



Western Bay of Plenty District

Demographic Profile 1986 - 2031

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Population Trends

1. The population of Western Bay of Plenty District has grown steadily over the past three decades, from just over 26,900 in 1986 to 45,800 in 2013 (70 per cent). The population is projected to further increase by 16.6 per cent over the 2011–2031 period, to around 53,340 persons by 2031. The trends are similar to that for Bay of Plenty Region, where the population is projected to increase by around 14.5 per cent.

Components of Change

2. Overwhelmingly the main component of growth for Western Bay of Plenty District has been positive net migration, especially during the early 2000s.
3. Components of change by age (which are free of cohort size effects) show that most of Western Bay of Plenty's net migration losses have occurred primarily at ages 15-19 and 20-24. Between 1996 and 2001, some migration gains were seen at ages 5-9 and 10-14 while the more widespread migration gains of all age groups between 30 and 69 years were seen in the latter period of 2001-2006.

Age Structure and Population Ageing

4. From a cross-sectional perspective (that is, change by age group rather than cohort), Western Bay of Plenty District experienced a decrease in numbers in the youngest age groups, with no change in 0-4 years and a marginal decline in the 5-9 years age group. The decline in the numbers for the population aged 25-39 years was a little more significant. The numbers increased at all older ages, particularly across the baby boomer age groups.
5. As elsewhere, the population of Western Bay of Plenty District is ageing. However, like many 'rural' areas, its ageing is being accelerated by sustained net migration loss at young adult ages which has caused a deep bite to develop in the age structure, across age 20-39 years. The minor gains at older ages also add to structural population ageing. The trends have been similar for the Bay of Plenty region.
6. The changes by age have important implications for the labour market. Western Bay of Plenty's labour market 'entry/exit ratio' (population aged 15-24 / 55-64 years) already has fewer 'entrants' than 'exits'. By comparison, the Bay of Plenty Region and Total New Zealand still have around 11 and 13 people respectively at entry age per 10 in the retirement zone.



Ethnic Composition and Growth

7. Western Bay of Plenty District has a larger proportion of those of European/New Zealand/Other ethnicity than either the Bay of Plenty Region or Total New Zealand, and a smaller proportion of both Māori and Pacific Island. Western Bay of Plenty also has substantially fewer people of Asian origin than nationally but slightly higher proportion than in the total Bay of Plenty Region. In all cases, the number in each ethnic group has grown. While Māori grew by 18.3 per cent, accounting for approximately 16.5 per cent of Western Bay of Plenty District's growth, the biggest increase was for the European/New Zealand/Other ethnicity with an increase of 9.9 per cent and contributing 44.4 per cent to the growth in the district.
8. As elsewhere in New Zealand, the age structures of Western Bay of Plenty's major ethnic groups differ markedly, with the European/New Zealander/Other population relatively older and the Māori population relatively young. There is a very strong correspondence between the overall bite in the age structure, and the age structure of the European population.
9. The very youthful age structure of Western Bay of Plenty's Māori population saw over one-third aged 0-14 years over the 2001-2013 period. These proportions are in stark contrast to the Māori population's 15.8 per cent total population share, and are clearly where the Māori population's contribution to Western Bay of Plenty's growth is concentrated. The data also indicate that Western Bay of Plenty's Māori population is slightly older than its counterparts in the Bay of Plenty Region and Total New Zealand. Young Māori (0-14 years) comprise a smaller share of Western Bay of Plenty's youthful population than they do of the Bay of Plenty Region's youth. The situation at 15-24 years is similar.
10. As noted at point 1, the population of Western Bay of Plenty District is set to grow by 16.6 per cent over the 2011–2031 period (medium assumptions). Significant growth in numbers is projected for 25-39 years and all 65+ age groups, with a small increase estimated in the number of 55-64 year olds. In contrast, the numbers at 15-24 years and 40-54 years are projected to decline. The 65+ population is anticipated to grow both numerically and structurally.
11. Projections by major ethnic group show the district's Māori population increasing between 2011 and 2021 by approximately 14.5 per cent, and the European-origin population by 10.4 per cent. There are, however, marked differences by age. The 65+ year Māori population is projected to increase by 66.7 per cent and the European-origin population of the same age by 41.3 per cent.



Population Projections

12. Data for the Bay of Plenty Region suggest there will be relatively little change in the overall ethnic composition over time, but greater change by age. Young Māori (0-14 years) are projected to maintain their share of the region's youthful population, while greater shift-share changes are projected for each successively older age group. In each case these result in a slightly diminished proportion of European.
13. The projections show Western Bay of Plenty's labour market entry/exit ratio falling further (entrant per exit) until 2021 or 2026, depending on which age groupings are used. The trends are similar for Bay of Plenty and Total New Zealand, although for total New Zealand the ratio does not fall below one during the projection period.
14. The projections also show a rapid decline in Western Bay of Plenty's natural increase that has significant implications for future growth. The trend is driven by a crossover to more elderly than children between 2011 and 2016 (compared with around 2021 for Bay of Plenty and 2026 Total New Zealand), and a relatively small proportion projected to be at the key reproductive ages (18-19 per cent for Western Bay of Plenty) compared with 22-24 per cent for Bay of Plenty and 25-27 per cent for Total New Zealand.

Industrial Change

15. A special topic section provides an overview of the Bay of Plenty Region's changing industrial age structure across the 1996-2006 period, focussing on its four largest industries, and concluding with an overview of all industries employing more than 1,000 people (57 of 158 at 3-digit level). Three of its four largest industries have somewhat older age structures than the total workforce, uppermost among them Horticulture and Fruit Growing, pointing to an urgent need to engage in succession planning.



Movers and Stayers

16. A final section provides an overview of 'movers' and 'stayers'. The 2013 Census indicated that 77 per cent of people enumerated as living in the Western Bay of Plenty District five years previously.
17. The single largest source of the District's arrivals was those who at the previous Census had been living in Tauranga City (7.9 per cent), followed by those not-born-5-years-ago (6.0 per cent) and those living overseas in 2008 (5.2 per cent).
18. The largest proportion of Western Bay of Plenty's leavers moved to Tauranga City (9.8 per cent), followed by Auckland (2.5 per cent), Hamilton City (1.2 per cent) and Hauraki District (0.9 per cent).



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 Table Builder (NZ.Stat), 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 workforce 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 1.1.1 and 1.1.2 further below, collected under different methods of aggregation, are a particular case in point. The issue is especially noted in Section 3 which draws on data from the ‘Usually Resident Population Count’ series (see Appendix A which outlines the different levels of population data).

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 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 2010a).

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 (e.g., 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 Estimated Resident Population (ERP) at one observation is subtracted from the ERP 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 *estimated 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 appropriate data (e.g., five year Census periods). First, ERP numbers by age and sex for one observation are ‘survived’ based on the probability of surviving to the next age group (at national level). Second, births for each Territorial Authority (TA) or region are apportioned male/female according to the sex ratio (105 males/100 females), and entered at age 0-4. Third, the survived numbers for each age/sex group are ‘aged’ by five 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 (2012) 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 12,000 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 are included in Appendix 3.1 and 3.2. When interpreting these data it is important to remember 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, 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 ‘Usually Resident’ employed population only. Data are given for four Census observations (1996, 2001, 2006 and 2013) 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.



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.

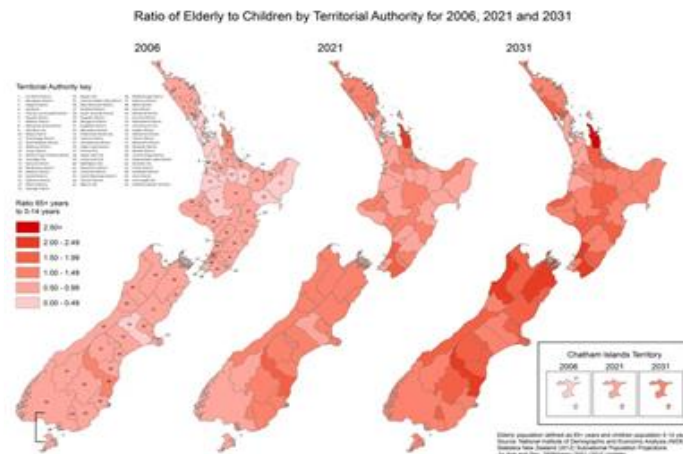
The overall outcome of these processes is an incremental—and in some cases rapid—shift to more elderly than children, more deaths than births, and to the end of growth and onset of what is expected to be permanent population decline, something not seen in modern populations until its recent onset in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

Figure 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.

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 3 TAs (Waitaki, Thames Coromandel, and Horowhenua) and is projected to be the case in 22 TAs (30 per cent) by 2031



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



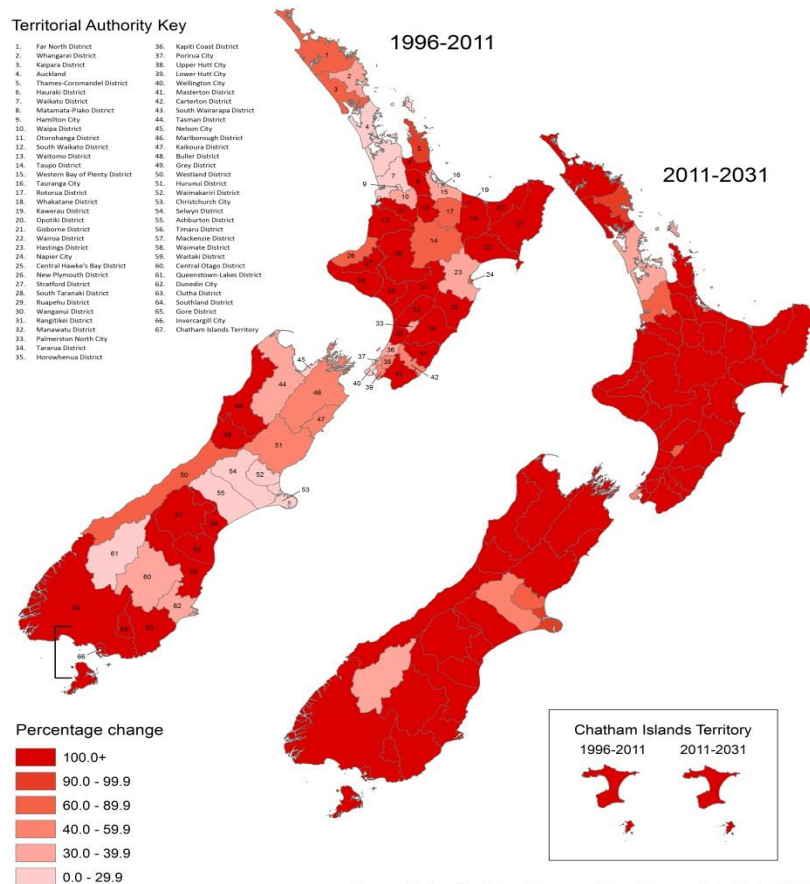
The final piece of jigsaw is a slow but equally inexorable shift from the ‘old’ form of population decline, which was caused by net migration loss that was greater than natural increase, to the ‘new’ form, where net migration loss is both accompanied by – and further contributes to – natural decline. Currently 24 (36 per cent) of New Zealand’s TAs are declining in absolute terms, but only one TA (Waitaki) has yet experienced the new (dual) form of decline. By 2031, the dual form is projected to be the case for 7 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 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 6 TAs coming marginally out of decline, and 5 entering it—meaning that in reality 29 TAs (43 per cent) are at the end of their growth stage.

