

Population Projections

Few issues are as important for Australia as the changes to our population that will occur over the next fifty years. We have already entered a unique period in our history during which we will go from being a young and growing population, to one that is older and possibly almost stable by mid-century. The magnitude of these changes is well illustrated by the likelihood that, in the 2030s, for the first time ever, more Australians are likely to die than are born.

Factors Involved in Population Change

Change in the size of the population is the result of natural increase (births minus deaths) and net overseas migration (NOM) (permanent and long-term arrivals minus permanent and long-term departures with an adjustment for category jumping). Possible implications of a change to the population include:

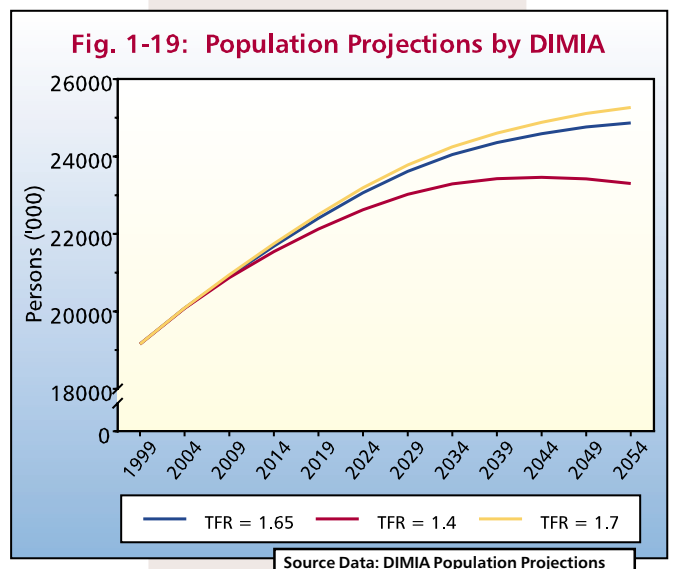
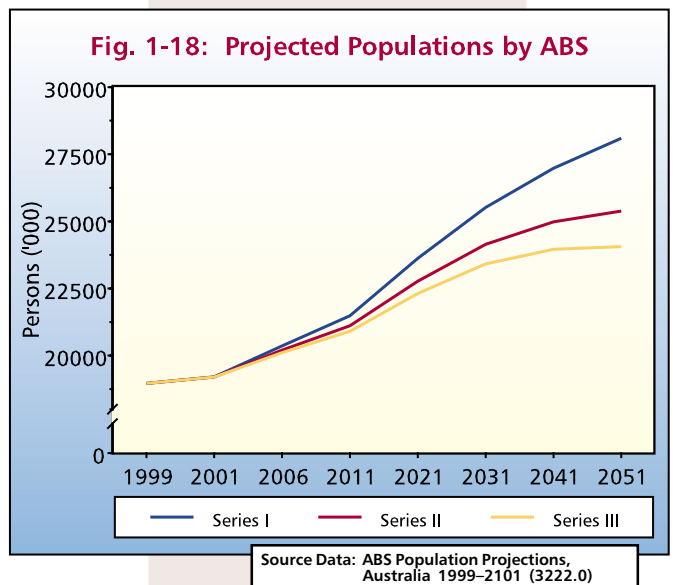
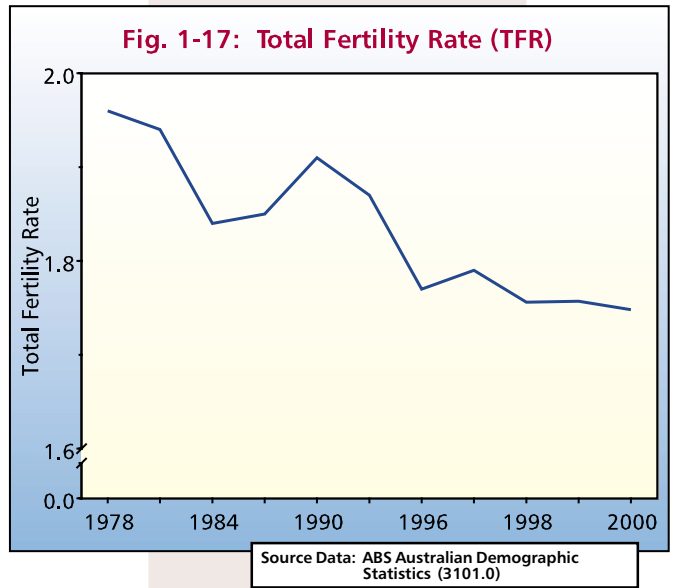
- change in the workforce growth rate;
- change in GDP; and
- change in the population age structure with flow-on implications for health and welfare expenditures.

