part of the population increased by 22 per cent during the same period (NAV, 2016). Medical factors are one of the reasons. Since the 1970s, the number of young people under 24 on disability benefit has increased (Brage and Thune, 2008), and some of the increase is due to the increased survival rate among prematurely born babies. These children have an increased incidence of long-term neurological and mental health effects in adulthood, and those with severely impaired work capacity need full or graded disability benefit. Those with less extensive long-term effects need adapted work and other support schemes to remain in employment. This development will continue as further medical progress is made.

Fewer people with musculoskeletal disorders on disability benefit

Since the early 1990s, there has been a decrease in the proportion of people with musculoskeletal disorders among recipients of health-related national insurance benefits (Brage et al., 2010). Among people on disability benefit, the proportion with musculoskeletal disorders has decreased from 41 per cent in 1991 to 29 per cent in 2013 (Figure 8.5). There has also been a decrease as regards sickness absence and work assessment benefit, although musculoskeletal disorders are still the most common cause in this context.

Strong decrease in cardiovascular diseases

Since the early 1980s, there has been a very strong decrease in the number of people who receive disability benefit because of cardiovascular disease. In 1977, this group accounted for more than 20 per cent of all new disability benefit recipients, while in 2013, it accounted for just over 5 per cent (Figure 8.5).

The decrease is due to what is referred to in the public health context as 'the cardiovascular revolution'. Medical and surgical treatment of heart attacks and strokes has become more aggressive and effective since the 1970s, and preventive measures to combat cardiovascular disease have won greater support (primarily campaigns and legislation to combat smoking). The number of new heart attack cases in Norway is reasonably stable at around 15,000 a year, while mortality as a result of heart attacks among people aged 45–64 has fallen by 85 per cent since 1970, and appears to be falling even further (Graff-Iversen et al., 2015). For strokes, which are the other major cause of mortality, there has also been a substantial decrease in the 45–64 age group, and mortality has been more than halved since 1970. The number of new cases is 13,000 a year, but most occur in age groups above the age of 67 years.

We can expect the decrease in mortality as a result of cardiovascular disease to continue in the coming years. Even though more people survive and many regain their previous work capacity, there are still some people whose health is permanently impaired because of such diseases.

Increased incidence of cancer, but lower mortality

The incidence of cancer has increased since the 1950s. In the period 2005–2009, about 26,000 people were diagnosed with cancer every year, compared with 8,000 in the period 1957–1961 (the Norwegian Institute of Public Health, 2014). Most of them are over the age of 70, but around 8,000 persons of working age get cancer every year (Gudbergsson and Dahl, 2009).

Despite the significant increase, mortality has remained fairly constant since the 1950s. The fact that the incidence has increased up until now, while mortality has remained stable or fallen slightly, means that more people survive the disease or die of other causes. Life prospects have improved considerably for certain types of cancer. Since 1977, there has been a modest increase in the proportion of new recipients of disability benefit who have a cancer diagnosis (Figure 8.5). The majority of those who get cancer regain their work capacity. Between 5,400 and 6,700 of the 8,000 members of the working population who get cancer every year return to full-time or part-time work (Gudbergsson and Dahl, 2009).

Complex health problems among immigrants

Few register-based studies have been carried out on the health of immigrants in Norway. Mental health problems are more frequent in the immigrant population, but, over and above that, there is uncertainty about the prevalence of illness and immigrants' use of health services and NAV services (the Norwegian Institute of Public Health, 2014a). Systematic overviews from other countries show that children and adults with a refugee background have complex health problems and a far higher prevalence of post-traumatic stress disorder, depression and anxiety than others (Fazel et al., 2005). Many are probably under-treated. The great variation in health problems and the complexity of difficulties are demanding for NAV. It is uncertain whether NAV's counsellors have sufficient expertise in minority health.