Between 2011 and 2031, only eleven 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, they mean that two-thirds of growth will be at 65+ years, the underlying trends at subnational level concealed largely by Auckland.



Figure 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 1 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 migrant whom New Zealand attracts *and trains* will be of ever-greater interest to our structurally older counterparts.

The following demographic profile for the Western Bay of Plenty District should be read with this broad context in mind. While the Bay of Plenty Region is still growing overall, there are marked differences at TA level. They show that 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.

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

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 Peace and Dr Trudi Cain (Massey University), Professor Natalie Jackson, Dr Dave Maré 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 Maré, Dr Michael Cameron, Dr Bill Cochrane, Dr Lars Brabyn, and Emeritus Professor Ian Pool (all of NIDEA).

Natalie Jackson

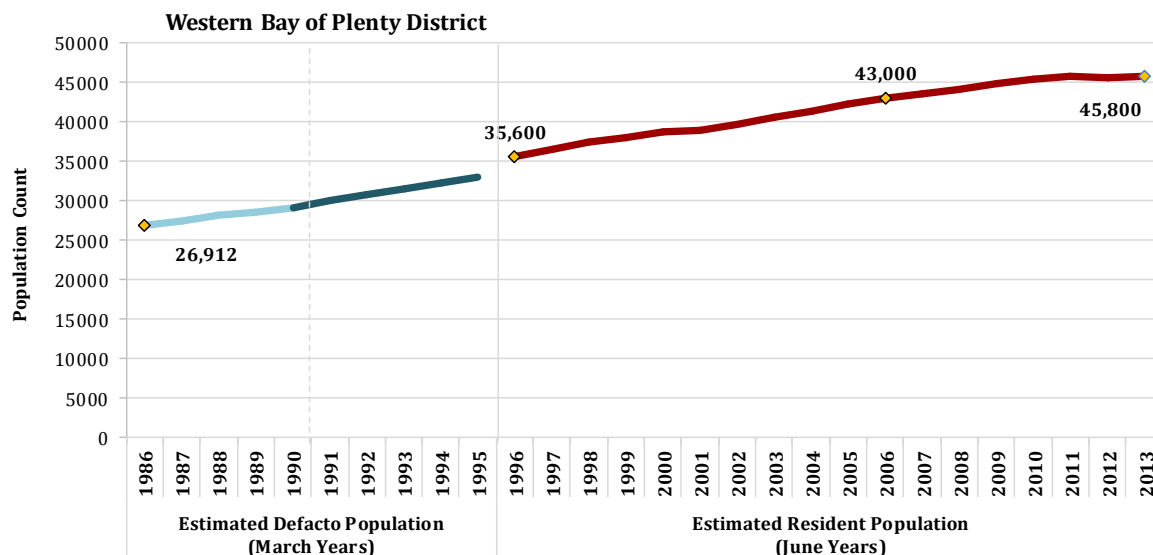


1. Population Trends

1.1 Population Size and Growth

The population of Western Bay of Plenty District has grown steadily over the past three decades, from just over 26,900 in 1986 to 45,800 in 2013—however appears to have stabilised since 2011 (Figure 1.1.1). 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 steady growth has occurred (see Appendix 1.0 for underlying data).

Figure 1.1.1: Population of Western Bay of Plenty District, 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)

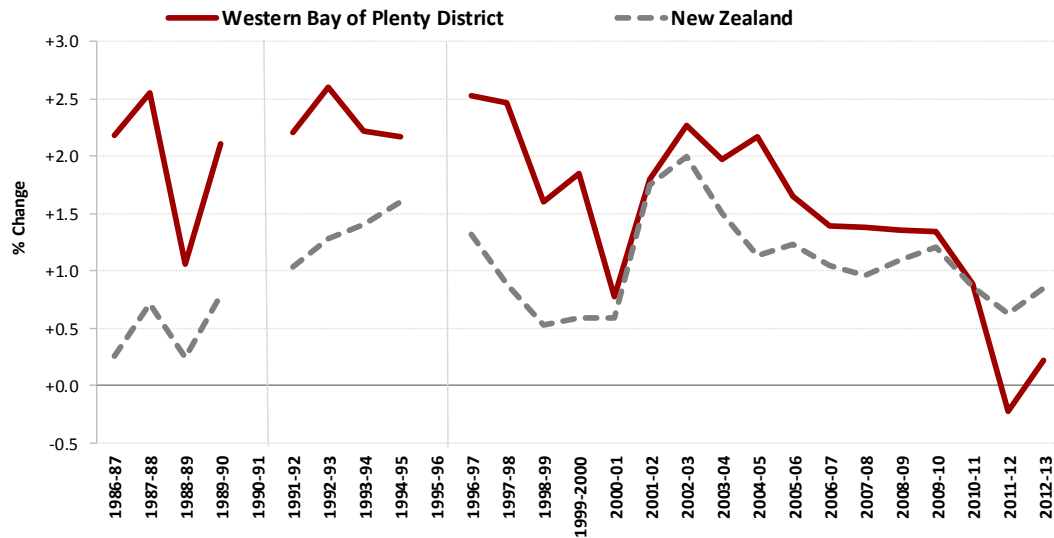
1996 - 2013: Estimated Resident Population for Territorial Authority and Regional Council Areas, at 30 June (1996+) (Annual-Jun)

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 1.1.2 shows the trends in terms of annual growth rates, with the data collection discontinuities identified by vertical lines. Data are also compared with Bay of Plenty Region and Total New Zealand. For Western Bay of Plenty District, growth rates are typically above, but the trends fairly similar in direction to, those for Bay of Plenty and Total New Zealand, with positive growth seen across the entire period except for the 2011-2012 years (see Appendix 1.0 for data). Notably the latter was preceded by a marked decline in the rate of growth across the past decade, but rebounded slightly 2012-2013.



Figure 1.1.2: Annual Population Growth Rate: Western Bay of Plenty District, Bay of Plenty Region and Total New Zealand, 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 - 2013: 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

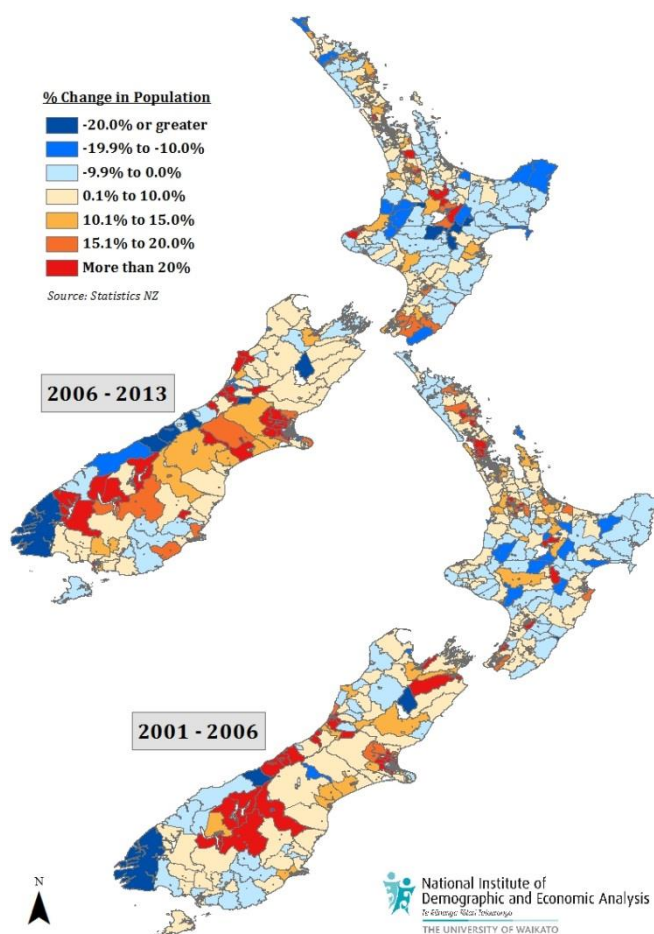


1.2 Census 2013 – First Insights

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 1.2.1 and 1.2.2 show the percentage change in the ‘usual resident’ population at the Census Area Unit (CAU) level for Total New Zealand and the Bay of Plenty Region respectively.¹

The Usually Resident Population (URP) of New Zealand increased by 5.3 per cent 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). Perhaps the most notable new change is the growing spread of decline in the North Island.

Figure 1.2.1: Percentage Change in the Usually Resident Population of Census Area Units (CAU), 2001-2006 and 2006-2013: Total New Zealand



¹ CAUs are aggregations of meshblocks which are non-administrative areas. CAUs may be aggregated at various levels to define common administrative areas such as urban communities, territorial authorities or regional council areas.



In keeping with the national picture, the Census Usually Resident Population of the Bay of Plenty Region grew by 4.0 per cent between 2006 and 2013 (Table 1.2.1), a little lower than the ERP growth (4.8 per cent, see Appendix 1.1)—the discrepancy likely to reduce when the 2013 Census-based ERP data are released. At the same time, over two-fifths (52 CAUs, 44.1 per cent) of the region’s 127 CAUs declined in size (Table 1.2.2), and as also occurred nationally, the decline was more widespread than between 2001 and 2006, when 33 of the region’s CAUs declined (28.0 per cent) (Figure 1.2.3). These trends resulted in Kawerau, Ōpōtiki, Rotorua and Whakatāne experiencing decline between 2006 and 2013, whereas between 2001 and 2006 only Kawerau and Ōpōtiki had declined.

