

Population trends in Norway

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Norway's population was 4 479 000 at the beginning of 2000 and will probably exceed 4.5 million in the course of the year. The most striking feature of developments in 1999 was a sharp growth in net immigration, to 19 300, the highest level ever recorded. The number of births and deaths was at the same level as the previous year. The population grew by 0.76 per cent; without net immigration it would have increased by 0.31 per cent. In the autumn of 1999 Statistics Norway published new population projections, three years since the previous, for the country as a whole to 2050 and for municipalities to 2020. As many as 11 scenarios for the country and 6 for the municipalities have been published this time in order to demonstrate the uncertainty more clearly. They show continued growth for the country as a whole to about 2025, but a decline in population in many municipalities.

Fertility

In the 1990s, the number of births has been relatively stable, at about 60 000 per year (figure 1), which implies a virtually constant number of nursery school children, pupils, students and persons entering the labour force in the years ahead. The fertility rate has also been fairly stable at 1.8-1.9 children per woman (figure 2). This level is among the highest in Western Europe, where the total fertility rate averages 1.45 children per woman. In Europe, only Iceland, Ireland and probably Albania are those countries which at the moment have a higher fertility rate than Norway. The relatively high, by international standards, fertility rate in Norway may be related to the family policy conducted, with an emphasis on providing an opportunity to combine children and labour force activity for women, partly through long care leaves of absence and relatively good day-care coverage, in addition to child allowance.

Several interesting features are behind the stability in Norwegian birth figures:¹

- The average age of women at the time they give birth is rising. This is reflected in increasing birth rates for "older" women (i.e. over the age of 30) and declining birth rates for "younger" women.
- The age at the time of the first birth shows a particularly sharp rise. The median age at the time of the first birth rose from 22.7 years for the 1950 cohort to about 27 years for the 1971 cohort (figure 3).

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- Childlessness is rising slightly, from 9.7 per cent for the 1950 cohort to 12.3 per cent for the 1958 cohort (figure 4).
- More women are having a third child. The share of mothers with two children who have had a third child at the age of 35 has risen from 40.8 per cent of the 1950 cohort to 45.3 per cent of the 1958 cohort (figure 5). In other words, those who have children have a few more, at the same time that a greater proportion is not having children at all.
- Following a prolonged decline, the cohort fertility rate² began to increase slightly, from 2.02 children for the 1950 cohort to 2.09 children for the 1960 cohort because "older" women have the children they postponed earlier. Thus, the cohort fertility level is about the same as the reproduction level of 2.08 children per woman, but it is doubtful whether this trend will continue for very long as the period fertility rate has been relatively stable at about 1.8 children per woman since the mid-1970s.

In Statistics Norway's projections for the period 1999-2050 we maintain a total fertility rate of 1.8 children per woman in the medium variant, but in order to illustrate the uncertainty we have also made calculations where the fertility rate after some years stabilises at 1.5 and 2.1 children per woman, respectively.

Mortality

The number of deaths has also been stable in the 1990s, at around 45 000 per year. This entails, however, a considerable decline in mortality, as the population has both increased in size and aged (by about 1/2 year). In the period 1988-1999 life expectancy at birth increased by 2.5 years for men and 1.7 years for

1 Most of the points below as well as figures 3-5 are based on Lappegård (1998).

2 The cohort fertility rate is the average actual lifetime number of children given birth by women born in the same year.