Medicalisation and changed perception of illness

Today, most of the people who are not in employment in Norway receive a health-related benefit, not unemployment benefit or social security benefits. The breakdown between the different benefits has changed a lot in the last 20 years. In 1992, there were twice as many people on unemployment benefit as on occupational rehabilitation benefit and rehabilitation benefit, while in 2012, the situation was the complete opposite. Then, there were three to four times as many people on work assessment benefit as on unemployment benefit (Fevang et al., 2015). This clear shift towards health-related benefits cannot be due to changes in the population's health. It has remained stable and good (the Norwegian Institute of Public Health, 2014a).

It is possible that more people are on health-related benefits due to changes in the perception of illness, ailments and poor health, i.e. increased medicalisation of social and work-related problems. This trend may have been reinforced by new assessment methods in the health services that have uncovered illness to a greater extent than before. This is most evident in psychiatric care, where illnesses such as ADHD, Asperger's syndrome and mild anxiety disorders have become much more common since the 1990s (Brage and Thune, 2008). It is also possible that the use of work ability assessments for participants in the qualification programme has led to more mental health problems being diagnosed among young recipients of social security benefits (Kann et al., 2016).

The regulations have also had a major impact on developments. Among other things, the conditions for qualifying for unemployment benefit are more stringent than for work assessment benefit and sickness benefit. For large groups of young people, it is easier to be granted work assessment benefit than employment benefit. Kann et al. (2016) find that this has resulted in an increase in applications for work assessment benefit compared with the previous schemes. Schreiner (2016) finds that the shift has resulted in weaker labour market attachment and increased risk of disability benefit for people in the grey zone between unemployment and health problems. The shift towards more health-related benefits will probably continue if the regulations and benefits are not changed. This will lead to even more young people on work assessment benefit.

Need for regulatory changes and more interdisciplinary cooperation

It is probable that mental health problems will continue to increase as grounds for health-related benefits in the coming years. These problems dominate completely among young people. Measures

targeting this group often require extensive cooperation with the mental health services.

We can expect a continued decrease in the number of new recipients of disability benefit due to cardiovascular disease. There will probably be an increased need for both short-term and long-term graded benefits.

In a five-year perspective, it is probable that more people will get cancer, but also that a higher proportion will survive, so that the mortality rate will remain unchanged. When more people survive cancer, this will lead to increased sickness absence and more use of work assessment benefit and disability benefit. The development can also result in a greater need for graded benefits. An increasing number of people with partially impaired work capacity may also lead to greater expectations of more individual treatment and more adaptation.

In order to counteract increased medicalisation and the shift towards increased use of health-related benefits, NAV must place more emphasis on people's resources and work capacity than on their diagnoses. This will require more targeted follow-up independently of the diagnosis and benefit, and NAV will have to advocate regulatory amendments that underpin this. More cross-sector cooperation will also be necessary, particularly with the health and education sectors.

9. Political trends

As discussed in section 7.2, the downscaling of the oil industry and reduction in revenues to the treasury happened sooner than we expected. Meeting the two-degree target can also be challenging for an oil-dependent economy. Automation can lead to a loss of one-third of today's jobs, major restructuring and to many people changing jobs. Norway's open economy is dependent on extensive international trade. The development of new and existing free trade agreements is currently uncertain. Under all circumstances, Norway must be expected to continue to be part of the European labour market. The influx of refugees reminded us that we need to ensure labour market participation among refugees. The sum of demographic, economic, climatic and political conditions make Europe and Norway attractive to people in North Africa and the Middle East. This will influence the development of labour and welfare policy going forward.

Initially, we expect emphasis to be placed on securing the income basis to be able to maintain the welfare state. This requires high participation in employment and a well-functioning labour market. Experience shows that major restructuring increases the risk of workers falling outside the labour market. It will be necessary to safeguard individuals through a financial security net, matching vacancies with competence, and requalification; in other words, an active labour market policy. There is therefore reason to assume that the main elements of labour and welfare policy will continue up until 2030. However, the sum of societal changes will make it necessary to change the content and design of, for example, work-related measures and NAV's work methods.

