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Synopsis of Trends and Projections
1991 - 2016**

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The New Zealand Population: A Synopsis of Trends and Projections 1991-2016¹

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Abstract:

Although there are many excellent documents and online resources available on New Zealand population trends, it is useful to highlight some key trends in one short document. This paper provides a synopsis of trends with respect to population size and age structure, sub-national population size and change, international migration, ethnicity, families and generations, fertility and mortality, and education and work.

Keywords: Population Structure, Migration, Family, Education, Work

¹ This is a revised and updated version of a short report commissioned by Radio New Zealand in 2004.

Introduction

This paper provides a synopsis of a number of New Zealand population trends and issues. Its focus is the period 1991 to 2001. The paper also provides some projections into the future until 2016. A number of issues are covered: population size and age structure, sub-national population size and change, international migration, ethnicity, families and generations, fertility and mortality, and education and work. These issues have important policy implications to the people of New Zealand now and in the future.

Many of these population issues and their policy implications are covered in some depth in the report *Population and Sustainable Development 2003* (Ministry of Economic Development et al. 2003). The present paper does not aim to be an update of that report, but merely a synopsis of trends over a shorter time horizon (1991-2016). The reader should note that the New Zealand Government has set up a website that brings together all official information on population from a wide range of government departments and agencies. The website address is www.population.govt.nz.

Population Size and Age Structure²

Limits to growth: The New Zealand total population reached the 4 million mark in 2003. From 3 million in 1973, it took 30 years to reach this milestone. In recent years the *total* population (including visitors) has been growing at a rate of close to 2% per year – the fastest among OECD countries.³

- It is extremely unlikely that population growth of the recent past will continue in the next few years. The growth path of New Zealand's population since 1951 and the plausible upper bound and lower bound of growth until 2016, are shown in Figure 1.
- What matters most in the short to medium term for total population is net international migration. Even with a continuation of high levels of immigration, the population would not reach 5 million until about 2030 and would be 4.5 million in 2016.⁴ Calls by some politicians for a population of 5 million by 2016 are simply not realistic (Bedford et al. 2003).
- Taking a long-term demographic perspective, the population is projected to reach 5 million in around 2041 and continue to grow slowly to the middle of the century. Between now and 2016 the population may be expected to grow at a rate of about 0.8% per annum on average, leading to a population of about 4.5 million in 2016.

² Unless stated otherwise, the source for the statistical information used in this section is Statistics New Zealand (2004b) and the projection use Series 5 (Statistics New Zealand 2004d).

³ www.oecd.org

⁴ Using series 6 (Statistics New Zealand 2004d), which assumes net migration of 15,000 per annum.

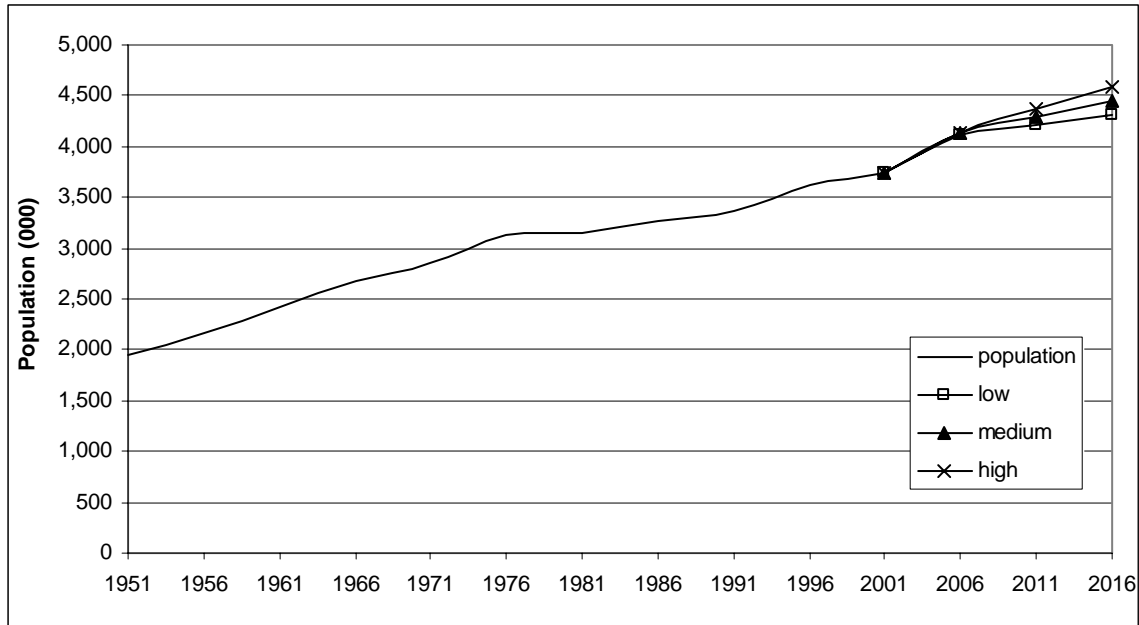


Figure 1: The New Zealand population: past, present and projected

Source: Statistics New Zealand (2004). *National Population Projections 2004 (base) - 2051*. Wellington: Statistics New Zealand.

Note: Series 1, 5 and 9 are used. The migration assumptions are 5,000, 10,000 and 15,000 for the 'low', 'medium' and 'high' scenarios respectively. Fertility rates are assumed to level off at 1.60, 1.85 and 2.10 births per woman respectively. For all three series it assumed for mortality that average life expectancy will increase, but at rates varying across the series.