This increase in the number/proportion of Bay of Plenty CAUs recording a decline in population numbers between 2006 and 2013 compared to the previous period is most significant for Rotorua district, where 25 CAUs (64 per cent) declined in size between 2006 and 2013, compared to 15 (38 per cent) between 2001 and 2006; Whakatāne (12 CAUs compared to 8; 63 compared with 42 per cent); and Tauranga City (5 CAUs compared to 2; 14 compared with 6 per cent). For Ōpōtiki the situation was essentially a continuation of the previous trend (4 of the 5 CAUs declining in both periods). For Western Bay of Plenty the number of CAUs declining increased from 3 to 5 (from 16.0 to 26.0 per cent).

Figure 1.2.2: Percentage Change in the Usually Resident Population of Census Area Units (CAU) within each Territorial Authority (TA) boundary, 2001-2006 and 2006-2013: Bay of Plenty Region

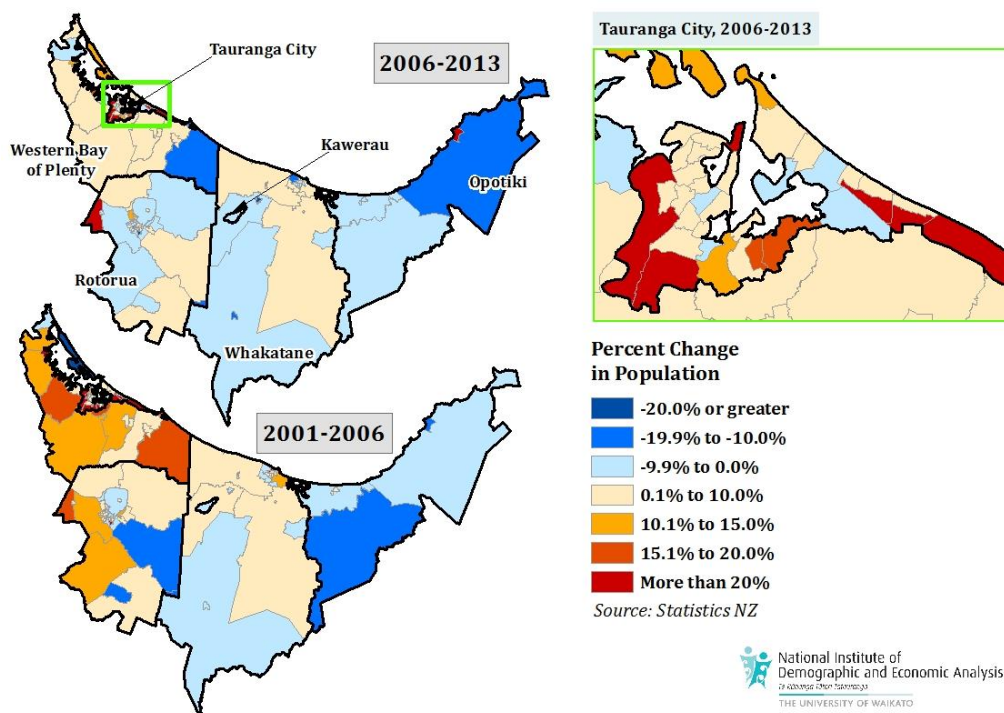


Table 1.2.1: Census Usually Resident Population of the Bay of Plenty Region living in each TA in 2001, 2006, 2013; and population change over the inter-censal periods

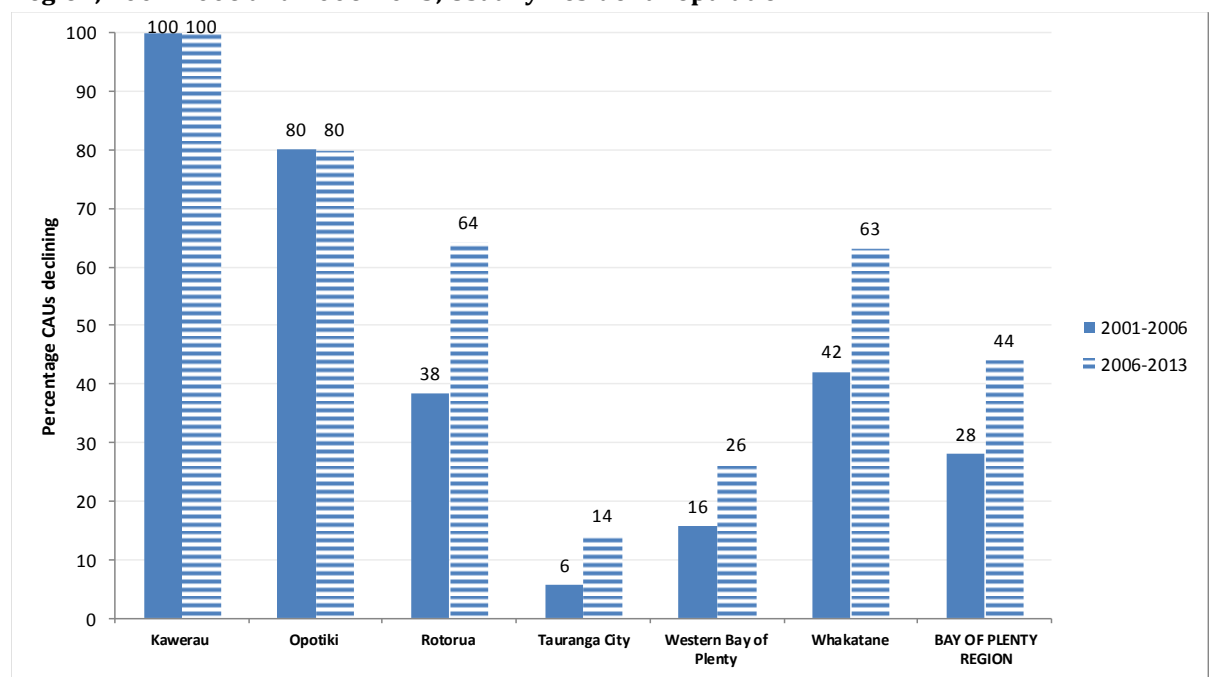
Territorial Authority (TA)	Census Usually Resident Population			Change 2001-2006			Change 2006-2013		
	2001	2006	2013	Number	Percent	Average annual change (Percent) ⁽¹⁾	Number	Percent	Average annual change (Percent) ⁽¹⁾
Kawerau District	6,975	6,921	6,363	-54	-0.8	-0.2	-558	-8.1	-1.2
Opotiki District	9,150	8,976	8,433	-174	-1.9	-0.4	-543	-6.0	-0.9
Rotorua District	64,473	65,901	65,280	+1,428	+2.2	+0.4	-621	-0.9	-0.1
Tauranga City	91,146	103,881	114,789	+12,735	+14.0	+2.8	+10,908	+10.5	+1.5
Western Bay of Plenty District	37,995	41,826	43,695	+3,831	+10.1	+2.0	+1,869	+4.5	+0.6
Whakatane District	32,868	33,297	32,688	+429	+1.3	+0.3	-609	-1.8	-0.3
Bay of Plenty Region	242,607	260,802	271,248	+18,195	+7.5	+1.5	+10,446	+4.0	+0.6

Table 1.2.2: Number of Census Area Unit (CAU) populations growing/declining between 2001-2006 and 2006-2013 by TA for the Census Usually Resident Population of the Bay of Plenty Region

Territorial Authority (TA)	Number of CAUs*	Population Change 2001-2006		Population Change 2006-2013	
		Growth	Decline	Growth	Decline
Kawerau District	1	0 (0%)	1 (100%)	0 (0%)	1 (100%)
Opotiki District	5	1 (20%)	4 (80%)	1 (20%)	4 (80%)
Rotorua District	39	24 (62%)	15 (38%)	14 (36%)	25 (64%)
Tauranga City	35	33 (94%)	2 (6%)	30 (86%)	5 (14%)
Western Bay of Plenty District	19	16 (84%)	3 (16%)	14 (74%)	5 (26%)
Whakatane District	19	11 (58%)	8 (42%)	7 (37%)	12 (63%)
Bay of Plenty Region	118	85 (72%)	33 (28%)	66 (56%)	52 (44%)

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

Figure 1.2.3: Percentage of CAUs declining in population size within each TA in the Bay of Plenty Region, 2001-2006 and 2006-2013, Usually Resident Population



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



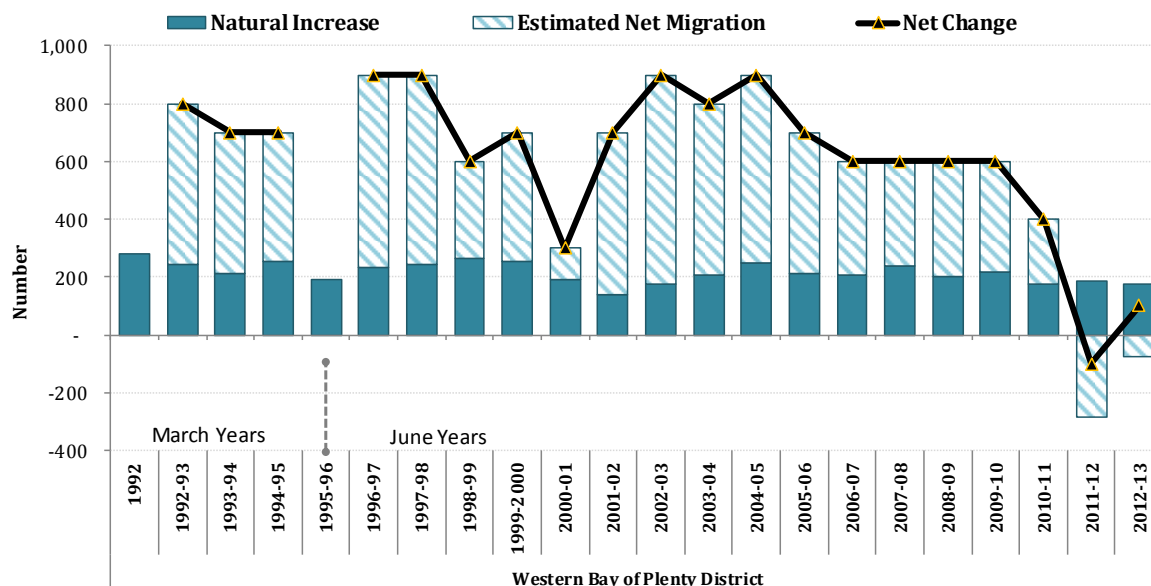
2. Components of Change

2.1 Natural Increase and Net Migration

Figure 2.1.1 shows the components of change contributing to growth for the Western Bay of Plenty District across the period 1991-2013 (see Table 2.1.1 for underlying data). Overwhelmingly the main component of growth has been net migration gain, which makes the recent observations of net migration loss appear quite anomalous.

