



Waitomo District

Demographic Profile 1986-2031

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Population Trends

- The population of Waitomo District has declined steadily over the past three decades, from around 10,500 in 1986 to 9,410 in 2013. The trends differ from those for both Waikato Region and total New Zealand, with negative growth seen in the district across almost the entire 1986-2013 period.
- The 2013 Census identified that the usually resident population of Waitomo declined by 5.6 per cent over the period 2006-2013, a somewhat more significant decline than the previous -0.2 per cent recorded between 2001 and 2006.
- The change between 2006 and 2013 was not evenly distributed, with two of Waitomo's eight CAUs recording growth in population, and the remaining six (75 per cent), net decline. In the previous inter-censal period 2001-2006, only 38 per cent of the CAUs (three of the eight in Waitomo) declined in population size, indicating continuing and more widespread decline across the district.

Components of Change

- Net migration loss is the primary cause of declining population numbers in the district, with a small but diminishing offset coming from natural increase.
- A steady decline in the number of births from 192 in 1992 to 117 in 2012-13 and slight increase in the number of deaths contributed to the declining levels of natural increase.
- Significant net migration losses have occurred across most age groups, but most notably at 15-19 and 20-24 years, generating a 'bite' in the age structure. Minor net migration gains were noted between 2001 and 2006 at 0-9 and 25-39 years.

Age Structure & Population Ageing

- As elsewhere in New Zealand, the population of the Waitomo District is ageing numerically (with an increase in numbers aged 65+ years) and structurally (with an increase in the proportion aged 65+ years). The loss of young adults is accelerating structural ageing. However in 2012 the population remained slightly younger (13.5 per cent aged 65+ years) than both Total New Zealand (13.8 per cent), and the Waikato Region (14.3 per cent).
- Waitomo District's Labour Market 'entry/exit ratio' has fallen since 1996, from 15.5 people at labour market entry age (15-24 years) for every 10 in the retirement zone (55-64 years), to just 12.5 per 10 in 2012. This is slightly lower than the ratio for both the Waikato Region and Total New Zealand.



- Waitomo District has a substantially larger proportion of Māori (35.6 per cent) than both the Waikato Region (19.2 per cent) and Total New Zealand (13.6 per cent), and a smaller proportion of all other ethnic groups.
- The Māori population of the Waitomo District grew by approximately 3.2 per cent across the 1996-2006 period, contributing around 27 per cent to the change in the district's population and offsetting some of the overall decline of 3.9 per cent; while a sharp decline in the number of people identifying as European or Other Ethnicity including New Zealander accounted for the majority of the district's overall decline. Pacific Peoples, and people of Asian origin both experienced growth, contributing 17.8 and 6.7 per cent respectively to overall change and also offsetting some of the overall decline, while the Middle Eastern/Latin American/African (MELAA) population declined.
- The bite in the age structure of the district's population is very much connected with the European/New Zealander/Other population. Younger age groups are disproportionately augmented by Māori youth, and the older age groups, almost exclusively by European.
- As elsewhere, the Māori population of the Waitomo District increases its share as age decreases, while the European-origin population increases its share as age increases.

Māori population

- Young Māori comprise a much larger share of Waitomo District's population (42.2 per cent) than they do of either the Waikato Region or Total New Zealand.
- The district's Māori population is slightly older than its Waikato and Total New Zealand counterparts.

European-origin population

- Over the decade 1996-2006 the European-origin population of Waitomo declined at all younger ages (less than 55 years) and increased at all older ages, with the net outcome of an overall decline of 9.5 per cent.
- With 13.1 per cent aged 65+ years in 2006, the European-origin population of Waitomo is marginally younger than its regional and national counterparts.



- Under the medium series assumptions the population of Waitomo District is projected to decline very slightly to around 8,900 persons by 2031.
- The decline is not evenly shared by age, with significant and consistent increases projected for all 65+ age groups while the numbers at most younger ages are likely to decline.
- The 65+ population is anticipated to grow both numerically (by 57.5 per cent between 2011 and 2031) and structurally (from 12.5 per cent in 2011 to 21.2 per cent by 2031).

Projections by Ethnicity

- Due to small cell sizes, population projections are not available for all ethnic groups.
- Waitomo's Māori population is projected to increase between 2011 and 2021 by approximately 7.3 per cent, and the European-origin population to decline by 7.6 per cent.
- The district's Māori population is projected to increase across all age groups less than 65 years, while the European/Other population is projected to decline at these ages. Both groups are projected to experience significant increase at the 65+ age group, with higher increases likely for the Māori population.

Labour Market Implications

- Waitomo District can expect to have fewer labour market 'entrants' (15-24 years) than 'exits' (55-64 years) by 2021, with the ratio then rising marginally as a small baby blip born over the past decade arrives at labour market entry age.

Natural Increase Implications

- The projected ratio of elderly (65+ years) to children (0-14 years) will increase rapidly from its 2006 ratio of 0.4 (4 elderly for every 10 children), to 0.9 by 2031.
- This shift towards more elderly than children will contribute to rapidly diminishing levels of natural increase, as will the declining proportion projected to be at the key reproductive ages.



Special Topic 1: Industrial Change

- The average age of employed persons in the Waikato Region at Census 1996, 2001 and 2006 was respectively 38.3, 40.3 and 41.4 years, an overall increase of 3.1 years (8.1 per cent). This is almost identical to the average age for the Total New Zealand employed labour force. However the Waikato Region's employed labour force is ageing at a slightly faster rate.
- The Waikato Region's four largest industries at the 3 digit level (which enumerates 158 industries) are Dairy Cattle Farming; School Education; Building and Construction; and Grain, Sheep and Beef Farming. Those employed in the region's School Education, and Grain, Sheep and Beef Farming industries are on average older and ageing faster than those employed in the Dairy Cattle Farming and Building and Construction industries.
- The relatively slow ageing of the region's Building and Construction industry reflects a 75 per cent increase in numbers employed over the 1996-2006 period, taking it from eleventh to third largest industry at the 3-digit level.
- The Waikato Region's Grain, Sheep and Beef Farmers are the region's third oldest industry of the 158 measured at 3-digit level. The industry's labour market entry: exit ratio has fallen from an already low 5 people at labour market entry age in 1996 per 10 in the 'retirement zone', to just 2 per 10 in 2006.
- For the Waitomo District, Agriculture, Forestry and Fishing is (similarly to the Waikato) the single-largest industry. However, for Waitomo, Manufacturing is second largest, followed by Retail Trade and then School Education.

Special Topic 2: Movers and Stayers

- Census 2006 data based on where people lived five years previously identified that 60.4 per cent of those living in Waitomo in 2006 had been living there in 2001.
- Births accounted for the single-largest percentage of 'Arrivals' (8.1 per cent), followed by those who had been living elsewhere in New Zealand but not further defined (5.7 per cent), those who did not state where they had been living in 2001 (3.5 per cent), and those who had been overseas in 2001 (3.0 per cent).
- The main origin and destination TAs of Waitomo's internal arrivals and leavers were essentially the same: Otorohanga, Hamilton City, and Waipa, with most other New Zealand TAs either sending or receiving a small proportion.



A. What you need to know about these data

Data sources: All data used in this report have been sourced from Statistics New Zealand. Most have been accessed via Infoshare or NZ.Stat/Table Builder, while some have come from purchased, customised databases specially prepared for NIDEA by Statistics New Zealand. Because the data come from different collections and/or are aggregated in different ways, for example by ethnicity or labour force status, and small cell sizes have been rounded by Statistics New Zealand to protect individuals, they often generate different totals. While considerable care has been taken to ensure that such inter- and intra-collection discontinuities are acknowledged and accounted for, for example via footnotes to tables or in the text, the disparities are not usually large, and typically do not affect the story being told. The matter is drawn to the attention of readers who are often concerned when numbers which ‘should’ be the same, are not. The time-series data in Figures 1.1 and 1.2 are a particular case in point.

Ethnicity: The ‘multiple count’ method of enumerating the population by ethnic group is another case worthy of special note. The ethnic concept underlying data used in this report is:

‘the ethnic group or groups that people identify with or feel they belong to. Ethnicity is self-perceived and people can belong to more than one ethnic group. For example, people can identify with Māori ethnicity even though they may not be descended from a Māori ancestor. Conversely, people may choose to not identify with Māori ethnicity even though they are descended from a Māori ancestor’ (Statistics New Zealand 2011).

Counting people more than once makes analysis of the data and its interpretation particularly difficult. Some analysts prefer to calculate proportions based on the summed numbers in each ethnic group, which is the approach taken here, while others prefer to use the total population count as the denominator (eg, for a region). The problem with the latter method is that proportions sum to well over 100 per cent, making it difficult to interpret the resulting graphs. The approach in this paper has been to identify the extent of the ‘over count’.

Residual method for estimating total net migration: This paper uses a residual method for estimating net migration. First, deaths for a given observation (e.g. one single year) are subtracted from births to give an estimate of natural increase. Second, the population at one observation is subtracted from the population at the previous observation, to give an estimate of net change between the two observations. Third, natural increase for that observation is subtracted from net change, to give the component due to net migration.



Residual method for estimating inter-censal migration by age and sex: A similar method is used for estimating net migration by age between two observations for which there are existing data (eg, 5 year census periods). First, numbers by age and sex for one observation are 'survived' based on the probability of surviving to the next age group. Second, known births are apportioned male/female according to the sex ratio (105 males / 100 females), and (using 5 year age group data) entered at age 0-4. Third, the survived numbers for each age/sex group are 'aged' by 5 years, to become the expected population for the next observation. Fourth, expected numbers for each age/sex group are subtracted from actual numbers at the next census, to derive an estimate of net migration for each age/sex.

Projections: The population projections used in this paper are in most cases based on Statistics New Zealand's medium set of assumptions, but comparison with the high and low variants have been included where useful. At national level, the medium assumptions are that the total fertility rate (TFR) will decline from its present 2.1 births per woman to 1.9 births per woman by 2026; that life expectancy will continue to increase, but at a decelerating rate, and that annual net international migration will be 10,000 per year. International and internal migration at the subnational level is also accounted for, the assumptions reflecting observed net migration during each five-year period 1981-2006. The assumptions for Waitomo are included in Appendix Figure 2. When interpreting these data it is important to remind readers that demographic projections of future demand are not forecasts in the sense that they incorporate interventions that may change the demographic future. Rather, they simply indicate what future demand will be if the underlying assumptions regarding births, deaths, and migration prevail.

Industry: The industry data used in the Special Topic (Section 7) are drawn from a time-series database developed by Statistics New Zealand to NIDEA specifications. They pertain to the employed population only. Data are given for three Census observations (1996, 2001 and 2006) and have been customised so that the industrial classification and geographic region is internally consistent across the period. The industrial classification is based on ANZSIC96 V4.1 at the three digit level. Aggregation by employment status (employer, self-employed, paid employee etc.) is another case where the totals in this report may differ from those in other collections.

Where lived five years ago: Section 8 is based on where people lived five years previously to the 2006 Census. Movers are disaggregated into Arrivals (by where lived in 2001) and Leavers (lived in the area in 2001 but lived elsewhere in 2006). Among the Arrivals are those not born five years ago (aged 0-4 years in 2006), and those who were living Overseas in 2001. There are no equivalent categories for Leavers (those Overseas at the 2006 Census, or who had died, were not enumerated).



B. Feature article – Population ageing in a nutshell

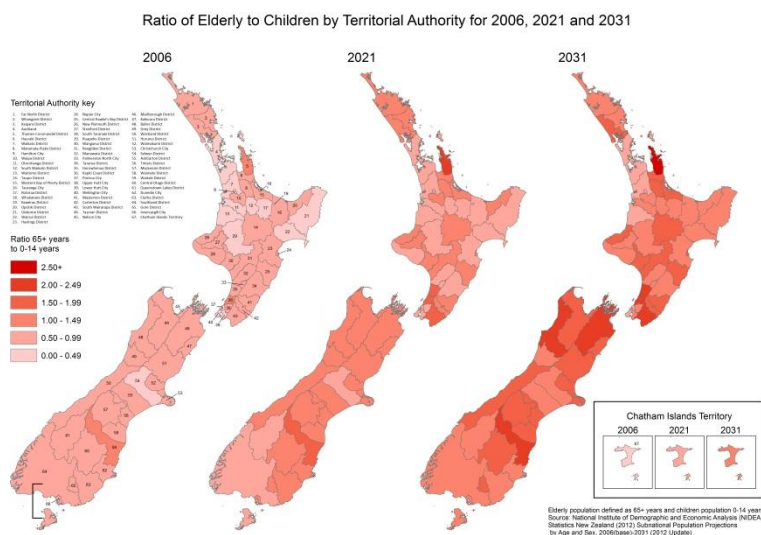
As elsewhere, population ageing is unfolding at markedly different rates across New Zealand. This diversity is caused by different mixes in the drivers of population ageing; birth rates, longevity (survivorship) and migration:

- Declining birth rates decrease the proportion of the population that is young and concomitantly increase the proportion at older ages.
- More people living longer adds to the numbers at older ages, and in the process further swells the proportion at those ages.
- When an area experiences net migration loss, which occurs mainly at 20-39 years, it removes both the young people themselves and their reproductive potential, further pushing up the median age.
- Where an area experiences net migration gains at retiree ages, both the numbers and proportions at those ages are further augmented, further accelerating structural ageing.

The overall outcome of these processes is an incremental—and in some cases rapid—shift to more elderly than children, more deaths than births, and to the end of growth and onset of what is expected to be permanent population decline, something not seen in modern populations until its recent onset in Japan and much of Europe.

Figure B.1 provides an overview of the first of these trends (more elderly than children) at Territorial Authority level (TA). In 1996, no TA had more elderly than children. By 2006 that had become 3 TAs (4.5 per cent); by 2021 it is projected to be the case for 41 TAs (61.2 per cent); and by 2031, for 61 TAs (91.0 per cent).

Figure B.1: Ratio of elderly (65+ years) to children (0-14 years), 2006, 2021 and 2031



As indicated, the process of population ageing generates two even more profound shifts: from natural increase, where births exceed deaths – as they have for all of New Zealand’s modern history – to natural decline where deaths exceed births; and from absolute growth to absolute decline once there are insufficient migrants to offset the ‘lost’ births and increased deaths. In New Zealand, the shift to natural decline is not expected to occur nationally until the second half of the Century. However, the crossover is already occurring in three TAs (Waitaki, Thames Coromandel, and Horowhenua) and is projected to be the case in 22 TAs (30 per cent) by 2031.

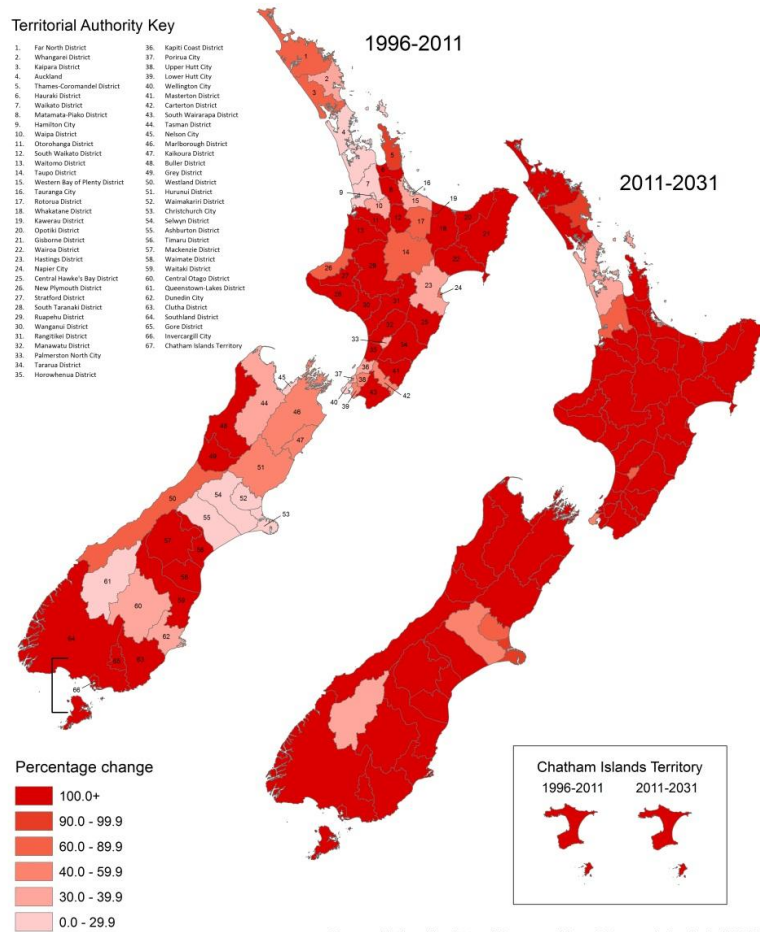
The final piece of the jigsaw is a slow but equally inexorable shift from the ‘old’ form of population decline, which was caused by net migration loss that was greater than natural increase, to the ‘new’ form, where net migration loss is both accompanied by – and further contributes to – natural decline. Currently 24 (36 per cent) of New Zealand’s TAs are declining in absolute terms, but only the three TAs noted above are yet experiencing the new (dual) form of decline. By 2031, the dual form is projected to be the case for seven TAs (10 per cent), alongside a further 15 TAs (22 per cent) experiencing decline from net migration loss only, and one experiencing decline from natural decline only. While it is still some way off for most TAs, the new form of population decline will be especially challenging because it will be self-reinforcing: ever-fewer young adults to bear the children, and ever-more elderly who have completed their childbearing years.

In the interim, it is critical to understand that for 56 TAs (84 per cent), all future ‘growth’ to 2031 will be at 65+ years (Figure B.2) - and that in 23 of these TAs, that growth will be insufficient to offset overall decline at other ages. While the number declining will actually be one fewer than between 1996 and 2011 (due to a higher net migration assumption going forward), there will also be some shift share effects, with six TAs coming marginally out of decline, and five entering it—meaning that in reality 29 TAs (43 per cent) are at the end of their growth stage.

Between 2011 and 2031, only 11 TAs are projected to see less than 100 per cent of their growth at 65+ years: Christchurch and Whangarei (each 95+ per cent at 65+ years), Waikato, Palmerston North City, and Waimakiriri (60-63 per cent), Wellington City, Selwyn and Tauranga City (44-46 per cent), and Auckland City, Hamilton City, and Queenstown (36-37 per cent). The trends are thus both pervasive and inexorable. At national level, this means that two-thirds of growth will be at 65+ years; the underlying trends at subnational level concealed largely by Auckland.



Figure B.2: Contribution to change by the 65+ year old population by Territorial Authority, 1996-2011 and 2011-2031



Source: National Institute of Demographic and Economic Analysis (NIDEA)
Statistics New Zealand (2012) Subnational Population Projections
by Age and Sex, 2006(base)-2031 (2012 Update)

To place New Zealand's situation in a global context, we can look at trends across the 58 More Developed Countries (MDCs) – of which New Zealand is one of the most youthful. Over the next 20 years, the population of the MDCs aged 65+ years will grow by around 98 million, while *all other age groups combined* will decline by 41 million. In anyone's language, those numbers will cause the scales to tip. Currently across the MDCs there is exactly one person aged 65+ years per child aged 0-14; by 2031 there will be 1.5. The shift is also unavoidable, because the 65+ population of 2031 is already 45+ years old. We know how many there are, and the rate at which they will die (and international migration at older ages is minimal). At the younger ages, only those aged less than 20 years are not yet born – but again we know approximately how many there will be in 2031 because we know how many people there will be at the key parenting ages (they are already teenagers) and we can be fairly certain that they are not going to return to having three or four children per woman as was the case during the baby boom (when their grandparents were born).



The global trends provide New Zealand with a salutary warning. The diminishing pool of youth in the other 57 OECD countries is the pool within which New Zealand competes for many of its skilled migrants. Increasing competition for these migrants will increasingly make it difficult for New Zealand to achieve the migration assumptions in the population projections drawn on above. Attention is increasingly being turned to the developing countries where there is still a significant excess supply of young people. However, attracting them to, and retaining them in New Zealand will require more attention to settlement issues and equity than is presently the case. As one of the youngest of the developed countries, those migrants whom New Zealand attracts *and trains* will be of ever-greater interest to our structurally older counterparts.

The following demographic profile for Waitomo should be read with this broad context in mind. The shift to the end of growth is a sequentially-unfolding phenomenon, with plenty of early warning signals. We can plot its course and plan ahead. However the clock is ticking and has been doing so for many years, as the retrospective elements of this profile will clearly identify. The crossing of any one of a handful of thresholds (see Box 1) by a TA means that it has entered the end of its growth phase. As indicated above, some regions may temporarily revert, but it is unlikely that they will resume significant or sustained growth. These issues are being investigated more deeply by researchers at the National Institute of Demographic and Economic Analysis (NIDEA) and their colleagues at Massey University:

Nga Tangata Oho Mairangi: Regional Impacts of Demographic and Economic Change – 2013-2014: MBIE-funded project led by Professor Paul Spoonley (Massey University) and Professor Jacques Poot (NIDEA). Key Researchers: Associate Professor Robin Pearce and Dr Trudi Cain (Massey University), Professor Natalie Jackson, Dr Dave Mare and Dr Michael Cameron (NIDEA).

The sub-national mechanisms of the ending of population growth. Towards a theory of depopulation: Marsden-funded project led by Professor Natalie Jackson. The research team consists of Dr Dave Mare, Dr Michael Cameron, Dr Bill Cochrane, Dr Lars Brabyn, and Emeritus Professor Ian Pool (all of NIDEA).

Box 1: Key thresholds indicating end of growth phase

- Onset of youth deficit (proportion of population aged 15-24 years declines below 15 per cent)
- Fewer people at labour market 'entry' than 'exit' age (15-24: 55-64 years; 20-29: 60-69 years)
- More elderly than children (65+ : 0-14 years)
- Key reproductive age population declines below 15 per cent of the population
- More deaths than births (natural decline)
- Absolute decline

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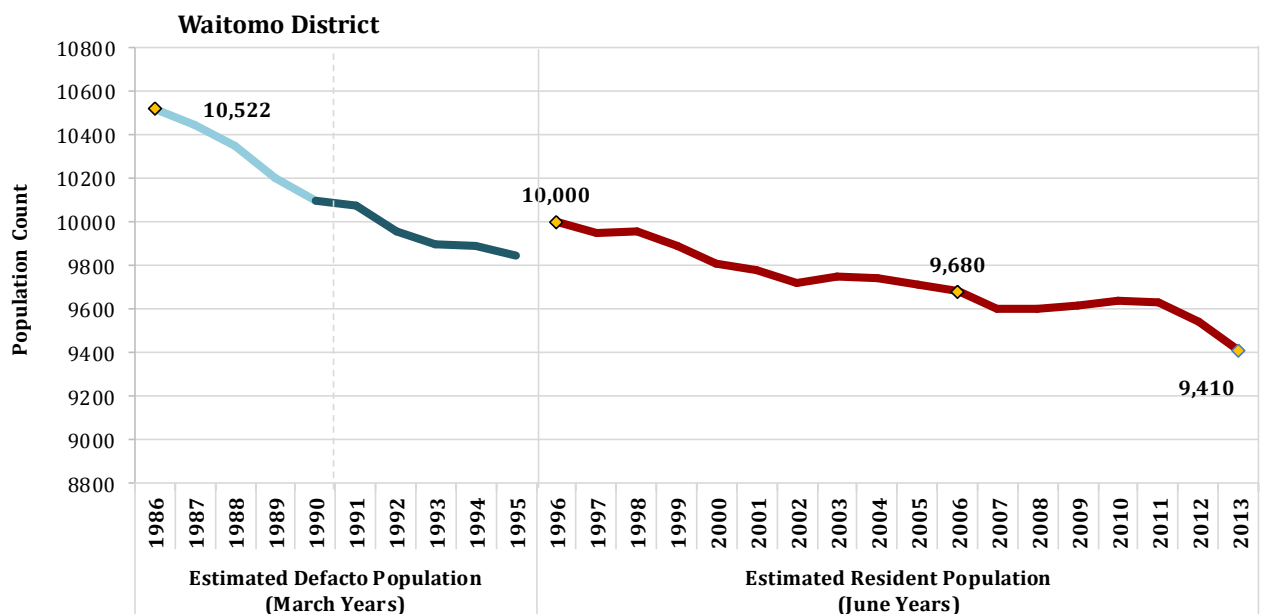


1. Population Trends

1.1 Population Size and Growth

The population of Waitomo District has declined steadily over the past three decades, from around 10,500 in 1986 to 9,410 in 2013 (Figure 1.1). Differences in the timing and methods of estimating population size across the period mean that the trends cannot be presented as continuous; however there is sufficient correspondence to indicate that there has been a steady decline in population since 1996 (with a steeper decline in the 1986-1995 period). Refer to Appendix Table 1 for underlying data.

Figure 1.1: Estimated Population, 1986-2012, Waitomo District



Source: Statistics New Zealand, Infoshare, Tables DPE052AA and DPE051AA

1986-1990: Census Night Resident Population (Census-Adjusted) Intercensal Estimates (March Years)

1991-1995: Census Night Resident Population (unadjusted for Census 1996) (March Years)

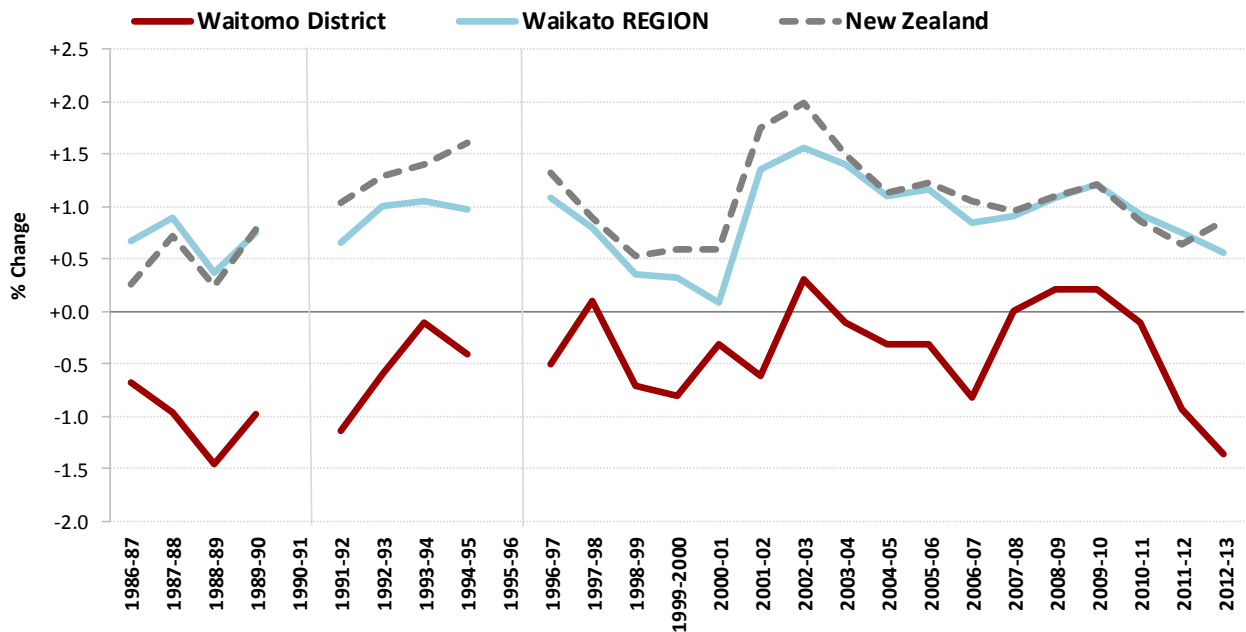
1996 - 2012: Estimated Resident Population for Territorial Authority and Regional Council Areas, at 30 June (1996+) (Annual-Jun)

Notes: *Changes in the timing and method of estimating Resident Population between 1991-1992 and 1995-1996 mean that the three sets of trends should be understood as discontinuous



Figure 1.2 shows the trends in terms of annual rates of population change, with the data collection discontinuities identified by vertical lines. Data are also compared with Waikato Region and Total New Zealand. For Waitomo District, the trends approximately mirror those for both Waikato and total New Zealand, but with negative growth seen across almost the entire 1986-2013 period (see Appendix Table 1 for data).

Figure 1.2: Estimated annual rate (%) of change in population, 1986-2013



Source: Statistics New Zealand, Infoshare, Tables DPE052AA and DPE051AA

1986-1990: Census Night Resident Population (Census-Adjusted) Intercensal Estimates (March Years)

1991-1995: Census Night Resident Population (unadjusted for Census 1996) (March Years)

1996 - 2012: Estimated Resident Population for Territorial Authority and Regional Council Areas, at 30 June (1996+) (Annual-Jun)

Notes: *Changes in the timing and method of estimating Resident Population between 1991-1992 and 1995-1996 mean that the three sets of trends should be understood as discontinuous

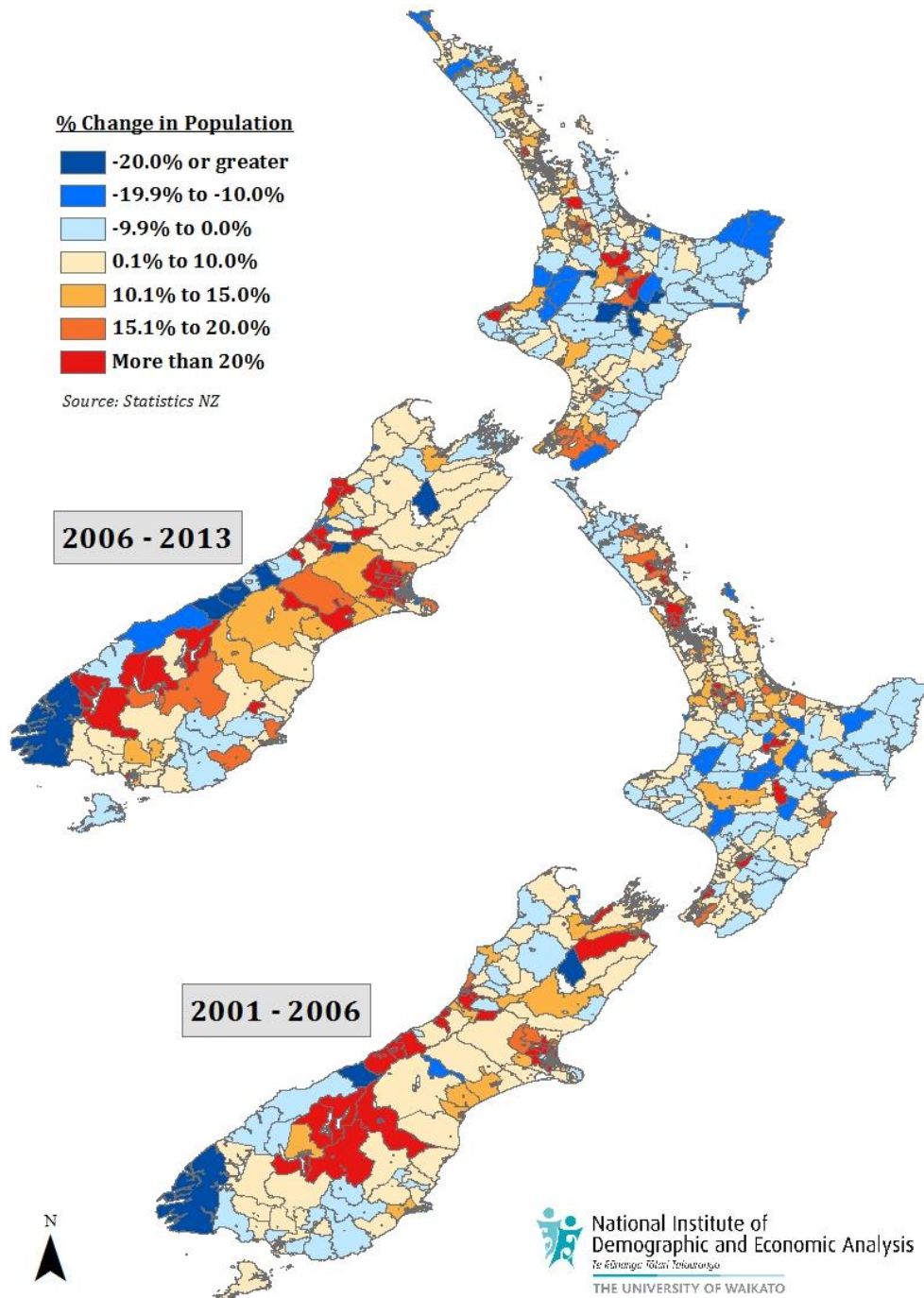
1.2 Census 2013 – First Insights

The first data release from the 2013 Census has made it possible to include in this report a snapshot of the changes in the usually resident population for the two periods, 2001-2006 and 2006-2013. Figures 1.3 and 1.4 show the percentage change in the ‘usual resident’ population at the Census Area Unit (CAU) level for Total New Zealand and the Waikato Region respectively. CAUs are non-administrative areas which are aggregations of meshblocks. CAUs may be aggregated at various levels to define common administrative areas such as urban communities, territorial authorities or regional council areas.



The usually resident population of New Zealand increased by 5.3 percent over the seven year period, 2006-2013. The pattern of change was not distributed evenly. Almost one-third of CAUs with a population of over 10 residents declined in number across the period (affecting 613 of the total 1,869 CAUs). This is a notable increase from the 475 CAUs (25.4 per cent) which recorded a decline in population over the previous inter-censal period (2001-2006).