Volatility of growth: National population growth is the sum of natural increase (births minus deaths) and net international migration. Of these two components, net migration is the most volatile, although there are upswings and downswings in natural increase too (see Figure 2).

- The ups and downs in natural increase are due to cyclical long-run changes in fertility (baby booms and busts). The last baby boom was around 1990 (an 'echo' effect of the post-war baby boom). This cohort is in the early years of high school now. Around 2008 they will enter tertiary education or the work place, etc.
- There will continue to be cycles in the number of births. For example, births have recently increased to a rate of about 58,000 per year. This may drop back again later this decade, but stabilise again during the 2010s.
- There are some 28,000 deaths per year and this is expected to increase steadily to above 30,000 deaths in 2016.
- The volatility of New Zealand's population growth has major impacts for many sectors of the domestic economy and for public sector policy making.⁵ Fluctuations in international migration plus the cyclicity of births are primarily responsible for this volatility.

⁵ For an overview of the issues, see for example: Pool (2003).

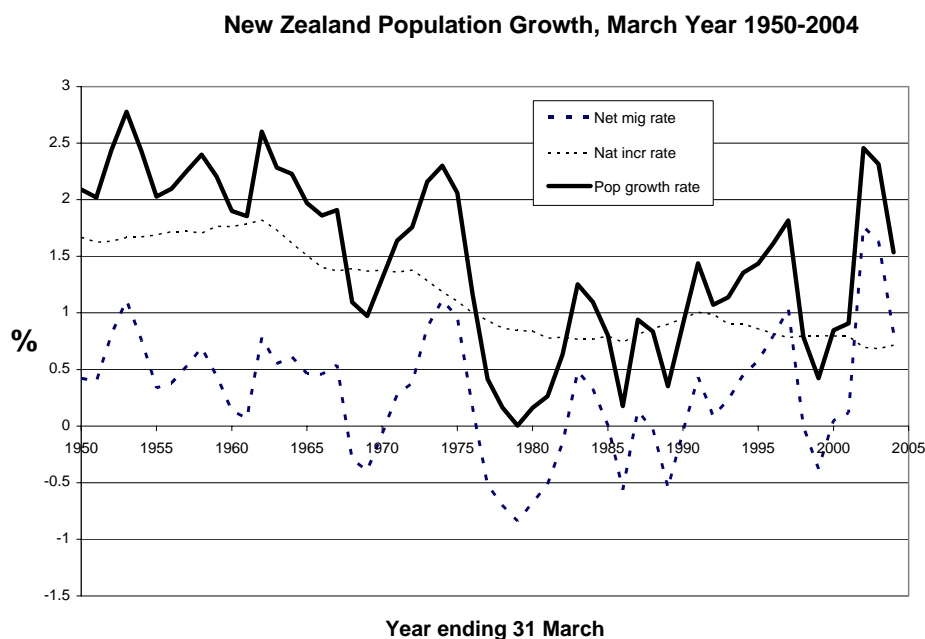


Figure 2: New Zealand population growth and its two components (net migration and natural increase)

Source: Derived from Statistics New Zealand data

Note: Net migration in this figure is defined as total arrivals from abroad minus total departures to abroad. This measurement is consistent with a concept of population that includes visitors (the so-called *de facto* population).

An ageing population: Compared with other developed countries, New Zealand is still relatively youthful. The median age of the population will increase because of fertility being below the replacement rate of 2.1 births per woman, because of ageing of the post war baby boomers, and because of increases in life expectancy. It should be noted though that the current total fertility rate of 2.0 is close to the replacement rate and, although similar to the USA, certainly much higher than the rate in many other OECD countries, with the rate being below 1.4 in some countries, such as Italy or Japan), However, the increase in the median age will be relatively slow. The median age of the population was 31 years in 1991, is 35 years at present and will increase to about 39 years in 2016. Alternative assumptions only alter this figure slightly in 2016. The past and projected changes in the age distribution are given in Table 1. The changes in the population age structure are illustrated in Figures 3 and 4.

- The share of the population under 15 declined slightly from 23.2% in 1991 to 22.7% in 2001. However, the number of children increased over this period. From now on, the total number of children is likely to decline both absolutely and relatively.
- In contrast, the number of young persons aged 15-24 declined between 1991 and 2001, but is likely to increase quite strongly in the future to about 617,000 in 2016 (14% of the total population).
- The population of family formation and career development ages (25-44) is around 1.1 million and is likely to remain rather static until 2016. The population of older working ages (45-64) has increased rapidly since 1991 and

is likely to continue to increase quite sharply, to exceed the 25-44 age group by 2016.

- Between now and 2016, the strongest growth is expected to occur in the 65-74 age group, an age group that had relatively modest growth since 1991.
- The common perception of population ageing leading to an increase in total demographic dependency (population 0-14 plus 65+, divided by population 15-64) is not correct for the period up to 2016 (see Table 1). The expected increase in the labour force generates a window of opportunity for policy that may yield a so-called “demographic dividend”, but only with appropriate policy responses in the areas of education and training with respect to the increase in young persons entering the labour market during the next decade (Pool 2003). The rate of inflow into the 65+ population will not peak until the mid 2020s when the largest post-war cohorts reach retirement age.