Data for the Bay of Plenty 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 larger role in both of these cases. While net migration loss across the period 1998-2001 resulted in low overall growth for New Zealand, the effect was somewhat more muted in the Bay of Plenty, similar to that for Western Bay of Plenty. The recent net migration loss for Western Bay of Plenty was also experienced across the Bay of Plenty Region, and between 2011 and 2012, also at national level.

Figure 2.1.1: Natural Increase, Net Migration and Net Change 1991-2013, Western Bay of Plenty 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

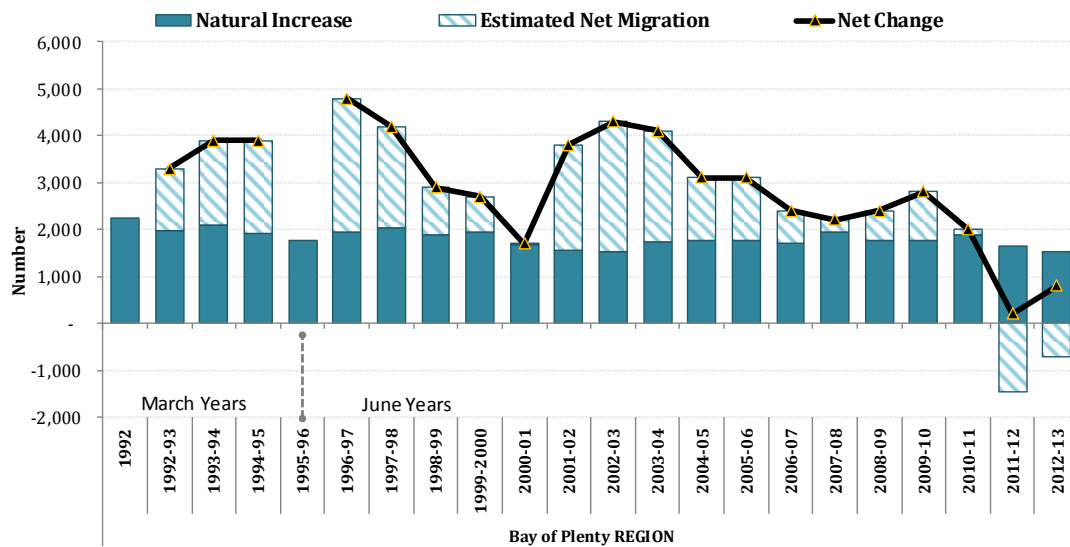
(3) Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun)

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.

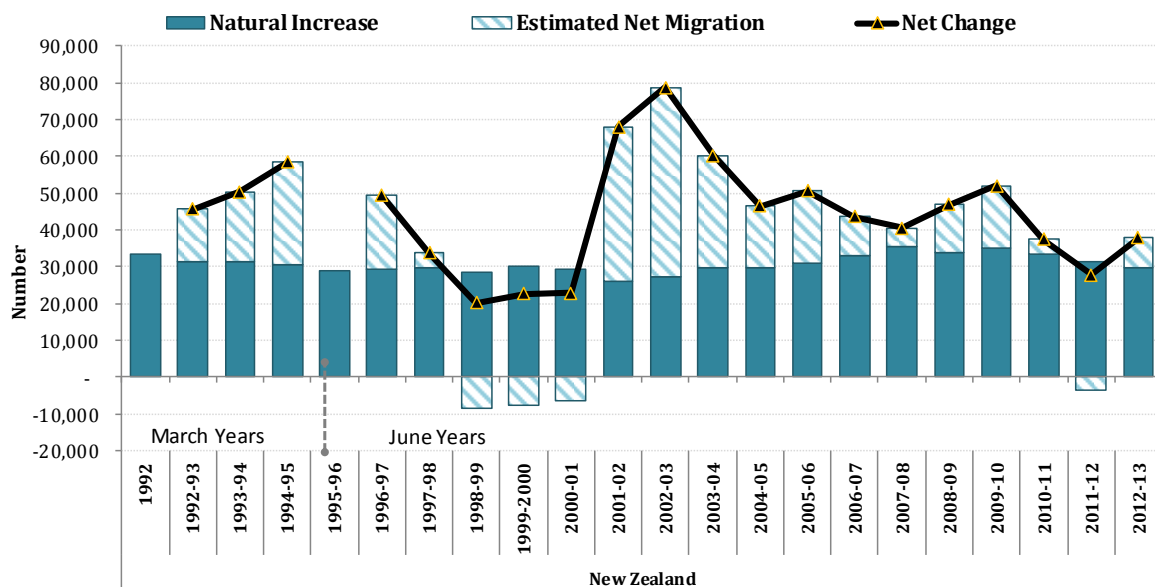


Figure 2.1.2: Natural Increase, Net Migration and Net Change 1991-2013, Bay of Plenty Region



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 2.1.3: Natural Increase, Net Migration and Net Change 1991-2013, Total New Zealand



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.



Table 2.1.1: Components of Change, 1991-2013, Western Bay of Plenty District and Total New Zealand

		Western Bay of Plenty District							Bay of Plenty 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	505	223	282	30,800	...	...	...	...	...	...	...	...	...	...	...
	1993	478	234	244	31,600	800	556	0.79	1.81	2.60	0.94	0.63	1.57	0.89	0.40	1.28
	1994	435	224	211	32,300	700	489	0.67	1.55	2.22	0.98	0.85	1.82	0.87	0.53	1.40
	1995	473	220	253	33,000	700	447	0.78	1.38	2.17	0.89	0.91	1.79	0.84	0.76	1.60
June Year	1996	469	277	192	35,600	...	...	...	...	...	...	...	...	...	...	...
	1997	521	287	234	36,500	900	666	0.66	1.87	2.53	0.84	1.24	2.08	0.79	0.53	1.32
	1998	509	265	244	37,400	900	656	0.67	1.80	2.47	0.87	0.91	1.78	0.78	0.11	0.89
	1999	540	277	263	38,000	600	337	0.70	0.90	1.60	0.79	0.42	1.21	0.75	-0.22	0.53
	2000	541	287	254	38,700	700	446	0.67	1.17	1.84	0.81	0.31	1.11	0.79	-0.20	0.59
	2001	499	309	190	39,000	300	110	0.49	0.28	0.78	0.69	0.01	0.69	0.76	-0.17	0.59
	2002	453	312	141	39,700	700	559	0.36	1.43	1.79	0.63	0.91	1.54	0.67	1.08	1.75
	2003	490	312	178	40,600	900	722	0.45	1.82	2.27	0.61	1.10	1.72	0.69	1.30	1.99
	2004	506	298	208	41,400	800	592	0.51	1.46	1.97	0.69	0.92	1.61	0.74	0.76	1.50
	2005	551	301	250	42,300	900	650	0.60	1.57	2.17	0.68	0.52	1.20	0.72	0.41	1.14
	2006	506	295	211	43,000	700	489	0.50	1.16	1.65	0.68	0.50	1.18	0.75	0.48	1.23
	2007	512	305	207	43,600	600	393	0.48	0.91	1.40	0.64	0.26	0.90	0.79	0.25	1.04
	2008	558	319	239	44,200	600	361	0.55	0.83	1.38	0.73	0.09	0.82	0.84	0.12	0.96
	2009	554	351	203	44,800	600	397	0.46	0.90	1.36	0.66	0.23	0.89	0.80	0.30	1.10
	2010	540	322	218	45,400	600	382	0.49	0.85	1.34	0.64	0.38	1.03	0.82	0.39	1.20
	2011	522	349	173	45,800	400	227	0.38	0.50	0.88	0.69	0.04	0.73	0.76	0.09	0.86
	2012	489	302	187	45,700	-100	-287	0.41	-0.63	-0.22	0.60	-0.53	0.07	0.71	-0.08	0.63
	2013	536	362	174	45,800	100	-74	0.38	-0.16	0.22	0.55	-0.26	0.29	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



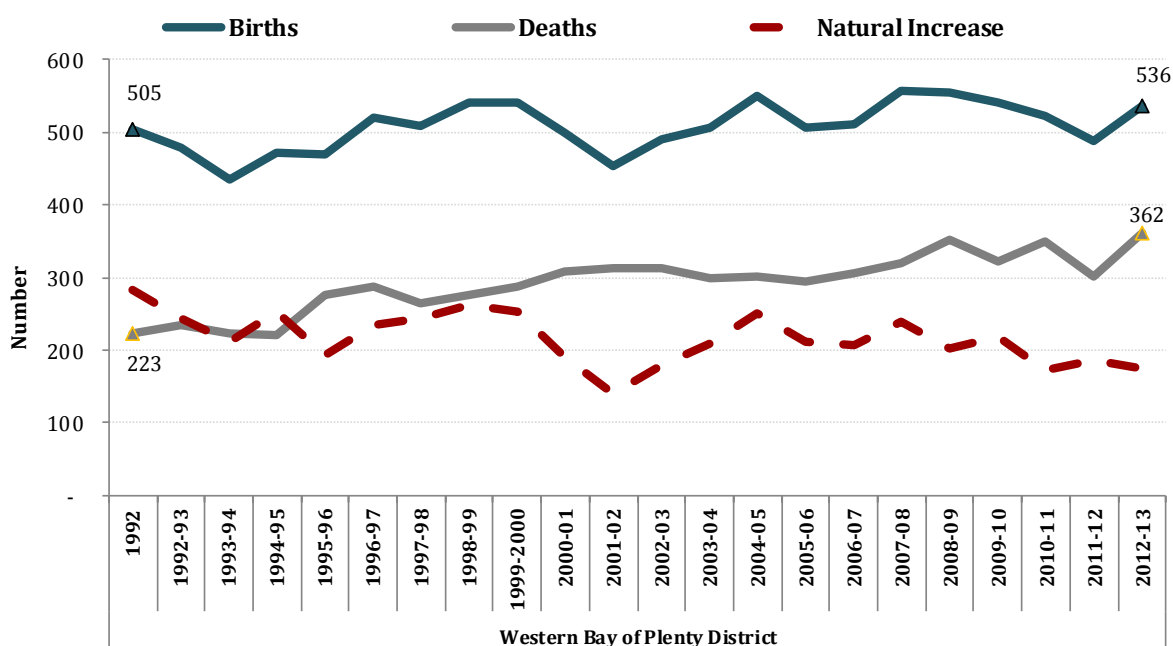
2.2 Births, Deaths and Natural Increase

Underlying the trends in natural increase shown above are those for births and deaths, depicted in Figure 2.2.1. Here we see that the number of births has remained relatively constant, albeit oscillating over the period, before reducing between 2008 and 2012 then increasing again to end the period slightly above numbers in 1992. However, for a number of reasons outlined below (most significantly the reducing size of the reproductive age cohort indicated in the section on age structures), birth numbers are unlikely to see major increase in the future.