Figure 1.3: Percentage change in the usually resident population of Census Area Units (CAU), 2001-2006 and 2006-2013: Total New Zealand



A similar pattern of change was seen across the Waikato Region, which grew overall by 6.4 per cent. One-third (56 CAUs, 33.9 per cent) of the region's 173 CAUs declined in size over the 2006-2013 period (see Figure 1.5 and Table 1.1). As occurred nationally, the decline was more widespread than across the previous inter-censal period 2001-2006, when approximately one-quarter of the region's CAUs declined in size (42 CAUs, 25.5 per cent).

This increase in the number/proportion of CAUs recording a decline in population numbers between 2006 and 2013 compared to the previous period is most significant for Waitomo (six CAUs declined in size between 2006 and 2013 compared to three between 2001 and 2006; Hauraki (five compared to two in 2001-2006); and Thames-Coromandel (seven compared to four).

Figure 1.4: Percentage change in the usually resident population of Census Area Units (CAU) within each Territorial Authority (TA) boundary, 2001-2006 and 2006-2013: Waikato Region

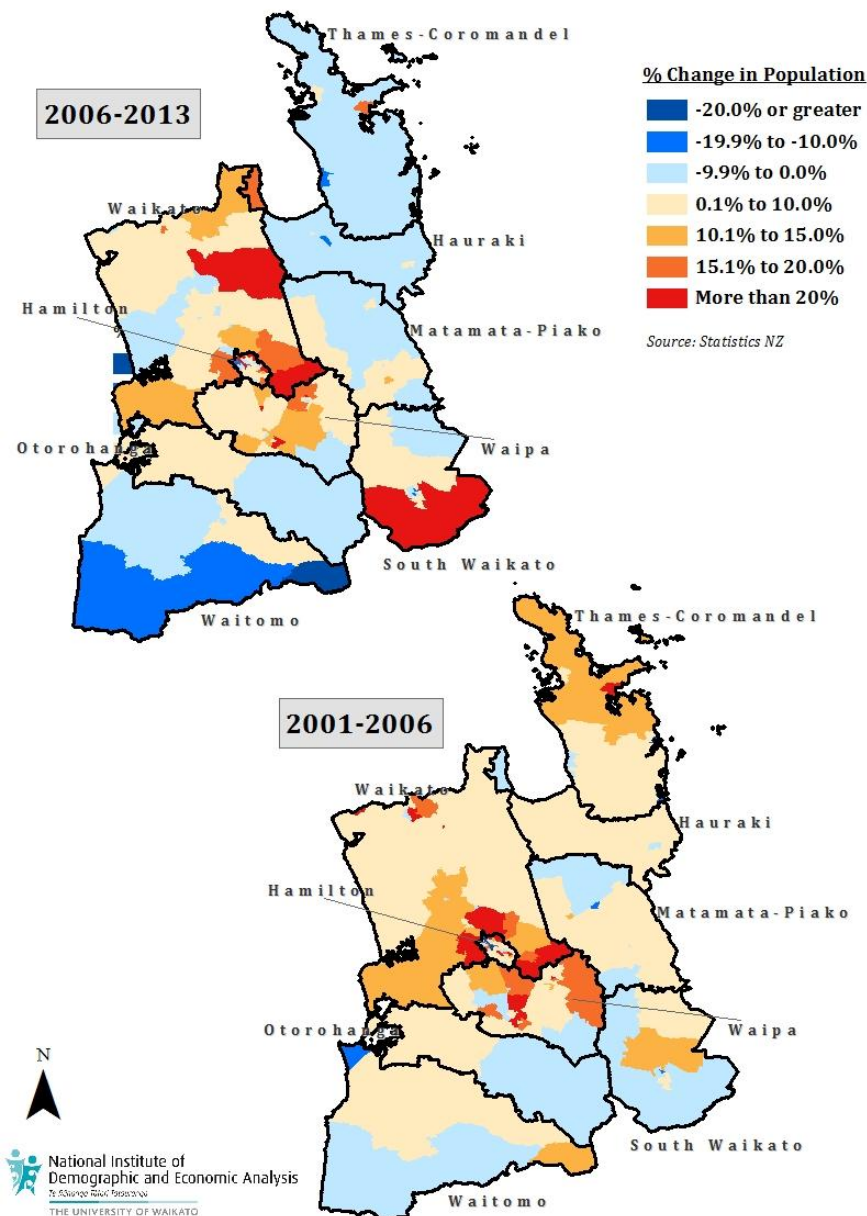
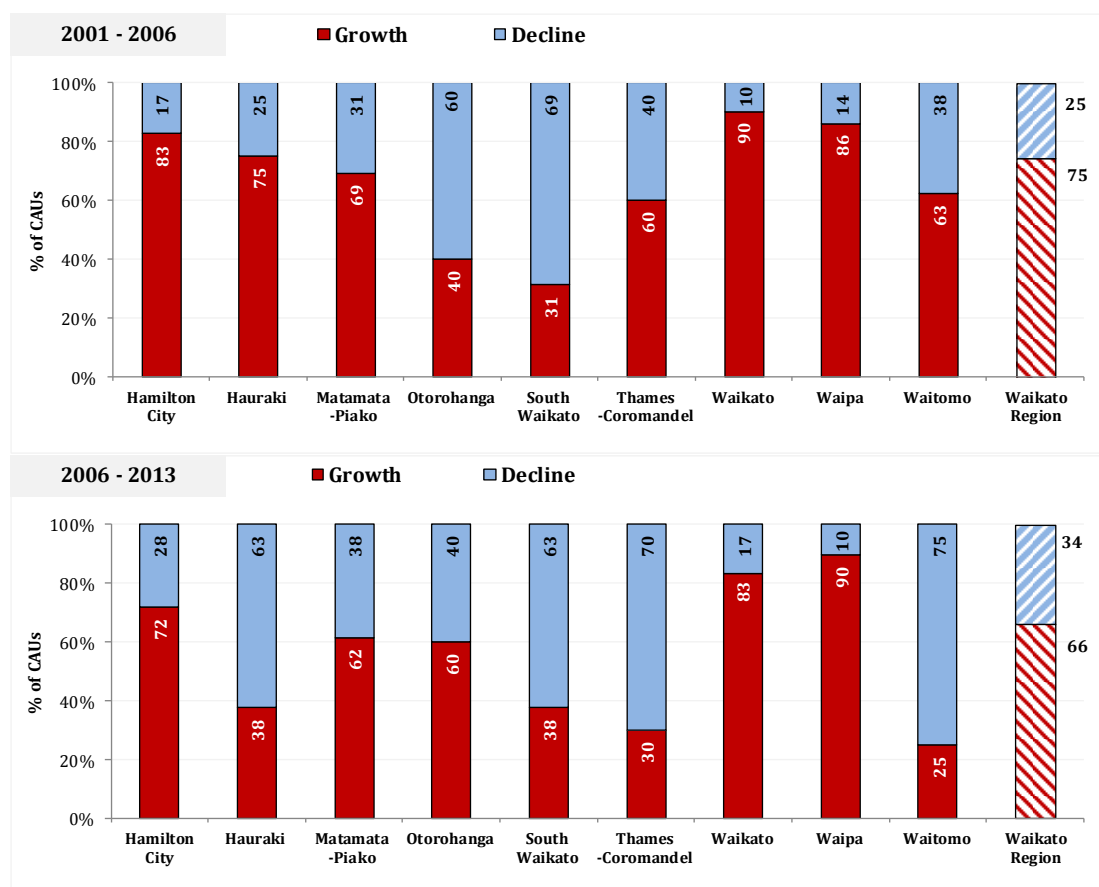


Figure 1.5: Percentage of CAUs growing or declining in population within each TA in the Waikato Region, 2001-2006 and 2006-2013



* Only CAUs with usually resident population of more than 10 in either of the three Census years, 2001, 2006 and 2013 are included.

Table 1.1: Census Usually Resident Population of the Waikato Region living in each TA in 2001, 2006, 2013; and population change over the inter-censal periods

Territorial Authority (TA)	Census Usually Resident Population			Change 2001-2006			Change 2006-2013		
	2001	2006	2013	Number	Percent	Average annual change (Percent) ⁽¹⁾	Number	Percent	Average annual change (Percent) ⁽¹⁾
Hamilton City	116,607	129,588	141,612	+12,981	+11.1	+2.2	+12,024	+9.3	+1.3
Hauraki	17,475	17,859	17,811	+384	+2.2	+0.4	-48	-0.3	-0.0
Matamata-Piako	29,469	30,480	31,536	+1,011	+3.4	+0.7	+1,056	+3.5	+0.5
Otorohanga	9,282	9,078	9,138	-204	-2.2	-0.4	+60	+0.7	+0.1
South Waikato	23,472	22,644	22,071	-828	-3.5	-0.7	-573	-2.5	-0.4
Thames-Coromandel	25,179	25,938	26,178	+759	+3.0	+0.6	+240	+0.9	+0.1
Waikato	51,843	57,585	63,378	+5,742	+11.1	+2.2	+5,793	+10.1	+1.4
Waipa	38,958	42,501	46,668	+3,543	+9.1	+1.8	+4,167	+9.8	+1.4
Waitomo	9,453	9,438	8,910	-15	-0.2	-0.0	-528	-5.6	-0.8
Waikato Region	321,738	345,111	367,302	+23,373	+7.3	+1.5	+22,191	+6.4	+0.9



The usually resident population of Waitomo declined by 5.6 per cent over the 2006-2013 period, a far more significant decline than the -0.2 per cent recorded from 2001-2006. As was the case both regionally and nationally, the change in population is not evenly distributed, with two of Waitomo's eight CAUs reporting growth in population across the 2006-2013 period, and the remaining six, net decline, together explaining the overall population decline of the district (Table 1.2).

Table 1.2: Census Usually Resident Population of Waitomo District living in each CAU in 2001, 2006, 2013; and population change over the inter-censal periods

Territorial Authority (TA)	Census Area Unit (CAU)	Census Usually Resident Population			Change 2001-2006			Change 2006-2013		
		2001	2006	2013	Number	Percent	Average annual change (Percent) ⁽¹⁾	Number	Percent	Average annual change (Percent) ⁽¹⁾
Waitomo District	Mahoenui	528	480	399	-48	-9.1	-1.8	-81	-16.9	-2.4
	Marokopa	1,569	1,572	1,536	3	+0.2	+0.0	-36	-2.3	-0.3
	Mokauiti	1,218	1,182	1,029	-36	-3.0	-0.6	-153	-12.9	-1.8
	Piopio	468	468	393	0	+0.0	+0.0	-75	-16.0	-2.3
	Taharoa	246	216	231	-30	-12.2	-2.4	15	+6.9	+1.0
	Te Kuiti	4,392	4,455	4,218	63	+1.4	+0.3	-237	-5.3	-0.8
	Tiroa	72	81	51	9	+12.5	+2.5	-30	-37.0	-5.3
	Waipa Valley	960	984	1,050	24	+2.5	+0.5	66	+6.7	+1.0
Waitomo District	9,453	9,438	8,907	-15	-0.2	-0.0	-531	-5.6	-0.8	

1. Calculated as a constant rate of annual population change over the period (five years between 2001 and 2006, and seven years between 2006 and 2013).

Percentages have been rounded to one decimal place.

* Only CAUs with usually resident population of more than 10 in either of the three Census years, 2001, 2006 and 2013 are included.

1. POPULATION TRENDS: KEY FINDINGS

Population Size and Growth

- The population of Waitomo District has declined steadily over the past three decades, from around 10,500 in 1986 to 9,410 in 2013.
- The trends mirror those for both Waikato Region and total New Zealand, but negatively, with decline occurring for the district across almost the entire 1986-2013 period.

Census 2013 – First Release

- The usually resident population of Waitomo declined by 5.6 per cent over 2006-2013, a more significant decline than the previous -0.2 per cent recorded between 2001 and 2006.
- The change is not evenly distributed, with two of Waitomo's eight CAUs recording growth in population 2006-2013, and the remaining six (75 per cent), net decline.
- In the previous inter-censal period 2001-2006, only 38 per cent of Waitomo's CAUs (three of the eight) declined in population size, indicating a continuing and more widespread decline across the district 2006-2013.



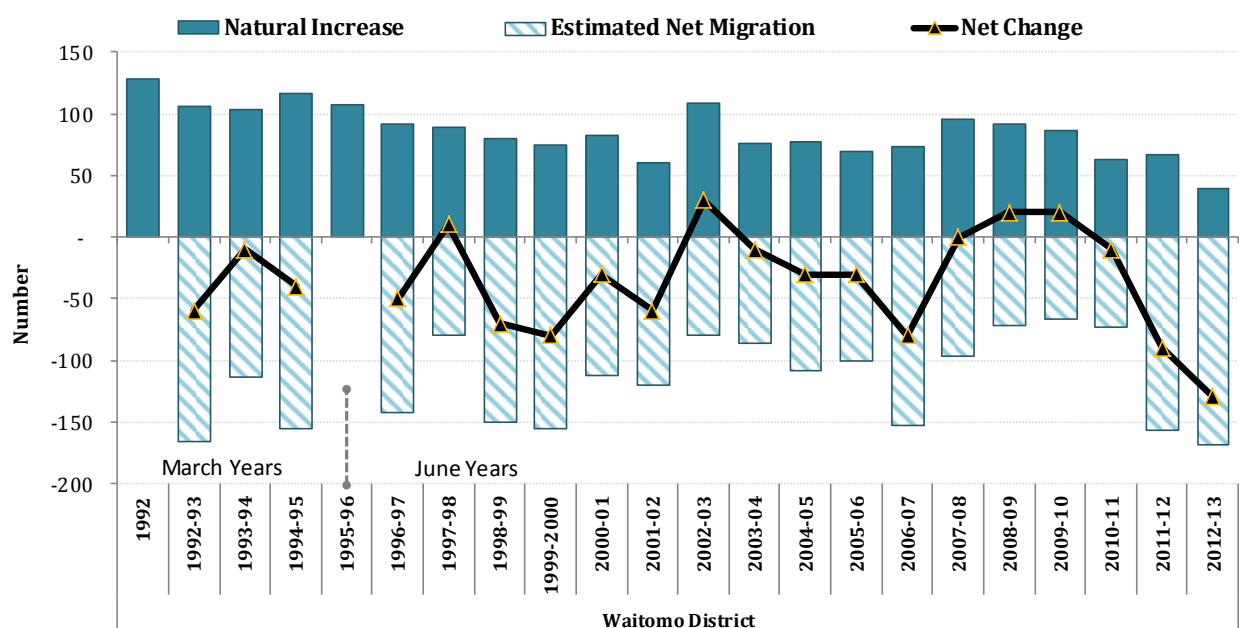
2. Components of Change

2.1 Natural Increase and Net Migration

Figure 2.1 shows the components of change contributing to the decline in population for the Waitomo District across the period 1991-2013 (see Appendix Table 2 for underlying data). The primary cause of declining population numbers in the district is clearly net migration loss, but this decline was partially offset by low (and declining) levels of natural increase (the difference between births and deaths).

Data for the Waikato and Total New Zealand (Figures 2.1.2 and 2.1.3) place these trends in context, with the important - but often poorly acknowledged - role of natural increase playing a relatively large role in both cases. While significant net migration losses were seen across the 1998-2001 period in the Waikato Region, similar losses, although more muted, were also recorded at the national level.

Figure 2.1: Natural Increase, Net Migration and Net Change 1992-2013, Waitomo District



Source: Compiled from Statistics New Zealand, Infoshare

(1) 1992-1995 Estimated Defacto Population (March Years); Statistics New Zealand, Yearbook collection 1893-2012

(2) Estimated Resident Population for Regional Council and Territorial Authority Areas, at 30 June(1996+) (Annual-Jun)

Table reference: DPE051AA and DPE052AA, Boundaries at 1 January 2013. Last updated: 22 October 2013 10:45am

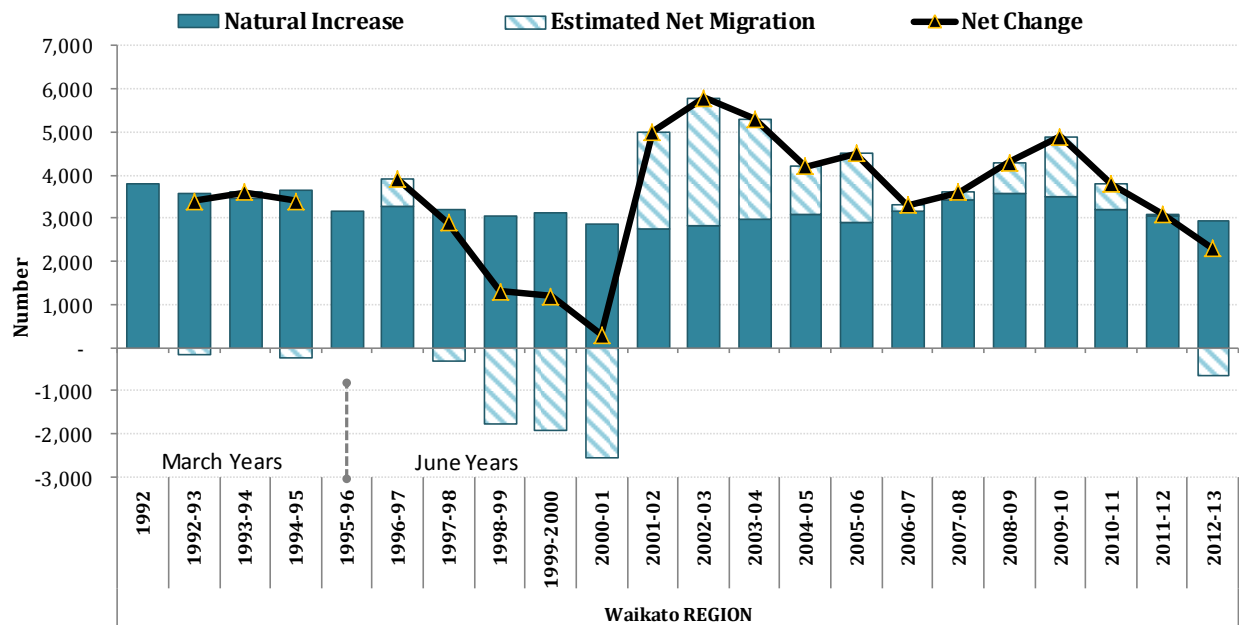
(3) Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun)

Table reference: VSB011AA, VSB016AA, VSD008AA, VSD018AA Last updated: 16 August 2013 10:45am

*Changes in timing and method of estimating Resident Population between 1995 and 1996 mean that only natural increase can be shown for that year.

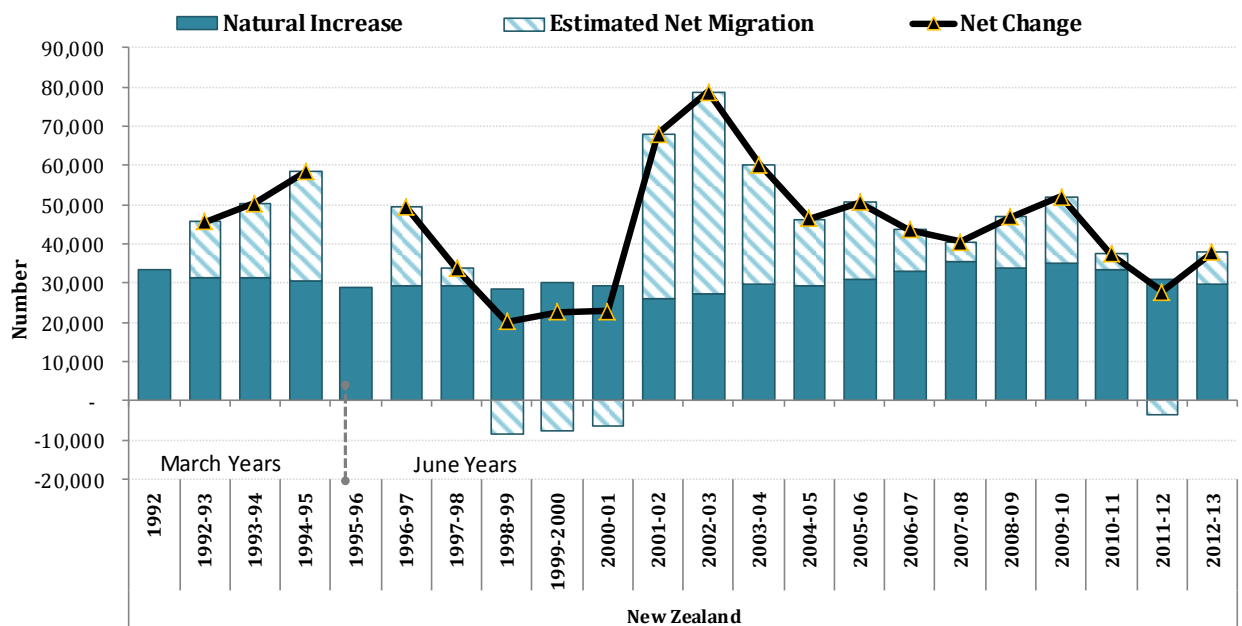


Figure 2.2: Natural Increase, Net Migration and Net Change 1992-2013, Waikato Region



*Changes in timing and method of estimating Resident Population between 1995 and 1996 mean that only natural increase can be shown for that year.

Figure 2.3: Natural Increase, Net Migration and Net Change 1992-2013, Total New Zealand



*Changes in timing and method of estimating Resident Population between 1995 and 1996 mean that only natural increase can be shown for that year.

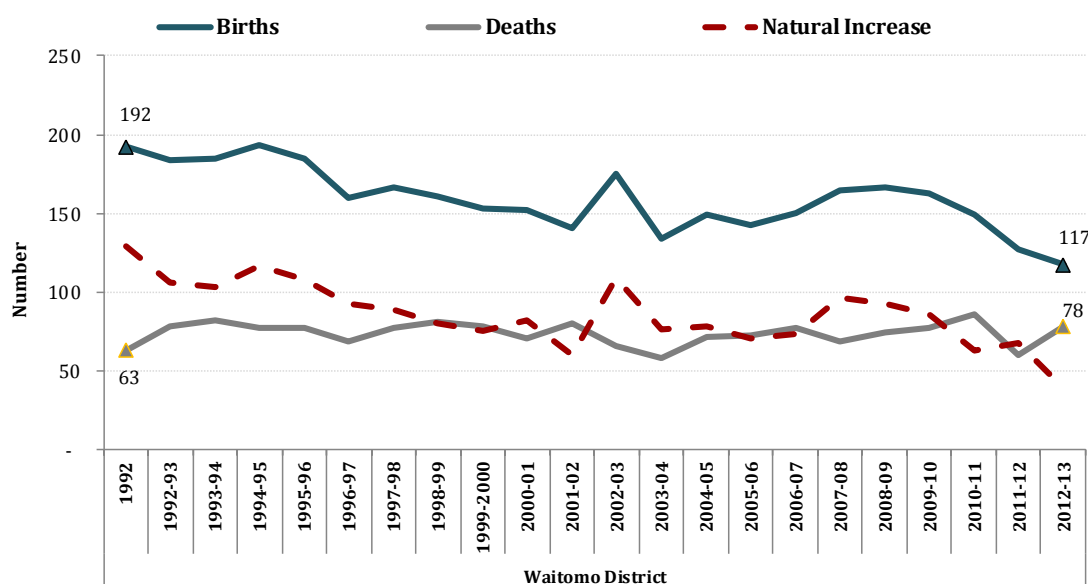


2.2 Births, Deaths and Natural Increase

Underlying the trends in natural increase shown above are those for births and deaths, depicted in Figure 2.4. Here we see that an important driver of the decline in population is a steady decline in the number of births from 192 in 1992 to 117 in 2012-13. For a number of reasons outlined below (most significantly the reducing size of the reproductive age cohort indicated in Section 4: Age Structure and Population Ageing), birth numbers are unlikely to see major increase in the future.

A slight increase in the number of deaths is also seen from 63 in 1992 to just below 80 in 2012-13. The overall trend of slow increase will soon accelerate as the Baby Boomer wave moves through the older age groups. As the projections further below show, the overall outcome of these opposing trends will be a steady decline in natural increase.

Figure 2.4: Births, Deaths and Natural Increase, 1992-2013, Waitomo District



Source: Compiled from Statistics New Zealand, Infoshare

Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun)

Table reference: VSB011AA, VSB016AA, VSD008AA, VSD018AA Last updated: 16 August 2013 10:45am

2. COMPONENTS OF CHANGE: KEY FINDINGS

- Low levels of natural increase (the difference between births and deaths) combined with widespread net migration losses over the entire period are the primary causes of declining population numbers in the district.
- Steady decline in the number of births from 192 in 1992 to only 117 in 2012-13 and slight increase in the number of deaths contributing to low levels of natural increase.

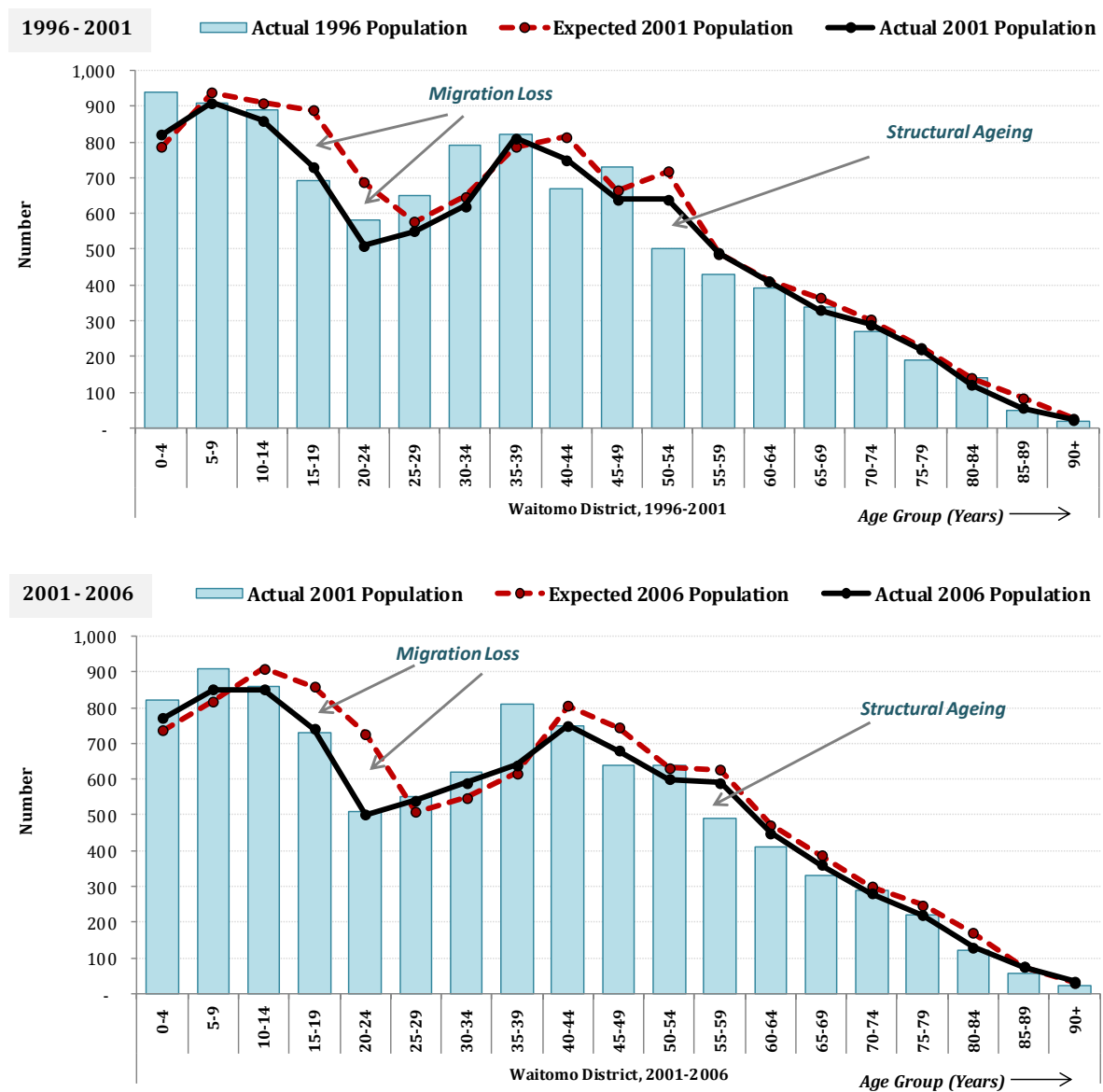


3. Components of Change by Age

3.1 Expected versus Actual Population

Using the residual method for estimating net migration described earlier, the components of change can be plotted by age. Figure 3.1 shows that in both periods 1996-2001 and 2001-2006, net migration losses occurred across most age groups, most notably at ages 15-19 and 20-24, but increasingly also at 40+ years. Between 2001 and 2006 there were minor gains at 0-9 and 25-39 years. Refer to Appendix Tables 3-6 for underlying data.

Figure 3.1: Expected and actual population by age, 1996-2001 and 2001-2006, Waitomo District



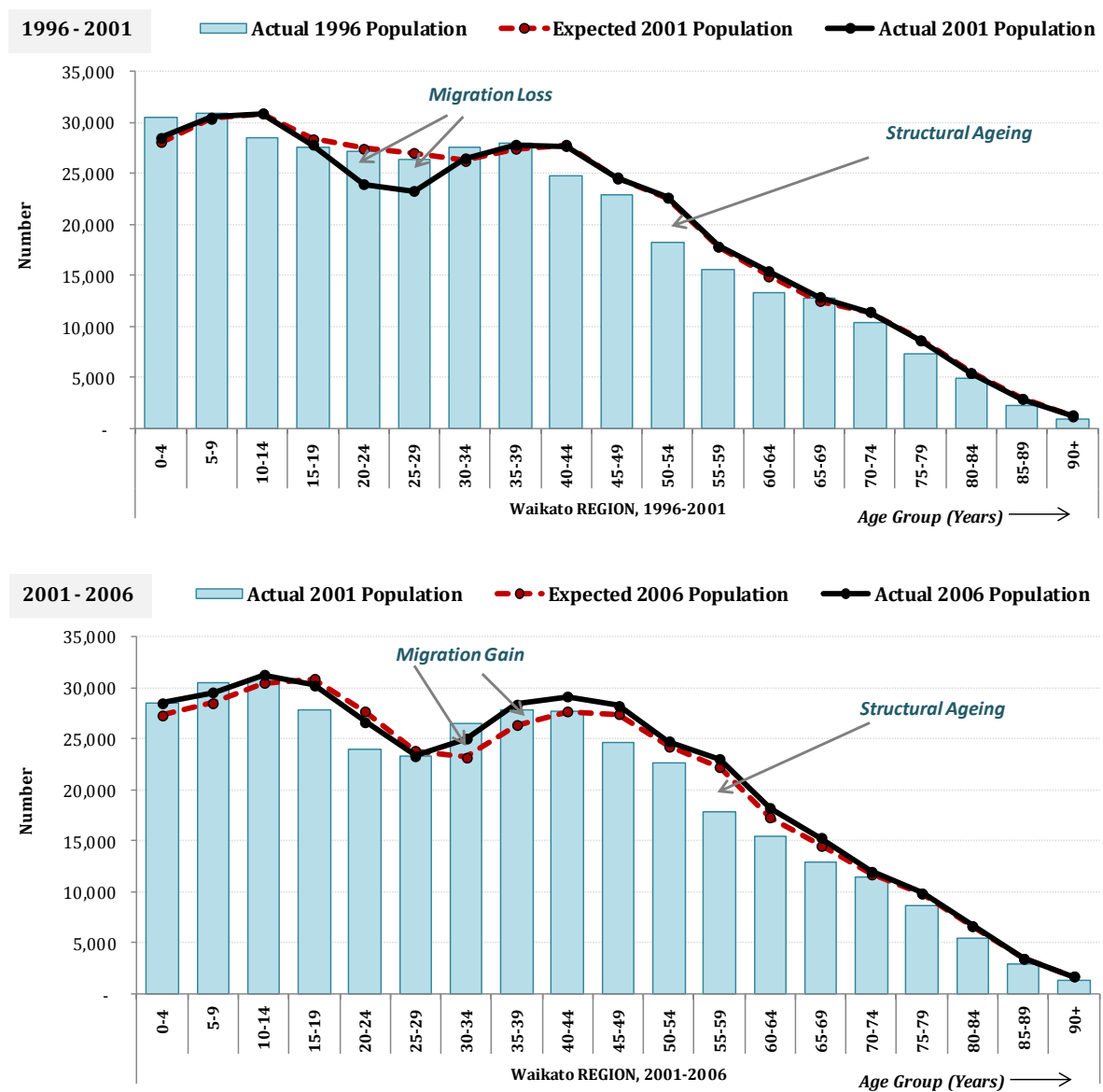
Source: Statistics NZ
 Jackson/ from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007



The data for the Waikato Region are somewhat different (Figure 3.2), with notable net migration losses only in the earlier 1996-2001 period and only at 20-24 and 25-29 years of age; modest net migration gains were also seen in the latter period over the broad 30-44 age group (see Appendix Tables 3-6 for underlying data).

Of note for both regions is the impact of structural ageing which shows at 50-54 years across the 1996-2001 period, and 55-59 years for 2001-2006. That is, the gap between numbers at the previous Census (columns) and Expected/Actual numbers at the subsequent Census, reflects the movement of the Baby Boomer wave through the age structure.

Figure 3.2: Expected and actual population by age, 1996-2001 and 2001-2006, Waikato Region



Source: Statistics NZ
 Jackson/ from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007



3.2 Migration Flows – Demographic Accounting Model

The data in the previous section can be further disaggregated using a demographic accounting methodology (Jackson and Pawar 2013) to show the approximate composition of migration flows. This is done first in Figures 3.3 and 3.4 to show all components of change (1996-2001 and 2001-2006), and then in Figures 3.5 and 3.6 to show the flows by age.