Table 1: Changes in the age structure of New Zealand’s population, 1991, 2001 and 2016

Age Group (years)	Actual	Actual	Projected	Numerical Change	
	1991	2001	2016	1991-2001	2001-2016*
Under 15	783,642	847,740	842,200	64,098	-35,000
15-24	556,083	505,065	617,200	-51,018	84,000
25-44	1,028,832	1,109,262	1,111,500	80,430	-40,900
45-64	625,599	824,787	1,187,400	199,188	330,300
65-74	225,984	246,174	387,100	20,190	135,400
75+	153,786	204,252	302,900	50,466	94,000
Total	3,373,929	3,737,280	4,448,500	363,351	568,000
	Percentage Distribution			Percentage change	
Under 15	23.2	22.7	18.9	8.2	-4.0
15-24	16.5	13.5	13.9	-9.2	15.8
25-44	30.5	29.7	25.0	7.8	-3.5
45-64	18.5	22.1	26.7	31.8	38.5
65-74	6.7	6.6	8.7	8.9	53.8
75+	4.6	5.5	6.8	32.8	45.0
Total	100.0	100.0	100.0	10.8	14.6
Total Demographic Dependency	0.526	0.532	0.525		

* Used the base of the 2001 projections which is adjusted for undercount in census.

Sources: Statistics New Zealand, 1991 and 2001 Censuses of Population and Dwellings.

Statistics New Zealand, 2004 (based) medium population projections (series 5).

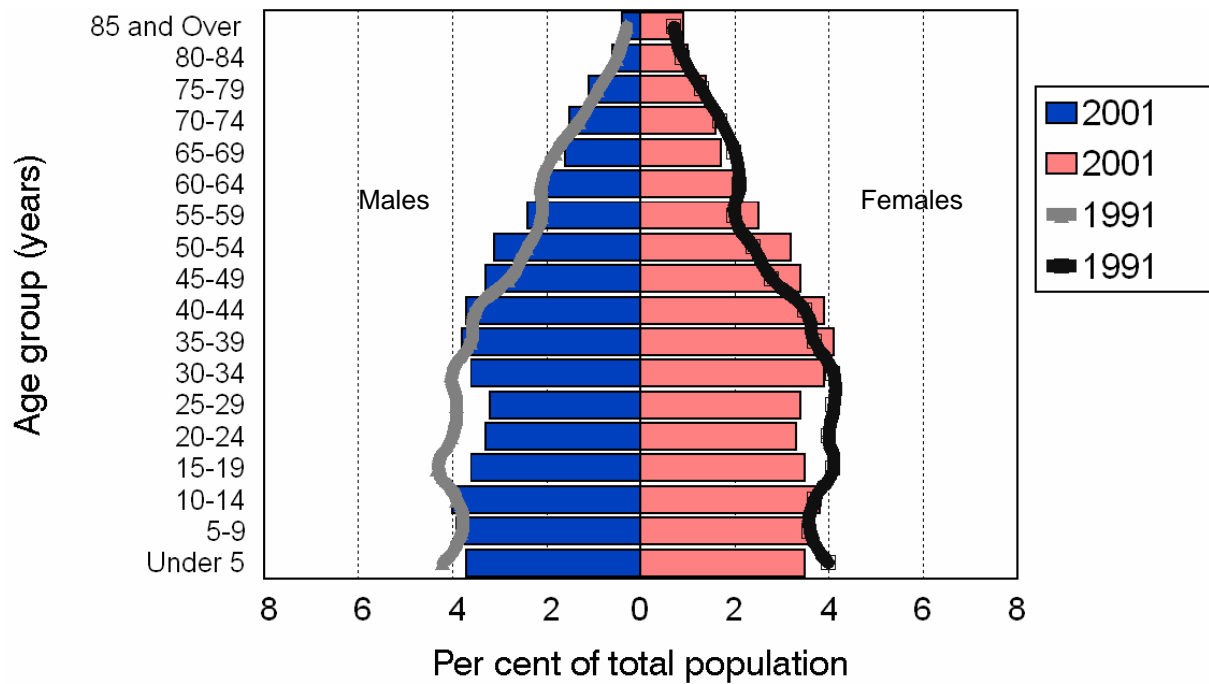


Figure 3a: The age-sex structure of the New Zealand population: 1991 and 2001 compared