Australia's demographic future will be determined by future levels of fertility, mortality and net overseas migration. These, together with the present age distribution of the population, are the components that are used in making population projections. Both the Australian Bureau of Statistics (ABS) and the Department of Immigration and Multicultural and Indigenous Affairs (DIMIA) have made population projections for Australia to 2051 based on a range of fertility, mortality and NOM assumptions.

Fertility Rate

Australia's total fertility rate (TFR), the average number of children a woman would bear throughout her lifetime, has declined steadily during the 1990s at a rate of around 0.02 children per woman per annum. The peak in Australia's TFR since 1950 was 3.6 children per woman in 1961. The rate fell strongly in the first half of the 1960s and then again in the first half of the 1970s to reach 1.9 children per woman by 1979. It remained almost constant throughout the 1980s. The rate has since fallen steadily to reach 1.75 children per woman in 2000. Many demographers consider that Australia's TFR will fall even further over the next ten years.

This downward trend has been replicated in almost every developed country, as well as many developing nations. In fact, the TFR is considerably lower in most other industrialised countries than in Australia. For example, Spain, Italy, Greece, Germany, Austria and Japan have total fertility rates below 1.4 children per woman.



The ABS has based its population projections on two TFR assumptions. The first is that the TFR will fall to 1.6 by 2008 and then remain constant. The second is that the TFR will remain at 1.75. DIMIA's standard projection has assumed a TFR of 1.65 children per woman by 2010 (Projection I). Thereafter, the TFR would remain constant. Alternative DIMIA projections are based on total fertility rates falling to 1.4 by 2020, thereafter remaining constant (Projection II) and falling to 1.7 children per woman by 2005, thereafter remaining constant (Projection III).

Mortality Rates

DIMIA assumptions on life expectancy follow the ABS projections which assume that by 2051, life expectancy would be 83.3 years for males and 86.6 years for females.

Net Overseas Migration

Over the last 25 years, the contribution of NOM to population growth has averaged around 39 per cent per year but this has fluctuated significantly from a low of 17.8 per cent in 1992–93 to a high of 54.4 per cent in 1988–89.

Actual NOM has averaged around 80,000 per annum over the last ten years and around 87,000–90,000 per annum over the last 50 years.

For its population projections, the ABS has assumed levels of NOM of 70,000, 90,000 and 110,000 per annum over the next 50 years. The DIMIA projections assume that, if current immigration policies are largely maintained for the next 50 years, long-term net overseas migration may average around 80,000 per annum.

Australia's Population Prospects by 2051

Using the assumptions set out below, the Australian Bureau of Statistics (ABS) projects Australia's population to grow from 19.4 million in 2001 to between 24.1 and 28.2 million in 2051 (see Figure 1.18).

- **Series I** - Assumes a TFR of 1.75 births per woman over the period, net overseas migration of 110,000 per year (28.2 million).
- **Series II** - Assumes that TFR will fall to 1.6 and remain there from 2008–09, net overseas migration of 90,000 per year (25.4 million).
- **Series III** - Assumes that TFR will fall to 1.6 and remain there from 2008–09, net overseas migration of 70,000 per year (24.1 million).

All series assume that life expectancy at birth will rise and attain levels of 83.3 years for males and 86.6 years for females in 2051.

If the standard DIMIA assumptions were to apply over the next 50 years, that is, roughly the present demographic trends were to continue, Australia's population would rise from 19.4 million in 2001 to 25 million by 2051 (see Figure 1.19), at which point population growth would be about 0.1 per cent. Alternative DIMIA population projections suggest that Australia's population may be around 23.4 million to 25.4 million in about 50 years.

Population Distribution

Population is not only a matter of total numbers. The distribution of the population across the cities and regions of Australia is also very important.

According to the ABS projections, the highest rates of population growth between 1999 and 2051 are expected to occur in the Northern Territory (between 36 per cent and 163 per cent), Queensland (between 53 per cent and 106 per cent) and Western Australia (between 44 per cent and 87 per cent). New South Wales is projected to remain the most populous state. Under the ABS Series II projection, its population is projected to increase by 29 per cent, from 6.4 million to 8.2 million.