Figure 3.3 shows that between 1996 and 2001, the Estimated Resident Population (ERP) of Waikato District declined by around 220 people. Natural Increase (births minus deaths) accounted for an increase of 418 persons while the decrease of 638 persons from the estimated resident population can be attributed to the Estimated Net Migration (Estimated Net Migration being the difference between Estimated Resident Population Change, and Natural Increase). From Estimated Net Migration we then account for 'known' Net Migration (-496), which is comprised of known Net Internal Migration (-315) and known Net International Permanent/Long Term (PLT) Migration (-181). This leaves an unaccounted for component of migration, which we call here 'residual' migration (-142). Residual migration is a complex combination of (a) potential error in the initial estimation of the ERP by Statistics New Zealand, (b) international immigrants moving to a different locality to that stated on their Arrival form, (c) international emigrants leaving a different locality to that stated on their Departure form, and (d) internal migrants incorrectly stating where they live now or lived five years ago.

The model then further disaggregates each net migration component into its respective inflows and outflows (for the 1996-2001 period, 1,464 internal immigrants and 1,779 internal emigrants; 302 PLT international immigrants and 483 PLT international emigrants).

Figure 3.4 for the period 2001-2006 can be similarly read. Similar to the previous period, the district experienced a Net Migration loss of 493 persons with declines in both Net Internal and Net International migration.

Figures 3.5 and 3.6 illustrate the same dataset by age group for each period, showing that all age groups experienced both inflows and outflows of both internal and international migrants, with the number of movements greatest for the characteristically high migration age group: 20-24 years.

The resulting age profile for Known Net Migration is summarised in Figure 3.7 (also see Table 3.1). Known Net migration is notably negative at almost all ages for both internal and international migration, for both periods, the only exceptions being at 5-14 and 25-34 years. The losses are most significant for the 15-19 and 20-24 year age groups. Very little migration is observed among persons aged 60 years or more.



Figure 3.3: Components contributing to Estimated Resident Population, Waitomo District 1996-2001

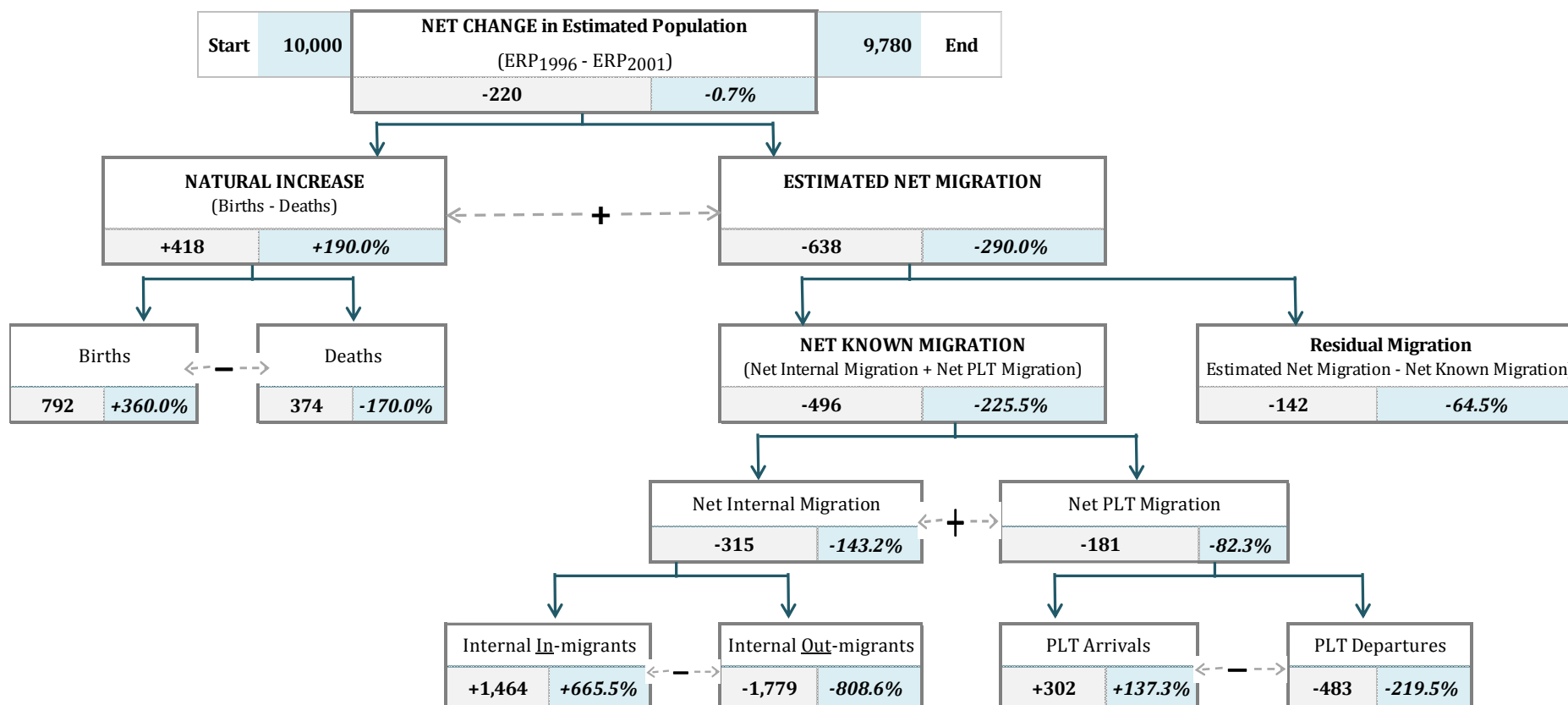


Figure 3.4: Components contributing to Estimated Resident Population, Waitomo District 2001-2006

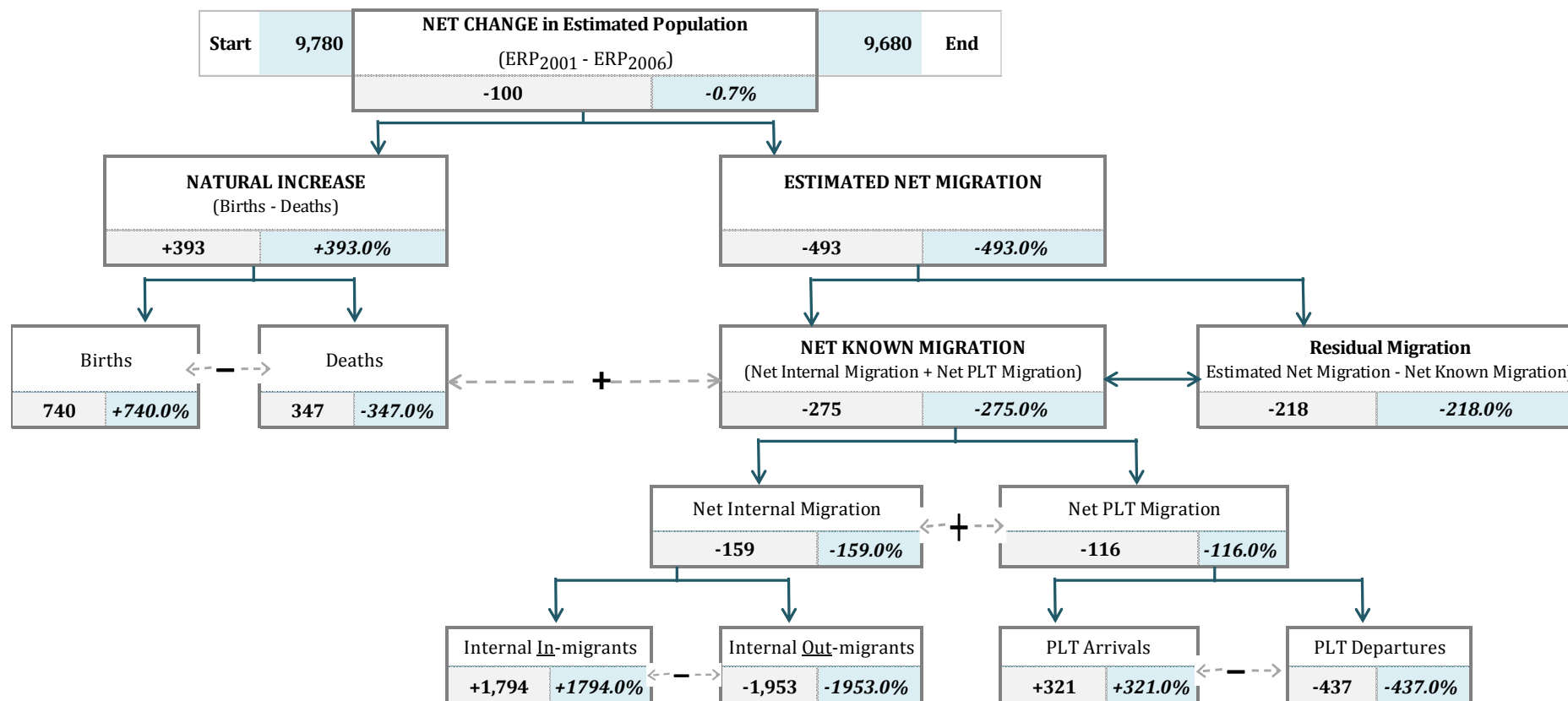
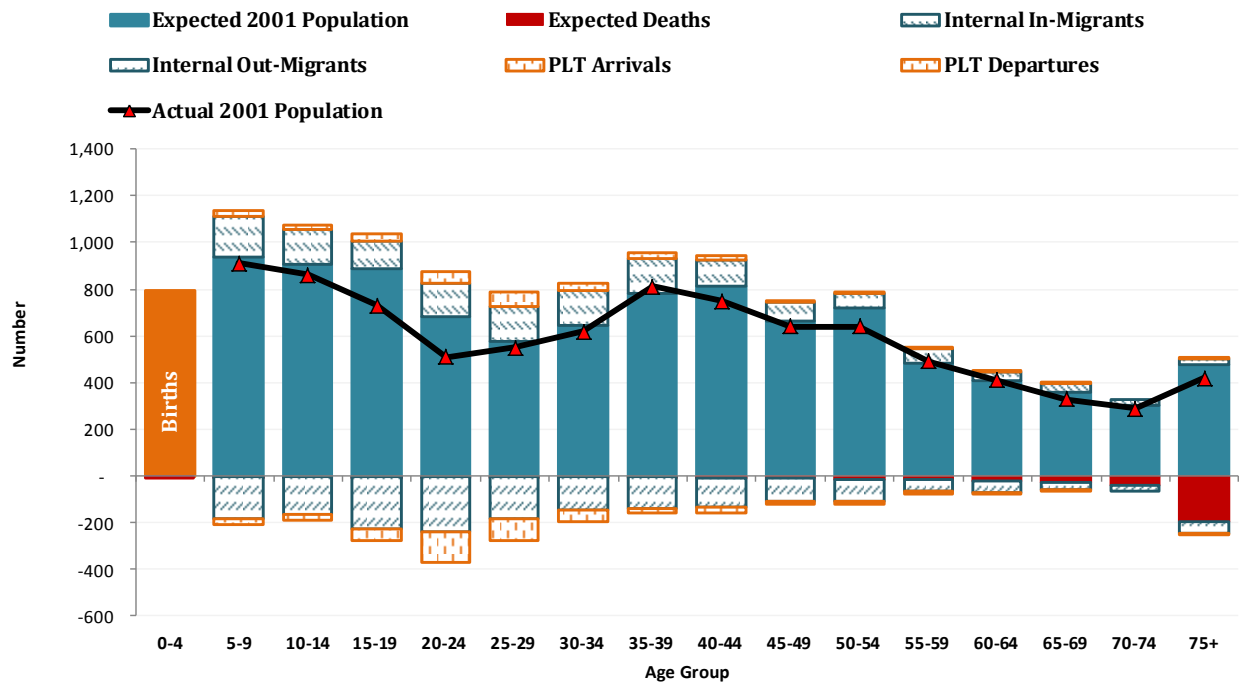
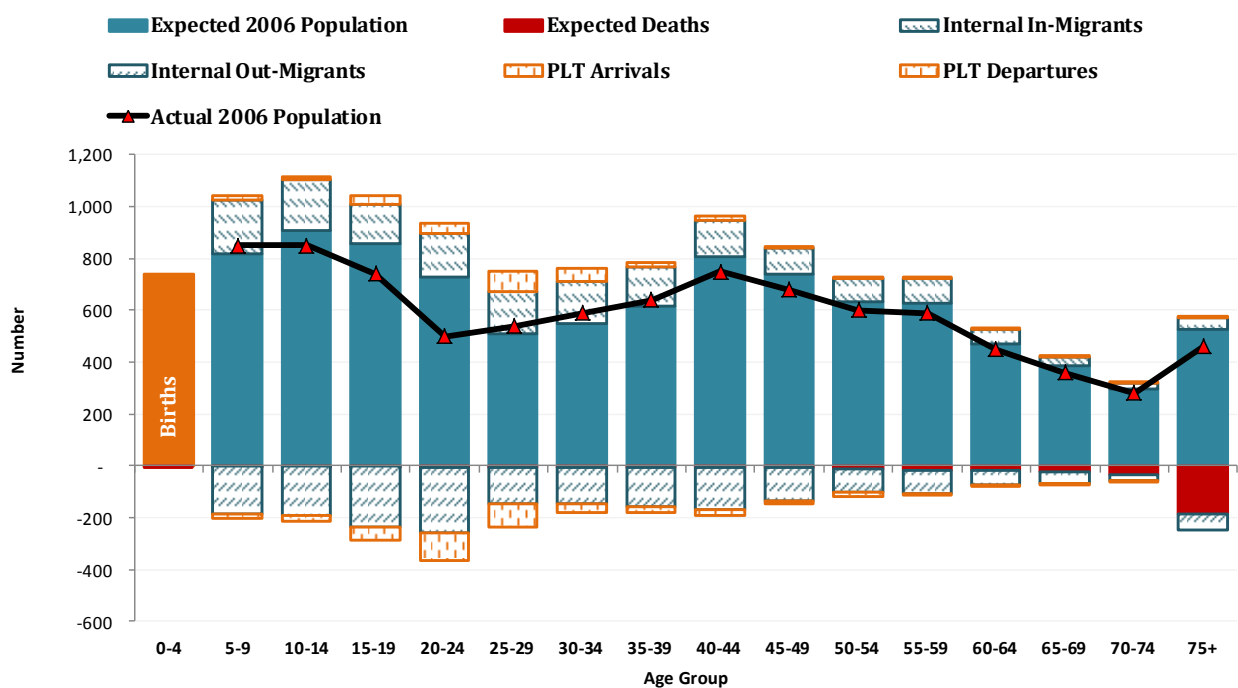


Figure 3.5: Components Contributing to Estimated Resident Population by Age, Waitomo District, 1996-2001



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources

Figure 3.6: Components Contributing to Estimated Resident Population by Age, Waitomo District, 2001-2006



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



Figure 3.7: Estimated Age Profile of [Known] Net Internal and Net International (PLT) Migration, Waitomo District 1996-2001 and 2001-2006

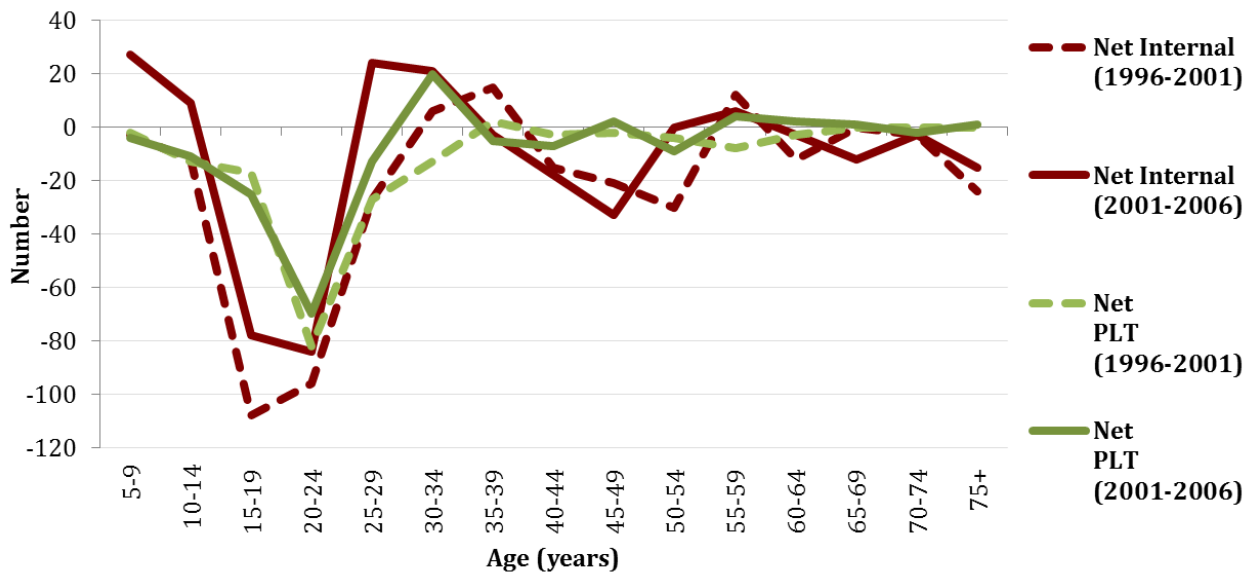


Table 3.1: Estimated Age Profile of [Known] Net Internal and Net International (PLT) Migration, Waitomo District 1996-2001 and 2001-2006

Age Group	Net Internal (1996-2001)	Net Internal (2001-2006)	Net PLT (1996-2001)	Net PLT (2001-2006)
5-9	-3	27	-2	-4
10-14	-12	9	-13	-11
15-19	-108	-78	-17	-25
20-24	-96	-84	-82	-70
25-29	-27	24	-27	-13
30-34	6	21	-13	20
35-39	15	-3	2	-5
40-44	-15	-18	-3	-7
45-49	-21	-33	-2	2
50-54	-30	0	-4	-9
55-59	12	6	-8	4
60-64	-12	-3	-3	2
65-69	0	-12	0	1
70-74	-3	-3	0	-2
75+	-24	-15	0	1

Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



3. COMPONENTS OF CHANGE BY AGE: KEY FINDINGS

- Significant net migration losses have occurred across most age groups, most notably at ages 15-19 and 20-24 over both the 1996-2001 and 2001-2006 periods, and increasingly at 40-59 years; There have been minimal net migration gains, with those occurring essentially limited to Internal Migrants at ages 5-14 and 25-34 and International Migrants aged 30-34, in the 2001-2006 period.



4. Age Structure and Population Ageing

4.1 Numerical and Structural Ageing

As elsewhere, the population of Waitomo District is ageing. It is ageing numerically, as more people survive to older ages, and structurally, as falling birth rates and reducing numbers at the key reproductive ages deliver fewer babies into the base of the age structure, causing the proportions at younger ages to decline and growth in numbers at older ages to also become increased proportions.

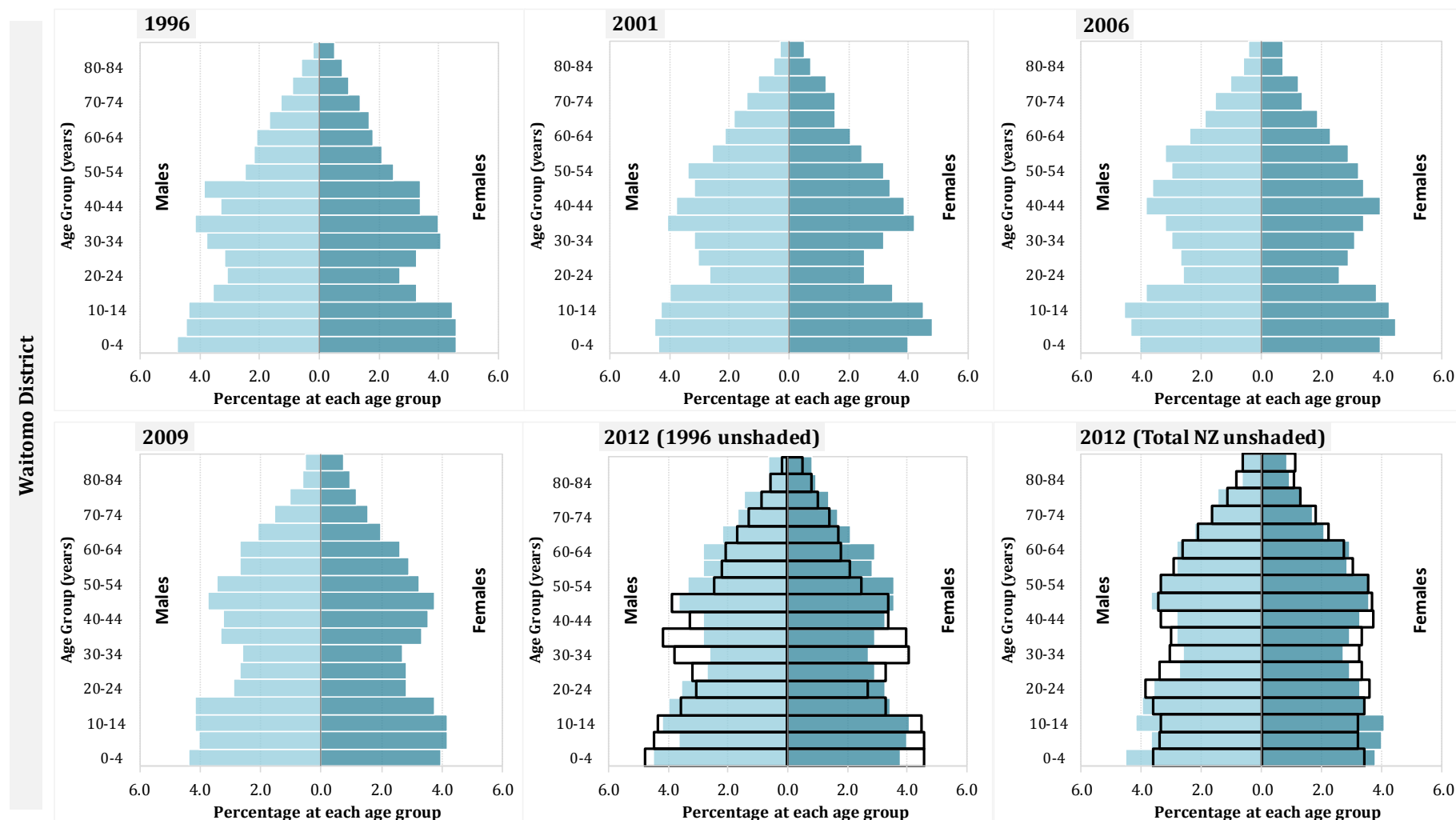
Migration is also playing a significant role. As indicated above, Waitomo's structural ageing is accelerated because of net migration loss at the young adult ages, particularly 15-24 years. The loss of people at these youthful ages accelerates the structural ageing process in two ways: firstly as a direct result of the reduction in their own numbers; and secondly because it removes their reproductive potential, along with any children they may have. The district's structural ageing may also be slightly *slowed* by net losses at older ages, which reduce both numerical and structural ageing.

Figure 4.1 illustrates the outcome of these trends over the period 1996-2012 (see Table 4.1 for summary data). Most obvious from Figure 4.1 is the deepening of the 'bite' (or 'waist') in the age structure over the young to middle adult years, indicating the combined effects of the net migration loss at 15-24 years (successively over time), and the minor net gains above and below, which act to accentuate the bite; further augmented by the increasing life expectancy at the oldest ages, and declining birth rates at the youngest ages. Importantly, Waitomo is not alone in experiencing this age structural bite; it is also evident across most of New Zealand's non-urban regions, and is partly a reflection of declining birth rates at the time the current population aged 20-39 years was born. The bite is, however, slightly deeper for Waitomo District at 20-44 years than for Total New Zealand, as can be seen in the lower right-hand panel.

Compression at the youngest ages due to declining birth rates over the period 1996-2006 is clear, followed by a small resurgence in births since 2009. The proportion at the youngest ages (0-4 years) in 2012 is marginally higher for Waitomo than Total New Zealand. As Table 4.1 shows, Waitomo's population aged 65+ years has increased from 10.1 per cent in 1996 to 13.5 per cent in 2012, making it slightly younger than both Total New Zealand (13.8 per cent), and the Waikato Region (14.3 per cent), but ageing faster (an increase of 7.1 per cent compared with 3.5 and 3.8 per cent respectively).



Figure 4.1: Age-sex Structure of Waitomo District 1996-2012, and compared with New Zealand 2012



Source: Jackson, N.O (2012) Subnational Age Structure Resource 1996-2011, NIDEA, University of Waikato. Source data from Stats NZ Infoshare Estimated Subnational Population and TableBuilder: (RC, TA,AU) by Age and Sex at 30 June 1996, 2001, 2006-2011 (2006 Boundaries)



Table 4.1: Summary indicators of change by age, 1996-2012

Distribution of population over broad age groups									
Broad Age Group (Yrs)	Population					Average Annual Change (%)			Annual Change (%) 2011-12
	1996	2001	2006	2011	2012	1996-2001	2001-2006	2006-2011	
0-14	2,740	2,590	2,470	2,380	2,310	-1.1	-0.9	-0.7	-2.9
15-24	1,270	1,240	1,240	1,360	1,360	-0.5	+0.0	+1.9	+0.0
25-54	4,160	4,010	3,800	3,570	3,530	-0.7	-1.0	-1.2	-1.1
55-64	820	900	1,040	1,100	1,090	+2.0	+3.1	+1.2	-0.9
65+	1,010	1,040	1,100	1,210	1,290	+0.6	+1.2	+2.0	+6.6
Waitomo District	10,000	9,780	9,650	9,620	9,580	-0.4	-0.3	-0.1	-0.4
Waikato Region	359,800	369,800	395,100	415,300	418,600	+0.6	+1.4	+1.0	+0.8
New Zealand	3,732,000	3,880,500	4,184,500	4,405,200	4,433,100	+0.8	+1.6	+1.1	+0.6
Broad Age Group (Yrs)	Percentage Distribution					Average Annual Change (%)			Annual Change (%) 2011-12
	1996	2001	2006	2011	2012	1996-2001	2001-2006	2006-2011	
0-14	27.4	26.5	25.6	24.7	24.1	-0.7	-0.7	-0.7	-2.5
15-24	12.7	12.7	12.8	14.1	14.2	-0.0	+0.3	+2.0	+0.4
25-54	41.6	41.0	39.4	37.1	36.8	-0.3	-0.8	-1.2	-0.7
55-64	8.2	9.2	10.8	11.4	11.4	+2.4	+3.4	+1.2	-0.5
65+	10.1	10.6	11.4	12.6	13.5	+1.1	+1.4	+2.1	+7.1
Waitomo District	100.0	100.0	100.0	100.0	100.0	...	...	...	-0.0
Waikato Region 65+ yrs	10.8	11.5	12.4	13.8	14.3	+1.5	+1.6	+2.2	+3.8
Total NZ 65+ yrs	11.5	11.9	12.2	13.3	13.8	+0.6	+0.6	+1.8	+3.5
Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)									
	Ratio					Average Annual Change (%)			Annual Change (%) 2011-12
	1996	2001	2006	2011	2012	1996-2001	2001-2006	2006-2011	
Waitomo District	15.5	13.8	11.9	12.4	12.5	-2.2	-2.7	+0.7	+0.9
Waikato Region	18.9	15.5	13.8	12.8	12.6	-3.5	-2.2	-1.5	-0.9
New Zealand	18.3	15.2	14.1	13.0	12.8	-3.3	-1.5	-1.5	-1.5
Ratio Elderly to Children (Number 65+ per Child 0-14)									
	Ratio					Average Annual Change (%)			Annual Change (%) 2011-12
	1996	2001	2006	2011	2012	1996-2001	2001-2006	2006-2011	
Waitomo District	0.4	0.4	0.4	0.5	0.6	+1.8	+2.2	+2.8	+9.8
Waikato Region	0.4	0.5	0.6	0.6	0.7	+2.0	+3.2	+3.0	+4.6
New Zealand	0.5	0.5	0.6	0.7	0.7	+1.0	+1.9	+2.8	+4.4

Jackson, N.O (2012) Subnational Age Structure Resource 1996-2011, National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato
 Notes: Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TAAU) by Age and Sex at 30 June 1996, 2001 and 2006-2011 (2006 Boundaries)



Overall trends by five-year age group are summarised in Figure 4.2 (see Table 4.2 for comparison with Waikato Region and Total New Zealand). Between 1996 and 2012, numbers for Waitomo District declined at most younger ages (the exception being at 15-19 and 20-24 years) and increased at all older ages, particularly across the Baby Boomer age groups. Importantly, as indicated in Section 3 (above), some of these changes reflect cohort size effects, with smaller cohorts replacing larger cohorts at the youngest ages, and vice-versa at older ages. This is notably the case at 15-24 and 50+ years, the larger size of the ‘incoming’ cohorts partially offsetting the migration losses note above. However, the age group data provide important information for planning and resource allocation.

Figure 4.2: Change by age (number), 1996-2012

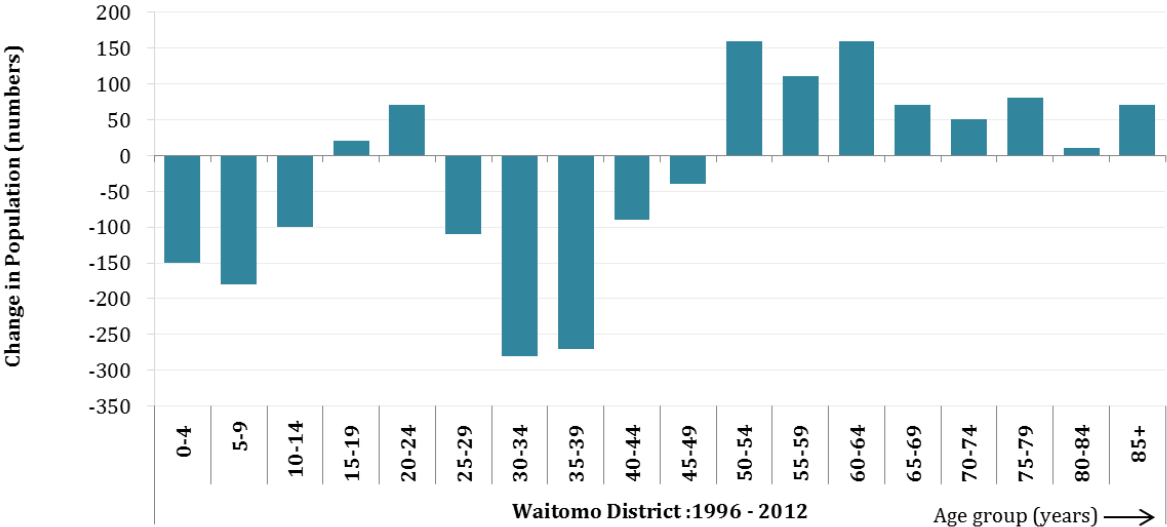


Table 4.2: Change by age (number and %), Waitomo District, Waikato, and Total New Zealand; 1996-2012

	Waitomo District		Waikato Region		New Zealand	
	Change in Population	% Change	Change in Population	% Change	Change in Population	% Change
0-4	(150)	-16.0	1,120	+3.7	17,140	+5.8
5-9	(180)	-19.8	(1,360)	-4.4	(4,300)	-1.5
10-14	(100)	-11.2	750	+2.6	19,890	+7.4
15-19	20	+2.9	2,780	+10.1	40,480	+14.9
20-24	70	+12.1	3,300	+12.2	49,850	+17.8
25-29	(110)	-16.9	(920)	-3.5	13,040	+4.6
30-34	(280)	-35.4	(3,020)	-11.0	(24,670)	-8.2
35-39	(270)	-32.9	(3,250)	-11.6	(15,520)	-5.2
40-44	(90)	-13.4	3,460	+14.0	48,550	+18.4
45-49	(40)	-5.5	5,280	+23.0	63,720	+25.5
50-54	160	+32.0	10,320	+56.5	112,470	+58.3
55-59	110	+25.6	9,660	+61.9	99,240	+60.3
60-64	160	+41.0	9,410	+70.5	99,850	+72.6
65-69	70	+20.6	6,090	+47.6	55,920	+41.4
70-74	50	+18.5	4,570	+43.8	36,910	+31.9
75-79	80	+42.1	3,440	+46.8	24,530	+29.3
80-84	10	+7.1	3,310	+67.3	27,230	+48.3
85+	70	+100.0	3,820	+120.1	36,810	+93.9
Total	(500)	-5.0	58,800	+16.3	701,100	+18.8

Source: Jackson, N.O (2013) Subnational Age Structure Resource 1996-2012, NIDEA, University of Waikato

Source data from Stats NZ TableBuilder Estimated Subnational Population by Age and Sex at 30 June (2006 Boundaries)

4.2 Labour Market Implications

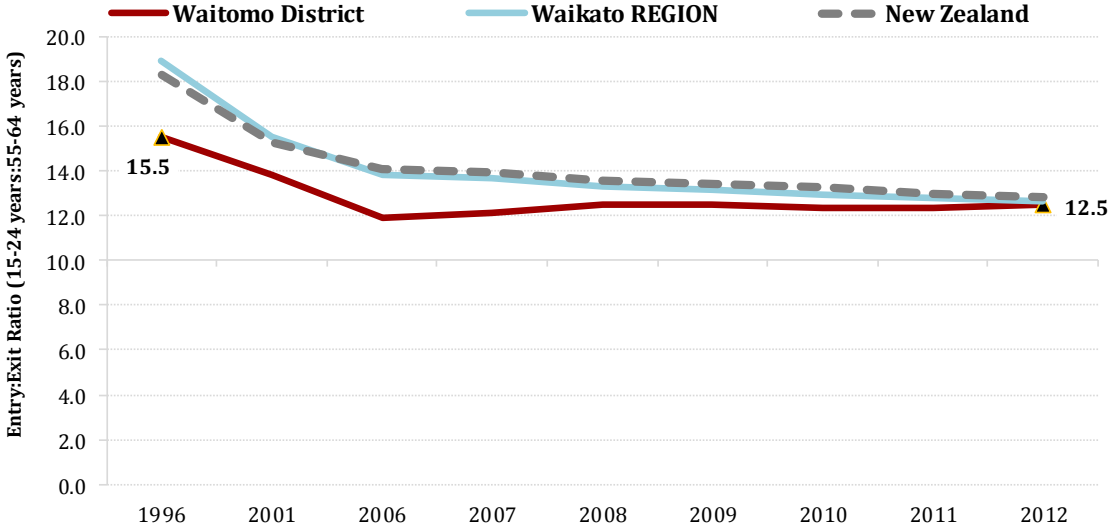
The above trends can also be monitored in terms of changes in the ratio of people in key age groups, such as those entering labour market entry age (eg 15-24 years) to those entering the 'retirement zone' (eg 55-64 years). Different age groupings can be used depending on the issue being examined. Here we are concerned with the labour *market* (those potentially available for work) as opposed to the labour *force* (those actually employed or unemployed), thus use the above groupings. When looking at the ageing of industries in Section 6, where the population base is only those employed, the ratio is more appropriately those aged 15-24 to those aged 55+ years.