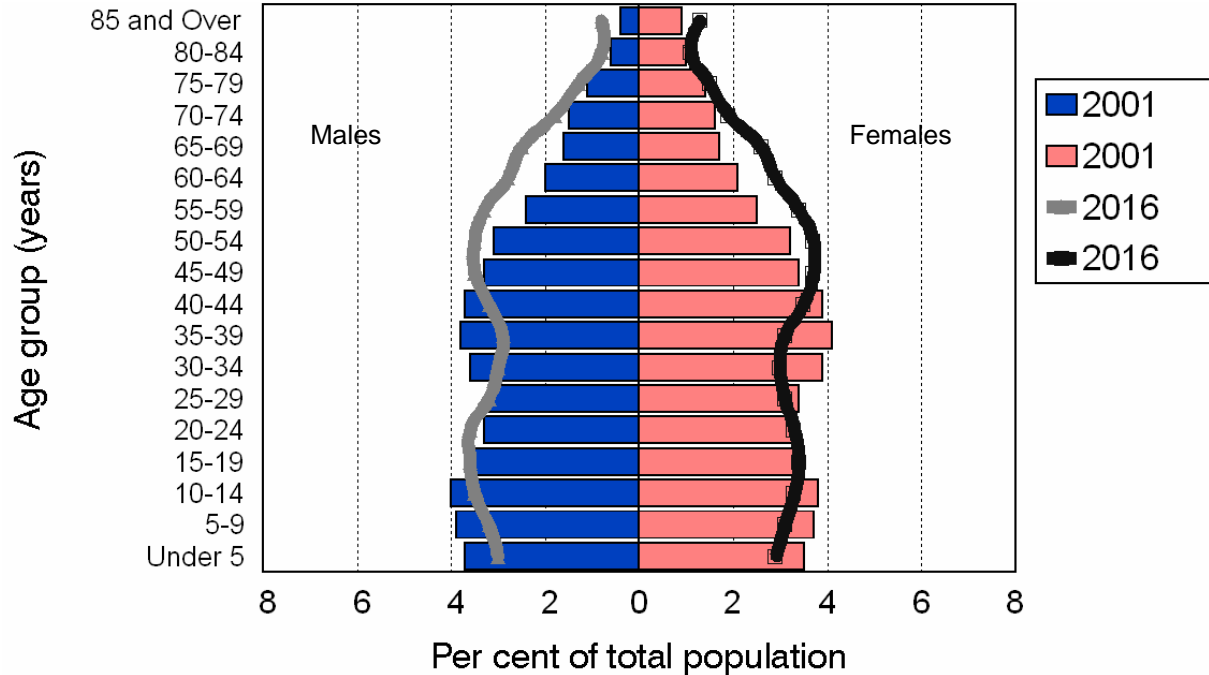


Figure 3b: The age-sex structure of the New Zealand population: 2001 and 2016 compared

Source: Statistics New Zealand, 1991 and 2001 Censuses of Population and Dwellings.
 Statistics New Zealand, 2004 (based) Medium (series 5) National Projections.

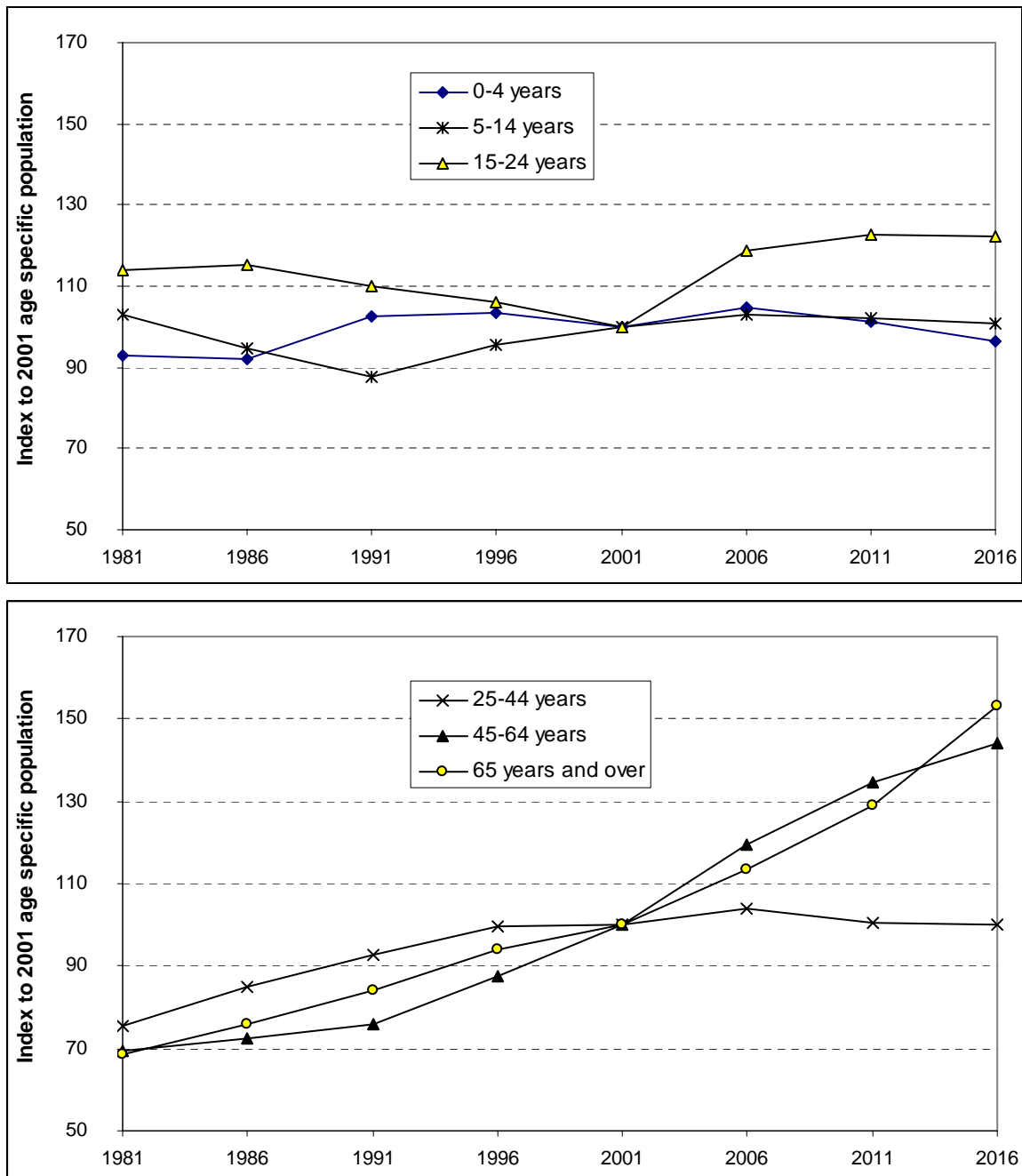


Figure 4 Population by Age Group index to 2001, New Zealand 1981-2016

Source: Statistics New Zealand, 1991 and 2001 Censuses of Population and Dwellings.
 Statistics New Zealand, 2004 (based) Medium (series 5) National Projections.