Figure 1. Births, deaths, immigration and emigration, 1950-1999

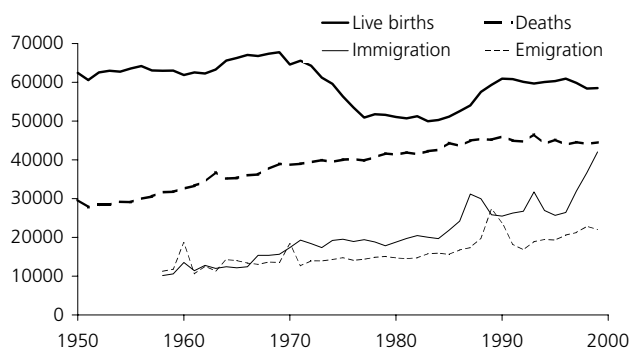


Figure 2. Total fertility rate in Norway and selected European countries, 1980-1998

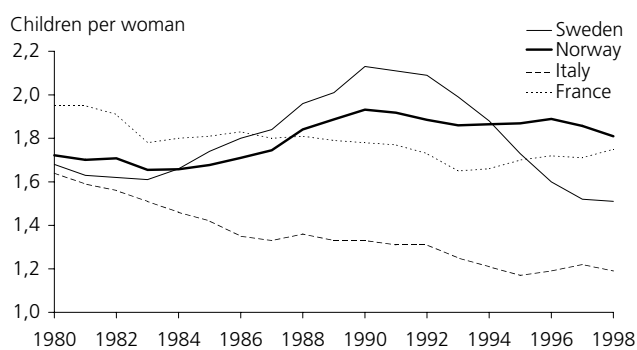


Figure 3. Median age at time of first birth for birth cohorts 1935-1971

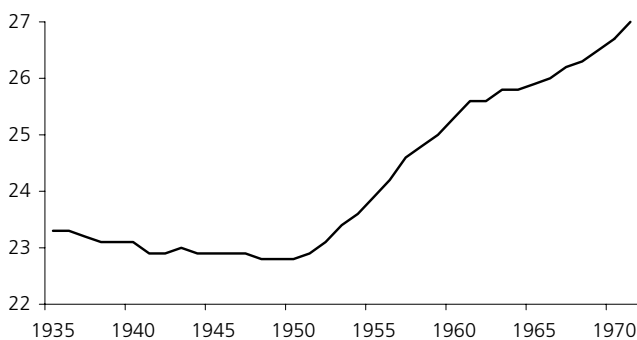
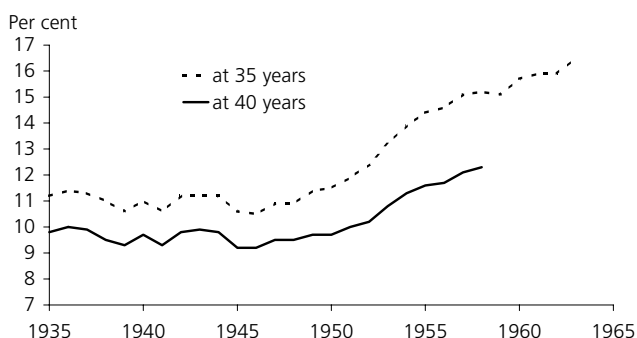


Figure 4. Childlessness for birth cohorts 1935-1963. Per cent



women (figure 6). Internationally, Norway ranks among the top, with a life expectancy of 75.5 years for men and 81.3 years for women. Only a few countries have a higher life expectancy than Norway, including Icelandic, Swiss and Swedish men; and Swiss, French, Swedish, Icelandic and Spanish women, in addition to the Japanese who live longer than in any other country.

The improvement in mortality that we have experienced the last decade, and actually almost on an uninterrupted basis since the beginning of the 1800s, must be expected to continue in the period ahead, partly due to advances in medical technology. A reduction in life-style illnesses due to smoking, unhealthy diets and lack of exercise may perhaps contribute to the same, but unfortunately not all of these trends point in the right direction. HIV/AIDS and other epidemics are not particularly widespread in Norway and this will probably continue to be the case in the future. With regard to developments in the mortality pattern in the period ahead, there are nevertheless some uncertain factors:

- How low can the mortality be, i.e. how high can the life expectancy at birth be? It is likely that the mortality rate will continue to fall, but we do not know how long this will continue. In the latest projections (for the period 1999-2050), we have assumed that life expectancy at birth rises to between 77 and 83 years for men and to between 81.5 and 87.5 years for women (figure 6). This is on a par with the UN's assumptions for Norway and other industrial countries for the next 50 years. In its long-term projections, the UN assumes that life expectancy rises significantly more, however, to fully 85.2 for men and 91.3 for women in Europe in 2150.
- The pace of the mortality decline is also uncertain. Will mortality fall at approximately the same pace as hitherto, will it decline somewhat slower, or will technological advance mean that mortality will fall even faster than so far? In the projections, we have in the high growth scenario assumed that life expectancy increases at about the same pace the next fifty years as in the previous fifty. In the other two scenarios we have assumed that the increase in life expectancy will occur most swiftly in the beginning and gradually taper off.
- Will the difference between life expectancy for women and men remain the same or narrow further? This difference increased from 3 1/2 years in 1950 to nearly 7 years in 1980 but has since been reduced to 5 1/2 years. In the projections, the difference is assumed to narrow to 4 1/2 years in all three scenarios (figure 6).
- Can we expect different developments for various ages? The mortality decline since 1970 has in relative terms been greatest for small children and

for the middle-aged and least for the oldest segment of the population, a pattern we have taken into account in the projections. As a result, in the long term the number of the very old (90+) will show a slightly lower growth than if we had assumed the same percentage decline for all ages, as in earlier projections.

- There are pronounced regional differences in mortality rates in Norway. In the county of Sogn and Fjordane men can expect to live about one year longer and women 1 1/2 years longer than the national average, while people living in Finnmark can expect to live 3 and 1 1/2 years, respectively, less than the national average. So far there are no clear indications that the regional differences are declining.

Internal migration

In 1998, 191 000 persons migrated between municipalities in Norway. This is a rise from about 170 000 at the beginning of the 1990s. This decade was marked by a net flow of migration from peripheral to central areas. Although there was some net out-migration from particularly Oslo to the rest of the country in 1998 these persons moved to nearby municipalities and not to remote areas. In 1998 medium-centralised regions recorded record-high net in-migration, with approximately the same number coming from large towns and from outlying areas.

There is a close relationship between economic development and internal migration, as more people migrate when the economy is expanding than when it is contracting. Figure 7 shows that the propensity to migrate varies inversely with the business cycle, here measured by unemployment (Carling 1999).

Immigration and emigration

Immigration and emigration flows have been reversed in the post-war period, with a shift from net emigration in the 1950s and 1960s to substantial net immigration since 1967, with the exception of the registered figures for 1970 due to corrections following the population census the same year and 1989 when there was some cyclically determined net emigration (figure 1). Since 1993, net immigration has risen sharply as a result of asylum-seekers and job-related immigration. In 1999, net immigration was higher than ever before, 19 300 persons, which is 5 500 more than the previous peak in 1998. The largest immigration groups in 1999 were Kosovar Albanians who came as a result of the war and Swedes who came for employment. However, some of the Kosovar Albanians have already returned but not all of these have been recorded for 1999.

Net immigration in 1999 accounted for 58 per cent of the total growth in population. Only once earlier in Norwegian history (60 per cent in 1987) has immigra-

Figure 5. Share of mothers with two children who have had their third child. Birth cohorts 1935-1963. Per cent

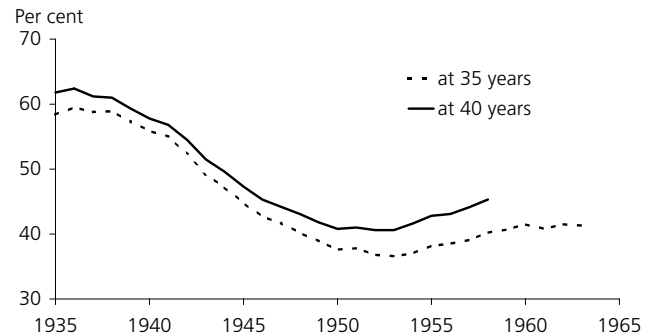


Figure 6. Life expectancy at birth for women and men, registered 1825-1998 and projected 1999-2050