9.1 Labour market policy must be adapted to a changing labour market

Labour market policy will have to be adapted to address the effects of the sharing economy and automation on the labour market, including possible growth in the number of self-employed persons and expected job destruction/job creation. Extensive automation can lead to higher unemployment and a surplus of labour during some periods (see section 7.2). Continued high employment and equilibrium between supply and demand in the labour market mean that the public sector must facilitate restructuring and innovation, requalification and relocation of labour. It will be necessary to strengthen the link between education/competence-raising and productivity growth/economic growth.

We expect to see a broad consensus about an active labour market policy that requalifies unemployed people for new jobs. The design and scope of labour market policy must be adapted to the effects of automation and the sharing economy. Ensuring that job seekers have relevant competence that justifies relatively high minimum wages will be important. The alternative will be to increase the use of pay and subsidies/benefits in combination, which must be designed to ensure that job seekers and employers have clear incentives to increase the proportion accounted for by wages in such arrangements. It may also be relevant to change the scope of labour market policy, both in the direction of more clearly supporting enterprises in a transitional phase and giving individuals opportunities for requalification independently of NAV's measures. NAV can be assigned the role of conductor in the labour market, to ensure that as many people as possible pull together to achieve the best possible result.

Jobs that are lost due to health problems and lack of ordinary work will still receive considerable attention. We can expect an increased focus on work being good for people's health. This can lead to increased expectations of cooperation between NAV and the primary and secondary health services. It should be possible to use the partnership with the municipalities to establish joint services in municipalities.

The importance of labour market participation to the integration of immigrants and the sustainability of the welfare state will have high priority, and this will

make demands on NAV's work in this area and require cooperation with others. Delimitation and coherence between educational policy and labour market policy will be key, both to ensure that more young people gain formal qualifications that lead to jobs and to requalify workers throughout their lives (see also section 7.2). Increasing documentation of how low income/poverty and disability can be passed on from one generation to the next will probably also lead to greater emphasis being placed on cross-sector schemes and initiatives. This will place demands on NAV to develop its own services, but, above all, it will lead to requirements for more cross-sector cooperation. At the same time, focusing on people's responsibility for their own lives can lead to increased expectations of each person's own contribution versus the public and the employers' responsibility.

The design and implementation of labour market policy will probably be more knowledge-based and place more emphasis on the effects on users and the labour market. Ordinary workplaces will be the most important arenas for (re)qualification of labour. Statutory requirements to ensure integration are not very likely. Support for employers, both financial and practical, will therefore be required to follow up individual users. If this is to be efficiently implemented, it will be necessary to clarify the role of NAV offices and how social enterprises are to be used.

9.2 Greater emphasis on work-oriented welfare schemes

With more than one-third of the national budget's expenditure tied up in national insurance benefits, there will be debate about the design of schemes and the use of funds. Demographics, adaptation to changes in the labour market and economic sustainability will be important dimensions in the debate. Changes to national insurance schemes will probably be aimed more at redistribution and increasing the work-orientation of the current schemes rather than on expanding them. The Productivity Commission (NOU 2016:3) argues that health-related national insurance benefits and social security benefits should become more activity-oriented by introducing activity requirements, stop points, rules on reduction and credible sanctions. It also points out that the pension reform has led to an increase in employment in the private sector, and recommends changes in the public sector pension schemes that pull in the same direction.

There will be debate about the effects of the schemes and who need them the most. This could form the basis for turning universal benefit schemes into means-tested benefits, benefits into services and designing national insurance benefits that can be used for active measures that reduce future payments. Increased use of means testing could come into conflict with more work-oriented benefits, and could also make the case processing more complex.

Restructuring in the labour market could lead to bigger groups being permanently excluded from employment if, among other things, labour market policy does not succeed in maintaining a high level of employment. This will give rise to debate about how the benefits can be designed to prevent poverty and about the division of responsibility between the central government and the municipalities.