Subnational Population Size and Change⁶

Regional diversity: Population change at the regional level can differ markedly from that at the national level. There is evidence of increasing complexity and diversity with respect to regional demographic trends (Pool et al. forthcoming). Besides natural

⁶ Unless stated the sources is New Zealand Censuses of Population and Dwellings 1991 and 2001 or Statistics New Zealand (2004b).

increase and international migration, regional population change is also affected by internal migration. The contribution of each of these three components to population change can vary considerably across regions and over time. Regional population change is summarised in Table 2.

- There has been a century-long trend of faster population growth in the North Island than in the South Island. Between 1991 and 2001, the North Island population grew 12%, twice as fast as the South Island population.
- Over the 1991-2001 decade, the Auckland Regional Council region has been New Zealand's 'growth pole', combining a large population size (1.2 million in 2001) with the fastest growth (23% over the 1991-2001 period).
- Other regions with faster growth than the nation over the 1991-2001 period are Bay of Plenty (17%), Nelson (13%), Tasman (22%) and Marlborough (13%). Five regions experienced population decline (Gisborne, Taranaki, Manawatu-Wanganui, West Coast and Southland).
- There is a greater degree of uncertainty in regional population projections than in national projections. Nonetheless, it is fairly likely that population growth in the Auckland, Bay of Plenty, Nelson and Tasman regions will continue to be faster than growth for New Zealand as a whole. Significant population declines are expected in Gisborne, Taranaki, West Coast and Southland.

Table 2: Regional population change

Region	Actual	Actual	Projected	% change	
	1991	2001	2016	1991-2001	2001-2016*
Northland	126,786	140,133	155,700	10.5	7.8
Auckland	943,776	1,158,891	1,563,900	22.8	28.5
Waikato	331,026	357,726	408,400	8.1	10.4
Bay of Plenty	203,982	239,412	291,100	17.4	17.9
Gisborne	44,265	43,974	43,800	-0.7	-3.7
Hawke's Bay	138,342	142,947	150,500	3.3	2.2
Taranaki	107,127	102,858	101,200	-4.0	-4.3
Manawatu-Wanganui	224,760	220,089	226,800	-2.1	-0.3
Wellington	400,284	423,765	480,300	5.9	9.1
Nelson	36,456	41,352	49,700	13.4	15.9
Tasman	34,026	41,568	52,500	22.2	23.8
Marlborough	35,148	39,558	45,400	12.5	11.5
West Coast	31,563	30,303	29,300	-4.0	-5.8
Canterbury	438,171	481,431	558,600	9.9	12.5
Otago	177,525	181,542	201,300	2.3	6.9
Southland	99,954	91,005	89,200	-9.0	-4.4

* The 2001-2016 percentage change is with respect to the base population of the 2001 projections, which is a population adjusted upward to correct for undercounting in the census.

Sources: Statistics New Zealand Census of Population and Dwellings 1991 and 2001

Statistics New Zealand, Sub-national Population Projections, 28 February 2005

- All regions are experiencing population ageing to some extent. The impact differs considerably across regions. The medium projections suggest that the

population aged 0-14 is likely to decline in all New Zealand regions, except in Auckland.

- The medium projections suggest that working age (defined here as 15-64 years) population growth will vary between a decline of 11.2 % in Southland and an increase of 29.2 % in Auckland.
- The population aged 65 years and over will grow significantly in all New Zealand regions. Growth of 50% or more is expected in Northland, Auckland, Waikato, Bay of Plenty, Tasman and Marlborough.
- Geographic mobility within New Zealand is high. This is a common feature of 'New World' countries (Bell 2002). Of the census population aged 5 and over and usually resident in New Zealand in 2001, 56% lived at a different address five years earlier (Statistics New Zealand 2002b: Table 21). However, three quarters of the movers came from another address within the same Regional Council (often simply a move within the same town or city). The relative contributions of internal and international migration to population change vary a lot across regions (Poot, 2005). Auckland had 1996-2001 the annual rates of natural increase, net international migration and net internal migration of 10.8, 9.2 and -0.4 per 1000 population respectively.

International Migration

Hard to forecast and hard to control: It is impossible to control volatility in population growth fully through immigration policy, because much of the volatility is driven by the free movement of New Zealanders in and out of the country⁷. The only way government can reduce volatility is by encouraging immigration during recessions when the net outflow of New Zealanders is the largest. This is politically not acceptable and would also increase short-term unemployment among recent immigrants.

- New Zealand has a very open population. Net migration is the 'tip of an iceberg' of total arrivals and departures of about 4.1 million per annum each (i.e. about equal to the size of the population). Much of this movement consists of short-term visitors whose arrivals and departures balance over a year or longer, but the bigger the gross flow, the greater the likelihood of fairly big swings in the net flow. For example, during June year 1998/99 there was a net outflow of population of 17,185, a few years later (2002/03) a net inflow of 78,450 (Statistics New Zealand 2004b).
- International migration in New Zealand is primarily a phenomenon whereby new immigrants replace New Zealanders leaving. Over the March years 1979-2004, there was a net outflow of about 421,000 New Zealand citizens and a net inflow of about 632,000 citizens from other countries. The net contribution of migration to population growth over this quarter century was only a little more than 8,000 people per year.⁸

⁷ For a discussion of forecasting trans-Tasman migration, see Gorbey et al. (1999).