Table 4.1 above showed that Waitomo District's Labour Market 'entry/exit ratio' has fallen since 1996, from 15.5 people at labour market entry age for every 10 in the 'retirement zone', to just 12.5 per 10 in 2012 (see Figure 4.3). In 2012 this was just slightly below that seen for both the Waikato Region and Total New Zealand which each had around 13 people at entry age per 10 at exit age.



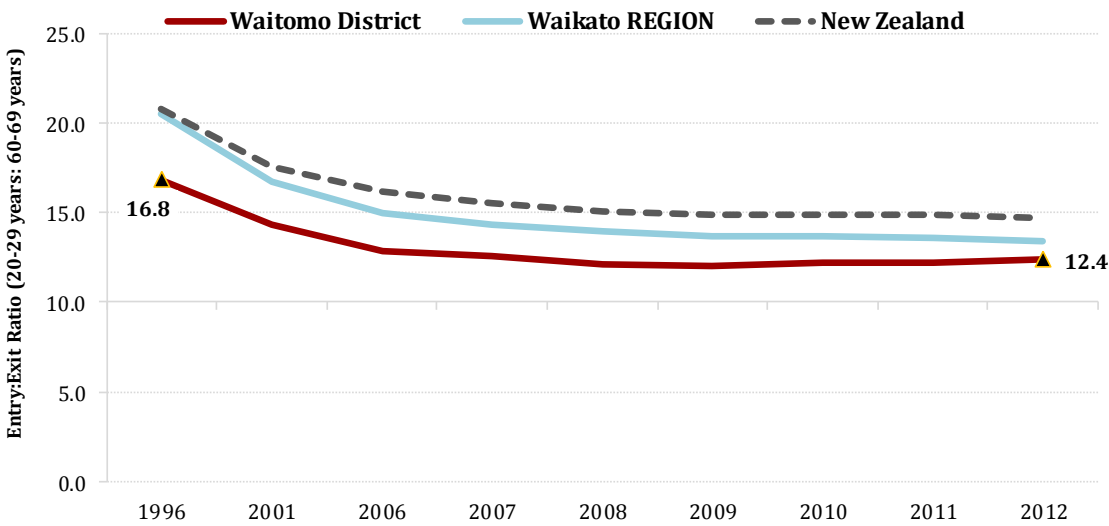
If older age groupings are used, for example 20-29 and 60-69 years, a similar pattern occurs where the entry: exit ratio for Waitomo falls from 16.8 to 12.5 persons in the retirement zone in 2012, again a little lower than for both the Waikato Region and Total New Zealand.

Figure 4.3: Labour market entry/exit ratio (15-24 years: 55-64 years), 1996-2012



Source: Jackson, N.O (2012) Subnational Age Structure Resource 1996-2011, NIDEA, University of Waikato. Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TAAU) by Age and Sex at 30 June 1996, 2001, 2006-2011 (2006 Boundaries)

Figure 4.4: Labour market entry/exit ratio (20-29 years: 60-69 years), 1996-2012



Source: Jackson, N.O (2012) Subnational Age Structure Resource 1996-2011, NIDEA, University of Waikato. Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TAAU) by Age and Sex at 30 June 1996, 2001, 2006-2011 (2006 Boundaries)



4. AGE STRUCTURE AND POPULATION AGEING: KEY FINDINGS

- As elsewhere in NZ, the population of Waitomo District is ageing numerically as well as structurally. Between 1996 and 2012 the Waitomo District's structural ageing was somewhat faster than for both the Waikato Region and Total New Zealand, primarily due to the net loss of young adults; however in 2012 it remained slightly younger than these comparators.
- Between 1996 and 2012, numbers for Waitomo District declined at most younger age groups and increased at all older ages, particularly across the Baby Boomer age groups. However overall increases occurred at 15-19 and 20-24 years, as larger cohorts replaced smaller ones and offset some of the net migration loss.
- The above trends can also be monitored in terms of changes in the ratio of people in key age groups, such as those entering labour market entry age, to those entering the 'retirement zone'. Waitomo District's Labour Market 'entry/exit ratio' has fallen since 1996 from 15.5 people at labour market entry age for every 10 in the retirement age zone, to just 12.5 per 10 in 2012.



5. Ethnic Composition and Growth

5.1 Ethnic Composition and Growth

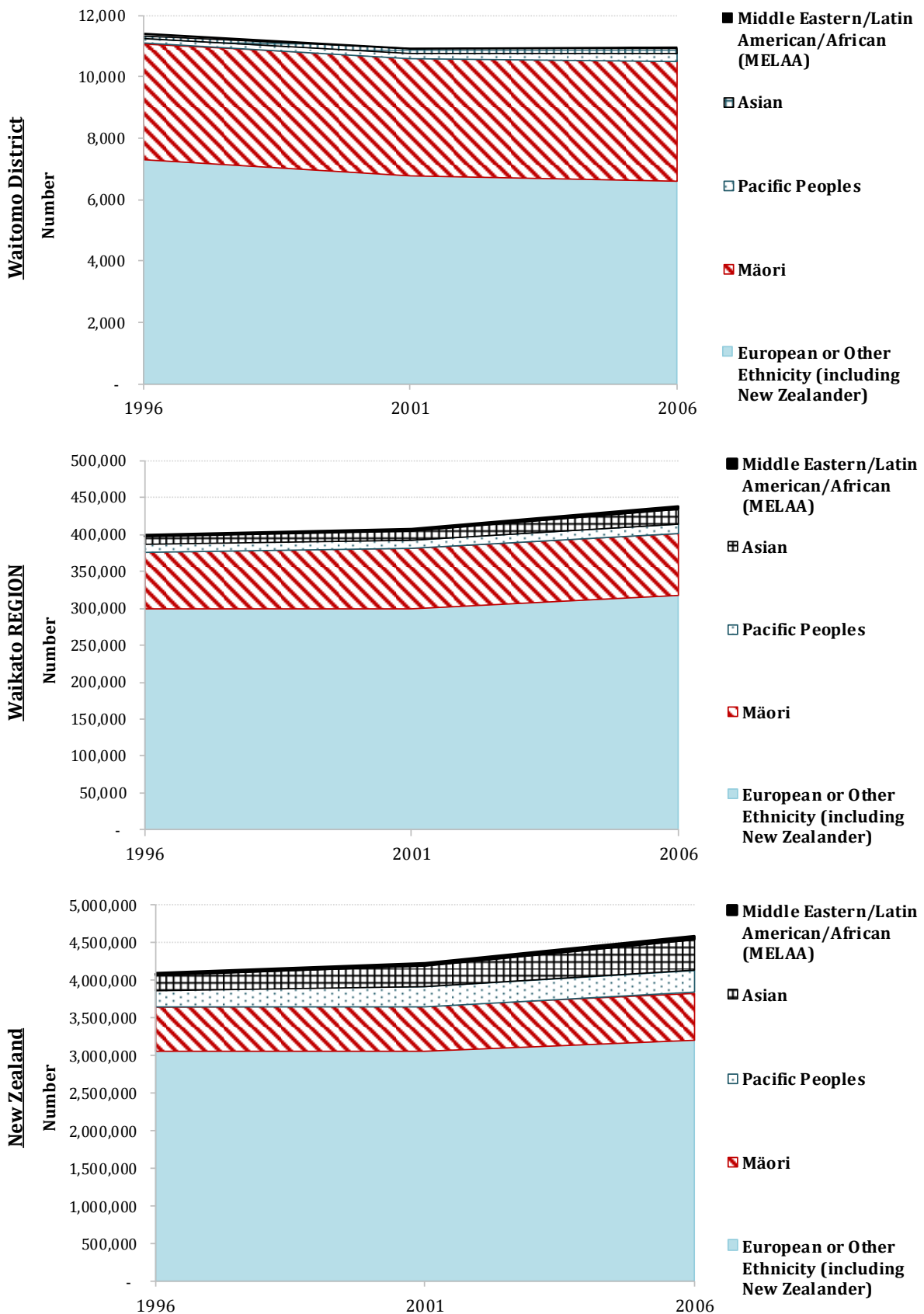
Figure 5.1 provides an indication of the extent to which the major ethnic groups have contributed to the region's population change (see also Table 5.1). Very clear from these 'multiple ethnic group' data¹ is that Waitomo District has a significantly larger proportion of Māori (35.6 per cent) than both the Waikato Region (19.2 per cent) and Total New Zealand (13.6 per cent), and a smaller proportion of all other ethnic groups.

The Māori population of the Waitomo District grew by approximately 3.2 per cent across the 1996-2006 period, contributing around 27 per cent to the change in the district's population and offsetting some of the overall decline of 3.9 per cent; while a sharp decline in the number of people identifying as European or Other Ethnicity including New Zealander accounted for the majority of the district's overall decline. Pacific Peoples, and people of Asian origin both experienced growth, contributing 17.8 and 6.7 per cent respectively to overall change and also offsetting some of the overall decline, while the Middle Eastern/Latin American/African (MELAA) population declined.

¹ The multiple ethnic group method of enumeration means that a proportion of people are counted more than once. Table 5.1 gives an approximation of the extent to which the method results in an over-count.



Figure 5.1: Population by Major Ethnic Group* (Multiple Count), 1996-2006



Statistics New Zealand, Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June 1996, 2001 and 2006

Notes: *People may be counted in more than one ethnic group



Table 5.1: Population (number, change and contribution to change) by Major Ethnic Group* (Multiple Count), 1996-2006

		Population			Change: 1996-2006			Distribution (%)*		
		1996	2001	2006	Number	% Change	Contribution to Change (%)	1996	2001	2006
Waiotomo District	European or Other Ethnicity (including New Zealander)	7,310	6,800	6,640	-670	-9.2	-148.9	64.0	62.2	60.5
	Māori	3,790	3,830	3,910	+120	+3.2	+26.7	33.2	35.0	35.6
	Pacific Peoples	170	190	250	+80	+47.1	+17.8	1.5	1.7	2.3
	Asian	120	90	150	+30	+25.0	+6.7	1.1	0.8	1.4
	Middle Eastern/Latin American/African (MELAA)	30	20	20	-10	-33.3	-2.2	0.3	0.2	0.2
	Total	11,420	10,930	10,970	-450	-3.9	100.0	100.0	100.0	100.0
	Total People, Ethnicity Stated (without multiple count)	10,000	9,780	9,680	...	-3.2	...	...	...	...
	Ethnic 'overcount' (%)	14.2	11.8	13.3	...	...	...	...	...	...
Waikato REGION	European or Other Ethnicity (including New Zealander)	299,600	300,100	317,300	+17,700	+5.9	+45.7	75.1	73.7	72.5
	Māori	77,900	80,200	84,000	+6,100	+7.8	+15.7	19.5	19.7	19.2
	Pacific Peoples	10,600	11,650	13,250	+2,650	+25.0	+6.8	2.7	2.9	3.0
	Asian	9,830	13,400	20,600	+10,770	+109.6	+27.8	2.5	3.3	4.7
	Middle Eastern/Latin American/African (MELAA)	1,170	1,870	2,720	+1,550	+132.5	+4.0	0.3	0.5	0.6
	Total	399,100	407,220	437,870	+38,770	+9.7	100.0	100.0	100.0	100.0
	Total People, Ethnicity Stated (without multiple count)	359,900	369,800	395,100	...	+9.8	...	...	...	...
	Ethnic 'overcount' (%)	10.9	10.1	10.8	...	...	...	...	...	...
New Zealand	European or Other Ethnicity (including New Zealander)	3,074,600	3,074,000	3,213,300	+138,700	+4.5	+28.2	75.2	72.8	70.1
	Māori	573,200	585,900	624,300	+51,100	+8.9	+10.4	14.0	13.9	13.6
	Pacific Peoples	229,300	261,800	301,600	+72,300	+31.5	+14.7	5.6	6.2	6.6
	Asian	194,800	272,500	404,400	+209,600	+107.6	+42.6	4.8	6.5	8.8
	Middle Eastern/Latin American/African (MELAA)	18,450	27,600	38,600	+20,150	+109.2	+4.1	0.5	0.7	0.8
	Total	4,090,350	4,221,800	4,582,200	+491,850	+12.0	100.0	100.0	100.0	100.0
	Total People, Ethnicity Stated (without multiple count)	3,732,000	3,880,500	4,184,600	...	+12.1	...	...	...	...
	Ethnic 'overcount' (%)	9.6	8.8	9.5	...	...	...	...	...	...

Source: Statistics New Zealand, Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June 1996, 2001 and 2006

Notes: *Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows



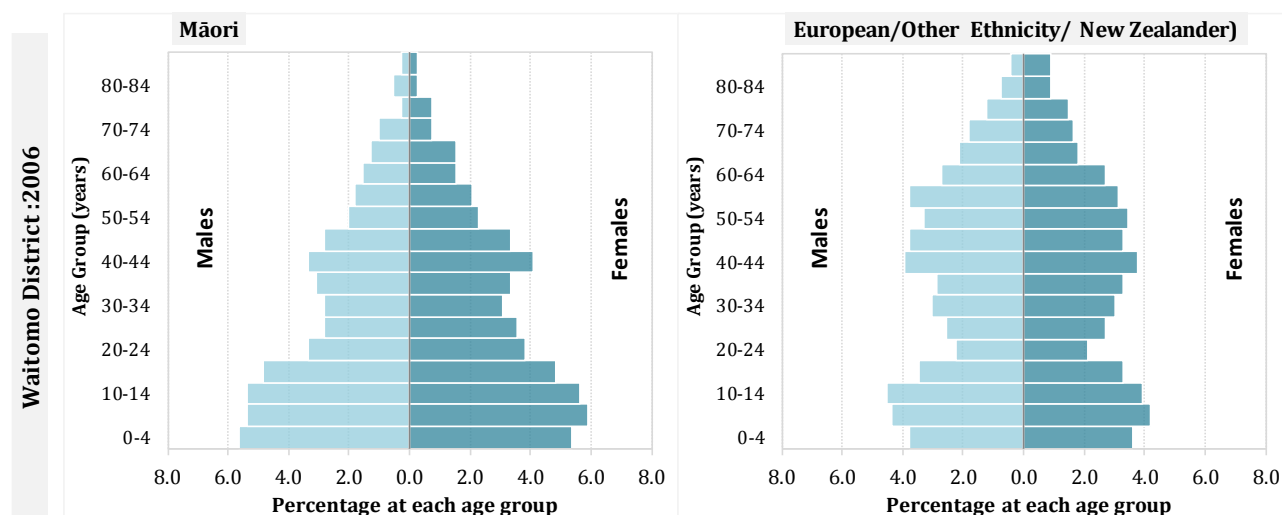
5.2 Ethnic Age Composition and Growth

Figure 5.2 provides a comparison of the Waitomo District's two major ethnic groups in 2006, according to the multiple count enumeration method discussed above. The age-sex structure for Pacific Peoples, Asian and MELAA ethnic groups cannot be shown due to their small numbers. As was indicated in Table 5.1, this method of enumeration means that a portion of the population is counted in more than one ethnic group. In Waitomo District's case, the over-count for 2006 (when the totals by ethnic group are summed) was approximately 13.3 per cent. However as can be seen by the markedly different age structures of each group in Figure 5.2, this methodological complexity would have very little impact on the story by age composition.

The data suggest that the overall bite in the age structure is very much connected with the European/New Zealander/Other population (hereafter European-origin). The younger age groups are disproportionately augmented by Māori youth, and the older age groups, almost exclusively by European (see also Table 5.2).

Similar comments apply to the situation for the Waikato Region (Figure 5.3), the age structures appearing a little 'smoother' due to the greater numbers involved, and permitting more ethnic groups to be graphed. (The age structure of MELAA population, is not shown as the numbers are too small to give a reliable picture by age).

Figure 5.2: Age-sex Structure by major ethnic group*, 2006

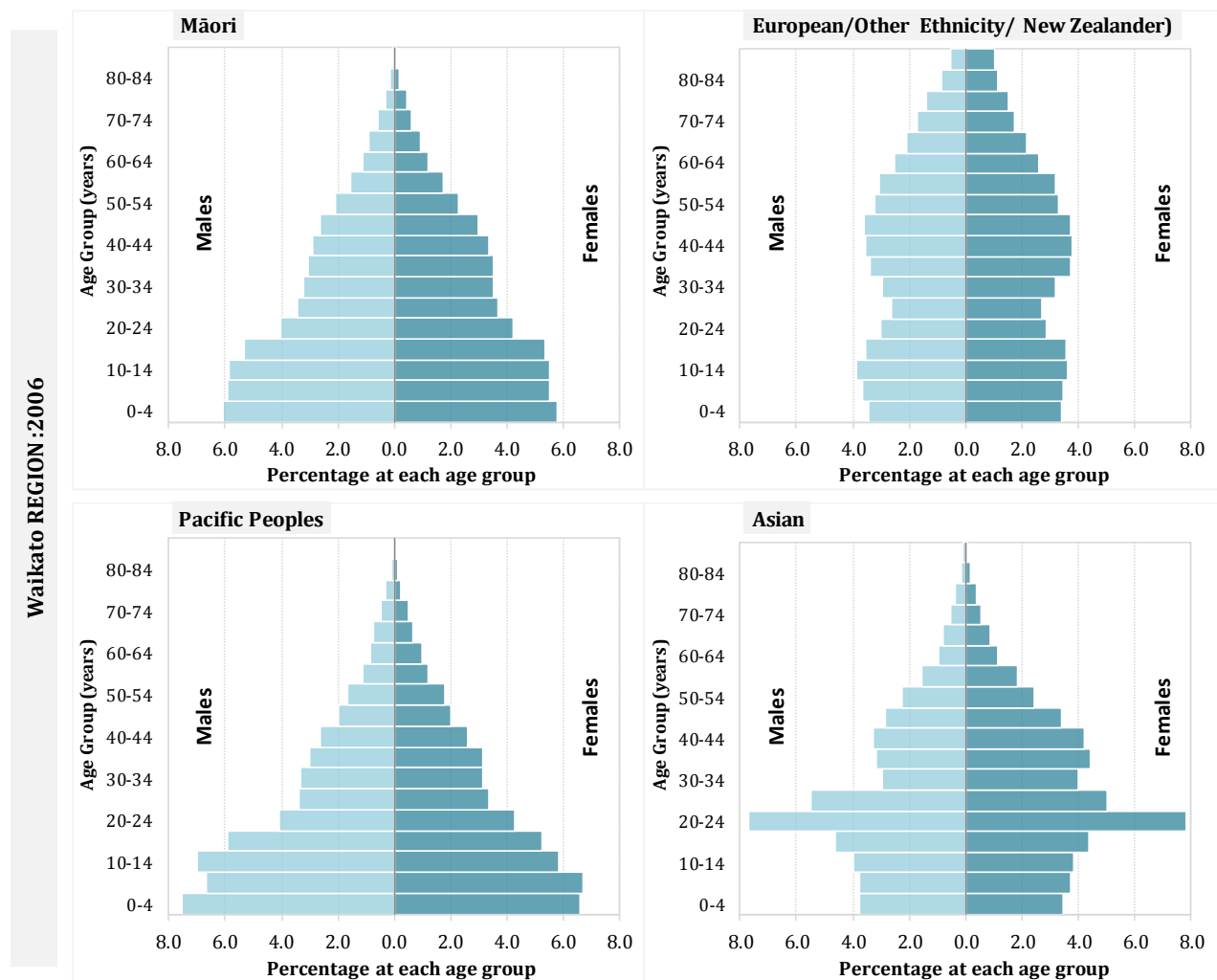


Source: Statistics New Zealand, *Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June 2006*

Notes: *Multiple count ethnicity means that people may be counted in more than one ethnic group



Figure 5.3: Age-sex Structure by major ethnic group*, Waikato Region 2006



Source: Statistics New Zealand, Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June 2006

Notes: *Multiple count ethnicity means that people may be counted in more than one ethnic group

Table 5.2 provides an overview of each ethnic group’s population share in 2006 by age. As indicated above, the general picture is that the Māori population increases its share as age decreases, while the European-origin population increases its share as age increases. The population of the other three ethnic groups is too small to make any analytically viable inferences.

Within that picture, young Māori comprise a much larger share of Waitomo District’s population (42.2 per cent) than they do of either the Waikato Region (26.9 per cent) or Total New Zealand (20.2 per cent). The situation is similar at all other age groups.



Table 5.2: Ethnic group* percentage share by age group and region, 2006

		Māori	Pacific Peoples	Asian	MELAA	European/ Other/NZ	Total*	Total People with Ethnicity Stated*	Ethnicity Overcount
Waitomo District	0-14	1,300 42.2	110 3.6	45 1.5	5 0.2	1,620 52.6	3,080 100.0	2,470	24.7
	15-24	660 44.9	45 3.1	25 1.7	- -	740 50.3	1,470 100.0	1,240	18.5
	25-54	1,430 34.5	70 1.7	60 1.4	- -	2,590 62.4	4,150 100.0	3,800	9.2
	55-64	270 24.5	5 0.5	5 0.5	- -	820 74.5	1,100 100.0	1,040	5.8
	65+	270 23.6	- -	5 0.4	- -	870 76.0	1,145 100.0	1,100	4.1
	Total	3,930 35.9	230 2.1	140 1.3	5 0.0	6,640 60.7	10,945 100.0	9,650	13.4
Waikato REGION	0-14	29,130 26.9	5,370 5.0	4,630 4.3	960 0.9	68,110 62.9	108,200 100.0	89,220	21.3
	15-24	15,920 24.3	2,600 4.0	5,050 7.7	530 0.8	41,440 63.2	65,540 100.0	56,930	15.1
	25-54	30,730 17.9	4,270 2.5	8,960 5.2	1,090 0.6	126,490 73.7	171,540 100.0	158,760	8.0
	55-64	4,710 11.1	550 1.3	1,140 2.7	90 0.2	36,090 84.8	42,580 100.0	41,190	3.4
	65+	3,540 7.1	430 0.9	820 1.6	50 0.1	45,160 90.3	50,000 100.0	49,030	2.0
	Total	84,030 19.2	13,220 3.0	20,600 4.7	2,720 0.6	317,290 72.5	437,860 100.0	395,130	10.8
New Zealand	0-14	215,290 20.2	110,280 10.4	83,590 7.9	10,330 1.0	645,240 60.6	1,064,730 100.0	888,320	19.9
	15-24	116,090 17.0	56,770 8.3	89,570 13.1	7,620 1.1	414,280 60.5	684,330 100.0	604,740	13.2
	25-54	232,190 12.4	107,800 5.8	187,640 10.0	17,800 1.0	1,325,060 70.8	1,870,490 100.0	1,750,250	6.9
	55-64	35,060 7.9	15,250 3.4	24,670 5.6	1,710 0.4	365,590 82.7	442,280 100.0	429,670	2.9
	65+	25,680 4.9	11,540 2.2	18,850 3.6	1,090 0.2	463,160 89.0	520,320 100.0	511,620	1.7
	Total	624,310 13.6	301,640 6.6	404,320 8.8	38,550 0.8	3,213,330 70.1	4,582,150 100.0	4,184,600	9.5

Source: Jackson, N.O (2011) Subnational Ethnic Age Structure Resource 1996, 2001, 2006, NIDEA. Source data: Statistics New Zealand, Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June

Notes: *Multiple count ethnicity means that people may be counted in more than one ethnic group



Tables 5.3 and 5.4 provide summary data for the Māori and European/New Zealander/Other populations. As noted above, data for the Pacific Peoples, Asian and MELAA populations are not presented because of very small numbers by age.

Table 5.3 shows the very youthful age structure of Waitomo District's Māori population in 2006, with the vast majority aged less than 55 years, and one-third or more aged 0-14 years across all three observations, falling from 35.9 per cent in 1996 to 33.1 per cent in 2006.

At 65+ years, numbers and proportions have grown from 5.5 per cent in 1996 to 6.9 per cent in 2006. The data indicate that Waitomo's Māori population is slightly older than its counterparts in Waikato and Total New Zealand, where proportions aged 65+ are a little lower, and labour market entry/exit ratios are a little higher (see Section 6 on this topic).



Table 5.3: Summary indicators, Māori Population: 1996, 2001, 2006

Distribution of population over broad age groups						Māori
Broad Age Group (Yrs)	Population			Change (%) over 5 years		Change (%) over 10 years 1996 - 2006
	1996	2001	2006	1996-2001	2001-2006	
0-14	1,370	1,310	1,300	-4.4	-0.8	-5.1
15-24	580	650	660	+12.1	+1.5	+13.8
25-54	1,410	1,420	1,430	+0.7	+0.7	+1.4
55-64	250	240	270	-4.0	+12.5	+8.0
65+	210	200	270	-4.8	+35.0	+28.6
Waitomo District Māori	3,820	3,820	3,930	+0.0	+2.9	+2.9
Waikato REGION Māori	77,900	80,200	84,000	+3.0	+4.7	+7.8
New Zealand Māori	573,200	586,000	624,300	+2.2	+6.5	+8.9
Broad Age Group (Yrs)	Percentage Distribution			Change (%) over 5 years		Change (%) over 10 years 1996 - 2006
	1996	2001	2006	1996-2001	2001-2006	
0-14	35.9	34.3	33.1	-4.4	-3.5	-7.8
15-24	15.2	17.0	16.8	+12.1	-1.3	+10.6
25-54	36.9	37.2	36.4	+0.7	-2.1	-1.4
55-64	6.5	6.3	6.9	-4.0	+9.4	+5.0
65+	5.5	5.2	6.9	-4.8	+31.2	+25.0
Waitomo District Māori	100.0	100.0	100.0	...	...	...
Waikato REGION Māori, % 65+ yrs	3.0	3.4	4.2	+13.1	+22.5	+38.5
New Zealand Māori, % 65+ yrs	3.0	3.4	4.1	+11.8	+22.0	+36.4
Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)						
	Ratio			Change (%) over 5 years		Change (%) over 10 years 1996 - 2006
	1996	2001	2006	1996-2001	2001-2006	
Waitomo District Māori	23.2	27.1	24.4	+16.7	-9.7	+5.4
Waikato REGION Māori	42.0	38.4	33.8	-8.7	-11.9	-19.5
New Zealand Māori	42.0	36.9	33.1	-12.1	-10.2	-21.1
Ratio Elderly to Children (Number 65+ per Child 0-14)						
	Ratio			Change (%) over 5 years		Change (%) over 10 years 1996 - 2006
	1996	2001	2006	1996-2001	2001-2006	
Waitomo District Māori	0.15	0.15	0.21	-0.4	+36.0	+35.5
Waikato REGION Māori	0.08	0.09	0.12	+14.4	+31.5	+50.4
New Zealand Māori	0.08	0.09	0.12	+11.8	+30.5	+45.9

Source: Jackson, N.O. (2011) Subnational Age Structure Resource 1996, 2001, 2006, NIDEA, University of Waikato.

Source data from Stats NZ TableBuilder Estimated Subnational Population (RC,TA,AU) by Age and Sex at 30 June 96,01,06.

Notes: Multiple count ethnicity means that people may be counted in more than one ethnic group

The European-origin population (Table 5.4) of Waitomo declined at all younger ages (less than 55 years) and increased at all older ages resulting in an overall decline of 9.5 per cent across the decade 1996-2006. With 13.1 per cent aged 65+ years in 2006, the European-origin population of Waitomo is marginally younger than its regional and national counterparts. Similar to the Waikato Region, the district's 65+ year old European-origin population is growing at a faster



rate (2 percentage points increase over the 1996-2006 period) than its national counterpart (one percentage point increase).

Table 5.4: Summary indicators, European/NZ/Other Population: 1996, 2001, 2006

Distribution of population over broad age groups							European /Other/NZ	
Broad Age Group (Yrs)	Population			Change (%) over 5 years		Change (%) over 10 years 1996 - 2006		
	1996	2001	2006	1996-2001	2001-2006			
0-14	1,920	1,670	1,620	-13.0	-3.0	-15.6		
15-24	890	780	740	-12.4	-5.1	-16.9		
25-54	3,090	2,840	2,590	-8.1	-8.8	-16.2		
55-64	610	680	820	+11.5	+20.6	+34.4		
65+	830	860	870	+3.6	+1.2	+4.8		
Waitomo District European /Other	7,340	6,830	6,640	-6.9	-2.8	-9.5		
Waikato REGION European /Other	299,600	300,100	317,300	+0.2	+5.7	+5.9		
New Zealand European /Other/NZ	3,074,600	3,074,000	3,213,400	-0.0	+4.5	+4.5		
Broad Age Group (Yrs)	Percentage Distribution			Change (%) over 5 years		Change (%) over 10 years 1996 - 2006		
	1996	2001	2006	1996-2001	2001-2006			
0-14	26.2	24.5	24.4	-6.5	-0.2	-6.7		
15-24	12.1	11.4	11.1	-5.8	-2.4	-8.1		
25-54	42.1	41.6	39.0	-1.2	-6.2	-7.3		
55-64	8.3	10.0	12.3	+19.8	+24.0	+48.6		
65+	11.3	12.6	13.1	+11.4	+4.1	+15.9		
Waitomo District European /Other	100.0	100.0	100.0	...	...	...
Waikato REGION European /Other	12.2	13.2	14.2	+8.4	+7.6	+16.7		
New Zealand European /Other/NZ	13.2	13.8	14.4	+4.6	+4.1	+8.8		
Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)								
	Ratio			Change (%) over 5 years		Change (%) over 10 years 1996 - 2006		
	1996	2001	2006	1996-2001	2001-2006			
Waitomo District European /Other	14.6	11.5	9.0	-21.4	-21.3	-38.1		
Waikato REGION European /Other	16.9	13.3	11.5	-21.3	-13.6	-32.0		
New Zealand European /Other/NZ	15.9	12.7	11.3	-20.1	-11.0	-28.9		
Ratio Elderly to Children (Number 65+ per Child 0-14)								
	Ratio			Change (%) over 5 years		Change (%) over 10 years 1996 - 2006		
	1996	2001	2006	1996-2001	2001-2006			
Waitomo District European /Other	0.43	0.51	0.54	+19.1	+4.3	+24.2		
Waikato REGION European /Other	0.52	0.58	0.66	+11.3	+14.9	+27.9		
New Zealand European /Other/NZ	0.61	0.65	0.72	+6.1	+10.0	+16.7		

Source: Jackson, N.O. (2011) *Subnational Age Structure Resource 1996, 2001, 2006*, NIDEA, University of Waikato.

Source data from Stats NZ TableBuilder *Estimated Subnational Population (RC,TA,AU) by Age and Sex at 30 June 96,01,06*.

Notes: Multiple count ethnicity means that people may be counted in more than one ethnic group



5. ETHNIC COMPOSITION AND GROWTH: KEY FINDINGS

- Waitomo District has a larger proportion of Māori than either the Waikato Region or Total New Zealand, and a smaller proportion of all other ethnic groups.
- The Māori population of Waitomo grew by 3.2 per cent in the 1996-2006 period, making a positive contribution of about 27 per cent to the change in the district's population; while a sharp decline in the number of people identifying as European or Other Ethnicity including New Zealander, accounted for the majority of the district's overall population decline of 3.9 per cent.
- The 'bite' in the age structure of the district's population is very much connected with the age-sex structure of the European/New Zealander/Other population. Younger age groups are disproportionately augmented by Māori youth, and the older age groups, almost exclusively by European.

Māori population

- The Māori population increases its share of the district's population as age decreases, while the European-origin population increases its share as age increases.
- Young Māori comprise a much larger share of Waitomo District's population (42.2 per cent) than they do of either the Waikato Region (26.9 per cent) or Total New Zealand (20.2 per cent).
- The district's Māori population is slightly older than its counterparts in Waikato and Total New Zealand.

European-origin population

- The European-origin population of Waitomo declined at all younger ages (less than 55 years) and increased at all older ages resulting in an overall decline of 9.5 per cent over the decade, 1996-2006.
- With 13.1 per cent aged 65+ years in 2006, the European-origin population of Waitomo is marginally younger than its regional and national counterparts.