9.3 Higher expectations of digitalisation in the public sector

There will be continuous high expectations of the scope and pace of digitalisation of services in the public sector. Guidelines for policy in this field are set out in, for example, the Digital Agenda for Norway (Report No 27 (2015–2016) to the Storting). Services and benefits shall increasingly be provided digitally. Customer focus and rights-orientation place greater demands on the adaptation of services and access to the basis for decisions. Expectations of seamless public administration and good user experiences (see Chapter 5) require increased cooperation between operational entities. Digitalisation will make it necessary to develop NAV in all areas, including policy, ethics, rules and management and control mechanisms. Weaker government finances could entail that the central

government takes a greater share of the efficiency gains of digitalisation.

Moreover, the development will be characterised by two eternal dilemmas in public administration policy: sector responsibility / cooperation, and the central/ local levels. Greater emphasis will be placed on designing policy and services across sectors, such as NAV, integration, health and education. The degree of decentralisation will depend on the size of the municipalities in future. Regardless of the outcome of the municipal reform, we must expect debate about NAV as an institution before 2030, both the partnership with the municipalities itself and the division of responsibility. An important premise will be that the administrative level that has the policy instruments at its disposal must carry the risk if they do not succeed.

10. Two alternative scenarios for the labour market

Plans and strategies often build on what we believe to be the most probable development, and this is also true for NAV's horizon scan. In some areas, there are forecasts that we can assume to be relatively certain. In other areas, uncertainty prevails, and it is more difficult to predict what the situation will be in 10–15 years. The only thing that is certain about the future is that we do not know exactly what it will look like. It is therefore important not to plan or prepare for something that is not going to happen, or that could have been avoided. The purpose of this chapter is to use different scenarios to investigate this uncertainty, and thereby show the range of different possible futures.

Figure 10.1 summarises what has happened in two scenarios for the labour market 20 years from now. In addition, each scenario is described through two fictional stories, presented in two different cartoons (Figures 10.2 and 10.3). The two scenarios are largely based on input from workshops, together with relevant research and public debate about the subject.