⁸ From arrivals and departure information from INFOS, Statistics New Zealand.

- Roughly half of permanent and long term migration from New Zealand is to Australia. Since 1992 net trans-Tasman migration has always been towards Australia. About one in ten New Zealanders lives in Australia.⁹
- About one in five persons living in New Zealand was born overseas in the 2001 census. With continuing net immigration, and a net outflow of New Zealand citizens this proportion will continue to increase.
- Changes in the immigration policy in the early 1990s led to an increase in migrants from ‘non-traditional’ source countries. The 1990s saw a significant increase particularly in the Asian population (Ministry of Social Development 2004: 21-41; Statistics New Zealand 2005b). Due to globalisation forces, international migration is becoming very different from traditional settlement on foreign soil. There is a growing short to medium term international circulation of professionals, a ‘brain exchange’ rather than a ‘brain drain’ (Bedford et al. 2002).
- In addition, New Zealand has a growing population of foreign students. The number of foreign student permits and visas issued quadrupled from 29,616 in 1999 to 119,651 in 2003. More than half of these students come from mainland China (Statistics New Zealand 2004f: Table 12.02). From information on Student Visa approval the number of student have recently started to drop with the number being six per cent less for the year ending March 2005 than the year before.¹⁰

Ethnicity

Biculturalism and beyond: Defining, collecting and analysing data on ethnicity in New Zealand is a complex exercise. This is particularly the case for Māori as most Māori are likely to have some non-Māori ancestry. According to the 2001 census, only about 50% of the Māori population identified themselves only as Māori, the rest as ‘mixed-Māori’. According to a survey carried out by the Population Studies Centre the ‘mixed-Māori’, about two-fifths identified Māori as their primary affiliation (Kukutai 2003). Thus the information given below on ethnic composition of the New Zealand population needs to be interpreted with the understanding that ethnicity is an ever-changing concept and that it is influenced by historical, social and political factors.

- In 2001, about 80% of the population was of European ethnicity, 14.7% were of Māori ethnicity, 6.6% were Asian and 6.5% were of Pacific Island ethnic origin. These percentages are based on ‘non-prioritised’ data on ethnicity. This means that if a person identifies with, for instance, two ethnic groups then he or she is included in both the groups.¹¹
- During the 1990s the Asian population grew by 138% and the Pacific Island population grew by 39%.
- According to Statistics NZ projections, the likely numbers of people of different ethnic backgrounds in 2016 are: 3.2 million Europeans (4.7% increase from

⁹ Estimate based on statistics in Hugo (2003).

¹⁰ http://www.educationnz.org.nz/facts_stats/key_facts.html view on 16 May 2005.

¹¹ Unless stated the sources are Statistics New Zealand, Censuses of Population and Dwellings.

2001 to 2016); 716,000 people of Māori ethnicity (an increase of 22%); 376,000 people of Pacific Island ethnic background (44% increase); and 573,000 Asians (and increase of 111%)¹².

- The relatively higher birth rate among the Māori and Pacific Island ethnic groups is the main contributor to the future increases in their population sizes.
- Further net international migration is likely to be the major contributor to the future size of Asian and other ethnic populations.
- The projected slow increase in the population size of European ethnicity is due to the likely continuation of below replacement fertility and relatively little net migration from Europe and North America.
- In 2001, the Māori and Pacific Island populations were young compared to the European and Asian populations. The median ages of the ethnic populations were: 37 years for Europeans, 29 among Asians; 22 among Māori and 21 years among the Pacific Islanders.
- By 2016, the median age for all ethnic populations will have increased. For the Europeans the median age is projected to increase to 43, for the Asian to 34, for the Māori to 25 and for the Pacific Islanders to 23 years.
- In 2001 the Asians have the highest proportion of their population in the working ages 15-64, followed by the Europeans, Māori and Pacific Islanders respectively.
- In 2016, about 19% Europeans will be aged 65 years and over, about 7% among the Asians, 6% Māori and 5% Pacific Island people.

Families and Generations

New Zealand families are changing: partnerships are becoming increasingly unstable; the rate of marriage continues to decline; the link between marriage and having children is less pronounced (Ministry of Social Development 2004: 11). There is a diversification of family life in New Zealand, a move away from the nuclear model of a heterosexual couple with children and a strict gendered division of paid and unpaid work. Sole parenting is becoming increasingly common; and there are variations in all of these changes depending on ethnicity. The timing and sequencing of life course events of family formation and dissolution no longer follow clear patterns.

- *The decline of the nuclear family:* The proportion of all families that consist of two parents and children has been declining: from 48% in 1991 to 42% in 2001.¹³ In contrast, there has been an increase in ‘couple only’ families: from 35% in 1991 to 39% in 2001. Probable explanations include young people cohabiting and delaying starting a family; and older persons whose children have ‘flown from the nest’. There has been a less noticeable increase in one-parent families: from 17% in 1991 to 19% in 2001.

¹² Ethnic projections are used (series 6) where all assumption are medium (Statistics New Zealand 2005b).

¹³ The census defines three types of families: a couple with children; a couple without children, and one parent and their children. A person living by themselves is not considered a family. See Statistics New Zealand (2002a).