A small but steady increase in the number of deaths is also seen from 211 in 1992 to 362 in 2013. The overall trend will soon accelerate as the baby boomer wave moves through the older age groups.

As Figure 2.2.1 shows, the overall outcome of these opposing trends will be a steady reduction in natural increase.

Figure 2.2.1: Births, Deaths and Natural Increase, Western Bay of Plenty District 1991-2013



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

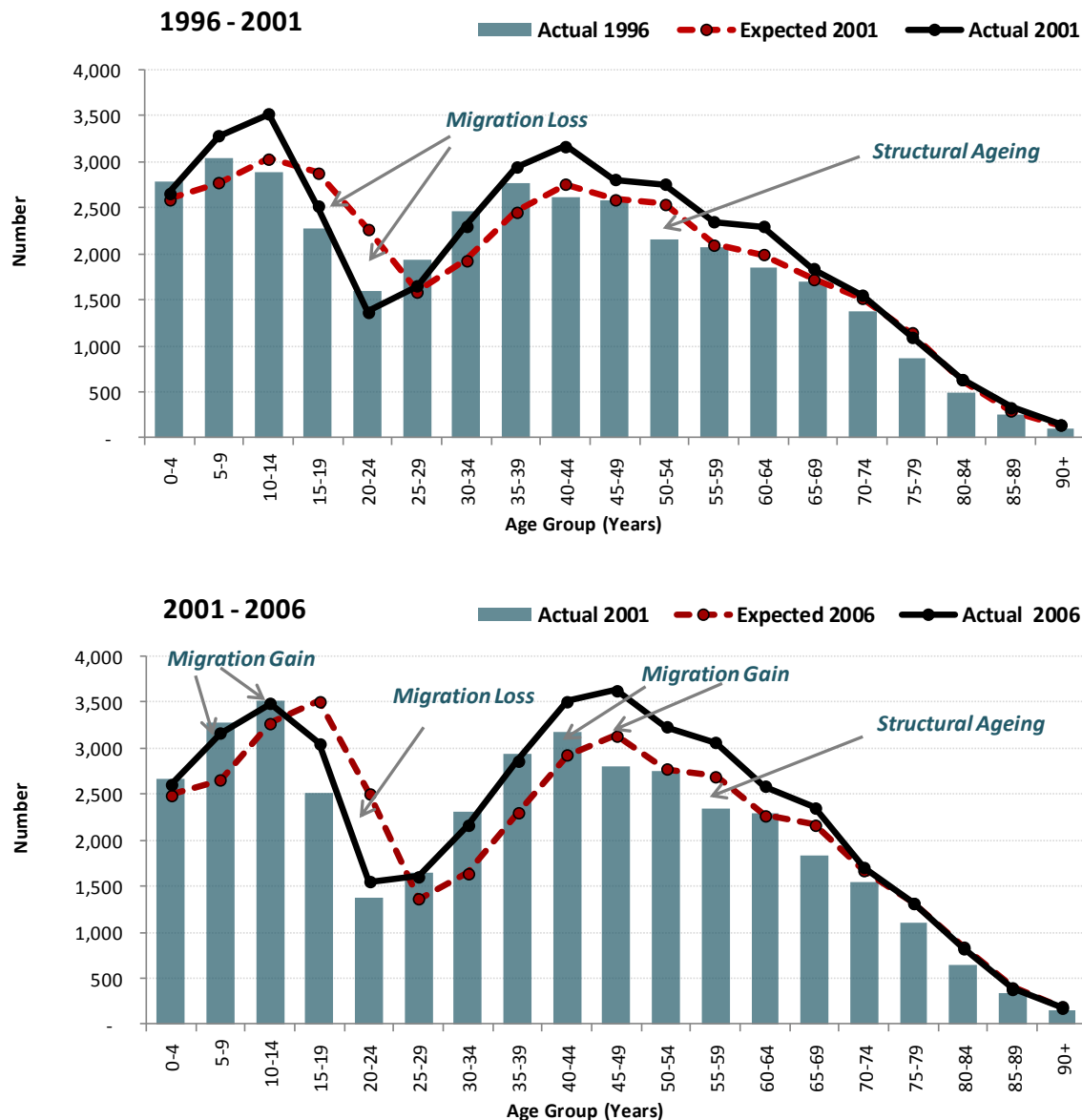


3. Components of Change by Age

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 3.1.1 shows that notable net migration losses have been experienced at 15-19 and 20-24 years, and net gains at 5-9 and 10-14 years, and more generally 30-69 years. At the younger ages, these gains were slightly lower across the 2001-2006 period than 1996-2001, while they increased at the older ages. The net migration loss at 15-24 years also increased slightly during the latter period.

Figure 3.1.1: Expected and Actual Population by Age, 1996-2001 and 2001-2006, Western Bay of Plenty District



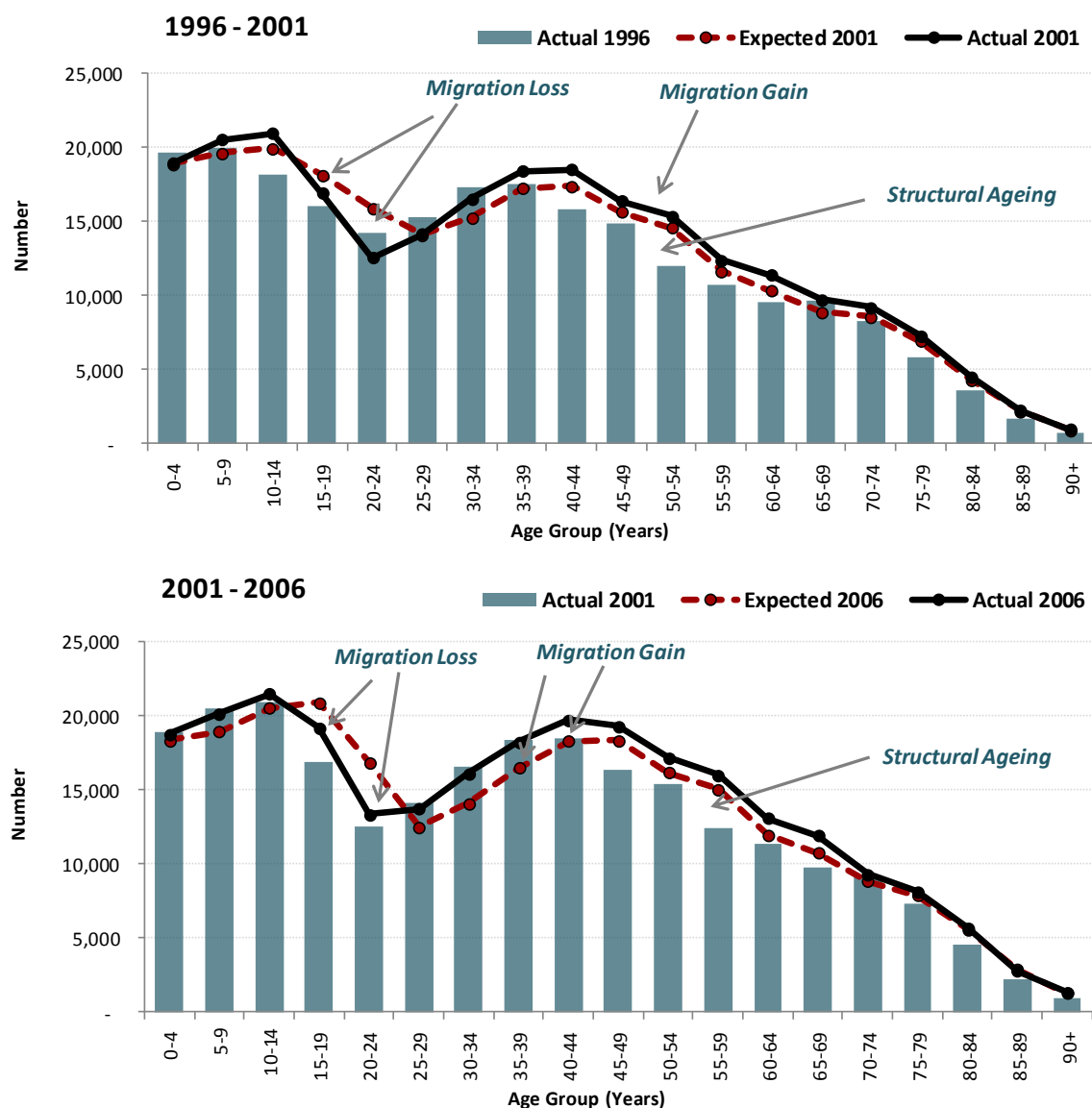
Source: Jackson/ from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007



The patterns of loss and gain were similar for the Bay of Plenty Region, although more muted (Figure 3.1.2). However for the Bay of Plenty, the gains at older ages extend to age 79 (see also Appendix 2).

Of note for both areas 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 3.1.2: Expected and Actual Population by Age, 1996-2001 and 2001-2006, Bay of Plenty Region



Source: 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—or ‘churn’. This is done first in Figures 3.2.1-3.2.3 to show all components of change (1996-2001, 2001-2006, 2008-13), and then in Figures 3.2.4-3.2.6 to show the flows by age.²

Figure 3.2.1 shows that between 1996 and 2001, the ERP of the Western Bay of Plenty District grew by approximately 3,400. Natural increase (births minus deaths) accounted for 1,185 persons, and estimated net migration, for 2,215 (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 (+1,543), which is comprised of known net internal migration (+2,265) slightly offset by known net international permanent/long term (PLT) migration (-722). This leaves an *unaccounted for* component of migration, which we call here the ‘residual component of migration’ (+672). 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 than stated on their Arrival form, (c) international emigrants leaving from a different locality than stated on their Departure form, and (d) internal migrants incorrectly stating where they live now or lived five years ago.