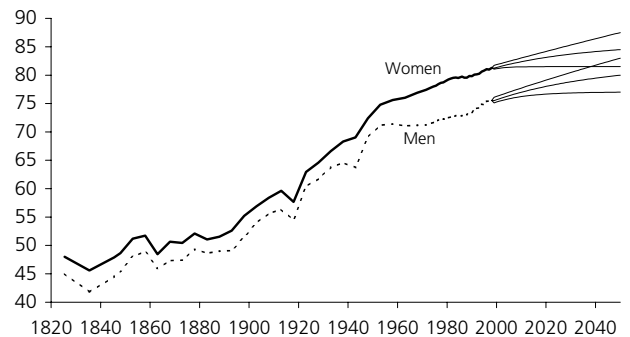


Figure 7. Unemployment and propensity to migrate. Standardised values. 1977-1998

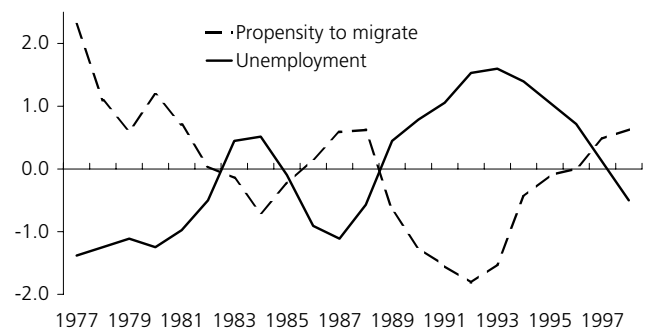


Figure 8. Population size, registered 1950-1999 and projected 2000-2050. In thousands

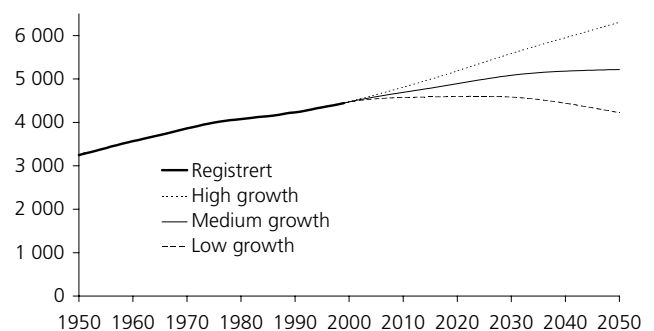
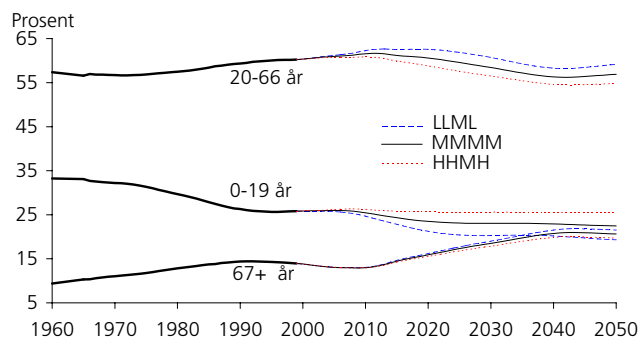


Figure 9. Population by age group, registered 1960-1999 and projected 2000-2050. Per cent of the entire population



tion made such a high contribution to population growth. In 1999, 6.1 per cent of the population had been born in another country.

