

Opening statement with brief definition

The changing face of New Zealand's population¹

Introduction

Population analysts, planners and decision-makers throughout the developed world envisage a more strategic role for demographics in future planning and policy-making. This expectation is based on increasing awareness of emerging trends in population dynamics and expected shifts in population growth and structure at both national and local levels. It is also reflected in the growing demand for basic demographic data from both the public and private sectors.

Statistics New Zealand recently released a special set of long-term projections of the New Zealand resident population covering the next 100 years to 2101. They were derived to mark the beginning of the 21st century, and to provide a benchmark for comparisons with demographic trends and dynamics as they unfold in the coming decades.

A range of alternative projections has been derived combining different scenarios in fertility, mortality and external migration. The assumptions were developed using plausible contemporary and emerging patterns as well as international perspectives as a guide. These population projections are not forecasts, but merely illustrate the changes in population size, growth rate and age structure that would occur if the given assumptions were met.

Before outlining the future demographic prospects, it is instructive to review the background assumptions involved and to briefly review their historical context.

Fertility

Fertility has been the dominant element in shaping the growth rate and population age-sex profile in the last 100 years, and its impact is also likely to be substantial in the future. This is despite the fact that for most of the last 20 years, fertility has been below the level required for the population to replace itself without migration (taken as 2.10 births per woman).

Three alternative scenarios have been chosen. The low, medium and high variants assume long-term fertility levels of 1.65, 1.90 and 2.15 births per woman, respectively. The underlying expectation is for sustained low fertility: couples either barely replace themselves, or fail to replace themselves altogether, in the long term. In sharp contrast, fertility exceeded the replacement level during the first 80 years of the last century. Sub-replacement fertility is now the norm across Europe. In fact, the medium fertility variant of 1.90 births per woman is higher than in any European country at present.

Mortality

Mortality reductions added about 20 years to the life expectancy at birth of average New Zealanders during the last 100 years. Further significant reductions in mortality are expected in future, partly because New Zealand has lagged behind nations leading the longevity stakes and therefore has the capacity to catch up. For males, by 2051, the low, medium and high mortality variants assume life expectancy at birth to reach 84.0, 82.0 and 80.0 years, respectively. For females, by 2051, life expectancy at birth is assumed to reach 88.0, 86.5 and 85.0 years, respectively. These represent gains of between five and nine years from life expectancy in 1999.

Net migration

Net migration averaged 5,000 people a year during the 20th century. However, the volume and direction of external net migration has fluctuated markedly, especially in the last 40 years. The migration balance depends on the combination of 'push and pull factors' such as changes in immigration policy, general economic conditions and image disparities both in New Zealand and in other countries. Consequently, four alternative net migration scenarios have been developed, namely long-term annual levels of 0, 5,000, 10,000 and 20,000.

¹ This paper was prepared by M Khawaja and K Dunstan of the Demography Division.

The following sections on the future population draw largely on the medium projection (series 4), which assumes that during the next 100 years:

- New Zealand women will have 1.9 children each, on average.
- Life expectancy at birth will increase by about seven years for males (to reach 82.0 years) and six years for females (to reach 86.5 years).
- There will be a net migration gain of 5,000 people a year (the annual average over the last 100 years).

The projections have as a base the estimated resident population at 30 June 1999.

Four million and beyond

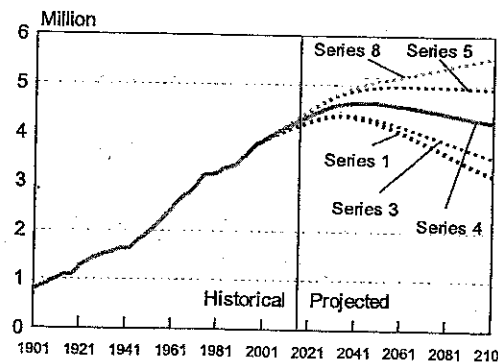
There were 3.83 million New Zealand residents at 30 June 2000. Under series 4, the fourth million will be reached about 2006 (Figure 1). The population is then projected to peak at 4.64 million around 2044, before slowly declining to 4.24 million by 2101. Should fertility follow the low variant scenario (series 1), the peak will be reached earlier and at a lower level, and by 2101 the population would be nearing the 3 million mark. By contrast, a shift to the high fertility variant (series 8) would mean an extra 2.2 million people by 2101 and a total of 5.57 million. Similarly, net migration gains greater than those assumed here would have a positive effect on the rate of population change as well as population size.

Slow or no growth

The annual growth over the past one hundred years averaged 1.6 percent but varied significantly from one period to the next, largely because of fluctuations in the size and direction

Figure 1

New Zealand Population 1901-2101



of the external migration balance (the difference between arrivals and departures). Under series 4, the rate of population growth is projected to fall from 0.8 percent a year in 2001 to 0.5 percent a year in 2021 and further to 0.1 percent a year in 2041. Over the second half of the 21st century the population is projected to decline slowly at an average annual rate of 0.2 percent.

Births and deaths

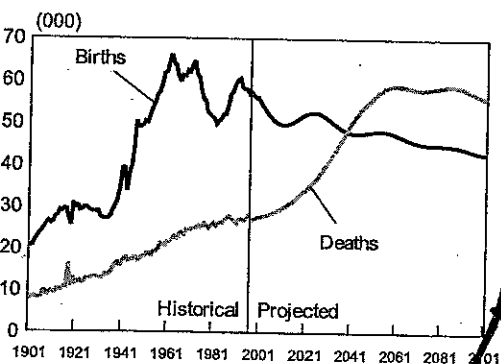
The post-World War II baby boom in New Zealand saw births peak at 65,400 in 1961. Since then the numbers have fluctuated, although the general trend has been downward (Figure 2). This trend is projected to continue, reflecting the combined effects of the assumed sub-replacement fertility and the shrinking number of women of childbearing age. The main contributor to the projected slow down is the narrowing gap between births and deaths. The crossover is likely to occur around 2044.

Unlike births, the general trend in deaths will be upwards over the projection period. The annual number of deaths is projected to more than double from less than 28,000 at present to 59,000 in 2060. The increase will be greatest after 2011 as the baby boomers begin to enter the ages most at risk of dying.

The excess of births over deaths, or natural increase, added an average of about 25,000 people a year to New Zealand's population during the 20th century. This amounted to 84 percent of total growth. The gap between births and deaths is expected to decline steadily from 30,000 in 1999 to nil in 2039. Thereafter, deaths will outnumber births by a growing margin, the gap reaching about 14,000 in the late 2070s, and then remaining at that level for the remainder of the projection period.

Figure 2

Births and Deaths 1901-2101



factual data, statistics to validate statement

Opening statement

Description of subject

Series of paragraphs about subject

Topic sentence - preview what paragraph is about

Audience

Present tense

Technical language

Generic term