6. Population Projections

6.1 Size, Growth and Population Ageing

Under the medium series assumptions, the population of Waitomo District is projected to decline very slightly over the 2011 – 2031 period, to around 8,900 persons by 2031 (Table 6.1). However the decline is not evenly shared by age, with significant and consistent increases projected for all 65+ age groups while the numbers at all younger ages, 0-54 years are likely to decline. The 65+ population is anticipated to grow both numerically (by 57.5 per cent between 2011 and 2031) and structurally (from 12.5 per cent in 2011 to 21.2 per cent by 2031). Figure 6.1 compares these changes under the low and high variant assumptions. Refer to Appendix Figure 2 and Appendix Tables 7 – 9 for projection assumptions and underlying data.

As would be expected, the losses by age are greater under the low variant assumptions, and lower under the high variant assumptions. However, even under the high series assumptions, loss is projected for several age groups.

Compared to the Waitomo District, more muted losses and small gains across the younger age groups are projected for both the Waikato Region and Total New Zealand, although the growth at 65+ years is expected to be much greater for both (Figure 6.2, 6.3 and Table 6.2).



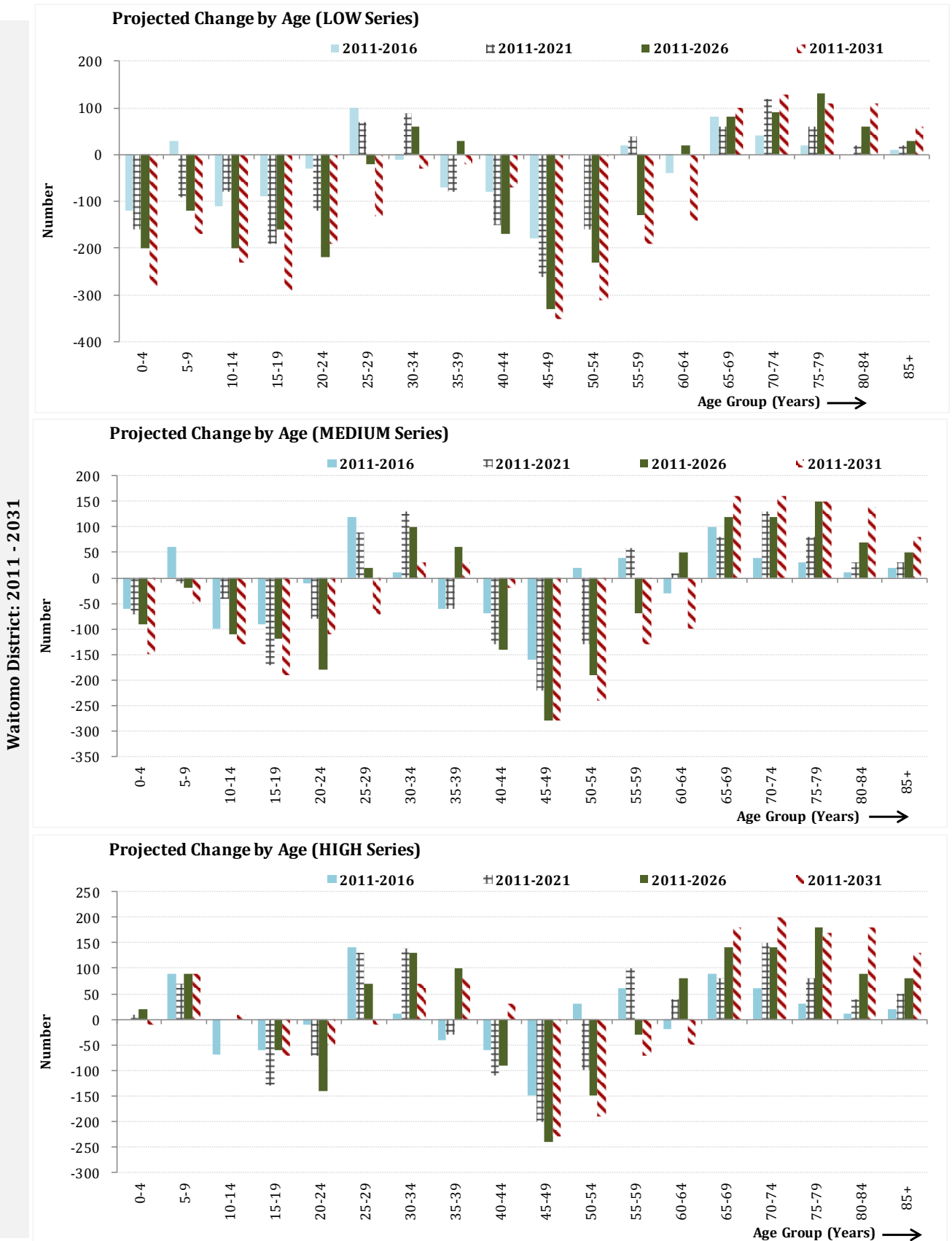
Table 6.1: Projected population, 2006-2031 (Medium Series)

Waitomo District	Numbers by age						Change (%) 2011-2031
	2006	2011	2016	2021	2026	2031	
0-14 years	2,470	2,370	2,270	2,250	2,150	2,040	-13.9
15-24 years	1,240	1,350	1,250	1,100	1,050	1,050	-22.2
25-39 years	1,770	1,640	1,710	1,800	1,820	1,630	-0.6
40-54 years	2,030	1,950	1,740	1,470	1,340	1,410	-27.7
55-64 years	1,040	1,110	1,120	1,180	1,090	880	-20.7
65-74 years	640	720	860	930	960	1,040	+44.4
75-84 years	350	380	420	490	600	670	+76.3
85+ years	110	100	120	130	150	180	+80.0
Total	9,650	9,620	9,490	9,350	9,160	8,900	-7.5
65+ years	1,100	1,200	1,400	1,550	1,710	1,890	+57.5
	Intercensal Change by Age (Numbers)						Change (N) 2011-2031
	2006-2011	2011-2016	2016-2021	2021-2026	2026-2031		
0-14 years	...	-100	-100	-20	-100	-110	-330
15-24 years	...	+110	-100	-150	-50	+00	-300
25-39 years	...	-130	+70	+90	+20	-190	-10
40-54 years	...	-80	-210	-270	-130	+70	-540
55-64 years	...	+70	+10	+60	-90	-210	-230
65-74 years	...	+80	+140	+70	+30	+80	+320
75-84 years	...	+30	+40	+70	+110	+70	+290
85+ years	...	-10	+20	+10	+20	+30	+80
Total	...	-30	-130	-140	-190	-260	-720
65+ years	...	+100	+200	+150	+160	+180	+690
	Age Distribution (% at each age group)						Change (%) 2011-2031
	2006	2011	2016	2021	2026	2031	
0-14 years	25.6	24.6	23.9	24.1	23.5	22.9	-7.0
15-24 years	12.8	14.0	13.2	11.8	11.5	11.8	-15.9
25-39 years	18.3	17.0	18.0	19.3	19.9	18.3	+7.4
40-54 years	21.0	20.3	18.3	15.7	14.6	15.8	-21.8
55-64 years	10.8	11.5	11.8	12.6	11.9	9.9	-14.3
65-74 years	6.6	7.5	9.1	9.9	10.5	11.7	+56.1
75-84 years	3.6	4.0	4.4	5.2	6.6	7.5	+90.6
85+ years	1.1	1.0	1.3	1.4	1.6	2.0	+94.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	+0.0
65+ years	11.4	12.5	14.8	16.6	18.7	21.2	+70.2
	Summary Measures						Change (%) 2011-2031
	2006	2011	2016	2021	2026	2031	
LM Entrants/Exits							
(15-24/55-64 years)	1.2	1.2	1.1	0.9	1.0	1.2	-1.9
(20-29/60-69 years)	1.3	1.2	1.2	1.1	0.9	1.0	-20.8
Elderly/Children	0.4	0.5	0.6	0.7	0.8	0.9	+83.0
Reproductive (20-39 yrs)	23.5	23.4	24.3	24.9	24.6	23.9	+2.3
Proportion 65+ years	11.4	12.5	14.8	16.6	18.7	21.2	+70.2
Proportion 75+ years	4.8	5.0	5.7	6.6	8.2	9.6	+91.4
Growth (%) in 5 years	...	-0.3	-1.4	-1.5	-2.0	-2.8	-7.5
Annual average growth (%)	...	-0.1	-0.3	-0.3	-0.4	-0.6	-0.4

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



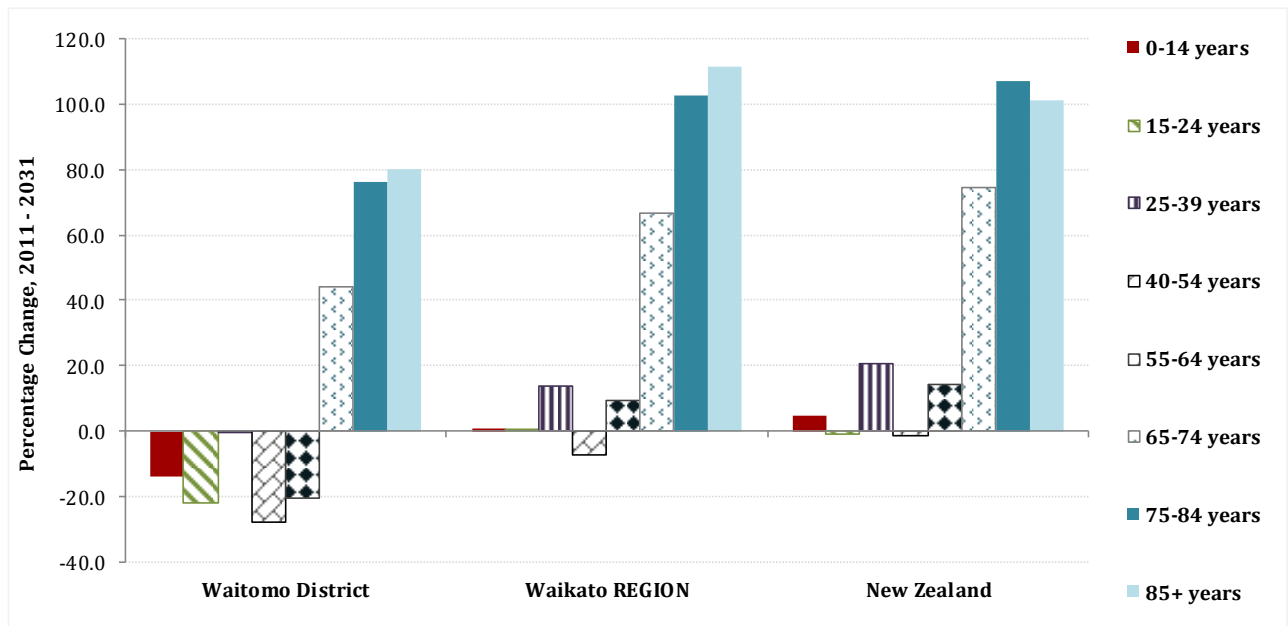
Figure 6.1: Projected population change by age and projection series, 2011 - 2031



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



Figure 6.2: Projected change 2011-2031 by broad age group (%), Medium Series



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)

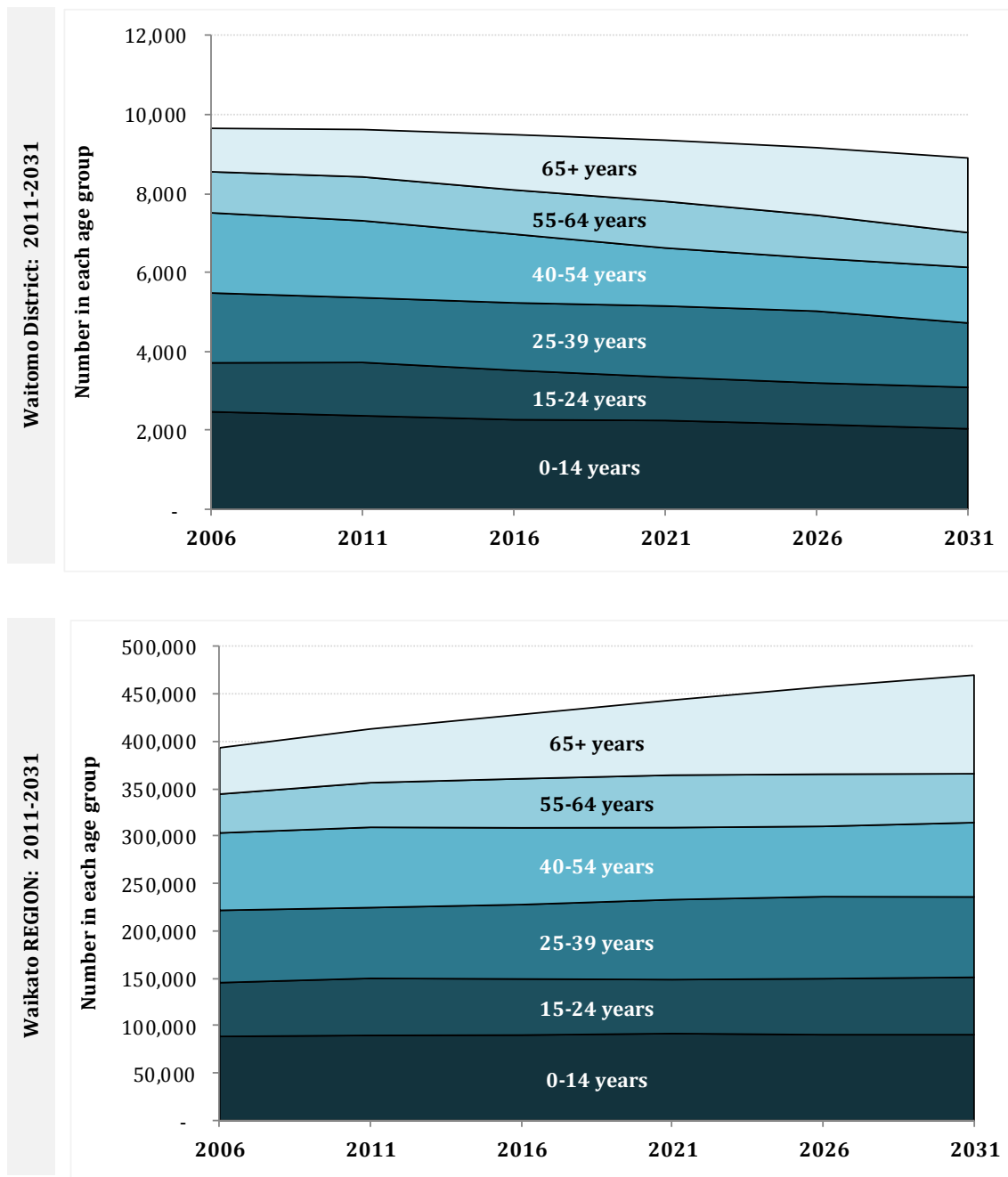
Table 6.2: Projected change 2011-2031 by broad age group (%), Medium Series

	Waitomo District	Waikato REGION	New Zealand
0-14 years	-13.9	+0.8	+4.5
15-24 years	-22.2	+0.6	-1.1
25-39 years	-0.6	+13.6	+20.7
40-54 years	-27.7	-7.5	-1.2
55-64 years	-20.7	+9.6	+14.2
65-74 years	+44.4	+66.9	+74.8
75-84 years	+76.3	+102.7	+107.2
85+ years	+80.0	+111.6	+101.5
Total	-7.5	+13.8	+17.9
65+ years	+57.5	+83.6	+88.5

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



Figure 6.3: Projected change in numbers by broad age group, 2006-2031, Medium Series



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



6.2 Projections by Ethnicity

While counting population by ethnicity is difficult, projecting populations based on ethnic affiliation is even more challenging. The following projections have many caveats attached to them and should be read as indicative only.

The first caveat is that projected data for Waitomo District are available for two ethnic groups only: European-origin and Māori (Table 6.3). They show the Māori population increasing between 2011 and 2021 by approximately 7.3 per cent, and the European-origin population declining by 7.6 per cent. There are, however, marked differences by age. The Māori population is projected to increase across all age groups less than 65 years, while the European/Other population is projected to decline at these ages. Both population groups are projected to increase at the 65+ age group, with higher percentage increases for the Māori population (+33.3 per cent compared to +20.0 per cent for European-origin population).

Table 6.3: Population projections by ethnic group and broad age group

Waitomo District	Population ^(2,3) by age group (years) at 30 June					Projected components of population change, five years ended 30 June					Median age ⁽⁵⁾ (years) at 30 June
	0-14	15-39	40-64	65+	All ages	Births	Deaths	Natural increase	Net migration	Inter-ethnic mobility ⁽⁴⁾	
European/Other											
1996	1,900	2,500	2,100	800	7,300	...	...	...	...	...	34.0
2001	1,700	2,100	2,200	900	6,800	...	...	...	...	...	36.8
2006 (base)	1,600	1,900	2,200	900	6,600	...	...	...	...	...	37.5
2011	1,600	1,900	2,200	1,000	6,600	500	200	300	-400	0	38.1
2016	1,500	1,800	2,000	1,100	6,400	500	200	200	-500	0	38.7
2021	1,500	1,600	1,800	1,200	6,100	400	200	200	-500	0	38.8
<i>Change 2011-2021 (%)</i>	-6.3	-15.8	-18.2	+20.0	-7.6	...	...	...	...	...	...
Māori											
1996	1,400	1,500	800	200	3,800	...	...	...	...	...	24.3
2001	1,300	1,500	800	200	3,800	...	...	...	...	...	23.9
2006 (base)	1,300	1,400	1,000	300	3,900	...	...	...	...	...	25.1
2011	1,300	1,500	1,000	300	4,100	500	100	300	-100	-100	25.1
2016	1,300	1,500	1,100	300	4,300	500	200	300	-100	-100	25.9
2021	1,400	1,600	1,100	400	4,400	500	200	300	-100	-100	27.0
<i>Change 2011-2021 (%)</i>	+7.7	+6.7	+10.0	+33.3	+7.3	...	...	...	...	...	...

Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update)

(1) Boundaries at 30 June 2009.

(2) These projections have as a base the estimated resident population of each ethnicity, of each area, at 30 June 2006 and incorporate medium fertility, medium migration, medium mortality, and medium inter-ethnic mobility assumptions for each area. Population estimates for 1996–2006 are derived from the respective 1996–2006 census usually resident population counts.

(3) Numbers reflect the multiple count enumeration methodology and their sum is somewhat greater than the total projection for the TA.

Projections are not available for all ethnic groups for all TA's.

(4) The net effect of people changing their ethnic identity.

(5) Half the population is younger, and half older, than this age.



Because the data in Table 6.3 do not account for all ethnic groups, they cannot be graphed to show future ethnic composition. Instead, Table 6.4 gives an overview for the Waikato region (see Appendix Table 10 for the underlying assumptions and other information). It should nevertheless be noted that the data pertain to four ethnic groups only. The fifth group (MELAA) is not projected even for Waikato because of the small cell sizes obtained when this relatively small population is disaggregated by age.

Based on these four main ethnic groupings, the data suggest that there will be relatively little change in the overall ethnic composition of the region over time. However the young population (0-14 years) of European origin is projected to decrease its share of the district's youthful population from 61.5 to 57.0 per cent; while that for the other three ethnic groups is set to increase.

Changes are equally evident for each successively older age group. At 40-64 years, for example, Māori increase their share from 14.8 to 16.3 per cent of the population, and at 65+ years, from 7.5 to 8.7 per cent. The percentage magnitude of the changes are even greater for the Pacific Island and Asian populations; however, as Figure 5.2.1 shows, they have somewhat less impact on the overall ethnic distribution, because they are coming off such small bases. Concomitantly, the European-origin share of all age groups declines.



Table 6.4: Projected distribution by age and ethnic group*, Waikato Region: 2011 - 2021

Waikato REGION	0-14	15-39	40-64	65+	All ages
2011					
European	61.5	65.2	78.6	88.8	71.4
Māori	27.8	22.7	14.8	7.5	19.6
Pacific Peoples	5.7	3.9	2.0	1.0	3.4
Asian	5.0	8.2	4.6	2.7	5.6
Total	100.0	100.0	100.0	100.0	100.0
Number ⁽¹⁾	111,400	151,900	139,500	58,900	461,700
2016					
European	59.3	63.1	77.0	87.3	69.8
Māori	28.5	23.2	15.6	8.0	20.0
Pacific Peoples	6.3	4.4	2.2	1.1	3.8
Asian	6.0	9.2	5.1	3.6	6.4
Total	100.0	100.0	100.0	100.0	100.0
Number ⁽¹⁾	115,600	154,600	142,400	69,900	482,800
2021					
European	57.0	61.8	74.9	85.3	68.2
Māori	29.0	23.6	16.3	8.7	20.4
Pacific Peoples	7.0	4.9	2.6	1.4	4.1
Asian	7.1	9.7	6.2	4.6	7.3
Total	100.0	100.0	100.0	100.0	100.0
Number ⁽¹⁾	119,400	158,000	142,700	81,200	501,400

Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update)

(1) Boundaries at 30 June 2009.

(2) These projections have as a base the estimated resident population of each ethnicity, of each area, at 30 June 2006 and incorporate medium fertility, medium migration, medium mortality, and medium inter-ethnic mobility assumptions for each area. Population estimates for 1996–2006 are derived from the respective 1996–2006 census usually resident population counts.

(3) Numbers reflect the multiple count enumeration methodology and their sum is somewhat greater than the total projection for the TA. Projections are not available for all ethnic groups for all TA's.

(4) The net effect of people changing their ethnic identity.

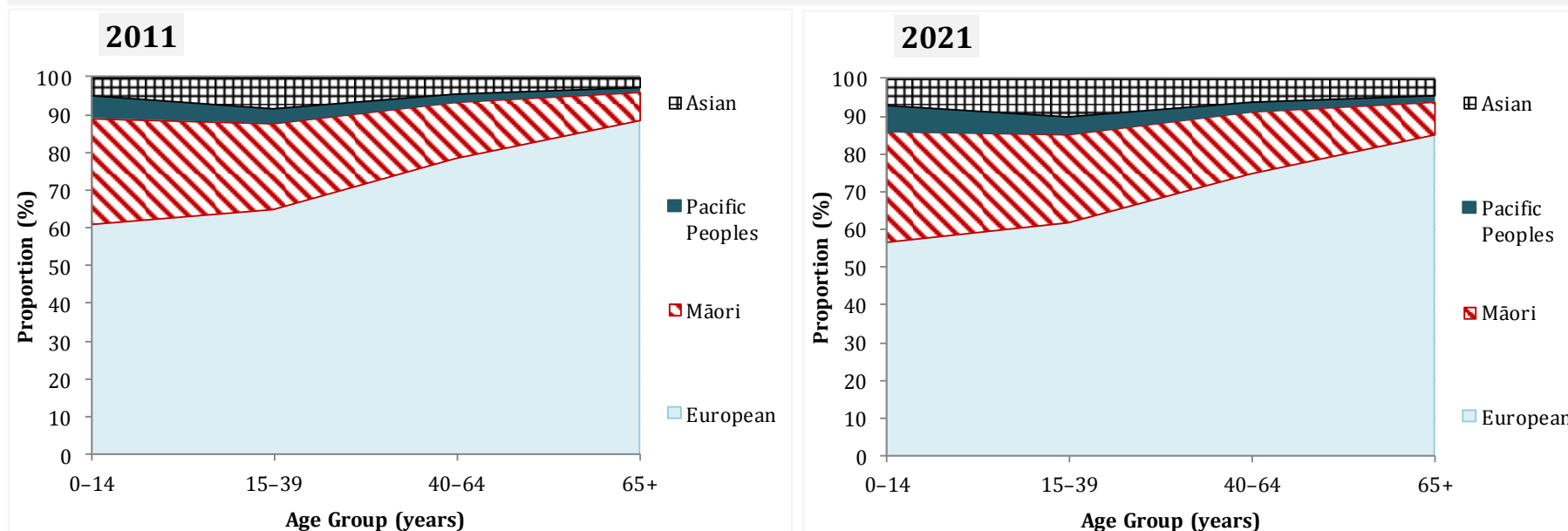
(5) Half the population is younger, and half older, than this age.

(1) Underlying numbers reflect the multiple count enumeration methodology and their sum is somewhat greater than the total projection for the region. Projections not available for all ethnic groups for all regions.



Figure 6.4: Projected population of the Waikato Region by major ethnic group* and broad age group, 2011 and 2021

Waikato REGION : 2011 and 2021



Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update)

(1) Boundaries at 30 June 2009.

(2) These projections have as a base the estimated resident population of each ethnicity, of each area, at 30 June 2006 and incorporate medium fertility, medium migration, medium mortality, and medium inter-ethnic mobility assumptions for each area. Population estimates for 1996–2006 are derived from the respective 1996–2006 census usually resident population counts.

(3) The underlying numbers reflect the multiple count enumeration methodology and their sum is somewhat greater than the total projection for the region.

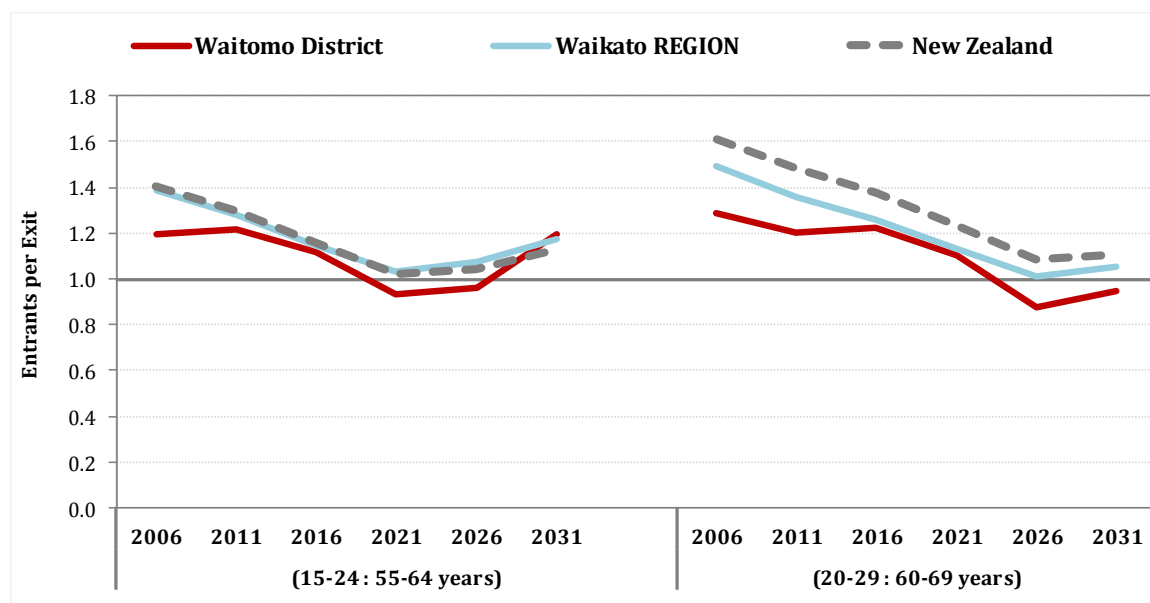


6.3 Labour Market Implications of Changing Age Structure

As noted earlier, population ageing drives other very important changes. One of the most important is change in the ratio of people at labour market entry age to those at 'exit' age. As noted, various age groupings can be employed to calculate this ratio; here we use two: people aged 15-24 to those aged 55-64 years, and people aged 20-29 to those aged 60-69 years (Figure 6.5). Based on the first of these indices (15-24: 55-64), Waitomo District can expect to have fewer 'entrants' than 'exits' from between 2016 and 2021, reaching a low point of 0.9 (9 entrants per 10 exits) by 2021 (see also Table 6.1 above). When the ratio is based on those aged 20-29 and 60-69 years, it falls below one by 2026.

Trends for the Waikato Region are more similar to those at national level (see also Appendix Table 8). For Total New Zealand the ratios similarly decline, but do not fall below 1.0 during the projection period (Appendix Table 9). All are, of course, linked in a national (and international) labour market that will see increased competition for the participation of the young and greater need to encourage retention of older workers. This demographically tight labour market will have significant implications for labour costs as it unfolds. This will be particularly so for industries which have older age structures and are ageing faster than average, as outlined below in the special topic (Section 7.0).

Figure 6.5: Projected ratio of people at labour market entry age to those approaching exit age, 2006-2031



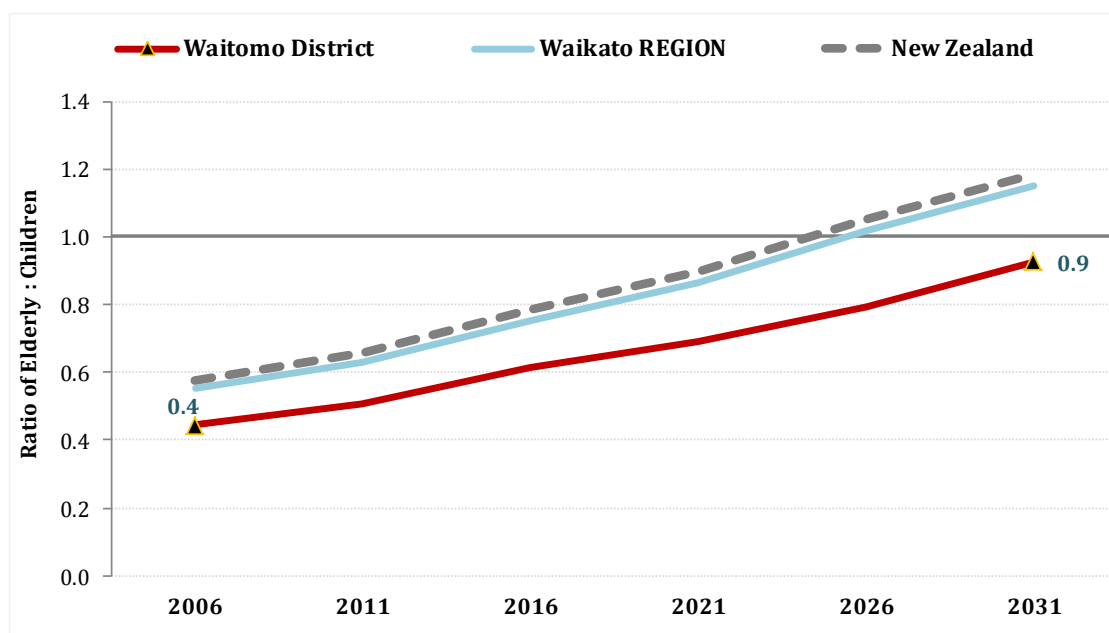
Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



6.4 Natural Increase Implications of Changing Age Structure

A second important index of structural ageing is that between children (0-14 years) and the older population (65+ years). For Waitomo District, the projected ratio of elderly (65+ years) to children (0-14 years) increases rapidly from its 2006 ratio of 0.4 (4 elderly for every 10 children), to 0.9 by 2031 (Figure 6.6). This profound shift towards more elderly than children will by then be contributing to rapidly diminishing levels of natural increase (Figure 6.7), as will the relatively small proportion projected to be at the key reproductive ages (about 23 per cent) compared with Total New Zealand (25-27 per cent) (Figure 6.8). For Waikato Region and Total New Zealand, the cross over to more elderly than children will occur earlier than in Waitomo; around 2026 (see also Appendices Table 8 and 9).

Figure 6.6: Projected ratio of elderly (65+ years) to children (0-14 years), 2006-2031

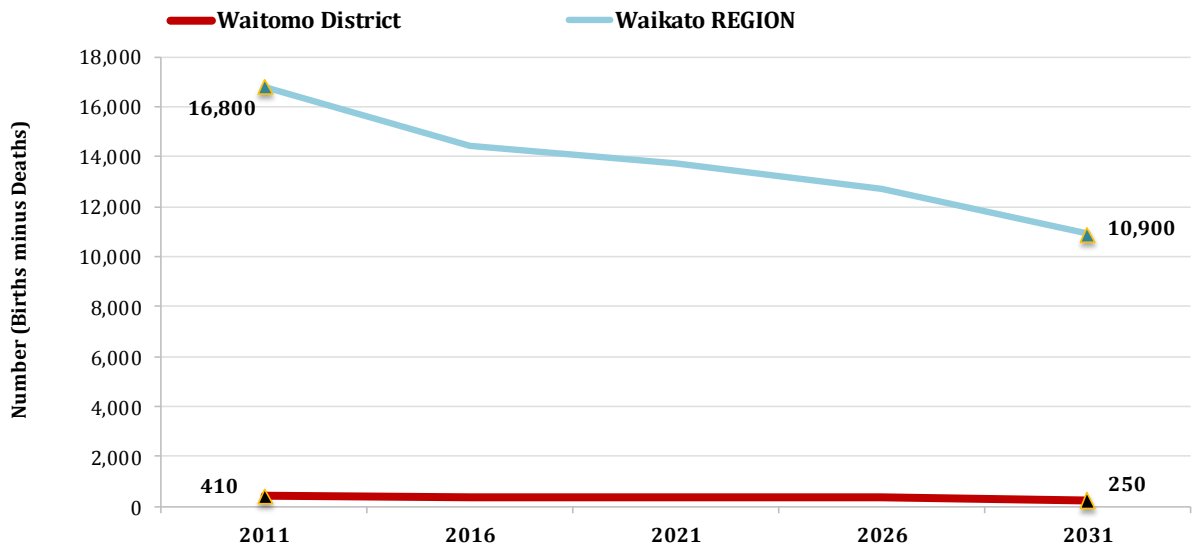


Source: Statistics New Zealand, *Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)*

The proportion at key reproductive ages (Figure 6.8) appears to be a particularly critical indicator of future growth. In 2010, 15 of New Zealand's 67 Territorial Authorities (22 per cent) had either stopped growing or declined in size (Jackson 2011: 20). All had proportions aged 20-39 years lower than the national average (then 26.9 per cent), and thereby severe 'hour-glass' shaped age structures which are no longer conducive to sustained natural growth. Referring back to Section 2, natural increase is now insufficient to offset the decline in Waitomo District's population. As that component further declines, growth – or maintenance of population size – will become ever more dependent on migration.