Queensland is projected to replace Victoria as the second most populous State between 2026 and 2038, while the ACT could overtake Tasmania between 2041 and 2047. The Northern Territory could overtake the populations of both Tasmania and the ACT by between 2044 and 2048. Under all three ABS projections, the population of South Australia is projected to decline by 2051 from 1.49 million to between 1.42 million and 1.48 million. Tasmania's population is also expected to decline under all of the ABS population projections by between 7 and 51 per cent, from 470,300 in 1999 to between 231,300 and 435,700 in 2051.

Capital city/balance of State and Territory projections

The populations of most capital cities are projected to increase over the period to 2051, with the largest proportionate increases in Darwin (between 38 and 176 per cent), Brisbane (between 57 and 107 per cent) and Perth (between 45 and 88 per cent). The population of Hobart, under all ABS scenarios, is projected to decline by between 4 per cent and 49 per cent by 2051.

Sydney is expected to remain the most populous city. Under the ABS Series II projection, Sydney is expected to increase by 45 per cent from 4.0 million to 5.9 million.

Environmental Impact of Population Change

An issue that is sometimes raised with respect to population growth is what impact this might have on Australia's environment. While Australia's population growth rate is slowing, the overall population will continue to grow for another 50 years, albeit very slowly in the decade or so preceding 2050. Currently, the CSIRO through its project "Future Options to 2050" is looking at the relationships between population, other factors such as demand for Australia's exports, lifestyle and technological changes and the environment. Workshop reports for the project have been progressively released through the CSIRO website at <http://www.dwe.csiro.au/futures/ecumene/DIMAwshopMAIN.htm>. The final report should be available in the first half of 2002.

Ageing of the Population

Population projections for Australia based on current trends in fertility, mortality and net overseas migration show that the ageing of our population will continue. This is the inevitable result of fertility remaining at low levels over a long period and increasing life expectancy. As growth slows, the population is projected to age progressively with the median age of 35 years in 2000 increasing to about 40 in 2021 and to above 45 years in 2051. By 2051, the proportion of our population aged 65 years and over is likely to double to around 24 per cent of our total population.

Other things being equal, falling fertility will also reduce the proportion of Australia's population of working age. It currently grows by around 180,000 each year. However, in the decade starting from around 2020, the working age population will only grow by about 140,000 over the whole decade.

Immigration will affect the age structure and skill levels of the population to the extent that the age structure and skill levels of net overseas migration are different from the Australian resident population. In recent years, migrants have been younger and more skilled than the Australian resident population. Migration, therefore, has tended slightly to "young" the population and to increase its overall skill levels.

However, extensive research has concluded that immigration is an inefficient means of reducing ageing. This is because massive levels of immigration would be needed to have any significant impact on the proportion of the population that is aged. This takes into account that ageing is a gradual process and that most migrants who settle would themselves be part of the aged population in 30 to 40 years time.

A study by Professor Peter McDonald and Rebecca Kippen from the Australian National University has found that, given current trends in fertility and mortality, annual net overseas migration to Australia of around 80,000 persons is necessary to avoid population decline and to reduce the decline in labour force growth. This level of annual net overseas migration also makes a worthwhile and efficient contribution to the retardation of population ageing. However, each increment above 80,000 in net overseas migration results in a smaller improvement in Australia's future age structure.

The Population Debate

There are a number of groups in Australia who advocate a higher level of net overseas migration to ensure that the population will grow faster and not stop growing by mid-century. These groups argue that increasing the number of migrants will help slow the rate of ageing of the population, stimulate the economy and help develop the full potential of the country.

On the other hand, other groups argue that, by increasing the number of people living in Australia, immigration is placing further pressures on Australia's diverse and sometimes fragile environment and natural resources.