Figure 10.1. 20 years have passed – two scenarios

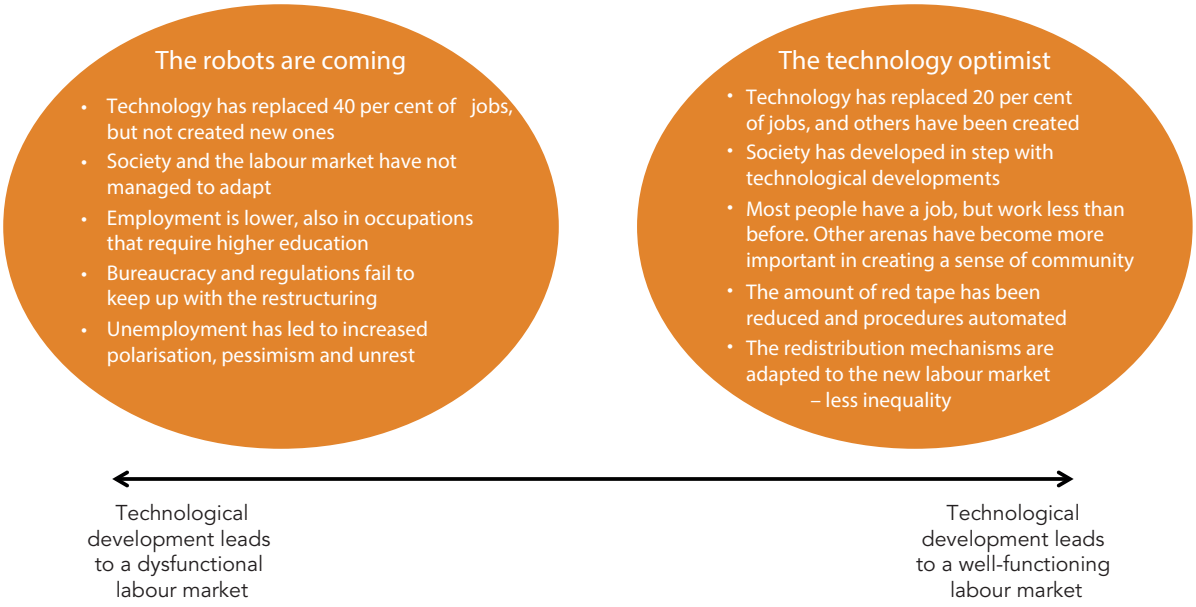


Figure 10.2. The robots are coming

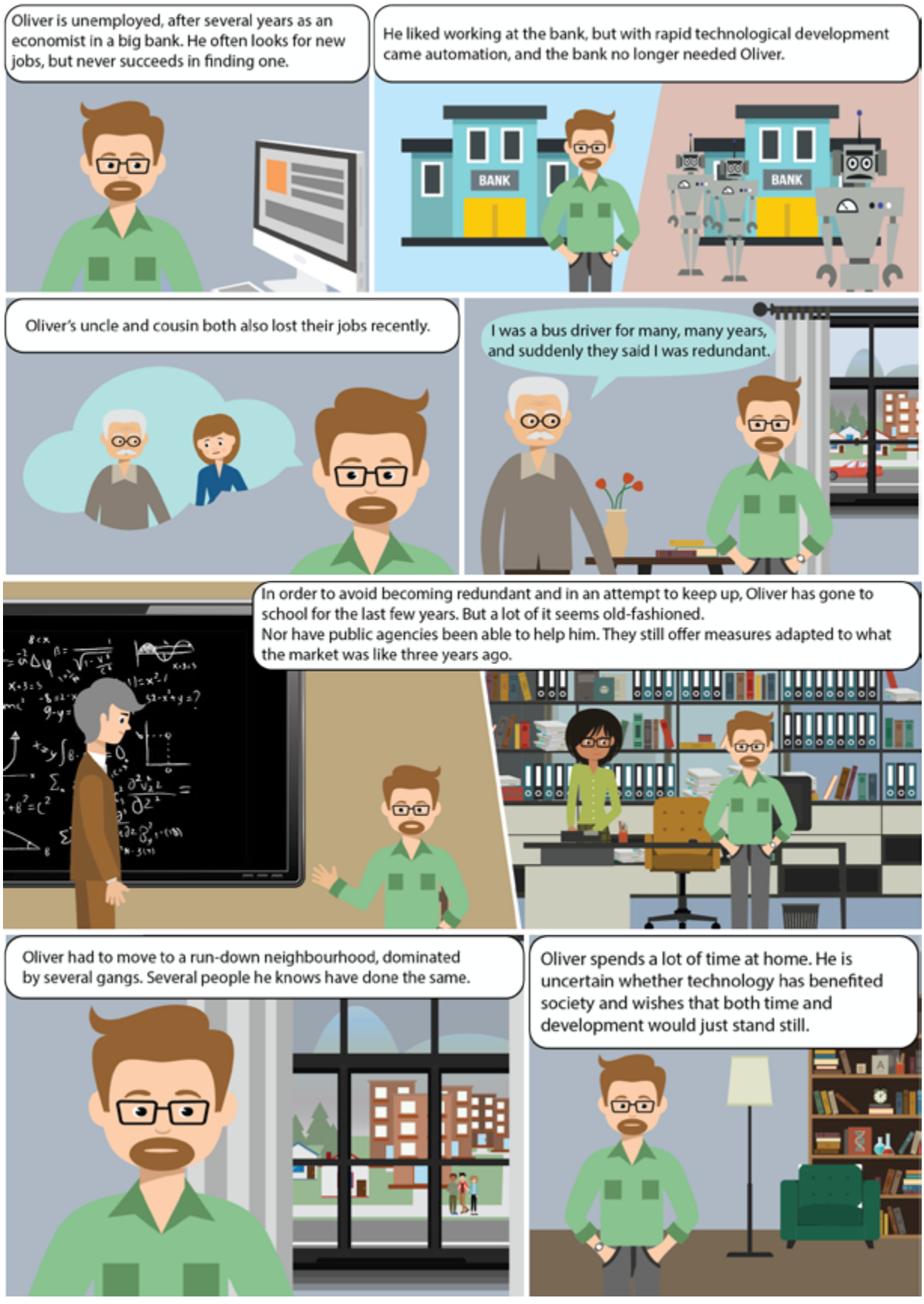