- *Multi-generational living is increasing*: The number of families with three or more generations living together may be increasing. In 1991, 1.2% of family households had a child under 16 years and a person aged 65 years or over, but this had increased to 1.6% by 2001 (Ministry of Social Development 2004: Table 11, pg39). In 2001, multigenerational families were the most likely among Pacific Islanders and Asians (8% and 6% respectively), compared to less than 3% and 1% for Māori and Europeans respectively.
- *Marriages continue to decline*: less than 15 out of every 1000 people not married and aged 16 years or more did marry in 2001, compared to nearly 20 out of every 1000 ten years earlier.¹⁴ The rate of divorce has remained fairly stable, averaging about 12 divorces for every thousand estimated existing marriages in the early 1990s and about 12.9 per thousand in 2002.
- *Try, and try again*: A significant proportion of marriages in New Zealand last for a relatively short period: 37% of all divorces in 2002 occurred after people had been married for less than 10 years. The proportions of marriages which are effectively remarriages (where one or both partners have been already been divorced or widowed) is increasing: in 1991 for example, 35% of all marriages were remarriages, compared to 37% in 2001. The majority of these are people who had been divorced.
- *Living together without marriage*: part of the decline in marriage is due to more people opting not to formalise their union, but instead to live in a de facto relationship. In 2001, 30% of New Zealand men and women aged between 15 and 44 who were in a partnership were in this type of relationships, compared to 24% in 1996.¹⁵

Fertility and Mortality¹⁶

- *Fewer babies per woman*: The average number of children born per woman declined sharply from the 1960s to the 1980s but the total fertility rate (TFR) in New Zealand has remained relatively close to the replacement level of 2.1 since the early 1990s.¹⁷ The TFR declined from 2.09 in 1991 to 1.97 in 2001, but is back to 2.01 births per woman at present (Statistics New Zealand 2004a). By comparison, the TFR is around 1.7 in Australia, England and Wales and The Netherlands. Women wait longer to have children. Bearing children outside marriage is also increasingly likely.
- *Ethnic differences in fertility*: two years into the new millennium, Māori and Pacific Island women were having on average 2.59 and 2.94 births, compared to only 1.77 and 1.67 for European and Asian groups.¹⁸

¹⁴ The following data comes from Statistics New Zealand (2004b).

¹⁵ From the Statistics New Zealand, Censuses of Population and Dwellings.

¹⁶ Unless stated otherwise, the source for the statistical information used in this section is Statistics New Zealand (2004b).

¹⁷ This is the average number of births a woman is expected to have across her reproductive life, if she follows the age-specific birth rates of the reference year.

¹⁸ <http://www.stats.govt.nz/popn-monitor/births/births-additional-info.htm>, viewed 21 January 2005 for 2000-02.

- *Delaying the parenting experience:* women continue to postpone having children. Since 1991, mothers' median age has risen from 27.9 to 29.8 in 2001, but has remained lower for Māori mothers at 26.0 years.
- *More women in their early thirties and forties are having children:* In March year 2005, the most common age for childbearing was between 30 and 34 (119 births per thousand women). The largest fertility decrease since the early 1990s occurred among women aged 20-24 years and the largest increase has been for women aged between 40 and 44 with their age-specific fertility rate increasing by more than three quarters since 1992.
- *Teenage childbearing is significant:* New Zealand has, in common with the UK and the USA, relatively high teenage fertility rates: about 28 for New Zealand and the UK, but higher for the US at 46 births per 1000 girls under 20, as compared with, say, 6 births per 1000 girls in The Netherlands. According to nationally representative survey data of New Zealand women aged 20-59 (NZW:FEE), 41% and 38% of Non-Māori and Māori women respectively born between 1970-75, who had a birth before the age of 20, had this birth outside of a stable relationship (Ministry of Social Development 2004: Appendix 1, Table 1 p.156).
- *Future fertility is hard to predict:* There is considerable uncertainty as to what will happen to fertility in the future. Official projections use a range for the TFR from 1.60 to 2.10. Given that fertility is still higher in New Zealand than in many other developed countries, a downward trend in fertility is plausible. On the other hand, public policies that provide increasing financial support and tax relief to families with children (such as the "Working for Families" package of measures) can be shown to have a positive impact on fertility (Siegers and Poot 2001).
- *Declines in mortality:* The number of deaths per 1000 of the population has declined from 7.7 per 1000 in 1992 to 7.1 per 1000 in 2002, the continuation of a long-term trend. There has been in particular a dramatic decline in infant mortality, which is now about one quarter of the rate 40 years ago.
- *Living longer:* New Zealanders are living longer than ever before. A newborn baby boy can expect to live 76.0 years and a newborn baby girl 80.9 years and this is expected to increase to 79.8 and 84.1 in the medium 2016 projections (Statistics New Zealand 2004d). However, despite recent improvements, life expectancy levels in New Zealand remain somewhat lower than in some comparable developed countries.
- *Ethnic differences in mortality:* There are significant differences in life expectancy across ethnic groups. A non-Māori boy can expect to outlive his Māori counterpart by 8.2 years. For girls, the non-Māori advantage is slightly larger, 8.8 years (Statistics New Zealand 2004e: Table 2.02 p.14).