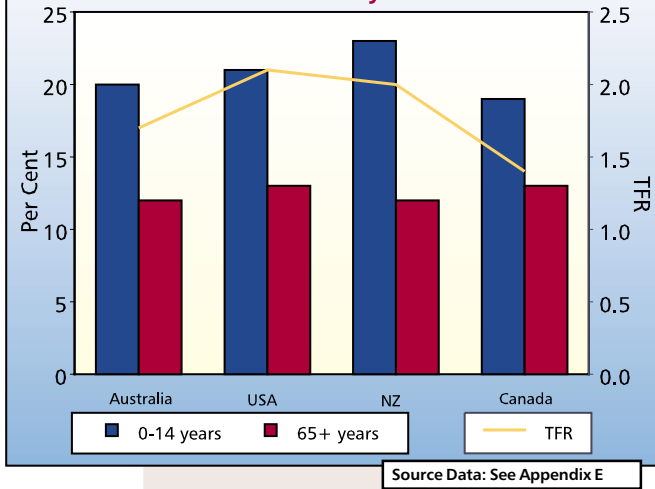
It is important to realise that the range of realistic options for future population levels available to Australia is restricted. This is because the policy levers available to governments to influence population size and distribution are limited, particularly in the case of a liberal democracy such as Australia where many of the kinds of measures generally associated with population policies in less democratic countries (eg control of internal mobility and compulsory birth control programs) would not be acceptable.

Difficulties faced in influencing Australia's population size through immigration include the need to uphold Australia's international humanitarian obligations, our commitment to family reunion, the importance of skilled migration for meeting skill shortages and increasing global competition for these people, the lack of control over emigration, and the limited influence on the entry of New Zealanders and on temporary entry.

Long term temporary arrivals now account for over 50 per cent of our net overseas migration. This compares with only 20 per cent 7 years ago. In addition, New Zealanders, under the reciprocal Trans-Tasman travel arrangement between Australia and New Zealand, may enter Australia to visit, live and work. In 1999–2000, 43,000 New Zealanders entered Australia permanently or long-term while around 13,000 left permanently or long-term, leaving a net gain of around 30,000. This compares with a net gain of 24,000 New Zealanders in 1998–99.

Population Characteristics of Other Countries

Fig. 1-20: Dependency Ratio and Total Fertility Rate



Populations of different countries grow at different rates, depending on the number of births, deaths, immigrants and emigrants. Other than Australia, three other countries operate planned migration programs, the USA, Canada and New Zealand. The characteristics of their populations are similar in some respects and quite dissimilar in others.

The annual average population growth rate between 1995 and 2000 for Australia was 1.0 per cent. This is equivalent to the average growth rates for Canada and New Zealand for the same period. The USA's annual rate of growth was a little lower at 0.8 per cent (United Nations World Population, 1998). As with many other developed countries the growth rate in Australia has slowed over time due to the decline in the number of children being born. The replacement level of 2.1 children per woman (that is, the number of children a woman will have in her lifetime that is required to replace the population) is not being met. Australia has a total fertility rate (TFR - the average number of children born to a woman during her lifetime) of 1.7 children per woman. Comparable rates for the other three migration countries are 1.4 for Canada, 2.0 for New Zealand and 2.1 for the USA, with much lower rates for many Western European countries and Japan.

Low fertility impacts on the ageing of the population and consequently on the size of the labour force. As people retire there is no counterbalance of similar numbers of younger people moving into the labour force causing governments to look for workers overseas. In all migration countries the proportion of those people aged 65 years or more is increasing. Fig. 1-20 shows the proportion of those aged 65 years or more was the same for Australia and New Zealand (12 per cent) while the proportion in the USA and Canada was a little higher (both 13 per cent).

The proportion of the populations in the younger age groups are representative of the trends in fertility in each of the countries. New Zealand has the highest proportion with those aged less than 15 years accounting for 23 per cent followed by the USA with 21 per cent. Both these countries have a TFR that is higher than Australia and Canada. The proportion of the Australian population aged 15 years or less was 20 per cent and for Canada, 19 per cent. The group comprised of those aged less than 15 years and those aged 65 years or more, is collectively known as the dependent population, as they do not generally participate actively in the labour force.

Another component of population growth is life expectancy. All countries throughout the world have experienced a decline in mortality. For the four migration countries the life expectancy at birth (that is, the age that a person is expected to reach when they are born) of males and females is shown in Fig. 1-21. Life expectancy for these four countries compare well with other developed countries, with Canada and Australia ranking amongst the top group.

The proportion of the Australian population born overseas is significantly greater than in the other three migration countries. The overseas-born comprised 17.4 per cent of the Canadian population (1996), 17.5 per cent of the New Zealand population (1996) and 9.7 per cent of the population of the USA (1997). This compares with 23.4 per cent of the Australian population (1996) who were born overseas.

Fig. 1-21: Life Expectancy

	Male	Female
Australia	76	82
USA	74	80
NZ	74	80
Canada	76	81

Source Data: See Appendix E

Fig. 1-22: Proportion of Overseas-born in Population