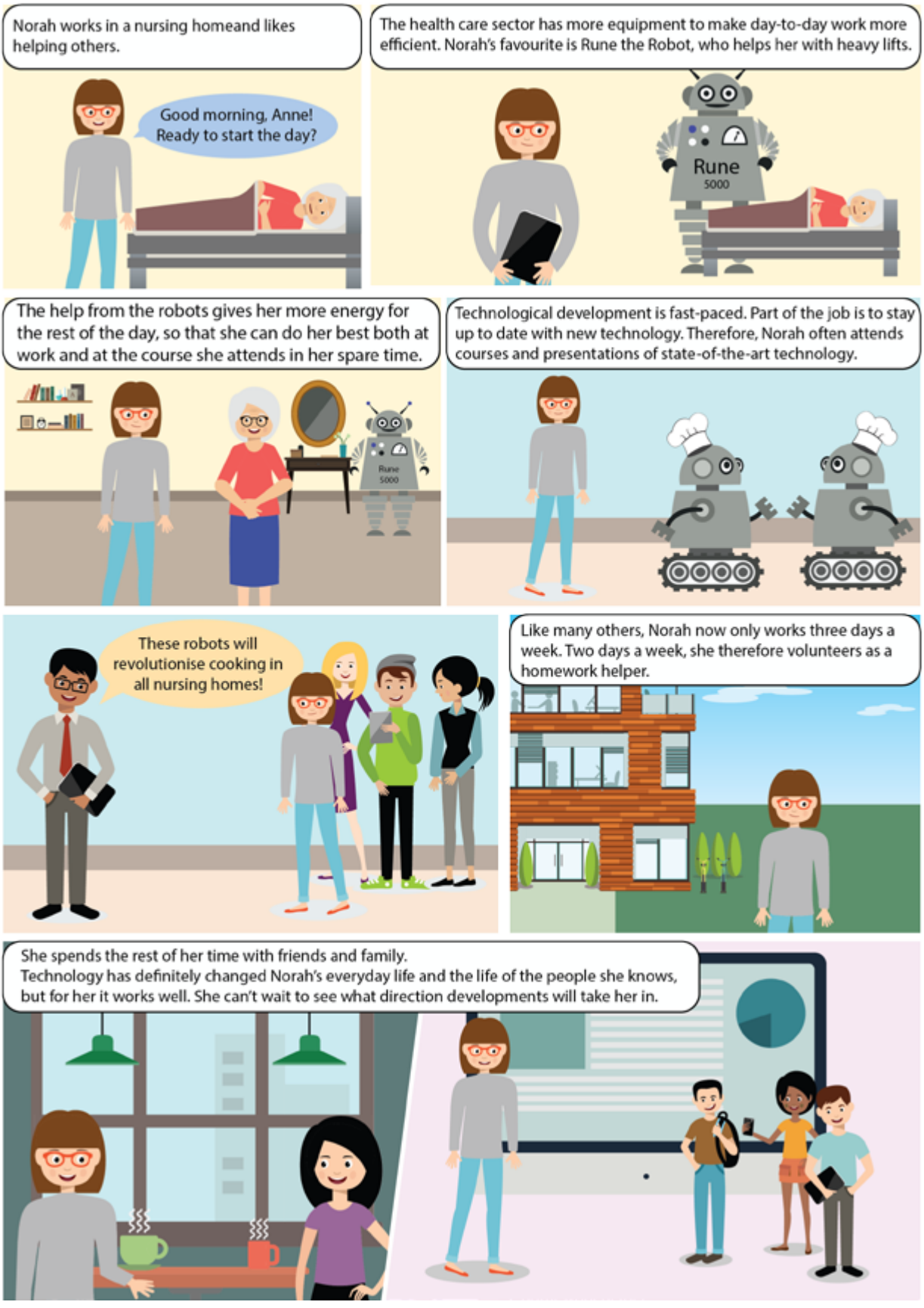


Figure 10.3. The technology optimist



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