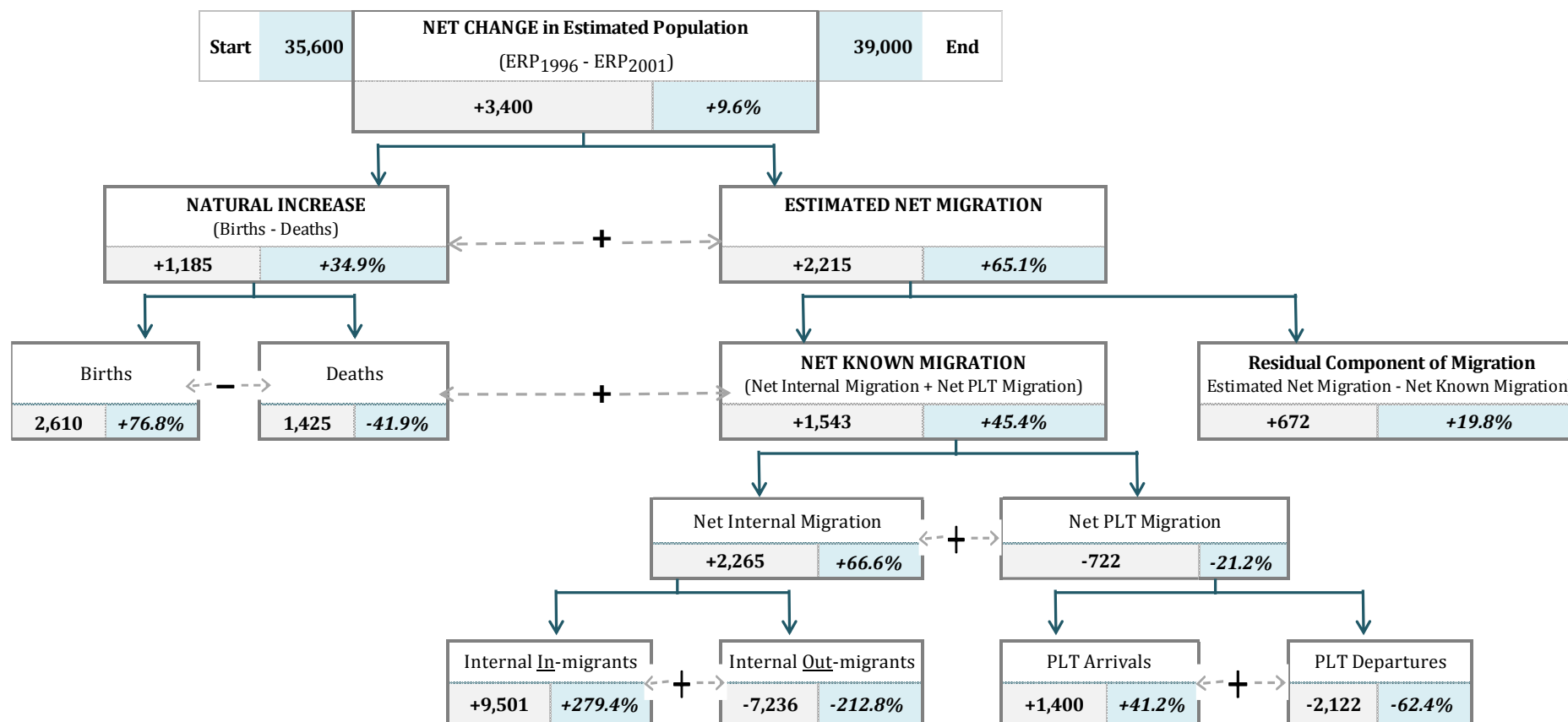
The model then further disaggregates each *known* net migration component into its respective inflows and outflows (for the 1966-2001 period, 9,501 internal immigrants less 7,236 internal emigrants; 1,400 PLT international immigrants less 2,122 PLT international emigrants).

Figure 3.2.2 for the period 2001-2006 can be similarly read. Across that period, estimated net migration increased (3,012). Known net migration declined slightly (+1,048) reflecting a net internal migration gain (+1,227) offset by a net PLT international loss (-179), and the residual (unknown) component increased (+1,964). Figure 3.2.3 for the period 2008-2013 indicates a slowing of growth, with natural increase down to 995 augmented by relatively low estimated net migration (+645). Significant churn can be observed for each of the components. Table 3.1.1 summarises the trends in terms of churn, and includes data at TA level.

² Minor differences will be noted between these data and those given elsewhere in this Report. This is because a number of different data sets have to be drawn on here to gain the overall picture. Numbers often differ slightly between the datasets due to the different way the data have been collected and aggregated, including the effect of underlying rounding in the data by Statistics New Zealand (done for confidentiality purposes when cell sizes are small). Discrepancies also arise when components from different datasets are summed. The discrepancies are seldom large and do not affect the overall trends, which should always be taken as approximations rather than definitively.



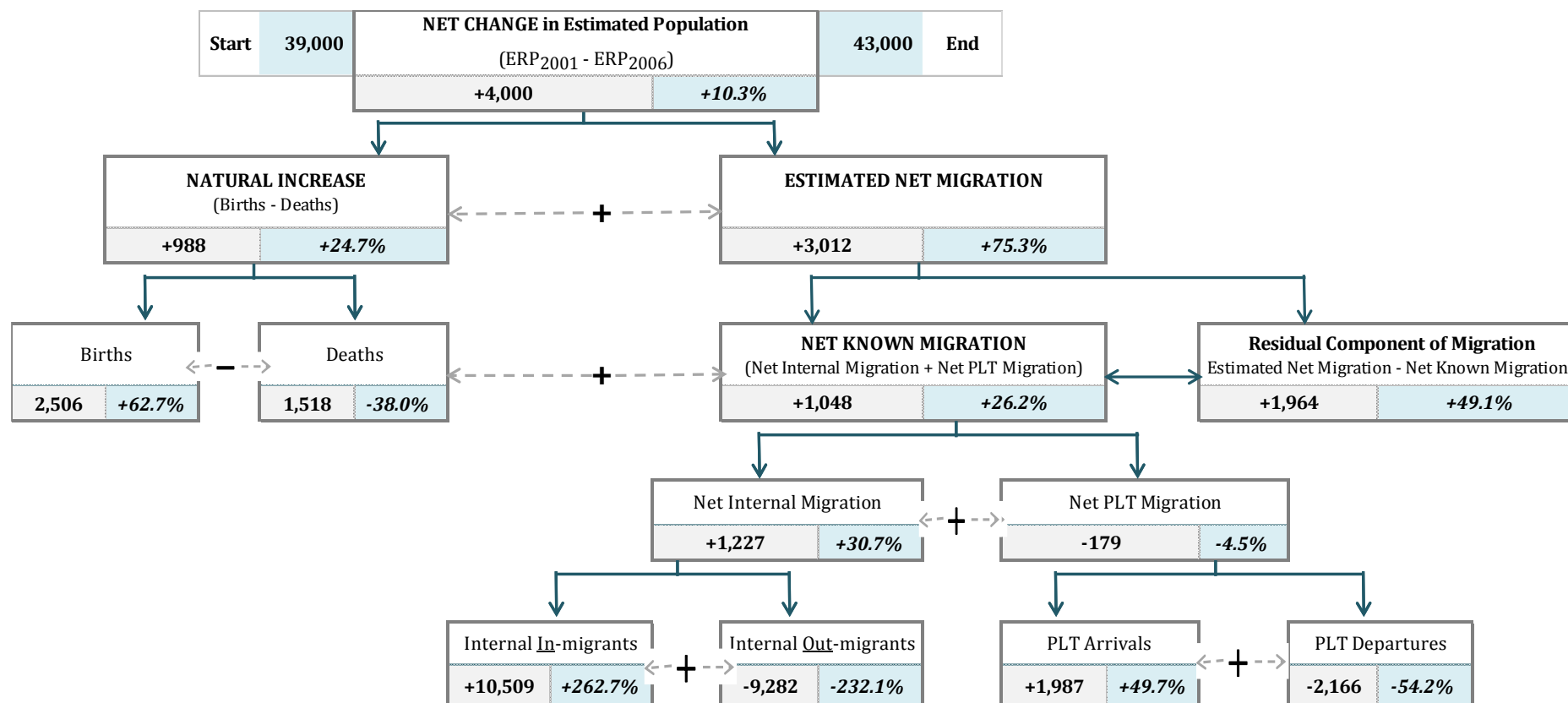
Figure 3.2.1: Components contributing to Estimated Resident Population, Western Bay of Plenty District 1996-2001



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



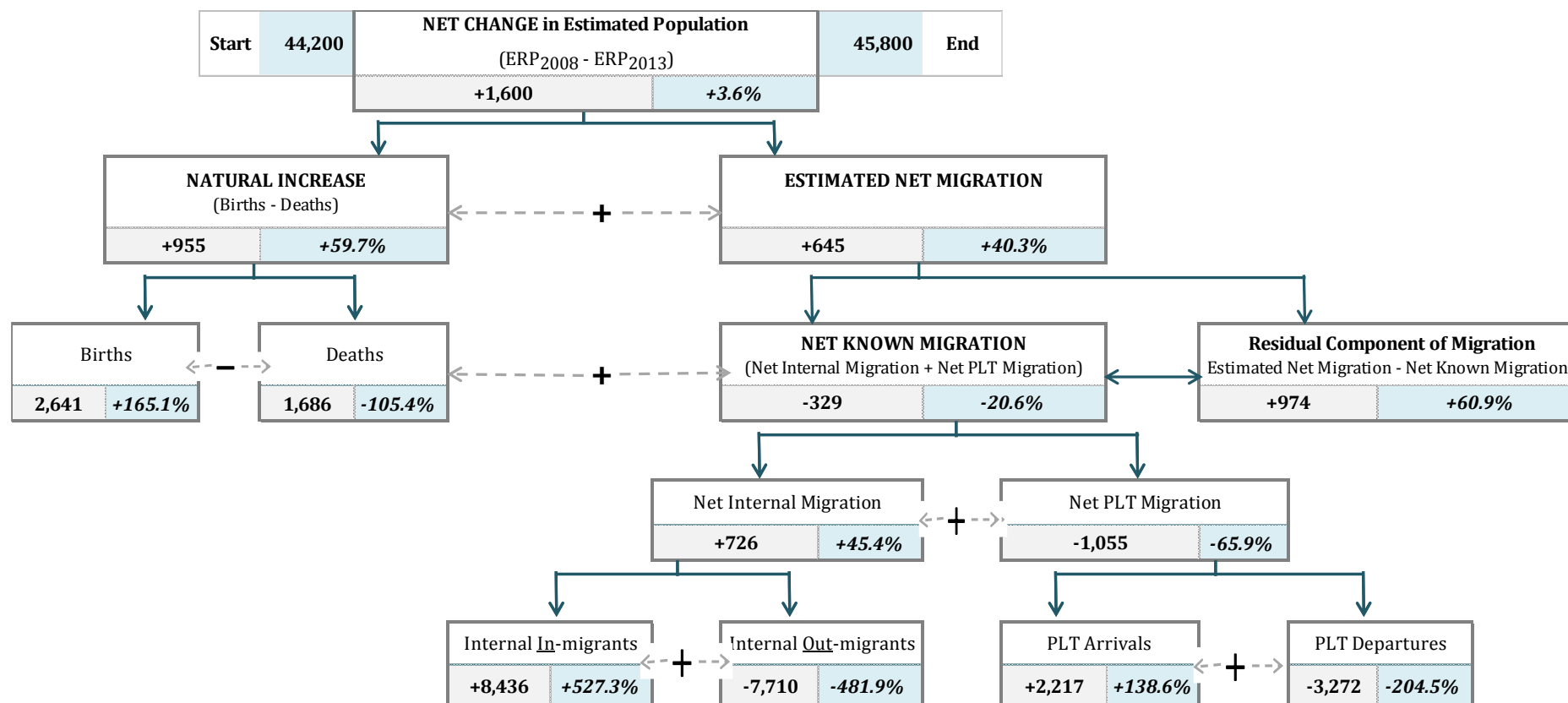
Figure 3.2.2: Components contributing to Estimated Resident Population, Western Bay of Plenty District 2001-2006