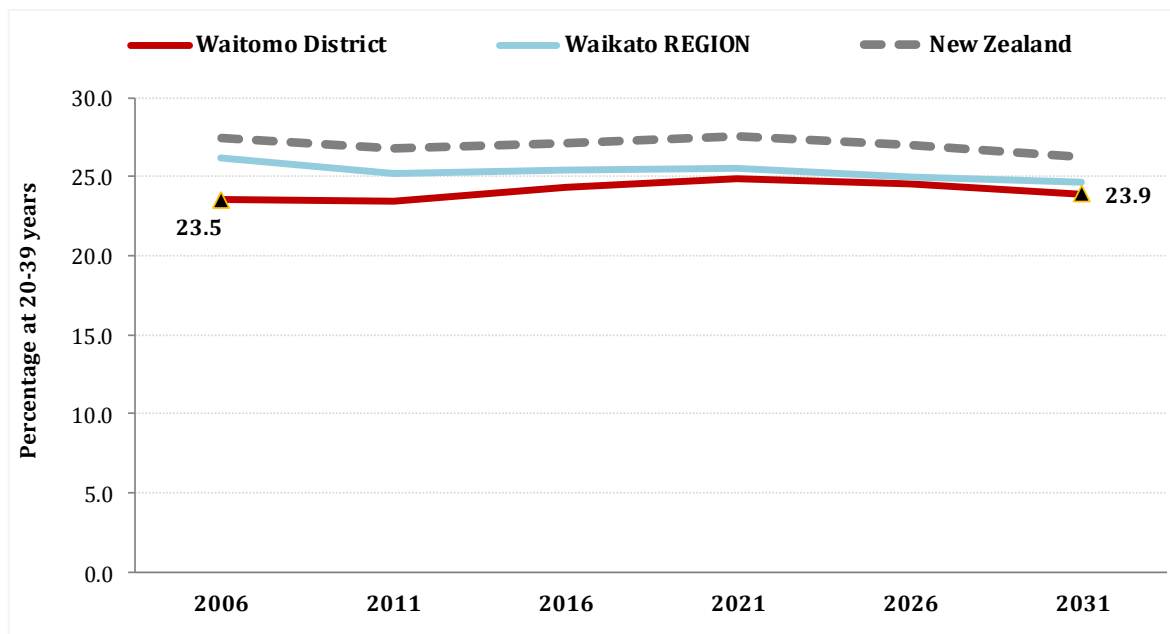


Figure 6.7: Projected natural increase, 2011-2031



Source: Subnational Projected Population Characteristics, 2006(base)-2031 (October 2012 update)

Figure 6.8: Projected proportion at key reproductive ages (20-39 years), 2006-2031



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



6. POPULATION PROJECTIONS: KEY FINDINGS

- The population of the Waitomo District, under the medium series assumptions, is projected to decline very slightly over the 2011 – 2031 period, to around 8,900 persons by 2031.
- The decline is not expected to be evenly shared by age, with significant and consistent increases projected for all 65+ age groups while the numbers at all younger ages, 0-54 years are likely to decline.
- The 65+ population is anticipated to grow both numerically (by 57.5 per cent between 2011 and 2031) and structurally (from 12.5 per cent in 2011 to 21.2 per cent by 2031).

Projections by Ethnicity

- The Māori population is likely to increase between 2011 and 2021 by approximately 7.3 per cent, and the European-origin population to decline by 7.6 per cent. There are, however, marked differences by age.
- The Māori population is projected to increase across all age groups below 65 years, while the European/Other population is projected to decline at these ages. Both population groups are projected to increase at 65+ years, with higher increases likely for the Māori population.
- There will be relatively little change in the overall ethnic composition of the Waikato Region over time. However, the young population (0-14 years) of European origin are projected to decrease their share of the region's youthful population; while that for the other three ethnic groups is set to increase.

Labour Market Implications

- Waitomo District can expect to have fewer people at labour market 'entry age' (15-24 years) than in the 'retirement zone' (55-64 years) from between 2016 and 2021, reaching a low point of 0.9 (9 entrants per 10 'exits') by 2021.

Natural Increase Implications

- The projected ratio of elderly (65+ years) to children (0-14 years) is projected to increase rapidly from its 2006 ratio of 0.4 (4 elderly for every 10 children), to 0.9 by 2031.
- This profound shift towards more elderly than children will contribute to rapidly diminishing levels of natural increase as will the relatively small proportion projected to be at the key reproductive ages.



7. Industrial Change – Special Topic 1

7.1 Industrial Age-Sex Structures (1996, 2001, 2006)

The extent (and speed) of population ageing and its impact on Labour Market entry: exit ratios also differ by industry. Industries which employ large proportions of younger people, such as supermarkets and grocery stores, by definition have youthful age structures; those employing large proportions of older people (especially in senior management positions) have older age structures. However industrial employment patterns by age are not of interest simply because they differ, but rather, in the context of population ageing, they provide important information for issues such as future labour supply and succession planning.

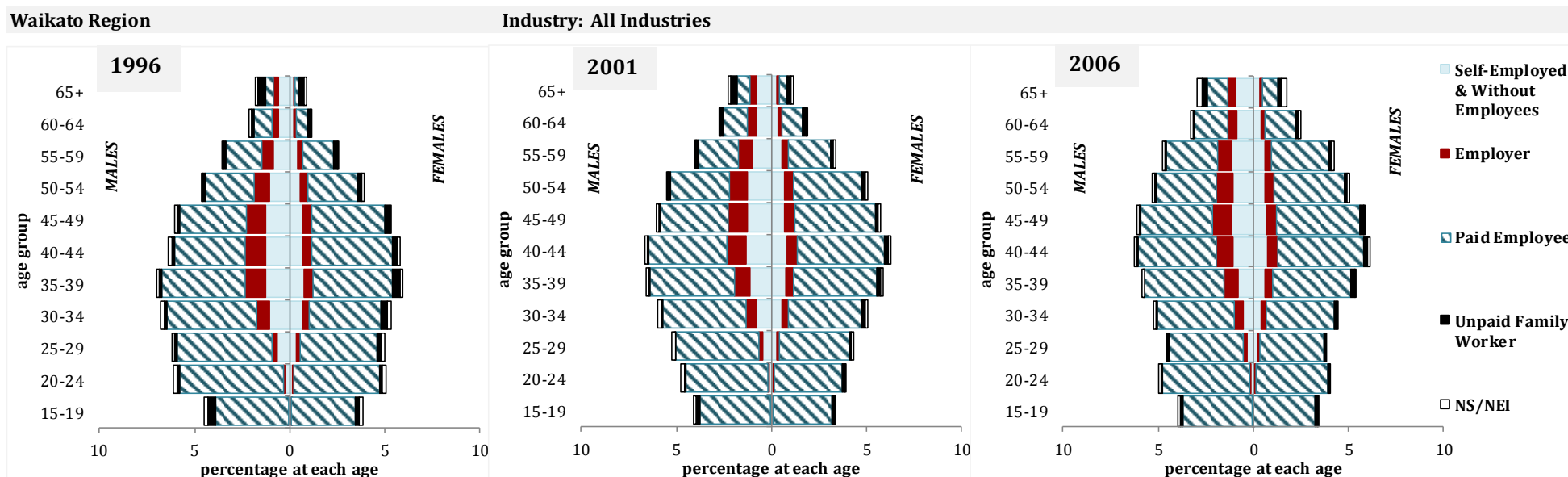
This section provides an overview of the changing age-sex structure of the Waikato Region's employed labour force by employment status (self-employed, employer, paid employee etc.), first for the total labour force, then for the region's four largest industries (in 2006) at the three digit level (which enumerates 158 industries): Dairy Cattle Farming; School Education; Building and Construction; and Grain, Sheep and Beef Farming (see also Appendix 11). The data have been customised by Statistics New Zealand to be consistent in terms of industry and employment status across time. The section concludes with a brief overview of change in all Waikato RC industries at three-digit level employing more than 1,000 people in 2006, followed by data for the Waitomo District at one-digit level.

Figure 7.1 provides data for the Waikato Region's total employed labour force (see also Appendix 11). Reflecting the trends outlined above, the average age of employed persons at each census was respectively 38.3, 40.3 and 41.4 years, an overall increase of 3.1 years (8.1 per cent). This is almost identical to the average age for the Total New Zealand employed labour force at each observation: 38.3, 40.1 and 41.2 years (an increase of 2.9 years, 7.6 per cent). However the Waikato Region's labour force (employed) is ageing at a slightly faster rate. The speed of this change is similarly evidenced in the increasing proportion aged 55+ years, from just 12.1 per cent in 1996 to 19.5 per cent in 2006 (61.0 per cent), and the ratio of those at labour market entry to exit age falling from 16 per 10 in 1996, to just 8 per 10 in 2006.

Differing somewhat from the total employed labour force is the region's single largest industrial grouping, Dairy Cattle Farming (ANZSIC96 V4.1 code A013), which is heavily masculinised (Figure 7.2) (Appendix Table 12). The average age of Waikato persons employed in this industry (41.9 years in 2006) is only slightly greater than the region's total labour force, and has shifted upwards since 1996 by 3.0 years (7.8 per cent). This is a slightly greater rate of structural ageing than for the Total New Zealand Dairy Farming labour force.



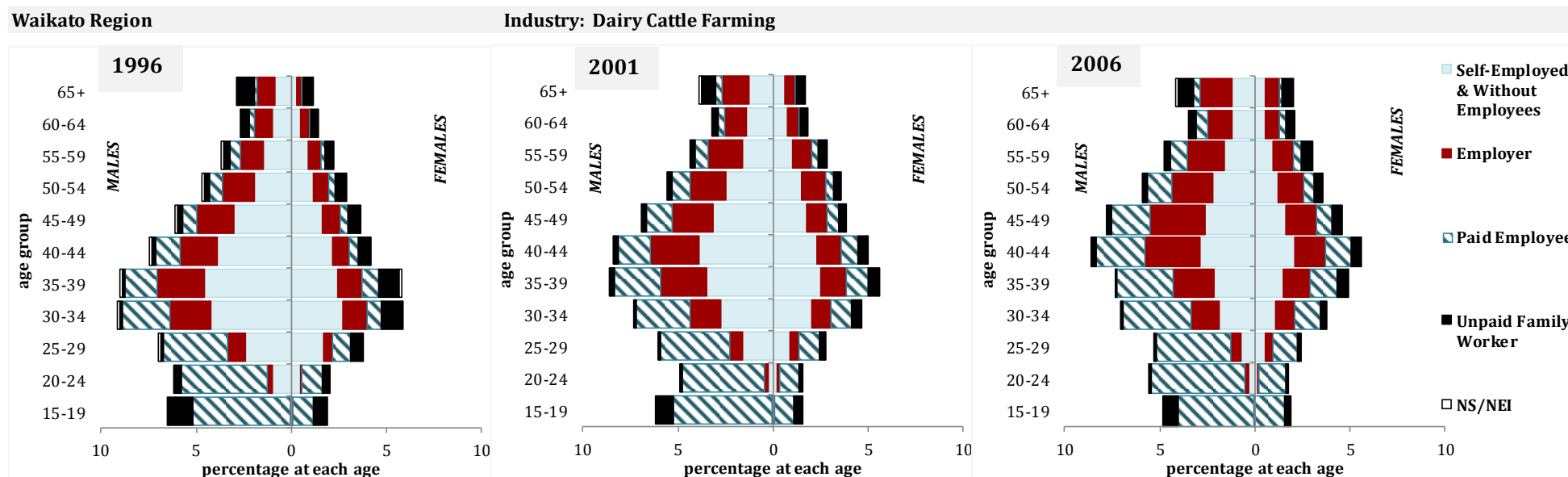
Figure 7.1: Age-Sex Structure and Employment Status of Employed Labour Force 1996, 2001, 2006, Waikato Region



Source: Jackson/Statistics NZ Customised Database,
 Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006



Figure 7.2: Age-Sex Structure and Employment Status of the Dairy Cattle Farming Industry [A013] 1996, 2001, 2006, Waikato Region



Source: Jackson/Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006



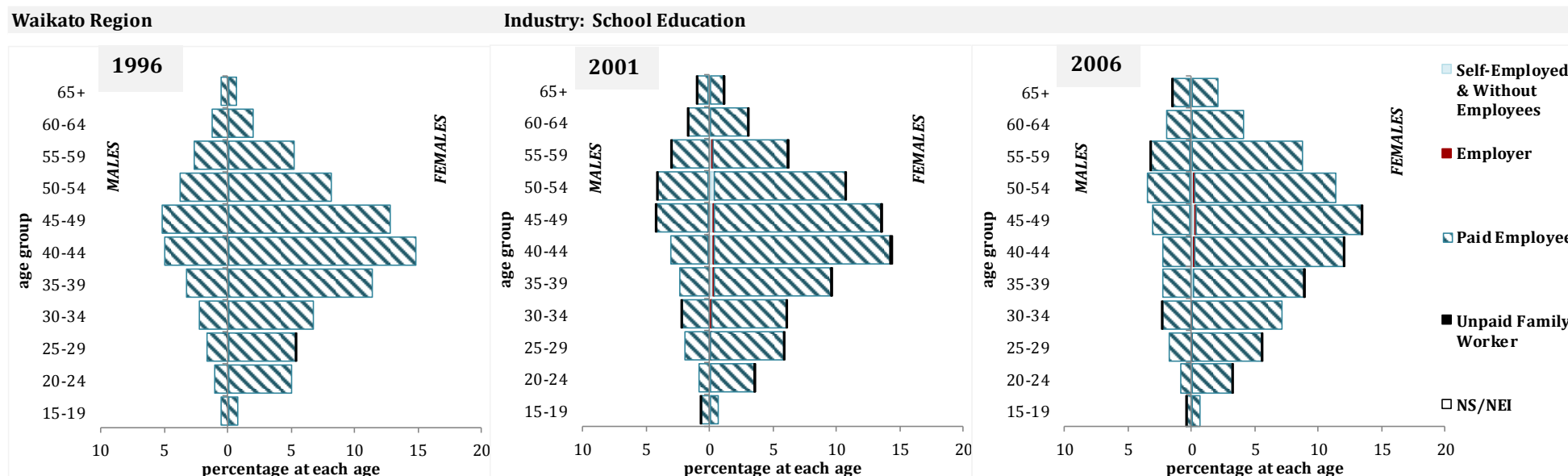
Contrasting completely with the region's male dominated dairy farming industry is the region's second largest industry, School Education, disproportionately employing females (Figure 7.3, Appendix Table 13). Although not unfolding quite as rapidly, structural ageing in this industry is also more advanced than in the dairy industry, with an average age in 2006 of 45.0 years (having increased by 2.6 years since 1996, 6.1 per cent). In 1996, just 12.2 per cent of those employed in this industry were aged 55+ years, while by 2006 that had increased to 21.5 per cent (a 76.0 per cent increase). The trends resulted in the labour market entry: exit ratio falling from 6 entrants per 10 in the retirement zone in 1996, to just 2 per 10 in 2006.

Significantly younger and substantially more masculinised, the region's third largest industry (in 2006 employing 4,680) is Building and Construction (Figure 7.4, Appendix Table 14). The average age of employees in this industry increased from 37.4 years in 1996 to 38.5 years in 2006 (1.1 years, 3.0 per cent), although it declined fractionally between 2001 and 2006. This relatively slow ageing reflects the enormous increase in this industry, which in 1996 employed just 2,682 persons, a 75 per cent increase, taking it from eleventh largest in 1996 to third in 2006. Nevertheless it should be noted that the industry's entry: exit ratio fell from 21 per 10 (entrants per those in the retirement zone) in 1996, to 16 per 10 in 2006.

The region's fourth largest industry is Grain, Sheep and Beef Cattle Farming, in 2006 employing 4,593 people (Figure 7.5, Appendix Table 15), only fractionally more than in 1996 (4,410) and explaining its fall from third to fourth position. Its age-sex structure contrasts substantially with those for the three largest industries, albeit like dairy farming it is also heavily masculinised (sex ratio in 2006, 1.9 males per female, down from 2.0 in 1996). Widely understood as one of the oldest industries in terms of age structure, the average age of the Waikato Region's Grain, Sheep and Beef Farmers increased from 44.6 years in 1996 to 49.3 years in 2006 (4.8 years, 10.7 per cent), making it the region's third oldest industry of the 158 measured at 3-digit level. Relatedly the proportion aged 55+ years increased from 26.5 to 41.6 per cent. The data show that the industry's labour market entry: exit ratio has fallen from an already low 5 people at labour market entry age in 1996 per 10 in the 'retirement zone', to just 2 per 10 in 2006. Notably also, the region's Grain, Sheep and Beef Farmers are a little older on average than their New Zealand counterparts. The relatively small proportion at the younger ages *vis-à-vis* the bulk of self-employed and employers at older ages has significant implications for the succession of these farms.



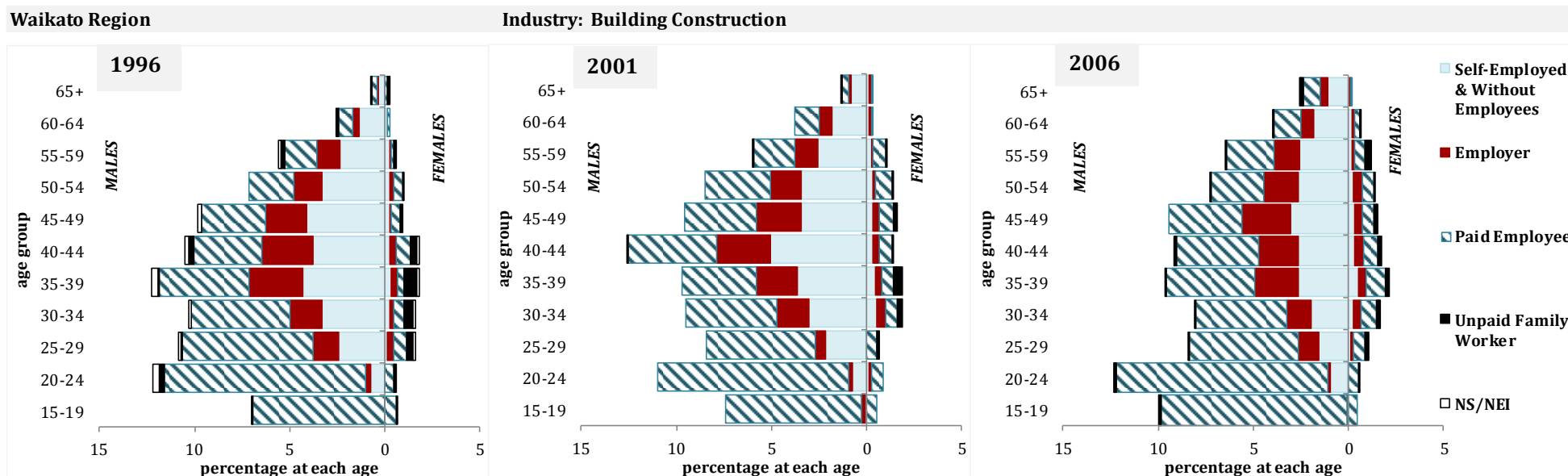
Figure 7.3: Age-Sex Structure and Employment Status, School Education Industry [N842] 1996, 2001, 2006, Waikato Region



Source: Jackson/Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006



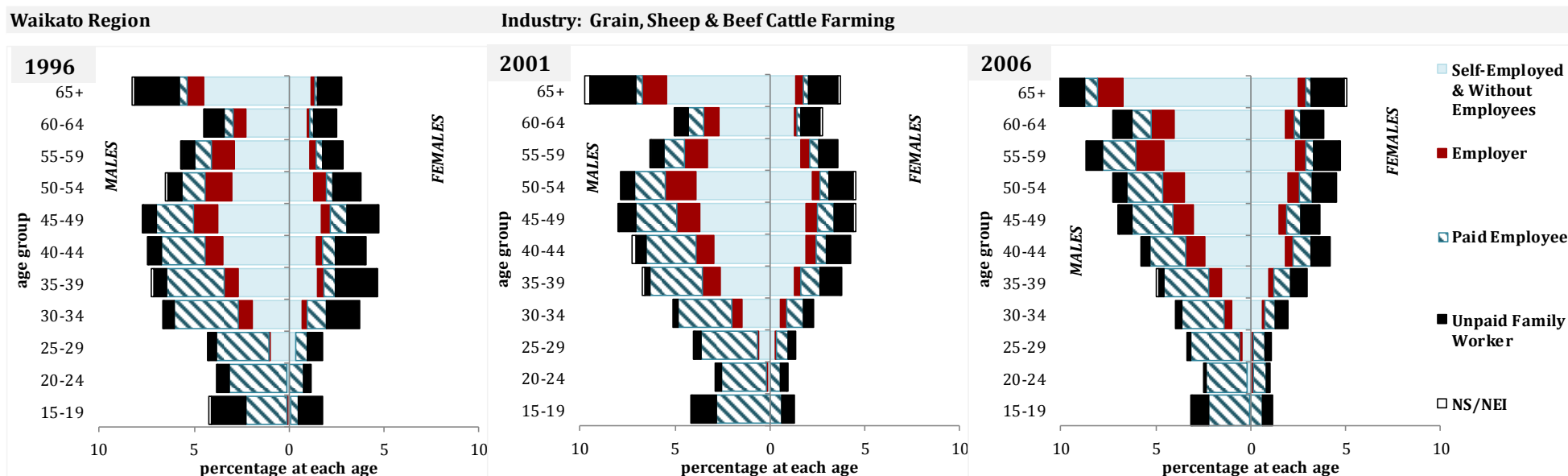
Figure 7.4: Age-Sex Structure and Employment Status, Building and Construction Industry [E411] 1996, 2001, 2006, Waikato Region



Source: Jackson/Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006



Figure 7.5: Age-Sex Structure and Employment Status, Grain, Sheep and Beef Cattle Farming Industry [A012] 1996, 2001, 2006, Waikato Region



Source: Jackson/Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006



Table 7.1 gives data for all Waikato industries at 3-digit level employing over 1,000 people in 2006 (accounting for 79 per cent of the region's employed workforce). As indicated above, the region's largest, second-largest and fourth-largest industries all have average ages above that of the total employed workforce, with the latter (Grain, Sheep and Beef Farming) having the third-oldest average age of all 158 industries at 3-digit level. Offsetting this workforce ageing to some extent are the below-average ages of the three next-largest industries: Building and Construction (3rd largest), Supermarket and Grocery Stores (5th largest), and Cafes and Restaurants (6th largest). However, it goes without saying that people and skills are not exact replacements for each other. While the region's overall population remains relatively young, it is critical that the rapid ageing of its workforce is urgently engaged with.



Table 7.1: Waikato Industries employing over 1,000 persons in 2006: Number, Average Age, and Change (%); 1996, 2001 and 2006 (Ranked largest to smallest)

Waikato Region	Number Employed			% Change	Average Age (in years)			% Change
	1996	2001	2006	1996-2006	1996	2001	2006	1996-2006
Dairy Cattle Farming	12,879	11,991	10,953	-15.0	38.8	41.0	41.9	+7.9
School Education	6,582	7,914	8,139	+23.7	42.5	43.9	45.0	+6.0
Building Construction	2,670	2,790	4,680	+75.3	37.3	39.0	38.5	+3.0
Grain, Sheep & Beef Cattle Farming	4,410	3,840	4,593	+4.1	44.6	46.6	49.3	+10.6
Supermarket & Grocery Stores	3,726	4,059	4,467	+19.9	29.7	31.6	33.8	+13.9
Cafes & Restaurants	3,141	3,663	4,383	+39.5	30.4	31.2	30.9	+1.4
Government Administration	4,374	4,083	4,371	-0.1	39.7	42.0	42.9	+8.0
Other Business Services	2,694	3,174	4,329	+60.7	38.9	40.6	41.2	+5.9
Other Health Services	1,497	4,005	4,305	+187.6	40.6	43.0	44.2	+9.0
Motor Vehicle Services	3,609	3,798	4,023	+11.5	34.3	36.1	37.7	+9.8
Hospitals & Nursing Homes	4,191	3,414	3,813	-9.0	40.2	42.7	44.5	+10.5
Community Care Services	2,385	3,096	3,732	+56.5	40.9	44.4	46.7	+14.3
Road Freight Transport	2,505	2,811	3,288	+31.3	38.5	40.2	42.9	+11.6
Accommodation	2,298	2,727	3,246	+41.3	40.2	41.5	42.1	+4.7
Other Personal & Household Good Retailing	2,493	2,625	3,177	+27.4	39.4	40.9	41.6	+5.7
Specialised Food Retailing	2,772	2,685	3,093	+11.6	33.4	33.9	33.9	+1.4
Installation Trade Services	1,851	2,262	3,048	+64.7	37.1	39.3	39.4	+6.4
Marketing & Business Management Services	1,275	2,001	2,913	+128.5	38.8	40.0	41.7	+7.4
Legal & Accounting Services	2,295	2,454	2,880	+25.5	37.7	40.2	41.5	+10.2
Other Personal Services	2,439	2,268	2,790	+14.4	35.9	38.9	40.7	+13.4
Services to Agriculture	1,608	2,121	2,454	+52.6	35.6	39.2	40.8	+14.7
Building Completion Services	1,584	1,794	2,400	+51.5	37.4	39.3	39.1	+4.6
Meat & Meat Product Manufacturing	2,046	2,373	2,364	+15.5	34.8	36.8	37.4	+7.6
Technical Services	1,221	1,473	2,304	+88.7	39.4	41.4	42.1	+6.8
Industrial Machinery & Equipment Manufacturing	2,094	1,989	2,280	+8.9	37.2	39.4	40.6	+9.1
Machinery & Equipment Wholesaling	1,620	1,878	2,193	+35.4	36.6	39.2	41.5	+13.5
Sport	1,368	1,518	2,106	+53.9	37.1	38.4	39.1	+5.4
Post School Education	1,926	2,343	2,097	+8.9	40.3	42.7	43.5	+7.9
Public Order & Safety Services	1,503	1,851	2,019	+34.3	38.8	40.4	42.8	+10.3
Property Operators & Developers	1,599	1,641	2,001	+25.1	41.0	43.7	44.5	+8.5
Non-Building Construction	1,470	1,623	1,986	+35.1	39.9	41.8	42.8	+7.3
Furniture, Houseware & Appliance Retailing	1,524	1,542	1,917	+25.8	38.9	39.6	39.4	+1.3
Real Estate Agents	1,392	1,314	1,842	+32.3	44.7	46.9	47.3	+5.8
Other Education	1,215	1,383	1,806	+48.6	40.3	41.3	44.1	+9.6
Medical & Dental Services	1,218	1,401	1,695	+39.2	40.8	43.3	44.7	+9.3
Dairy Product Manufacturing	1,596	1,296	1,680	+5.3	36.8	40.0	40.3	+9.5
Deposit Taking Financiers	2,010	1,461	1,665	-17.2	35.5	39.4	40.5	+14.1
Motor Vehicle Retailing	1,599	1,518	1,569	-1.9	36.5	38.4	39.5	+8.2
Other Livestock Farming	1,722	2,271	1,563	-9.2	43.1	45.1	45.9	+6.5
Horticulture & Fruit Growing	2,127	1,872	1,542	-27.5	38.8	41.1	43.9	+13.2
Clothing & Soft Good Retailing	1,347	1,227	1,533	+13.8	39.3	40.5	38.5	-2.0
Log Sawmilling & Timber Dressing	1,536	1,716	1,521	-1.0	36.5	38.2	39.6	+8.7
Builders Supplies Wholesaling	1,038	1,080	1,476	+42.2	36.8	39.3	39.1	+6.2
Other Wood Product Manufacturing	1,314	1,155	1,365	+3.9	35.8	38.2	40.2	+12.3
Postal & Courier Services	1,089	1,215	1,320	+21.2	37.1	39.4	42.3	+14.1
Preschool Education	579	807	1,203	+107.8	37.0	39.5	39.8	+7.6
Building Structure Services	603	717	1,182	+96.0	36.2	36.2	35.7	-1.4
Recreational Good Retailing	909	1,098	1,176	+29.4	35.1	37.0	38.1	+8.4
Forestry & Logging	1,761	1,674	1,167	-33.7	34.4	36.2	38.7	+12.4
Food, Drink & Tobacco Wholesaling	1,065	1,107	1,152	+8.2	36.6	37.9	39.1	+6.8
Computer Services	288	639	1,107	+284.4	37.3	37.0	38.4	+2.8
Department Stores	918	1,161	1,086	+18.3	28.8	29.8	31.9	+10.9
Interest Groups	744	1,038	1,074	+44.4	40.2	42.7	44.3	+10.3
Child Care Services	459	648	1,029	+124.2	34.3	36.3	36.9	+7.5
Site Preparation Services	501	699	1,026	+104.8	38.3	41.9	41.7	+8.8
Scientific Research	831	891	1,026	+23.5	37.5	39.3	40.7	+8.6
Fabricated Metal Product Manufacturing	936	930	1,005	+7.4	37.0	39.3	40.5	+9.6
Industries employing over 1,000 persons in 2006	118,446	128,124	146,154	+23.4				
Waikato Region: Total Employed Labour Force	155,457	162,963	185,691	+19.4	38.3	40.3	41.4	+8.0

Source: Jackson/Statistics NZ Customised Database, available from author. Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006



7.2 Industrial Change for Waitomo District (1996, 2001, 2006)

Table 7.2 gives an overview of industrial change for the Waitomo District at the one-digit level (which enumerates 18 industries). As would be expected, Agriculture, Forestry and Fishing is (similarly to the Waikato) the single-largest industry for the district. However, for Waitomo, Manufacturing is second largest, followed by Retail Trade and then Education. Of some importance is the 3.2 per cent decline in the dominant Agriculture, Forestry and Fishing industry over the 1996-2006 decade, against a significant increase in Property and Business Services (82.4 per cent) and also the Construction industry (36.5 per cent). Health and Community Services also saw a sizeable increase (48.1 per cent). Notably the main declines were confined to the smaller industries – a trend similar to districts elsewhere.

Table 7.2: Number, and Change (%) 1996, 2001 and 2006, Waitomo District

Waitomo District					
Industry	1996	2001	2006	Change 1996-2006	% Change 1996-2006
Agriculture, Forestry and Fishing	1326	1305	1284	-42	-3.2
Manufacturing	495	558	534	+39	+7.9
Retail Trade	423	399	396	-27	-6.4
Education	273	312	312	+39	+14.3
Property and Business Services	153	231	279	+126	+82.4
Construction	189	219	258	+69	+36.5
Health and Community Services	156	210	231	+75	+48.1
Accommodation, Cafes and Restaurants	180	207	225	+45	+25.0
Transport and Storage	156	126	156	+00	+0.0
Wholesale Trade	90	99	99	+09	+10.0
Personal and Other Services	117	117	93	-24	-20.5
Cultural and Recreational Services	81	102	93	+12	+14.8
Mining	93	96	78	-15	-16.1
Government Administration and Defence	114	81	60	-54	-47.4
Finance and Insurance	75	51	60	-15	-20.0
Electricity, Gas and Water Supply	51	48	54	+03	+5.9
Communication Services	36	27	27	-09	-25.0
Not Elsewhere Included	291	288	351	+60	+20.6
Total Industry	4299	4476	4590	+291	+6.8

Source: Statistics NZ, NZStats, Industry (ANZSIC96 V4.1 Division) by Age Group and Sex, for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001 and 2006



7. INDUSTRIAL CHANGE: KEY FINDINGS

- The average age of employed persons in the Waikato Region at Census 1996, 2001 and 2006 was respectively 38.3, 40.3 and 41.4 years, an overall increase of 3.1 years (8.1 per cent). This is almost identical to the average age for the Total New Zealand employed labour force at each observation: 38.3, 40.1 and 41.2 years (an increase of 2.9 years, 7.6 per cent). However the Waikato Region's employed labour force is ageing at a slightly faster rate.
- The Waikato Region's four largest industries at the 3 digit level (which enumerates 158 industries) are Dairy Cattle Farming; School Education; Building and Construction; and Grain, Sheep and Beef Farming.
- The average age of persons employed in the region's Dairy Cattle Farming industry (41.9 years in 2006) is slightly greater than the region's total employed labour force, and has shifted upwards since 1996 by 3.0 years (7.8 per cent). This is a slightly greater rate of structural ageing than for the Total New Zealand Dairy Farming labour force, but a little less than the national (employed) labour force.
- The region's second largest industry, School Education, is somewhat older, with an average age in 2006 of 45.0 years, having increased by 2.6 years since 1996 (6.1 per cent). In 1996, 12.2 per cent of those employed in this industry were aged 55+ years, while by 2006 that had increased to 21.5 per cent (a 76.0 per cent increase).
- Those employed in the region's Building and Construction industry are on average somewhat younger and the population is ageing more slowly. The relatively slow ageing reflects a 75 per cent increase in numbers employed in this industry, taking it from eleventh largest in 1996 to third in 2006.
- The Waikato Region's Grain, Sheep and Beef Farmers are the region's third oldest industry of the 158 measured at 3-digit level. The industry's labour market entry: exit ratio has fallen from an already low 5 people at labour market entry age in 1996 per 10 in the 'retirement zone', to just 2 per 10 in 2006. Notably also, the region's Grain, Sheep and Beef Farmers are a little older on average than their New Zealand counterparts.
- As would be expected, Agriculture, Forestry and Fishing is, (similarly to the Waikato), the single-largest industry for the district. However, for Waitomo, Manufacturing is second largest, followed by Retail Trade and then Education.