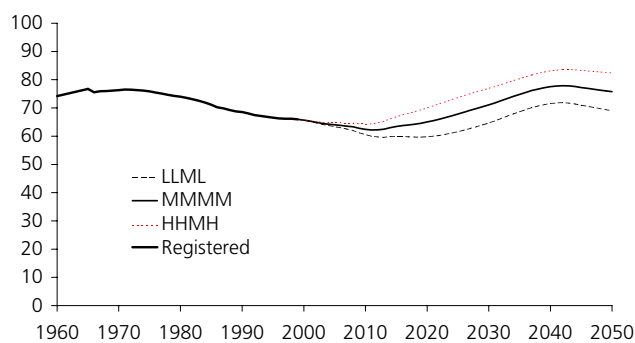
New population projections

There is a considerable need for population projections, for central and local government authorities, in the business sector and as a basis for the political debate. In order to ensure high professional standards and consistency in the figures, i.e. that the sum of the various municipalities' population growth is the same as the growth for the country as a whole, Statistics Norway makes population projections, usually every third year. These are made both for the country as a whole and for each municipality, but for municipalities the population projections apply to a shorter period (most recently 1999-2020) than for the entire country (1999-2050). There is considerable uncertainty concerning future population trends, particularly for small municipalities.

For the country as a whole, fertility represents the greatest element of uncertainty concerning population trends in the long term, but in the short term there may be considerable and unpredictable variations in net immigration. Mortality does not involve any great uncertainty concerning the future population, since, as noted earlier, there has been a steady improvement on an almost uninterrupted basis the last two hundred years, but for some age groups, particularly the oldest segments of the population, the uncertainty is greater.

In the three main scenarios we have chosen combinations of assumptions that have the greatest effect on national population growth. In the medium growth scenario (MMMM) we have assumed that the total fertility rate is the same as in the last 5-10 years (1.8 children per woman), a medium increase in life expectancy (3.8 years for both sexes), a medium degree of centralization³ and a medium net immigration

Figure 10. Dependency ratio, registered 1960-1999 and projected 2000-2050. Per cent



(10 000 per year). In the high growth scenario (HHMH) we have assumed high fertility (2.1 children per woman), a high increase in life expectancy (6.8 years), a medium degree of centralisation and a high net immigration (15 000 per year). In the low growth scenario (LLML) we have assumed low fertility (1.5 children per woman), a small increase in life expectancy (0.8 years), a medium degree of centralisation and a low net immigration (5 000 per year). The degree of centralisation only affects internal migration and is, therefore, the same in all three main scenarios since it has little impact on the total population.

According to the new projections, Norway's population is expected to continue to rise the next 25 years, from 4.4 million in 1999 to between 4.6 and 5.4 million in 2025 (figure 8). The increase will probably also continue after 2025, but a decline cannot be ruled out. In 2050, Statistics Norway expects Norway's population to be between 4.2 and 6.3 million. The medium growth scenario will gradually result in nearly zero growth, while the low growth scenario (LLML) will result in a decline and the high growth scenario a rise in population for a long period ahead.

For the time being the number of elderly in the Norwegian population is *declining* since it is the small cohorts from the 1930s that are becoming pensioners. After 2010, however, the share of elderly will increase sharply, irrespective of the assumptions underlying the projections (figure 9). The share of persons 67 years and older will increase from the current 14 per cent to between 19 and 22 per cent in 2050, which is approximately double the level of the 1960s. The share of children and young people will decline, irrespective of scenario, but least in the high growth scenario. In 1960, there were more than three times as many young people as elderly in the population; in 50 years the number in these two groups will be approximately the same.

³ All Norwegian municipalities are assigned a level of centralisation ranging from 0 to 3, where level 0 consists of outlying municipalities and level 3 consists of large towns and the nearest neighbouring municipalities. The degree of centralisation is the average difference between the in-migration regions' and out-migration regions' level of centralisation for all moves (Carling 1995).

The share of persons of working age, 20-66 years, will in the period to 2050 account for slightly more than half of the population (between 55 and 63 per cent). The dependency ratio, which indicates the ratio of the number of persons below 20 and above 66 to the age group 20-66 years, will increase considerably from 2010 to 2040, from 64 per cent to between 72 and 83 per cent, and will thereafter decline slightly when the small cohorts from the 1980s become pensioners (figure 10). In the long term, the economically active population will have more people to support and care for. The increase in the share of elderly will to some extent be offset by a decline in the share of children and young people.

Projection results and more information concerning the assumptions may be found on Statistics Norway's web site, <http://www.ssb.no/folkfram/>.

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