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



Figure 3.2.3: Components contributing to Estimated Resident Population, Western Bay of Plenty District 2008-2013



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



Table 3.1.1: Migration Flows (Churn) for the Western Bay of Plenty and Total Bay of Plenty Region 1996-2001, 2001-06 and 2008-2013

Western Bay of Plenty	Internal In Migrants	Internal Out Migrants	Net Internal Migration	PLT Arrivals	PLT Departures	Net PLT Migration	Net Known Migration	Residual Component of Migration	Estimated Net Migration
	<i>1996 - 2001</i>	+9,501	-7,236	+2,265	+1,400	-2,122	-722	+1,543	+672
<i>2001 - 2006</i>	+10,509	-9,282	+1,227	+1,987	-2,166	-179	+1,048	+1,964	+3,012
<i>2008 - 2013</i>	+8,436	-7,710	+726	+2,217	-3,272	-1,055	-329	+974	+645

Bay of Plenty region	Internal In Migrants	Internal Out Migrants	Net Internal Migration	PLT Arrivals	PLT Departures	Net PLT Migration	Net Known Migration	Residual Component of Migration	Estimated Net Migration
	<i>1996 - 2001</i>	+34,926	-26,262	+8,664	+11,664	-17,714	-6,050	+2,614	+4,175	+6,789
<i>2001 - 2006</i>	+34,719	-28,824	+5,895	+15,912	-17,622	-1,710	+4,185	+5,821	+10,006
<i>2008 - 2013</i>	+26,991	-24,984	+2,007	+17,170	-23,362	-6,192	-4,185	+3,785	-400

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



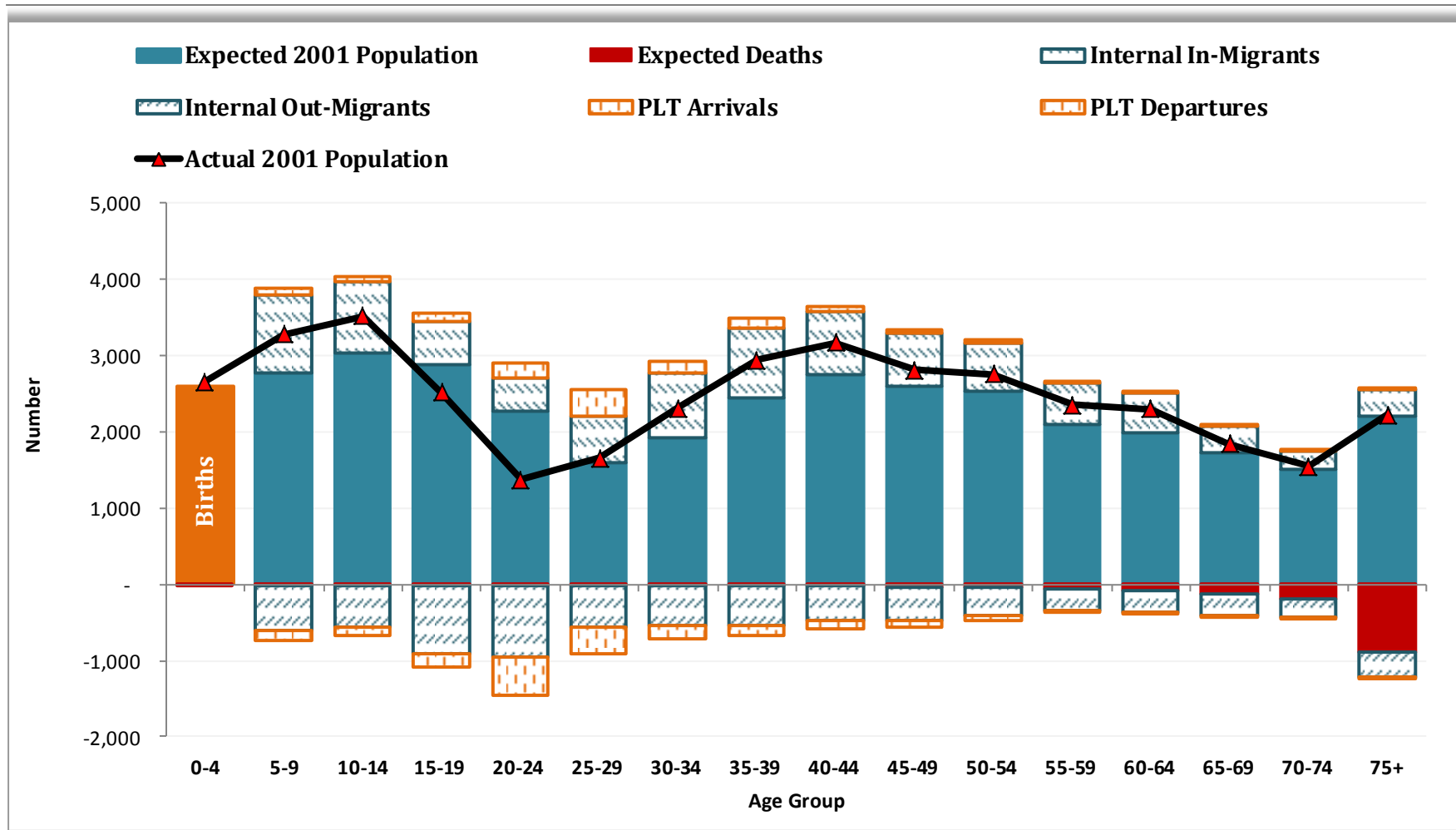
Figures 3.2.4, 3.2.5 and 3.2.6 illustrate the same dataset by age group for each period, although it should be noted that the migration flows are shown for known migration only. The data—which are based on the residual migration methodology—indicate that all Western Bay of Plenty age groups experienced both inflows and outflows of both internal and international migrants, with the number of movements greatest for the characteristically high migration age groups: 15-19 and 20-24 years.

An important point about these data and their underlying methodology is that each age group at each start observation (e.g., 1996) has been survived to the next age group using survivorship rates (drawn from the New Zealand Life Tables) and thus incorporate change in cohort size. The resulting numbers are then compared with the actual number observed at the next census (e.g., 2001). The difference between the 'expected' population and the 'actual' population is the effect of net migration (shown in these particular graphs by their internal and international flows). Accordingly, each age group—or more correctly, each birth cohort—can be traced as it 'ages' through the age structure. From the first two graphs it can be readily seen how the 20-24 year old age group for the period 1996-2001 (the cohort born 1972-76) resulted in a smaller age group at 25-29 years in the 2001-2006 graph. The delayed 2013 Census means that this cohort currently spans the 30-34 and 35-39 year age groups, rather than being precisely 30-34 years. The 2008-2013 graph is thus indicative only, but it indicates that the 1972-76 birth cohort is smaller again and usefully illustrates the compounding effect of net migration loss on the reproductive age cohorts. Each other birth cohort can be similarly traced.

The resulting age profile for estimated net migration (that is, known plus unknown migration) is summarised in Figure 3.2.7 to show the net internal and PLT flows, and in Figure 3.2.8 to show total estimated net migration. Despite overall net migration gains for each period, estimated net migration is notably negative at 15-19 and 20-24 years for all three periods. By contrast, it is strongly positive for all other age groups up to 70 years of age, indicating the net arrival of both familial age groups (parents and children) and those at late working age/early retiree age. Little movement is seen beyond age 70. Gains were notably greatest in the 2001-2006 period, with those for the 2008-2013 period the lowest.



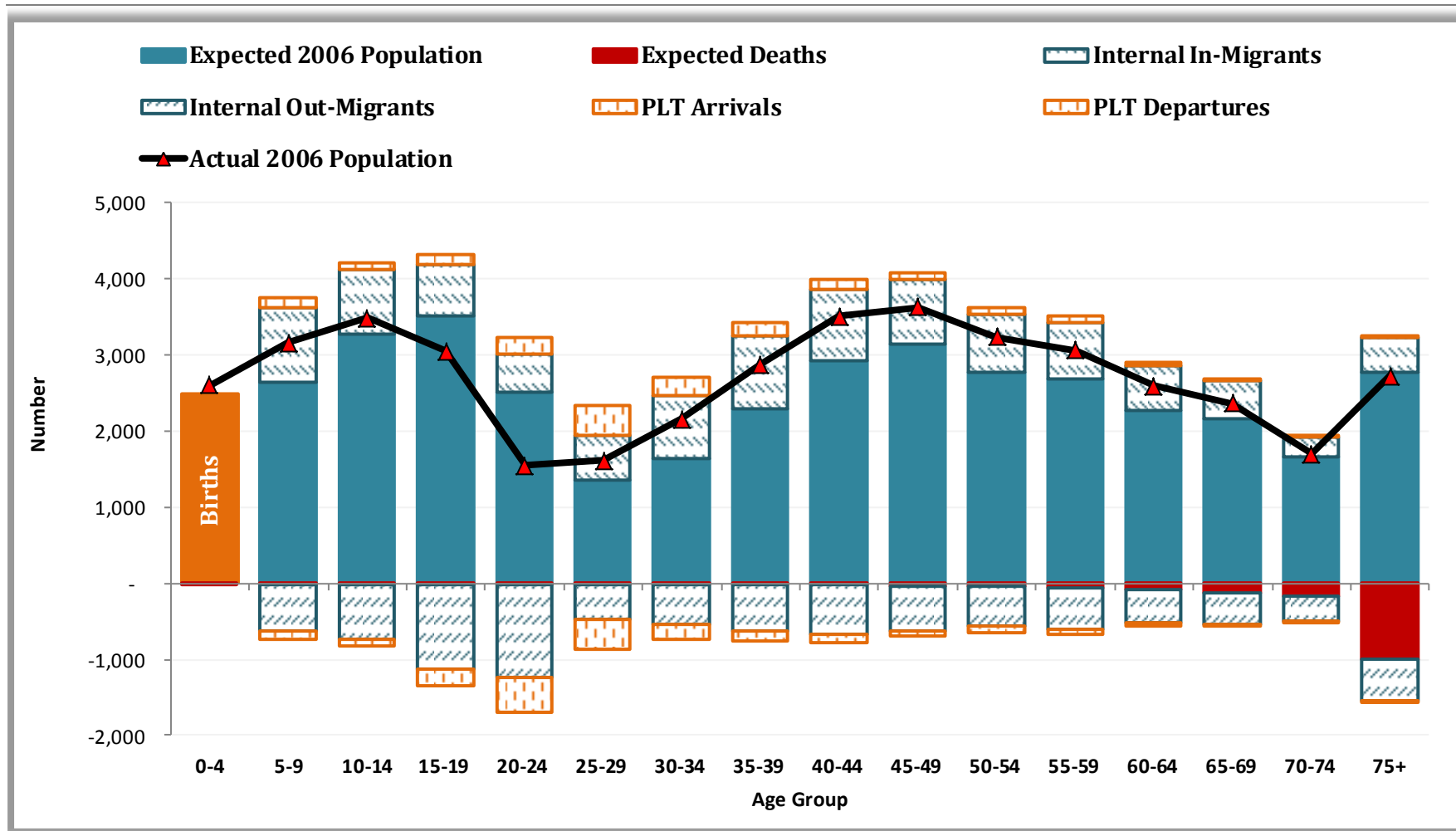
Figure 3.2.4: Components Contributing to Estimated Resident Population by Age, Western Bay of Plenty District, 1996-2001