8. Movers and Stayers – Special Topic 2

This section looks at the ‘usual residence five years ago’ indicator collected at each Census. At Census 2006, for example, this indicator referred to a person’s usual residence in March 2001, linked by where they were living on census night in 2006. Detailed data from the 2013 Census are not yet available at TA level, thus data in this section are from the 2006 Census only (Figure 8.1). We split movers into Arrivals (in Waitomo in 2006 by where lived in 2001) and Leavers (in Waitomo 2001 by where living in 2006).

The 2006 Census population enumerated approximately 9,459 persons living in Waitomo. Figure 8.1 (left hand panel, Arrivals) shows that 60.4 per cent had also been residing there in 2001; this is the ‘Stayer’ population (also see Table 8.1). Those not born at the 2001 Census accounted for the single largest component of Arrivals (8.1 per cent), followed by those who had been living elsewhere in New Zealand but not further defined (5.7 per cent), those who did not state where they had been living in 2001 (3.5 per cent), and those who had been overseas in 2001 (3.0 per cent). These components can be seen in the box to the left of the map. Turning to internal immigration, the single-largest proportion of Arrivals to Waitomo had in 2001 been residing in Otorohanga (2.4 per cent), while relatively large contributions also came from Hamilton City (1.7 per cent), Waipa District (1.7 per cent), and Ruapehu District (1.1 per cent). Five TAs each contributed between 0.50 and 0.99 per cent (namely Waikato District, New Plymouth District, Rotorua District, Manukau City, and Auckland City). A further 17 TAs each contributed between 0.20 and 0.49 per cent, and the remaining TAs each contributed less than 0.2 per cent.

The right hand panel gives the data for those who had lived in Waitomo in 2001 by where they were living in 2006. The data show a significant similarity between the main origin and destination TAs, the single-largest proportion of Leavers having gone to Otorohanga (3.5 per cent), Hamilton City (3.5 per cent), and Waipa District (3.1 per cent). Tauranga City accounted for the next largest proportion (1.7 per cent). Eight TAs each received between 0.50 and 0.99 per cent of previous Waitomo residents, among them Ruapehu and Waikato districts at close to one per cent each. It should be noted that there are no data for people who were overseas or not born in 2006, as such people are not enumerated by the Census.



Figure 8.1: Movers and Stayers 2001-2006: Where People Lived Five Years Ago, Waitomo District

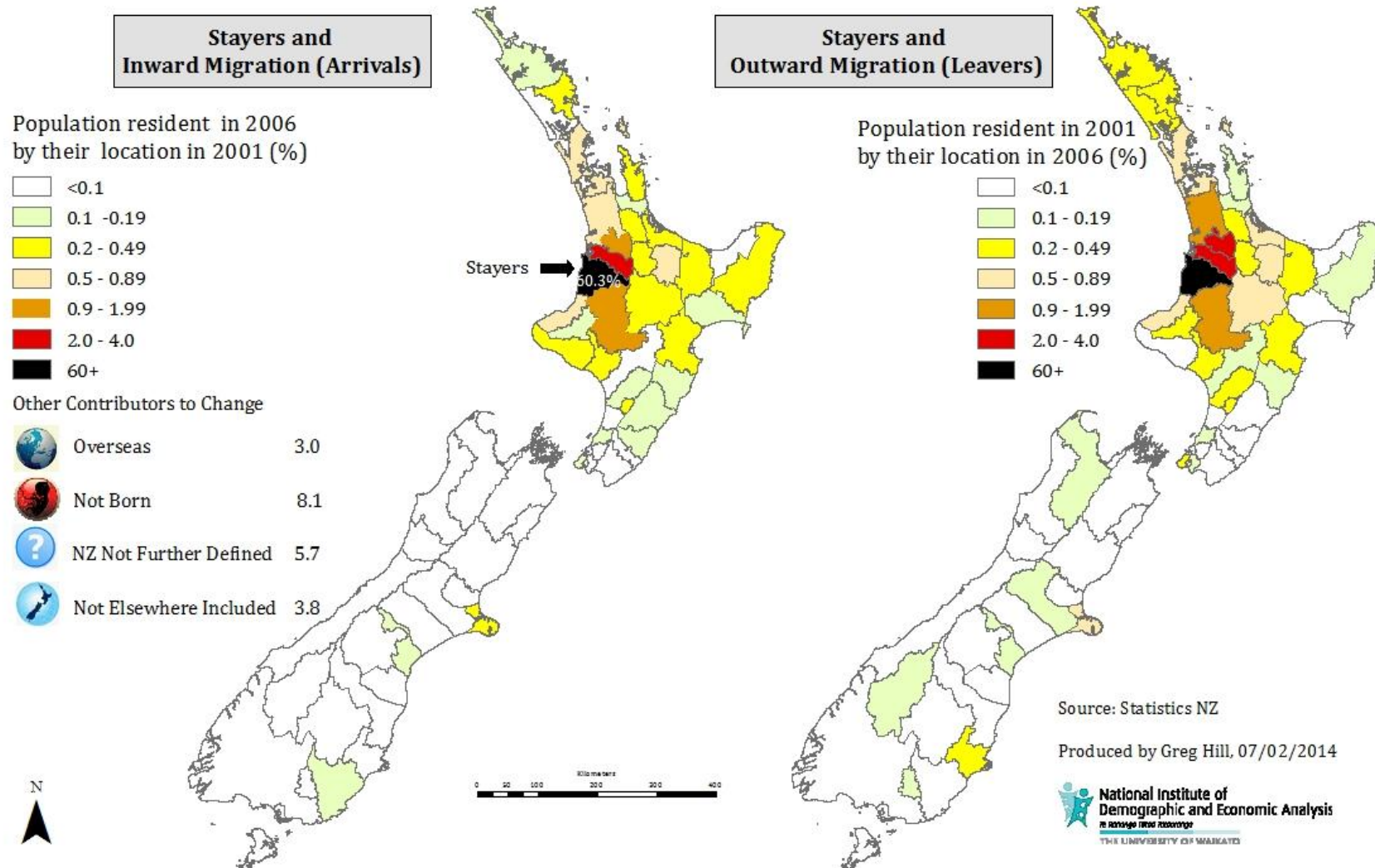


Table 8.1: Number, and Change (%) 1996, 2001 and 2006, Waitomo District

Number usually resident in Waitomo District in 2013:		9,459	
ARRIVALS: TA of Residence in 2001 for those who arrived in Waitomo over the 2001-2006 period		LEAVERS: TA of Residence in 2006 for those who left Waitomo over the 2001-2006 period	
<i>Waitomo District (Stayers)</i>	5,700	<i>Waitomo District (Stayers)</i>	5,700
Otorohanga District	228	Hamilton City	270
Hamilton City	165	Otorohanga District	270
Waipa District	111	Waipa District	240
Ruapehu District	105	Tauranga City	90
Waikato District	78	Ruapehu District	75
New Plymouth District	75	Waikato District	69
Rotorua District	66	Taupo District	54
Manukau City	51	New Plymouth District	54
Auckland City	48	Rotorua District	51
South Waikato District	45	Western Bay of Plenty District	48
Taupo District	45	Auckland City	45
Franklin District	42	Christchurch City	39
Matamata-Piako District	39	Franklin District	33
Waitakere City	36	Papakura District	30
Tauranga City	33	Matamata-Piako District	30
North Shore City	30	Dunedin City	30
South Taranaki District	30	Manukau City	27
Wanganui District	27	Palmerston North City	27
Palmerston North City	27	Whangarei District	24
Whangarei District	24	Whakatane District	24
Western Bay of Plenty District	24	Wellington City	24
Gisborne District	24	Far North District	21
Hastings District	24	South Waikato District	21
Thames-Coromandel District	21	Napier City	21
Whakatane District	21	Wanganui District	21
Christchurch City	21	Manawatu District	21
Far North District	18	Kaipara District	18
Papakura District	18	Hastings District	18
Stratford District	18	Stratford District	18
Kapiti Coast District	18	Thames-Coromandel District	15
Wellington City	18	Hauraki District	15
Clutha District	18	Gisborne District	15
Hauraki District	15	North Shore City	12
Central Hawke's Bay District	15	Waitakere City	12
Masterton District	15	Rangitikei District	12
Rodney District	12	Tasman District	12
Wairoa District	12	Central Hawke's Bay District	9
Manawatu District	12	Kapiti Coast District	9
Tararua District	12	Lower Hutt City	9
Timaru District	12	Selwyn District	9
Napier City	9	Timaru District	9
Rangitikei District	9	Queenstown-Lakes District	9
Horowhenua District	9	Gore District	9
Tasman District	9	Other TAs (with 6 or less migrants)	81
Hurunui District	9		
Waitaki District	9		
Other TAs (with 6 or less migrants)	99		
Overseas	288		
Not Born in 2001	765		
NZ not further defined	543		
Not elsewhere included	357		



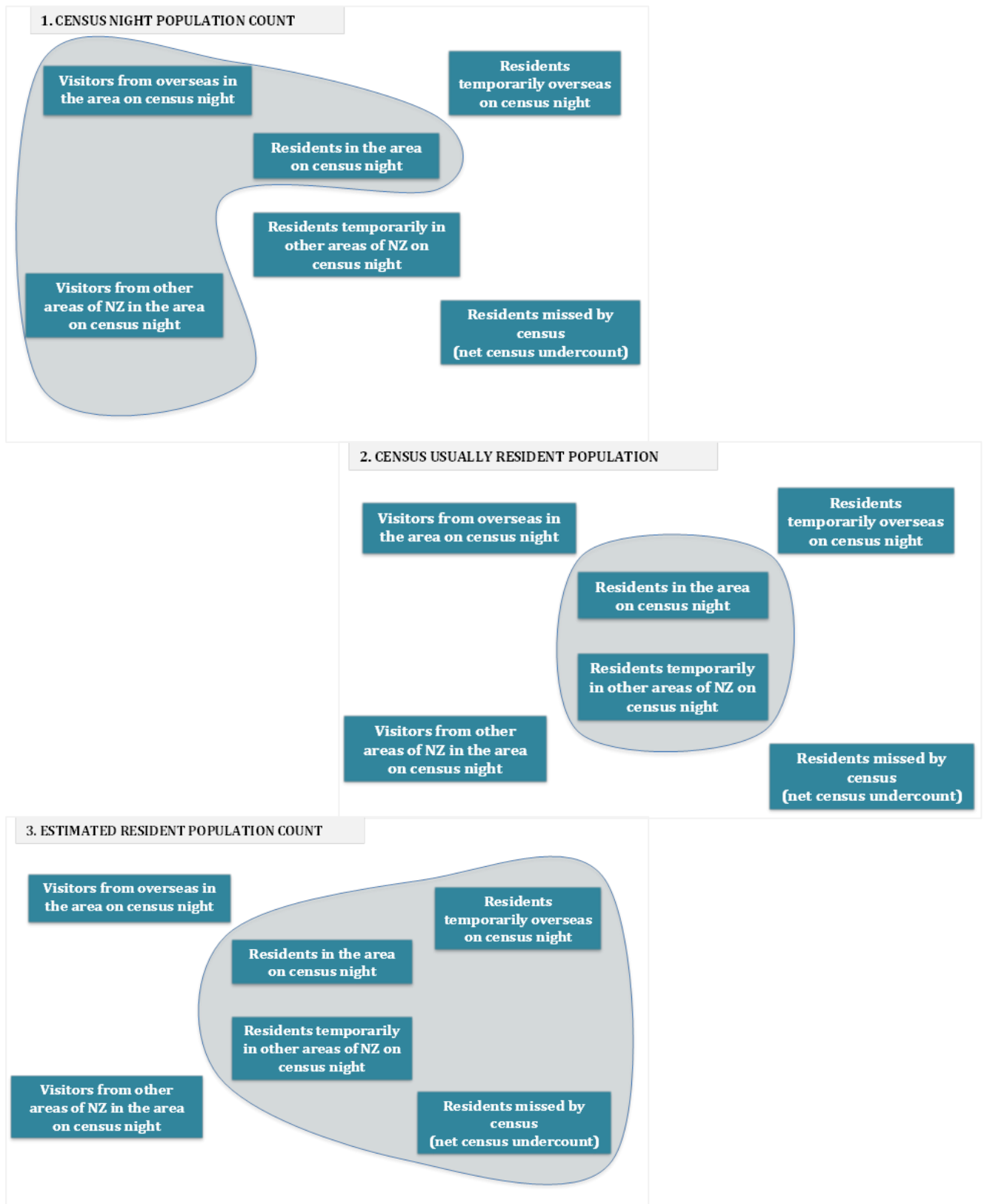
8. MOVERS AND STAYERS: KEY FINDINGS

- Mover and Stayer data from the 2013 Census are not yet available at TA level; this section is based on data from the 2006 Census.
- 60.4 per cent of those living in Waitomo in 2006 had been living there in 2001.
- Births accounted for the single-largest percentage of 'Arrivals' (8.1 per cent), followed by those who had been living elsewhere in New Zealand but not further defined (5.7 per cent), those who did not state where they had been living in 2001 (3.5 per cent), and those who had been overseas in 2001 (3.0 per cent).
- The main origin and destination TAs (of Waitomo's internal arrivals and leavers) were essentially the same: Otorohanga, Hamilton City, and Waipa, with most TAs either sending or receiving a small proportion.



Appendices

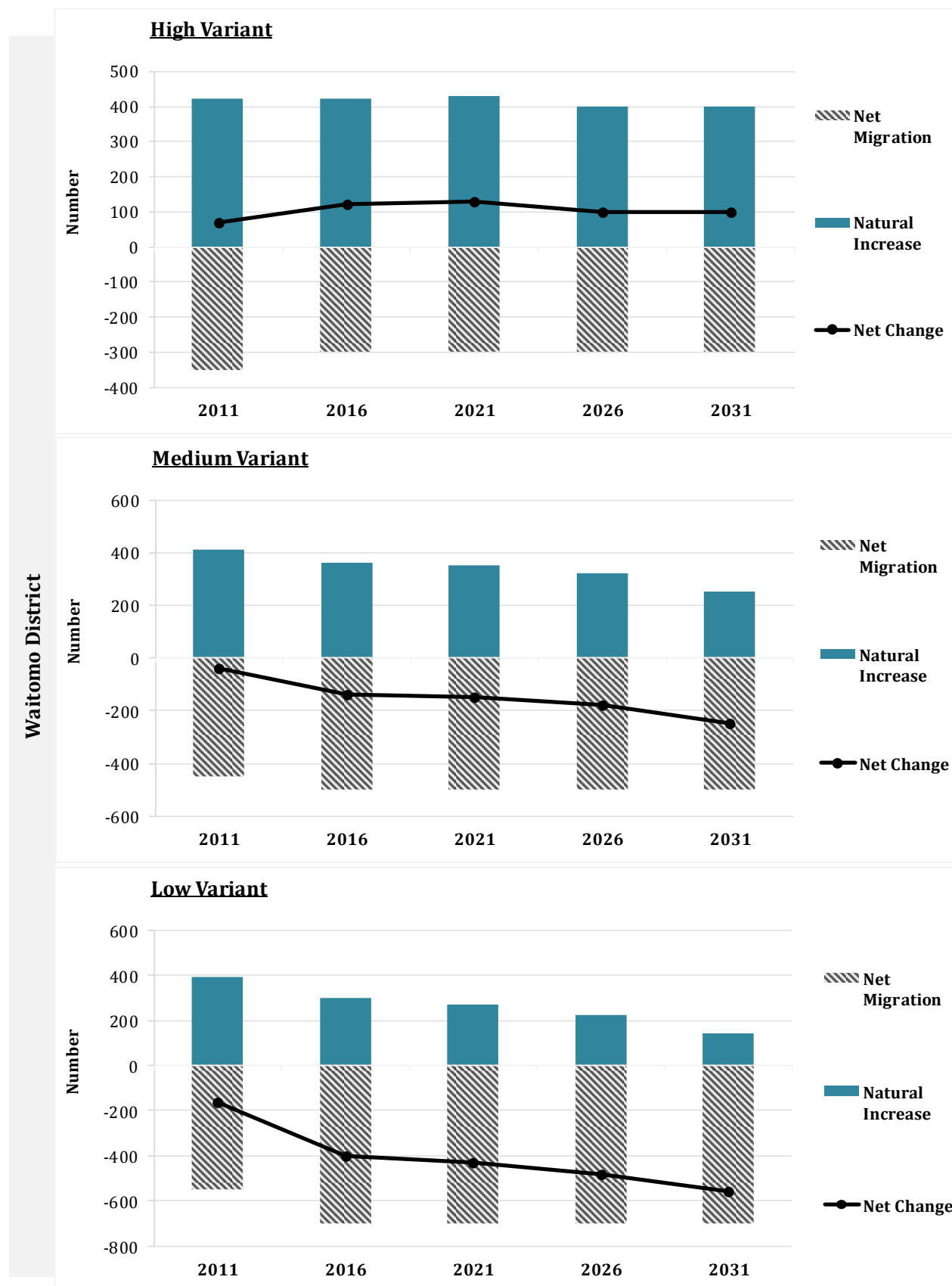
Appendix Figure 1: Definitions of population counts



Source: Statistics NZ



Appendix Figure 2: Projected Assumptions by Projection Variant



Source: Subnational Projected Population Characteristics, 2006(base)-2031 (October 2012 update)



Appendix Table 1: Population size and growth, 1986-2012

		Waitomo District		Waikato REGION		New Zealand	
		Population Number	% Change from previous year	Population Number	% Change from previous year	Population Number	% Change from previous year
Estimated Defacto Population (adjusted for 1991 Census) (March Years) ⁽¹⁾	1986	10,522	...	325,220	...	3,307,084	...
	1987	10,450	-0.7	327,400	+0.7	3,315,410	+0.3
	1988	10,350	-1.0	330,300	+0.9	3,339,160	+0.7
	1989	10,200	-1.4	331,500	+0.4	3,347,140	+0.2
	1990	10,100	-1.0	334,000	+0.8	3,373,400	+0.8
Estimated Defacto Population (unadjusted for Census 1996) (March Years) ⁽¹⁾	1991	10,074	...	338,959	...	3,515,980	...
	1992	9,960	-1.1	341,200	+0.7	3,552,240	+1.0
	1993	9,900	-0.6	344,600	+1.0	3,597,850	+1.3
	1994	9,890	-0.1	348,200	+1.0	3,648,260	+1.4
	1995	9,850	-0.4	351,600	+1.0	3,706,710	+1.6
Estimated Usual Resident Population (June Years) ⁽²⁾	1996	10,000	....	358,800	....	3,732,000	....
	1997	9,950	-0.5	362,700	+1.1	3,781,300	+1.3
	1998	9,960	+0.1	365,600	+0.8	3,815,000	+0.9
	1999	9,890	-0.7	366,900	+0.4	3,835,100	+0.5
	2000	9,810	-0.8	368,100	+0.3	3,857,700	+0.6
	2001	9,780	-0.3	368,400	+0.1	3,880,500	+0.6
	2002	9,720	-0.6	373,400	+1.4	3,948,500	+1.8
	2003	9,750	+0.3	379,200	+1.6	4,027,200	+2.0
	2004	9,740	-0.1	384,500	+1.4	4,087,500	+1.5
	2005	9,710	-0.3	388,700	+1.1	4,133,900	+1.1
	2006	9,680	-0.3	393,200	+1.2	4,184,600	+1.2
	2007	9,600	-0.8	396,500	+0.8	4,228,300	+1.0
	2008	9,600	+0.0	400,100	+0.9	4,268,900	+1.0
	2009	9,620	+0.2	404,400	+1.1	4,315,800	+1.1
	2010	9,640	+0.2	409,300	+1.2	4,367,800	+1.2
2011	9,630	-0.1	413,100	+0.9	4,405,200	+0.9	
2012	9,540	-0.9	416,200	+0.8	4,433,000	+0.6	
2013	9,410	-1.4	418,500	+0.6	4,470,800	+0.9	
1986-2013*		-1,112	-10.6	+93,280	+28.7	+1,163,716	+35.2

Source: (1) Statistics New Zealand, Yearbook collection 1893-2012

(2) Estimated Resident Population for Regional Council and Territorial Authority Areas, at 30 June(1996+) (Annual-Jun)

Table reference: DPE051AA and DPE052AA, Boundaries at 1 January 2013. Last updated: 22 October 2013 10:45am

Notes: *Changes in the timing and method of estimating Resident Population between 1991-1992 and 1995-1996 mean that the three sets of trends should be understood as discontinuous



Appendix Table 2: Components of change, 1991-2012

		Waitomo District									Waikato REGION			New Zealand		
		Components of Change					Contribution to Net Change			Contribution to Net Change			Contribution to Net Change			
		Births ^a	Deaths ^b	Natural Increase ^c = (a-b)	Estimated Resident Population, ERP ^d	Net Change ^e = (d _{t+1} - d _t)	Estimated Migration ^f = (e-c)	Estimated Natural Increase (%)	Estimated Migration (%)	Net Change (%)	Estimated Natural Increase (%)	Estimated Migration (%)	Net Change (%)	Estimated Natural Increase (%)	Estimated Migration (%)	Net Change (%)
March Year	1992	192	63	129	9,960	...	...	...	...	...	...	...	...	...	...	...
	1993	184	78	106	9,900	-60	-166	1.06	-1.67	-0.60	1.05	-0.05	1.00	0.89	0.40	1.28
	1994	185	82	103	9,890	-10	-113	1.04	-1.14	-0.10	1.00	0.04	1.04	0.87	0.53	1.40
	1995	193	77	116	9,850	-40	-156	1.17	-1.58	-0.40	1.05	-0.07	0.98	0.84	0.76	1.60
June Year	1996	185	77	108	10,000	...	...	...	...	...	...	...	...	...	...	...
	1997	160	68	92	9,950	-50	-142	0.92	-1.42	-0.50	0.91	0.18	1.09	0.79	0.53	1.32
	1998	166	77	89	9,960	10	-79	0.89	-0.79	0.10	0.88	-0.08	0.80	0.78	0.11	0.89
	1999	161	81	80	9,890	-70	-150	0.80	-1.51	-0.70	0.84	-0.49	0.36	0.75	-0.22	0.53
	2000	153	78	75	9,810	-80	-155	0.76	-1.57	-0.81	0.85	-0.52	0.33	0.79	-0.20	0.59
	2001	152	70	82	9,780	-30	-112	0.84	-1.14	-0.31	0.78	-0.70	0.08	0.76	-0.17	0.59
	2002	140	80	60	9,720	-60	-120	0.61	-1.23	-0.61	0.75	0.60	1.36	0.67	1.08	1.75
	2003	175	66	109	9,750	30	-79	1.12	-0.81	0.31	0.76	0.79	1.55	0.69	1.30	1.99
	2004	134	58	76	9,740	-10	-86	0.78	-0.88	-0.10	0.79	0.61	1.40	0.74	0.76	1.50
	2005	149	71	78	9,710	-30	-108	0.80	-1.11	-0.31	0.80	0.29	1.09	0.72	0.41	1.14
	2006	142	72	70	9,680	-30	-100	0.72	-1.03	-0.31	0.74	0.41	1.16	0.75	0.48	1.23
	2007	150	77	73	9,600	-80	-153	0.75	-1.58	-0.83	0.80	0.03	0.84	0.79	0.25	1.04
	2008	164	68	96	9,600	0	-96	1.00	-1.00	0.00	0.86	0.05	0.91	0.84	0.12	0.96
	2009	166	74	92	9,620	20	-72	0.96	-0.75	0.21	0.89	0.18	1.07	0.80	0.30	1.10
	2010	163	77	86	9,640	20	-66	0.89	-0.69	0.21	0.87	0.34	1.21	0.82	0.39	1.20
	2011	149	86	63	9,630	-10	-73	0.65	-0.76	-0.10	0.78	0.15	0.93	0.76	0.09	0.86
	2012	127	60	67	9,540	-90	-157	0.70	-1.63	-0.93	0.74	0.01	0.75	0.71	-0.08	0.63
2013	117	78	39	9,410	-130	-169	0.41	-1.77	-1.36	0.71	-0.15	0.55	0.67	0.18	0.85	

Source: Compiled from Statistics New Zealand, Infoshare

(1) 1992-1995 Estimated Defacto Population (March Years); Statistics New Zealand, Yearbook collection 1893-2012

(2) Estimated Resident Population for Regions and TAs, at 30 June(1996+) (Annual-Jun), Table reference: DPE051AA and DPE052AA, Boundaries at 1 January 2013. Last updated: 22 October 2013

(3) Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun). Table reference: VSB011AA, VSB016AA, VSD008AA, VSD018AA Last updated: 16 August 2013

^ Natural Increase, Net Migration and Net Change as a percentage of previous year's ERP



Appendix Table 3: Components of Change by age, 1996-2001

<i>Waitomo District</i>	Actual (Observed) 1996	Expected 2001	Actual (Observed) 2001	Actual (Observed) Change 1996-2001	Change due to Migration	Change due to Deaths	Change to cohort size	Actual (Observed) change 1996-2001	Change due to Migration ~	Change due to Deaths ~	Change to cohort size ~
	Number							Percentage (%)			
0-4 Years	940	787	820	-120	33	-5	-148	-12.8	3.5	-0.6	-15.7
5-9 Years	910	939	910	0	-29	-1	30	0.0	-3.1	-0.2	3.3
10-14 Years	890	909	860	-30	-49	-1	20	-3.4	-5.5	-0.1	2.2
15-19 Years	690	888	730	40	-158	-2	200	5.8	-22.9	-0.3	29.0
20-24 Years	580	687	510	-70	-177	-3	110	-12.1	-30.5	-0.5	19.0
25-29 Years	650	577	550	-100	-27	-3	-70	-15.4	-4.2	-0.4	-10.8
30-34 Years	790	647	620	-170	-27	-3	-140	-21.5	-3.4	-0.4	-17.7
35-39 Years	820	786	810	-10	24	-4	-30	-1.2	2.9	-0.5	-3.7
40-44 Years	670	815	750	80	-65	-5	150	11.9	-9.7	-0.8	22.4
45-49 Years	730	664	640	-90	-24	-6	-60	-12.3	-3.2	-0.9	-8.2
50-54 Years	500	718	640	140	-78	-12	230	28.0	-15.7	-2.3	46.0
55-59 Years	430	487	490	60	3	-13	70	14.0	0.7	-3.0	16.3
60-64 Years	390	412	410	20	-2	-18	40	5.1	-0.5	-4.7	10.3
65-69 Years	340	363	330	-10	-33	-27	50	-2.9	-9.8	-7.9	14.7
70-74 Years	270	304	290	20	-14	-36	70	7.4	-5.1	-13.4	25.9
75-79 Years	190	225	220	30	-5	-45	80	15.8	-2.7	-23.6	42.1
80-84 Years	140	141	120	-20	-21	-49	50	-14.3	-14.6	-35.4	35.7
85-89 Years	49	84	56	7	-28	-56	91	13.6	-57.8	-113.4	184.7
90+ Years	21	27	24	3	-3	-43	49	15.9	-14.1	-206.1	236.0
Total	10,000	10,459	9,780	-220	-679	-333	792	-2.2	-6.8	-3.3	7.9

Source: Statistics NZ, Infoshare, Table reference: VSB011AA, VSB016AA, VSD008AA & VSD018AA Last updated: 16 August 2013

NZ.Stat, Estimated Subnational Population (RC, TU) by Age and Sex at 30 June 2006-12 (2006 boundaries)

NZ.Stat, Estimated Subnational Population (RC,TA) by Age and Sex at 30 June 1996, 2001 and 2006

Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007

Notes: ~ As a percentage of Previous Observed Population



Appendix Table 4: Components of Change by age, 2001-2006

<i>Waitomo District</i>	Actual (Observed) 2001	Expected 2001	Actual (Observed) 2006	Actual (Observed) Change 2001-2006	Change due to Migration	Change due to Deaths	Change to cohort size	Actual (Observed) change 2001-2006	Change due to Migration ~	Change due to Deaths ~	Change to cohort size ~
	Number							Percentage (%)			
0-4 Years	820	736	770	-50	34	-4	-80	-6.1	4.2	-0.5	-9.8
5-9 Years	910	819	850	-60	31	-1	-90	-6.6	3.4	-0.1	-9.9
10-14 Years	860	909	850	-10	-59	-1	50	-1.2	-6.9	-0.1	5.8
15-19 Years	730	858	740	10	-118	-2	130	1.4	-16.2	-0.2	17.8
20-24 Years	510	727	500	-10	-227	-3	220	-2.0	-44.6	-0.5	43.1
25-29 Years	550	508	540	-10	32	-2	-40	-1.8	5.8	-0.4	-7.3
30-34 Years	620	548	590	-30	42	-2	-70	-4.8	6.8	-0.4	-11.3
35-39 Years	810	617	640	-170	23	-3	-190	-21.0	2.8	-0.4	-23.5
40-44 Years	750	805	750	0	-55	-5	60	0.0	-7.3	-0.7	8.0
45-49 Years	640	743	680	40	-63	-7	110	6.3	-9.9	-1.1	17.2
50-54 Years	640	631	600	-40	-31	-9	0	-6.3	-4.9	-1.4	0.0
55-59 Years	490	626	590	100	-36	-14	150	20.4	-7.4	-2.9	30.6
60-64 Years	410	473	450	40	-23	-17	80	9.8	-5.6	-4.2	19.5
65-69 Years	330	387	360	30	-27	-23	80	9.1	-8.1	-7.0	24.2
70-74 Years	290	300	280	-10	-20	-30	40	-3.4	-6.8	-10.5	13.8
75-79 Years	220	248	220	0	-28	-42	70	0.0	-12.8	-19.0	31.8
80-84 Years	120	169	130	10	-39	-51	100	8.3	-32.9	-42.1	83.3
85-89 Years	56	76	74	19	-2	-44	64	33.3	-2.9	-78.6	114.8
90+ Years	24	32	36	11	4	-48	56	47.2	15.7	-199.9	231.4
Total	9,780	10,213	9,650	-130	-563	-307	740	-1.3	-5.8	-3.1	7.6

Source: Statistics NZ, Infoshare, Table reference: VSB011AA, VSB016AA, VSD008AA & VSD018AA Last updated: 16 August 2013

NZ.Stat, Estimated Subnational Population (RC, TU) by Age and Sex at 30 June 2006-12 (2006 boundaries)

NZ.Stat, Estimated Subnational Population (RC,TA) by Age and Sex at 30 June 1996, 2001 and 2006

Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007

Notes: ~ As a percentage of Previous Observed Population



Appendix Table 5: Components of Change by age, Waikato Region: 1996-2001

<i>Waikato REGION</i>	Actual (Observed) 1996	Expected 2001	Actual (Observed) 2001	Actual (Observed) Change 1996-2001	Change due to Migration	Change due to Deaths	Change to cohort size	Actual (Observed) change 1996-2001	Change due to Migration ~	Change due to Deaths ~	Change to cohort size ~
	Number							Percentage (%)			
0-4 Years	30,410	28,009	28,530	-1,880	521	-189	-2,212	-6.2	1.7	-0.6	-7.3
5-9 Years	30,860	30,365	30,480	-380	115	-45	-450	-1.2	0.4	-0.1	-1.5
10-14 Years	28,470	30,835	30,860	2,390	25	-25	2,390	8.4	0.1	-0.1	8.4
15-19 Years	27,540	28,405	27,760	220	-645	-65	930	0.8	-2.3	-0.2	3.4
20-24 Years	27,130	27,419	23,900	-3,230	-3,519	-121	410	-11.9	-13.0	-0.4	1.5
25-29 Years	26,390	27,006	23,250	-3,140	-3,756	-124	740	-11.9	-14.2	-0.5	2.8
30-34 Years	27,520	26,272	26,460	-1,060	188	-118	-1,130	-3.9	0.7	-0.4	-4.1
35-39 Years	27,970	27,383	27,800	-170	417	-137	-450	-0.6	1.5	-0.5	-1.6
40-44 Years	24,770	27,792	27,630	2,860	-162	-178	3,200	11.5	-0.7	-0.7	12.9
45-49 Years	22,930	24,530	24,590	1,660	60	-240	1,840	7.2	0.3	-1.0	8.0
50-54 Years	18,250	22,568	22,660	4,410	92	-362	4,680	24.2	0.5	-2.0	25.6
55-59 Years	15,610	17,776	17,870	2,260	94	-474	2,640	14.5	0.6	-3.0	16.9
60-64 Years	13,350	14,953	15,390	2,040	437	-657	2,260	15.3	3.3	-4.9	16.9
65-69 Years	12,790	12,448	12,880	90	432	-902	560	0.7	3.4	-7.1	4.4
70-74 Years	10,440	11,423	11,440	1,000	17	-1,367	2,350	9.6	0.2	-13.1	22.5
75-79 Years	7,350	8,713	8,640	1,290	-73	-1,727	3,090	17.6	-1.0	-23.5	42.0
80-84 Years	4,920	5,476	5,460	540	-16	-1,874	2,430	11.0	-0.3	-38.1	49.4
85-89 Years	2,240	2,977	2,928	688	-50	-1,943	2,680	30.7	-2.2	-86.7	119.6
90+ Years	940	1,220	1,292	352	72	-1,960	2,240	37.5	7.6	-208.5	238.4
Total	359,880	375,570	369,820	9,940	-5,750	-12,508	28,198	2.8	-1.6	-3.5	7.8