Education and Work¹⁹

- *The population is becoming better educated:* Of those aged 20 years and over who stated their education attainment, 35% reported in 1991 that they had no educational qualifications. The female rate of 'no qualification' (38%) was 5 percentage points higher than the male. By 2001 the number of people with no qualification dropped to 28%, and the gap between men and women became smaller.
- *A university level qualification is becoming a more common phenomenon:* In 1991, of those over 20 years of age who stated their level of educational attainment, 7% possessed a Bachelors or higher degree. Men (9%) were traditionally considerably more likely than women (6%) to possess such a qualification. By 2001 the proportion of those possessing a Bachelors or higher degree had risen by 6 percentage points, with near parity between men (14%) and women (12%).
- *Increasing ethnic diversity at the tertiary level:* In 1990 85% of students at public tertiary institutions were New Zealand Europeans/Pakeha. By 2001 this had fallen to 63% while the proportion Māori had increased from 7% to 19%, Pacific peoples from 3 to 5% and Asians from 3 to 9% (Statistics New Zealand 2003b: Table 4.17).
- *School aged children:* The number of children aged 5-14 years enrolled in school increased 17% between 1992 and 2004 (Ministry of Education 2004). The number of Māori at school for the same age group had increased by 27% over this period. The increase in school aged children is likely to be followed by a slight decline during the next decade (see Figure 4).
- *Increasing use of early childhood education:* For the period 1992 to 2001 the number of children enrolled in early childhood education rose from around 133,000 to approximately 170,000; an increase of nearly 28% (Statistics New Zealand 2003b: Table 4.01). In 1999 the number of children aged less than five enrolled in early childhood education was 85.4% of the total population of three and four year olds (Statistics New Zealand 2003b: Table 4.04).
- *Female labour force participation continues to increase:* Between 1991 and 2001 female labour force participation increased from 51% to 60%. Of the total number of females employed in 1991, 31% were in part-time employment while in 2001 this had increased to 36%. Over the 1991-2001 period male participation rates increased from 70 to 74% while the percentage of employed males in full-time work fell from 92% to 88% (Statistics New Zealand 2003a: Table 2). The patterns of change in participation rates indicate that for both male and females rising participation rates have been driven by an expansion in part-time employment.
- *Having children is less of a barrier to employment than in the past:* For women aged 20-39 years, with a youngest child under 5 years, 15% were in full-time employment in 1991 while this figure had risen to 22% by 2001. Among these same women, 21% were in part-time employment in 1991 with this percentage

¹⁹ Unless stated the source in this section is Statistics New Zealand, Censuses of Population and Dwellings.

increasing to 27% by 2001. Overall labour market participation rates for women 20-39 years with children under 5 years increased by 13 percentage points in the decade 1991-2001, rising from 36% to 49% (Sceats 2003: Table 3, pg 160).

- *Increasing labour force participation among older persons:* The labour force participation rate of 60-64 year olds more than doubled from 25.7% in 1991 to 55.4% in 2003 (Statistics New Zealand 2003c: Table 1.02). This is primarily due to the phased increase in the eligibility of NZ superannuation from 60 to 65. For the 65+ age group there has been a general expansion of employment with increases in part-time employment dominating increases in full-time employment. Overall, the proportion of those aged 65 years and over in employment has increased from 6% in 1991 to 11% in 2001 (census data). For females aged 65+ the proportion in employment increased by 4 percentage points, from 3 to 7%, over the 1991-2001 decade.
- *The unemployment rate is now much lower than in the early 1990s:* In 1991 8.4% of the labour force was unemployed, with the male unemployment at 8.8% and the female unemployment rate at 7.9% (Statistics New Zealand 2003c: Table 1.01). By March 2005, the overall unemployment rate had fallen to 3.8%, the male and female rates being 3.6% and 4.0% respectively (Statistics New Zealand 2005a).
- The future of the labour market is not easy to assess, as there are many factors influencing the supply and the demand for paid work.²⁰ There is no doubt, however, that the age structure of the labour force is changing: the average age of those at work is increasing. It can be seen from Table 1 that under the medium projection, the population aged 25-44 is likely to grow by only 0.2% between 2001 and 2016, whereas the age group 45-64 is likely to growth 44%. Labour force projections show a 20% growth between 2001 and 2016 with the median age of the labour force going from 39.3 in 2001 to 42.0 in 2016.²¹ The largest growth in participation is projected to be in the 45-64 years age group going form 651,000 in 2001 to 931,000 in 2016. There is also projected to be sizeable increase in the 65 years and over going from 38,000 in 2001 to 90,000 in 2016. An ageing labour force has possible implications for labour mobility, adjustment, career prospects, etc.²²

Conclusion

The population issues covered in this paper have important implications for years to come. Planners and policy makers need to be aware of changing population trends when formulating policy. The size of the total population may not change very much on a year by year basis, but some aspects of population structure can change quite markedly over a short period of time (international migration, age structure, etc.)

²⁰ For an accessible introduction of how work is changing in New Zealand, see Department of Labour (2003).

²¹ The National Labour Force Projection using series 5M assuming median fertility, mortality and labour force participation with annual net migration of 10,000 (Statistics New Zealand 2004c).

²² For an early review of the issues, see Poot (1988)

The parameters that underpin population projections are changing, such as due to increased life expectancy, possibly reduced fertility, and fluctuating migration. Such parameters also vary across ethnic groups. Patterns of marriage and divorce are changing with the implications to family structures. The labour force is becoming better qualified, while female participation and participation in part-time work continue to increase. Unemployment in recent years has reduced significantly. The changing population structure will have implications in the changing workforce.

Some future population changes are relatively easy to predict. For example, at the moment there is a “baby-blip” cohort (those born around 1990) moving through the secondary school system, to be followed by a cohort of those born in the second half of the 1990s that is at least 10% smaller. It is important that policies that aim at human capital accumulation and transitions into work take such demographic facts into account. It should be accepted, however, that as in other applications of projections and forecasts, the uncertainty about population size and structure increases, the further into the future we peer. This is particularly true for New Zealand, where volatile net international migration can have a significant impact on population structure.

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