Source: Statistics NZ, Infoshare, Table reference: VSB011AA, VSB016AA, VSD008AA & VSD018AA Last updated: 16 August 2013

NZ.Stat, Estimated Subnational Population (RC, TU) by Age and Sex at 30 June 2006-12 (2006 boundaries)

NZ.Stat, Estimated Subnational Population (RC,TA) by Age and Sex at 30 June 1996, 2001 and 2006

Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007

Notes: ~ As a percentage of Previous Observed Population



Appendix Table 6: Components of Change by age, Waikato Region: 2001-2006

<i>Waikato REGION</i>	Actual (Observed) 2001	Expected 2001	Actual (Observed) 2006	Actual (Observed) Change 2001-2006	Change due to Migration	Change due to Deaths	Change to cohort size	Actual (Observed) change 2001-2006	Change due to Migration ~	Change due to Deaths ~	Change to cohort size ~
	Number							Percentage (%)			
0-4 Years	28,530	27,318	28,500	-30	1,182	-160	-1,052	-0.1	4.1	-0.6	-3.7
5-9 Years	30,480	28,494	29,480	-1,000	986	-36	-1,950	-3.3	3.2	-0.1	-6.4
10-14 Years	30,860	30,459	31,240	380	781	-21	-380	1.2	2.5	-0.1	-1.2
15-19 Years	27,760	30,802	30,260	2,500	-542	-58	3,100	9.0	-2.0	-0.2	11.2
20-24 Years	23,900	27,662	26,670	2,770	-992	-98	3,860	11.6	-4.2	-0.4	16.2
25-29 Years	23,250	23,810	23,300	50	-510	-90	650	0.2	-2.2	-0.4	2.8
30-34 Years	26,460	23,161	25,000	-1,460	1,839	-89	-3,210	-5.5	7.0	-0.3	-12.1
35-39 Years	27,800	26,340	28,370	570	2,030	-120	-1,340	2.1	7.3	-0.4	-4.8
40-44 Years	27,630	27,630	29,090	1,460	1,460	-170	170	5.3	5.3	-0.6	0.6
45-49 Years	24,590	27,382	28,270	3,680	888	-248	3,040	15.0	3.6	-1.0	12.4
50-54 Years	22,660	24,253	24,730	2,070	477	-337	1,930	9.1	2.1	-1.5	8.5
55-59 Years	17,870	22,169	23,000	5,130	831	-491	4,790	28.7	4.6	-2.7	26.8
60-64 Years	15,390	17,246	18,190	2,800	944	-624	2,480	18.2	6.1	-4.1	16.1
65-69 Years	12,880	14,526	15,290	2,410	764	-864	2,510	18.7	5.9	-6.7	19.5
70-74 Years	11,440	11,720	12,010	570	290	-1,160	1,440	5.0	2.5	-10.1	12.6
75-79 Years	8,640	9,785	9,900	1,260	115	-1,655	2,800	14.6	1.3	-19.2	32.4
80-84 Years	5,460	6,658	6,710	1,250	52	-1,982	3,180	22.9	1.0	-36.3	58.2
85-89 Years	2,928	3,482	3,505	577	23	-1,978	2,532	19.7	0.8	-67.6	86.5
90+ Years	1,292	1,694	1,695	403	1	-2,526	2,928	31.2	0.1	-195.5	226.6
Total	369,820	384,592	395,210	25,390	10,618	-12,706	27,478	6.9	2.9	-3.4	7.4

Source: Statistics NZ, Infoshare, Table reference: VSB011AA, VSB016AA, VSD008AA & VSD018AA Last updated: 16 August 2013

NZ.Stat, Estimated Subnational Population (RC, TU) by Age and Sex at 30 June 2006-12 (2006 boundaries)

NZ.Stat, Estimated Subnational Population (RC,TA) by Age and Sex at 30 June 1996, 2001 and 2006

Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007

Notes: ~ As a percentage of Previous Observed Population



Appendix Table 7: Projection Assumptions by Variant and Region

Waitomo District	2011	2016	2021	2026	2031	Change 2011-2031 (%)
HIGH						
Births (Live) - 5 years ended 30 June	800	790	810	800	800	0.0
Deaths - 5 years ended 30 June	390	370	380	400	400	2.6
Natural Increase - 5 years ended 30 June	420	420	430	400	400	-4.8
Net Migration - 5 years ended 30 June	-350	-300	-300	-300	-300	-14.3
Population at 30 June	9740	9870	10000	10100	10200	4.7
Median Age (Years) at 30 June	35.2	35.2	35.1	36	36.8	4.5
MEDIUM						
Births (Live) - 5 years ended 30 June	790	740	730	700	660	-16.5
Deaths - 5 years ended 30 June	390	370	380	390	400	2.6
Natural Increase - 5 years ended 30 June	410	360	350	320	250	-39.0
Net Migration - 5 years ended 30 June	-450	-500	-500	-500	-500	11.1
Population at 30 June	9630	9490	9340	9160	8910	-7.5
Median Age (Years) at 30 June	35.2	35.4	35.5	36.6	37.8	7.4
LOW						
Births (Live) - 5 years ended 30 June	780	680	650	600	530	-32.1
Deaths - 5 years ended 30 June	390	380	380	380	390	0.0
Natural Increase - 5 years ended 30 June	390	300	270	220	140	-64.1
Net Migration - 5 years ended 30 June	-550	-700	-700	-700	-700	27.3
Population at 30 June	9520	9120	8680	8200	7640	-19.7
Median Age (Years) at 30 June	35.3	35.6	35.9	37.1	38.7	9.6
Waikato REGION						
HIGH						
Births (Live) - 5 years ended 30 June	31300	31500	32800	33900	34600	10.5
Deaths - 5 years ended 30 June	14000	14600	15800	16800	18300	30.7
Natural Increase - 5 years ended 30 June	17300	16900	17000	17100	16300	-5.8
Net Migration - 5 years ended 30 June	6800	8300	8800	8800	8800	29.4
Population at 30 June	417300	442400	468100	494000	519100	24.4
Median Age (Years) at 30 June	36.4	37	37.5	38.3	39.1	7.4
MEDIUM						
Births (Live) - 5 years ended 30 June	30900	29400	29700	29700	29400	-4.9
Deaths - 5 years ended 30 June	14100	15000	15900	17000	18500	31.2
Natural Increase - 5 years ended 30 June	16800	14400	13700	12700	10900	-35.1
Net Migration - 5 years ended 30 June	3100	900	1400	1400	1400	-54.8
Population at 30 June	413100	428400	443500	457600	469900	13.7
Median Age (Years) at 30 June	36.4	37.2	37.9	38.7	39.8	9.3
LOW						
Births (Live) - 5 years ended 30 June	30500	27200	26700	25900	24700	-19.0
Deaths - 5 years ended 30 June	14200	15400	16300	17200	18500	30.3
Natural Increase - 5 years ended 30 June	16300	11900	10400	8700	6200	-62.0
Net Migration - 5 years ended 30 June	-600	-6500	-6000	-6000	-6000	900.0
Population at 30 June	408900	414400	418800	421500	421800	3.2
Median Age (Years) at 30 June	36.5	37.4	38.2	39.2	40.6	11.2

Source: Subnational Projected Population Characteristics, 2006(base)-2031 (October 2012 update)



Appendix Table 8: Projected Population, Waikato Region, 2006-2031 (Medium Series)

Waikato REGION	Numbers by age						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
0-14 years	88,740	89,830	90,180	91,790	90,570	90,570	+0.8
15-24 years	56,740	60,180	59,180	56,910	59,100	60,550	+0.6
25-39 years	76,280	74,630	78,470	84,340	86,500	84,790	+13.6
40-54 years	81,630	84,720	80,990	76,020	74,170	78,390	-7.5
55-64 years	40,980	47,040	51,770	55,310	55,050	51,550	+9.6
65-74 years	27,180	31,940	38,860	44,810	49,610	53,320	+66.9
75-84 years	16,560	18,310	21,170	25,440	31,640	37,110	+102.7
85+ years	5,110	6,440	7,770	8,890	10,920	13,630	+111.6
Total	393,220	413,090	428,390	443,510	457,560	469,910	+13.8
65+ years	48,850	56,690	67,800	79,140	92,170	104,060	+83.6
	Intercensal Change by Age (Numbers)						Change (N)
	2006-2011	2011-2016	2016-2021	2021-2026	2026-2031		2011-2031
0-14 years	...	+1,090	+350	+1,610	-1,220	+00	+740
15-24 years	...	+3,440	-1,000	-2,270	+2,190	+1,450	+370
25-39 years	...	-1,650	+3,840	+5,870	+2,160	-1,710	+10,160
40-54 years	...	+3,090	-3,730	-4,970	-1,850	+4,220	-6,330
55-64 years	...	+6,060	+4,730	+3,540	-260	-3,500	+4,510
65-74 years	...	+4,760	+6,920	+5,950	+4,800	+3,710	+21,380
75-84 years	...	+1,750	+2,860	+4,270	+6,200	+5,470	+18,800
85+ years	...	+1,330	+1,330	+1,120	+2,030	+2,710	+7,190
Total	...	+19,870	+15,300	+15,120	+14,050	+12,350	+56,820
65+ years	...	+7,840	+11,110	+11,340	+13,030	+11,890	+47,370
	Age Distribution (% at each age group)						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
0-14 years	22.6	21.7	21.1	20.7	19.8	19.3	-11.4
15-24 years	14.4	14.6	13.8	12.8	12.9	12.9	-11.6
25-39 years	19.4	18.1	18.3	19.0	18.9	18.0	-0.1
40-54 years	20.8	20.5	18.9	17.1	16.2	16.7	-18.7
55-64 years	10.4	11.4	12.1	12.5	12.0	11.0	-3.7
65-74 years	6.9	7.7	9.1	10.1	10.8	11.3	+46.8
75-84 years	4.2	4.4	4.9	5.7	6.9	7.9	+78.2
85+ years	1.3	1.6	1.8	2.0	2.4	2.9	+86.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	+0.0
65+ years	12.4	13.7	15.8	17.8	20.1	22.1	+61.4
	Summary Measures						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
LM Entrants/Exits							
(15-24/55-64 years)	1.4	1.3	1.1	1.0	1.1	1.2	-8.2
(20-29/60-69 years)	1.5	1.4	1.3	1.1	1.0	1.1	-22.5
Elderly/Children	0.6	0.6	0.8	0.9	1.0	1.1	+82.1
Reproductive (20-39 yrs)	26.2	25.2	25.4	25.5	25.0	24.6	-2.2
Proportion 65+ years	12.4	13.7	15.8	17.8	20.1	22.1	+61.4
Proportion 75+ years	5.5	6.0	6.8	7.7	9.3	10.8	+80.2
Growth (%) in 5 years	...	+5.1	+3.7	+3.5	+3.2	+2.7	+13.8
Annual average growth (%)	...	+1.0	+0.7	+0.7	+0.6	+0.5	+0.7

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



Appendix Table 9: Projected Population, Total New Zealand, 2006-2031 (Medium Series)

New Zealand	Numbers by age						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
0-14 years	888,320	894,460	895,880	918,410	922,190	934,760	+4.5
15-24 years	604,740	642,420	627,810	604,110	620,770	635,360	-1.1
25-39 years	858,960	856,580	912,400	1,004,920	1,045,250	1,033,890	+20.7
40-54 years	891,290	930,220	903,540	854,150	852,610	919,050	-1.2
55-64 years	429,670	494,440	544,290	592,840	596,600	564,790	+14.2
65-74 years	275,700	325,440	400,300	465,990	518,940	568,860	+74.8
75-84 years	177,780	188,510	215,810	261,810	330,290	390,510	+107.2
85+ years	58,140	73,110	86,190	95,790	117,780	147,350	+101.5
Total	4,184,600	4,405,180	4,586,220	4,798,020	5,004,430	5,194,570	+17.9
65+ years	511,620	587,060	702,300	823,590	967,010	1,106,720	+88.5
	Intercensal Change by Age (Numbers)						Change (N)
	2006-2011	2011-2016	2016-2021	2021-2026	2026-2031		2011-2031
0-14 years	...	+6,140	+1,420	+22,530	+3,780	+12,570	+40,300
15-24 years	...	+37,680	-14,610	-23,700	+16,660	+14,590	-7,060
25-39 years	...	-2,380	+55,820	+92,520	+40,330	-11,360	+177,310
40-54 years	...	+38,930	-26,680	-49,390	-1,540	+66,440	-11,170
55-64 years	...	+64,770	+49,850	+48,550	+3,760	-31,810	+70,350
65-74 years	...	+49,740	+74,860	+65,690	+52,950	+49,920	+243,420
75-84 years	...	+10,730	+27,300	+46,000	+68,480	+60,220	+202,000
85+ years	...	+14,970	+13,080	+9,600	+21,990	+29,570	+74,240
Total	...	+220,580	+181,040	+211,800	+206,410	+190,140	+789,390
65+ years	...	+75,440	+115,240	+121,290	+143,420	+139,710	+519,660
	Age Distribution (% at each age group)						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
0-14 years	21.2	20.3	19.5	19.1	18.4	18.0	-11.4
15-24 years	14.5	14.6	13.7	12.6	12.4	12.2	-16.1
25-39 years	20.5	19.4	19.9	20.9	20.9	19.9	+2.4
40-54 years	21.3	21.1	19.7	17.8	17.0	17.7	-16.2
55-64 years	10.3	11.2	11.9	12.4	11.9	10.9	-3.1
65-74 years	6.6	7.4	8.7	9.7	10.4	11.0	+48.2
75-84 years	4.2	4.3	4.7	5.5	6.6	7.5	+75.7
85+ years	1.4	1.7	1.9	2.0	2.4	2.8	+70.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	+0.0
65+ years	12.2	13.3	15.3	17.2	19.3	21.3	+59.9
	Summary Measures						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
LM Entrants/Exits							
(15-24/55-64 years)	1.4	1.3	1.2	1.0	1.0	1.1	-13.4
(20-29/60-69 years)	1.6	1.5	1.4	1.2	1.1	1.1	-25.4
Elderly/Children	0.6	0.7	0.8	0.9	1.0	1.2	+80.4
Reproductive (20-39 yrs)	27.5	26.8	27.1	27.5	27.0	26.3	-2.0
Proportion 65+ years	12.2	13.3	15.3	17.2	19.3	21.3	+59.9
Proportion 75+ years	5.6	5.9	6.6	7.5	9.0	10.4	+74.3
Growth (%) in 5 years	...	+5.3	+4.1	+4.6	+4.3	+3.8	+17.9
Annual average growth (%)	...	+1.1	+0.8	+0.9	+0.9	+0.8	+0.9

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



Appendix Table 10: Projected Population by Ethnic Group* and Broad Age Group, Waikato Region

Waikato REGION	Population ^(2,3) by age group (years) at 30 June					Projected components of population change, five years ended 30 June					Median age ⁽⁵⁾ (years) at 30 June
	0-14	15-39	40-64	65+	All ages	Births	Deaths	Natural increase	Net migration	Inter-ethnic mobility ⁽⁴⁾	
European/Other											
1996	70,500	109,900	82,700	36,600	299,600	0	0	0	0	0	33.3
2001	68,800	99,800	91,800	39,700	300,100	0	0	0	0	0	35.8
2006 (base)	68,100	100,600	103,400	45,200	317,300	0	0	0	0	0	37.8
2011	68,500	99,000	109,700	52,300	329,500	23,100	12,100	11,000	1,300	0	39.3
2016	68,500	97,600	109,700	61,000	336,800	21,700	13,100	8,600	-1,300	0	40.6
2021	68,000	97,600	106,900	69,300	341,900	21,000	14,000	7,000	-1,800	0	41.5
<i>Change 2011-2021 (%)</i>	<i>-0.7</i>	<i>-1.4</i>	<i>-2.6</i>	<i>+32.5</i>	<i>+3.8</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>
Māori											
1996	29,300	32,800	13,300	2,400	77,900	0	0	0	0	0	21.2
2001	29,900	32,000	15,600	2,800	80,200	0	0	0	0	0	21.8
2006 (base)	29,100	33,100	18,300	3,500	84,000	0	0	0	0	0	22.8
2011	31,000	34,500	20,600	4,400	90,500	12,300	2,100	10,100	-2,400	-1,300	23.1
2016	32,900	35,900	22,200	5,600	96,700	12,000	2,300	9,700	-2,100	-1,300	23.9
2021	34,600	37,300	23,300	7,100	102,300	11,800	2,600	9,200	-2,100	-1,400	24.8
<i>Change 2011-2021 (%)</i>	<i>+11.6</i>	<i>+8.1</i>	<i>+13.1</i>	<i>+61.4</i>	<i>+13.0</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>
Pacific Peoples											
1996	4,400	4,400	1,600	300	10,600	0	0	0	0	0	19.0
2001	4,900	4,600	1,800	300	11,600	0	0	0	0	0	18.8
2006 (base)	5,400	5,200	2,300	400	13,300	0	0	0	0	0	19.2
2011	6,300	6,000	2,800	600	15,700	2,500	200	2,300	300	-100	19.7
2016	7,300	6,800	3,200	800	18,200	2,700	300	2,400	300	-200	20.2
2021	8,300	7,700	3,700	1,100	20,800	2,900	300	2,600	300	-200	20.6
<i>Change 2011-2021 (%)</i>	<i>+31.7</i>	<i>+28.3</i>	<i>+32.1</i>	<i>+83.3</i>	<i>+32.5</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>
Asian											
1996	2,900	4,700	2,000	300	9,800	0	0	0	0	0	24.7
2001	3,400	6,300	3,200	500	13,400	0	0	0	0	0	25.6
2006 (base)	4,600	10,200	4,900	800	20,600	0	0	0	0	0	26.4
2011	5,600	12,400	6,400	1,600	26,000	2,100	200	1,900	3,700	-200	28.4
2016	6,900	14,300	7,300	2,500	31,100	2,600	300	2,300	3,100	-300	30.3
2021	8,500	15,400	8,800	3,700	36,400	2,900	400	2,500	3,100	-300	31.7
<i>Change 2011-2021 (%)</i>	<i>+51.8</i>	<i>+24.2</i>	<i>+37.5</i>	<i>+131.3</i>	<i>+40.0</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>

Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update) Tables 4e, 4m, 4p, 4a

(1) Boundaries at 30 June 2009.

(2) These projections have as a base the estimated resident population of each ethnicity, of each area, at 30 June 2006 and incorporate medium fertility, medium migration, medium mortality, and medium inter-ethnic mobility assumptions for each area. Population estimates for 1996–2006 are derived from the respective 1996–2006 census usually resident population counts.

(3) Numbers reflect the multiple count enumeration methodology and their sum is somewhat greater than the total projection for the TA.

Projections are not available for all ethnic groups for all TA's.

(4) The net effect of people changing their ethnic identity.

(5) Half the population is younger, and half older, than this age.



Appendix Table 11: Key Statistics for the Employed Labour Force, Waikato Region, 1996, 2001, 2006.

Industry: All Industries	Male	Female	Total	Sex Ratio (Males/Females)	Average Age*
Waikato Region					
1996					
Self-Employed & Without Employees	14,181	7,023	21,204	2.0	44.5
Employer	9,825	4,473	14,298	2.2	44.8
Paid Employee	56,388	51,375	107,763	1.1	36.0
Unpaid Family Worker	2,775	4,086	6,861	0.7	42.3
NS/NEI	2,916	2,424	5,340	1.2	38.7
<i>All Employed</i>	<i>86,085</i>	<i>69,381</i>	<i>155,466</i>	<i>1.24</i>	<i>38.3</i>
2001					
Self-Employed & Without Employees	15,009	8,028	23,037	1.9	46.9
Employer	10,092	5,058	15,150	2.0	46.8
Paid Employee	58,578	56,586	115,164	1.0	37.9
Unpaid Family Worker	1,959	2,931	4,890	0.7	45.0
NS/NEI	2,556	2,166	4,722	1.2	41.9
<i>All Employed</i>	<i>88,194</i>	<i>74,769</i>	<i>162,963</i>	<i>1.18</i>	<i>40.3</i>
2006					
Self-Employed & Without Employees	15,177	8,709	23,886	1.7	48.6
Employer	10,791	5,529	16,320	2.0	47.7
Paid Employee	68,460	67,134	135,594	1.0	39.0
Unpaid Family Worker	1,953	2,808	4,761	0.7	47.2
NS/NEI	2,751	2,364	5,115	1.2	44.6
<i>All Employed</i>	<i>99,132</i>	<i>86,544</i>	<i>185,676</i>	<i>1.15</i>	<i>41.4</i>

Change 1996 - 2006	Males	Females	Total
Number	+13,047	+17,163	+30,210
(%)	(+15.2)	(+24.7)	(+19.4)

	1996	2001	2006	Change 1996-2006 (%)
Employment Entry/Exit Ratio (15-24 years : 55+ years)	1.6	1.0	0.8	-47.7
Percentage aged 55+ years	12.1	15.5	19.5	+61.1
Sex Ratio by age (males/females)				
15-19 Years	1.2	1.2	1.2	-1.7
20-24 Years	1.2	1.2	1.2	+1.7
25-29 Years	1.3	1.2	1.2	-3.8
30-34 Years	1.3	1.2	1.2	-8.8
35-39 Years	1.2	1.1	1.1	-7.9
40-44 Years	1.1	1.1	1.0	-7.5
45-49 Years	1.1	1.1	1.0	-8.1
50-54 Years	1.2	1.1	1.1	-12.6
55-59 Years	1.4	1.2	1.1	-19.4
60-64 Years	1.8	1.5	1.3	-27.3
65+ Years	2.1	2.0	1.7	-21.4
<i>Total All Ages*</i>	<i>1.2</i>	<i>1.2</i>	<i>1.1</i>	<i>-7.7</i>

Source: Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006

* Age not available for small cell sizes, thus summed totals by employment status are lower than summed totals by industry



Appendix Table 12: Key Statistics for the Employed Labour Force, Waikato Region, 1996, 2001, 2006, Dairy Cattle Farming (A013)

Industry: Dairy Cattle Farming	Male	Female	Total	Sex Ratio (Males/Females)	Average Age*
Waikato Region					
1996					
Self-Employed & Without Employees	3,168	1,779	4,947	1.8	41.2
Employer	1,881	924	2,805	2.0	44.5
Paid Employee	2,658	795	3,453	3.3	29.8
Unpaid Family Worker	588	888	1,476	0.7	40.7
NS/NEI	138	66	204	2.1	41.8
<i>All Employed</i>	<i>8,433</i>	<i>4,452</i>	<i>12,885</i>	<i>1.89</i>	<i>38.8</i>
2001					
Self-Employed & Without Employees	2,658	1,608	4,266	1.7	44.4
Employer	1,911	1,053	2,964	1.8	46.8
Paid Employee	2,823	912	3,735	3.1	31.8
Unpaid Family Worker	378	513	891	0.7	43.2
NS/NEI	72	63	135	1.1	43.7
<i>All Employed</i>	<i>7,842</i>	<i>4,149</i>	<i>11,991</i>	<i>1.89</i>	<i>41.0</i>
2006					
Self-Employed & Without Employees	1,860	1,116	2,976	1.7	46.0
Employer	1,896	1,086	2,982	1.7	47.6
Paid Employee	2,958	1,170	4,128	2.5	33.8
Unpaid Family Worker	342	456	798	0.8	46.3
NS/NEI	39	42	81	0.9	48.4
<i>All Employed</i>	<i>7,095</i>	<i>3,870</i>	<i>10,965</i>	<i>1.83</i>	<i>41.9</i>

Change 1996 - 2006	Males	Females	Total
Number	-1,338	-582	-1,920
(%)	(-15.9)	(-13.1)	(-14.9)

	1996	2001	2006	Change 1996-2006 (%)
Employment Entry/Exit Ratio (15-24 years : 55+ years)	1.2	0.8	0.7	-39.4
Percentage aged 55+ years	13.9	17.7	19.4	+39.6
Sex Ratio by age (males/females)				
15-19 Years	3.5	4.0	2.6	-26.5
20-24 Years	3.1	3.2	3.2	+1.9
25-29 Years	1.9	2.2	2.2	+18.3
30-34 Years	1.6	1.6	1.9	+19.4
35-39 Years	1.6	1.5	1.5	-3.9
40-44 Years	1.8	1.7	1.5	-14.1
45-49 Years	1.7	1.8	1.7	+2.5
50-54 Years	1.6	1.6	1.7	+3.6
55-59 Years	1.7	1.6	1.6	-4.1
60-64 Years	2.0	1.8	1.7	-15.3
65+ Years	2.6	2.4	2.1	-21.1
<i>Total All Ages*</i>	<i>1.9</i>	<i>1.9</i>	<i>1.8</i>	<i>-3.2</i>

Source: Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006

* Age not available for small cell sizes, thus summed totals by employment status are lower than summed totals by industry



Appendix Table 13: Key Statistics for Employed Labour Force, Waikato Region, 1996, 2001, 2006, School Education (N842)

Industry: School Education	Male	Female	Total	Sex Ratio (Males/Females)	Average Age*
Waikato Region					
1996					
Self-Employed & Without Employees	6	3	9	2.0	64.2
Employer	-	-	-	....	....
Paid Employee	1,794	4,773	6,567	0.4	42.4
Unpaid Family Worker	-	-	-	....	....
NS/NEI	-	3	3	0.0	27.5
<i>All Employed</i>	<i>1,800</i>	<i>4,779</i>	<i>6,579</i>	<i>0.38</i>	<i>42.5</i>
2001					
Self-Employed & Without Employees	78	120	198	0.7	47.4
Employer	9	36	45	0.3	43.8
Paid Employee	1,887	5,700	7,587	0.3	43.8
Unpaid Family Worker	3	24	27	0.1	41.9
NS/NEI	21	51	72	0.4	47.1
<i>All Employed</i>	<i>1,998</i>	<i>5,931</i>	<i>7,929</i>	<i>0.34</i>	<i>43.9</i>
2006					
Self-Employed & Without Employees	48	81	129	0.6	50.9
Employer	6	24	30	0.3	44.0
Paid Employee	1,815	6,138	7,953	0.3	45.0
Unpaid Family Worker	6	6	12	1.0	27.5
NS/NEI	6	15	21	0.4	45.4
<i>All Employed</i>	<i>1,881</i>	<i>6,264</i>	<i>8,145</i>	<i>0.30</i>	<i>45.0</i>
Change 1996 - 2006					
	Males	Females	Total		
Number	+81	+1,485	+1,566		
(%)	(+4.5)	(+31.1)	(+23.8)		
1996 2001 2006 Change 1996-2006 (%)					
Employment Entry/Exit Ratio (15-24 years : 55+ years)	0.6	0.4	0.2		-61.4
Percentage aged 55+ years	12.2	15.9	21.5		+76.0
Sex Ratio by age (males/females)					
15-19 Years	0.8	1.1	0.6		-23.1
20-24 Years	0.2	0.2	0.3		+20.1
25-29 Years	0.3	0.3	0.3		+1.2
30-34 Years	0.3	0.4	0.3		-4.8
35-39 Years	0.3	0.2	0.3		-10.2
40-44 Years	0.3	0.2	0.2		-44.0
45-49 Years	0.4	0.3	0.2		-44.2
50-54 Years	0.5	0.4	0.3		-32.8
55-59 Years	0.5	0.5	0.4		-27.8
60-64 Years	0.7	0.6	0.5		-26.4
65+ Years	0.9	0.9	0.7		-16.7
<i>Total All Ages*</i>	<i>0.4</i>	<i>0.3</i>	<i>0.3</i>		<i>-20.3</i>

Source: Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006

* Age not available for small cell sizes, thus summed totals by employment status are lower than summed totals by industry



Appendix Table 14: Key Statistics for Employed Labour Force, Waikato Region, 1996, 2001, 2006, Building and Construction (E411)

Industry: Building Construction	Male	Female	Total	Sex Ratio (Males/Females)	Average Age*
Waikato Region					
1996					
Self-Employed & Without Employees	705	45	750	15.7	43.2
Employer	375	45	420	8.3	42.1
Paid Employee	1,239	123	1,362	10.1	32.6
Unpaid Family Worker	30	66	96	0.5	39.7
NS/NEI	42	12	54	3.5	35.3
<i>All Employed</i>	<i>2,391</i>	<i>291</i>	<i>2,682</i>	<i>8.22</i>	<i>37.4</i>
2001					
Self-Employed & Without Employees	750	69	819	10.9	44.3
Employer	378	54	432	7.0	43.6
Paid Employee	1,311	171	1,482	7.7	34.5
Unpaid Family Worker	3	36	39	0.1	42.9
NS/NEI	6	-	6	....	50.0
<i>All Employed</i>	<i>2,448</i>	<i>330</i>	<i>2,778</i>	<i>7.42</i>	<i>38.9</i>
2006					
Self-Employed & Without Employees	984	105	1,089	9.4	45.7
Employer	645	117	762	5.5	44.7
Paid Employee	2,418	294	2,712	8.2	33.7
Unpaid Family Worker	27	63	90	0.4	42.7
NS/NEI	21	6	27	3.5	40.8
<i>All Employed</i>	<i>4,095</i>	<i>585</i>	<i>4,680</i>	<i>7.00</i>	<i>38.5</i>
Change 1996 - 2006					
	Males	Females	Total		
Number	+1,704	+294	+1,998		
(%)	(+71.3)	(+101.0)	(+74.5)		
Employment Entry/Exit Ratio					
	1996	2001	2006	Change 1996-2006 (%)	
(15-24 years : 55+ years)	2.1	1.5	1.6	-24.1	
Percentage aged 55+ years	10.0	13.0	15.0	+50.7	
Sex Ratio by age (males/females)					
15-19 Years	10.5	13.8	22.3	+112.2	
20-24 Years	21.8	12.8	21.4	-1.6	
25-29 Years	6.9	13.0	8.3	+19.1	
30-34 Years	6.6	5.2	4.8	-26.3	
35-39 Years	6.9	5.3	4.6	-33.4	
40-44 Years	5.9	9.0	5.3	-9.9	
45-49 Years	11.0	5.9	6.1	-44.3	
50-54 Years	7.1	6.1	5.2	-27.1	
55-59 Years	10.0	5.6	5.6	-43.9	
60-64 Years	11.5	11.7	6.2	-46.1	
65+ Years	3.5	4.3	13.3	+281.0	
<i>Total All Ages*</i>	<i>8.2</i>	<i>7.4</i>	<i>7.0</i>	<i>-14.8</i>	

Source: Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006

* Age not available for small cell sizes, thus summed totals by employment status are lower than summed totals by industry



Appendix Table 15: Key Statistics for Employed Labour Force, Waikato Region, 1996, 2001, 2006, Grain, Sheep and Beef Cattle Farming (A012)

Industry: Grain, Sheep & Beef Cattle Farming	Male	Female	Total	Sex Ratio (Males/Females)	Average Age*
Waikato Region					
1996					
Self-Employed & Without Employees	1,146	450	1,596	2.5	49.8
Employer	348	123	471	2.8	49.7
Paid Employee	951	261	1,212	3.6	36.1
Unpaid Family Worker	444	621	1,065	0.7	44.1
NS/NEI	45	21	66	2.1	44.3
<i>All Employed</i>	<i>2,934</i>	<i>1,476</i>	<i>4,410</i>	<i>1.99</i>	<i>44.6</i>
2001					
Self-Employed & Without Employees	1,038	468	1,506	2.2	51.6
Employer	333	132	465	2.5	50.5
Paid Employee	861	252	1,113	3.4	37.1
Unpaid Family Worker	324	384	708	0.8	47.9
NS/NEI	33	24	57	1.4	48.8
<i>All Employed</i>	<i>2,589</i>	<i>1,260</i>	<i>3,849</i>	<i>2.05</i>	<i>46.6</i>
2006					
Self-Employed & Without Employees	1,269	624	1,893	2.0	54.3
Employer	390	150	540	2.6	52.5
Paid Employee	957	300	1,257	3.2	39.1
Unpaid Family Worker	390	465	855	0.8	51.3
NS/NEI	27	21	48	1.3	49.4
<i>All Employed</i>	<i>3,033</i>	<i>1,560</i>	<i>4,593</i>	<i>1.94</i>	<i>49.3</i>
Change 1996 - 2006					
	Males	Females	Total		
Number	+99	+84	+183		
(%)	(+3.4)	(+5.7)	(+4.1)		
1996 2001 2006 Change 1996-2006 (%)					
Employment Entry/Exit Ratio (15-24 years : 55+ years)	0.4	0.3	0.2		-55.1
Percentage aged 55+ years	26.5	31.1	41.6		+56.8
Sex Ratio by age (males/females)					
15-19 Years	2.4	3.4	2.8		+18.4
20-24 Years	3.3	3.1	2.5		-23.1
25-29 Years	2.4	3.1	3.3		+34.1
30-34 Years	1.8	2.3	2.0		+12.0
35-39 Years	1.6	1.8	1.7		+7.3
40-44 Years	1.9	1.7	1.4		-25.4
45-49 Years	1.7	1.8	1.9		+15.6
50-54 Years	1.7	1.7	1.6		-7.8
55-59 Years	2.0	1.8	1.8		-9.8
60-64 Years	1.8	1.9	1.9		+5.5
65+ Years	3.1	2.7	2.4		-21.2
<i>Total All Ages*</i>	<i>2.0</i>	<i>2.1</i>	<i>1.9</i>		<i>-2.2</i>

Source: Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006

* Age not available for small cell sizes, thus summed totals by employment status are lower than summed totals by industry



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