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



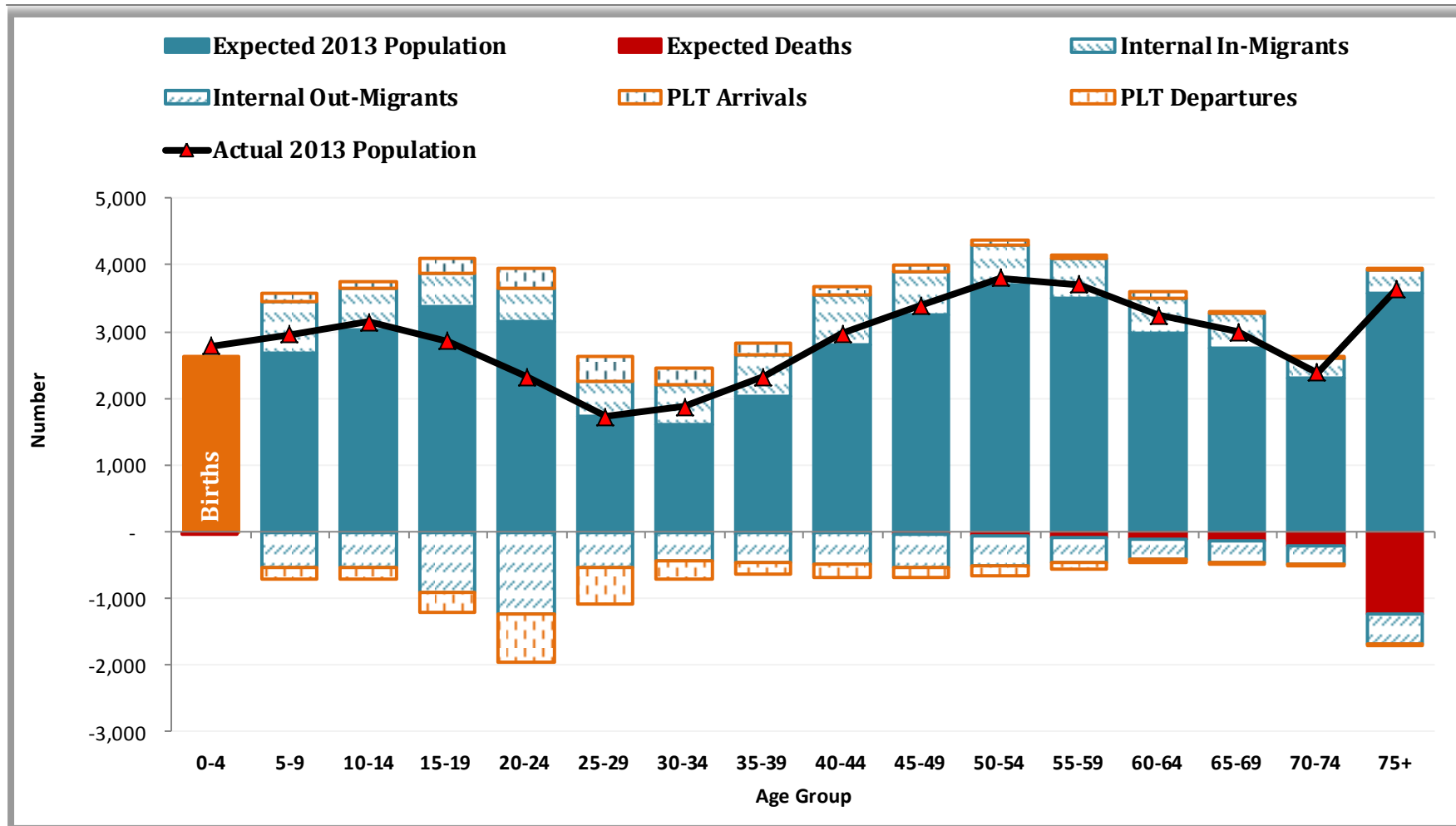
Figure 3.2.5: Components Contributing to Estimated Resident Population by Age, Western Bay of Plenty District, 2001-2006



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



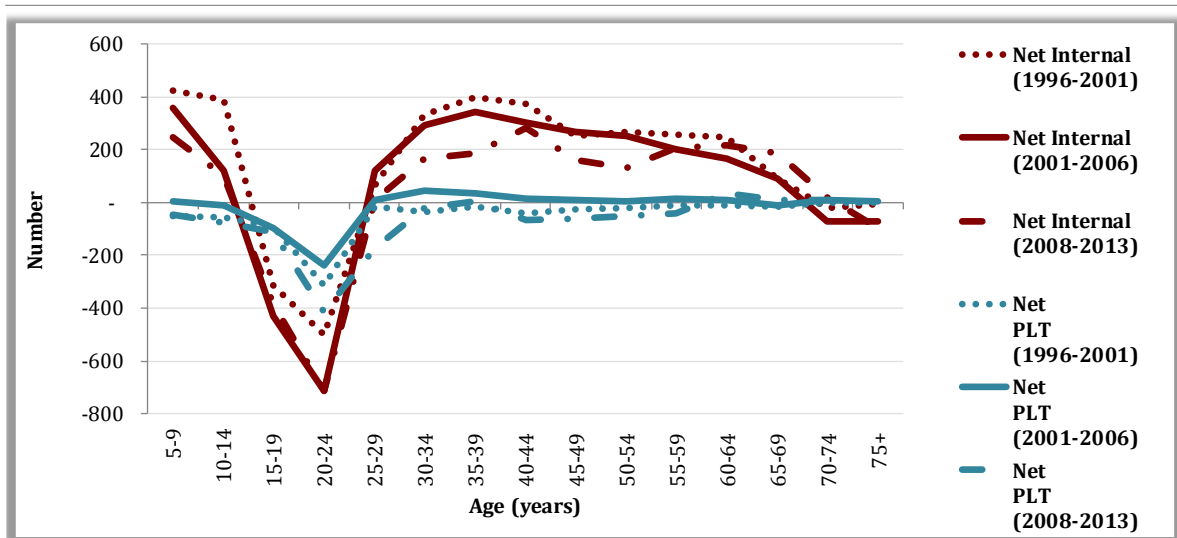
Figure 3.2.6: Components Contributing to Estimated Resident Population by Age, Western Bay of Plenty District, 2008-2013



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

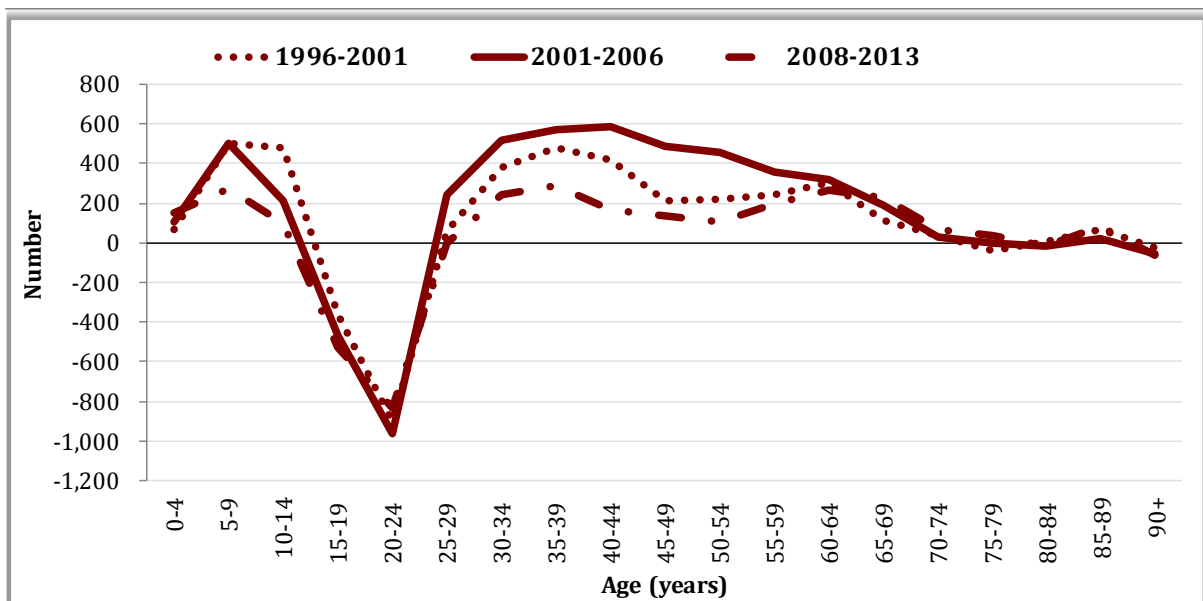


Figure 3.2.7: Estimated Net Migration by Internal and PLT Flow and Age, Western Bay of Plenty District, 1996-2001, 2001-2006 and 2008-2013



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

Figure 3.2.7: Estimated Total Net Migration by Age, Western Bay of Plenty District, 1996-2001, 2001-2006 and 2008-2013



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



4. Age Structure and Population Ageing

4.1 Numerical and Structural Ageing

As elsewhere, the population of Western Bay of Plenty 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 decrease and the increased numbers at older ages to also become increased proportions.

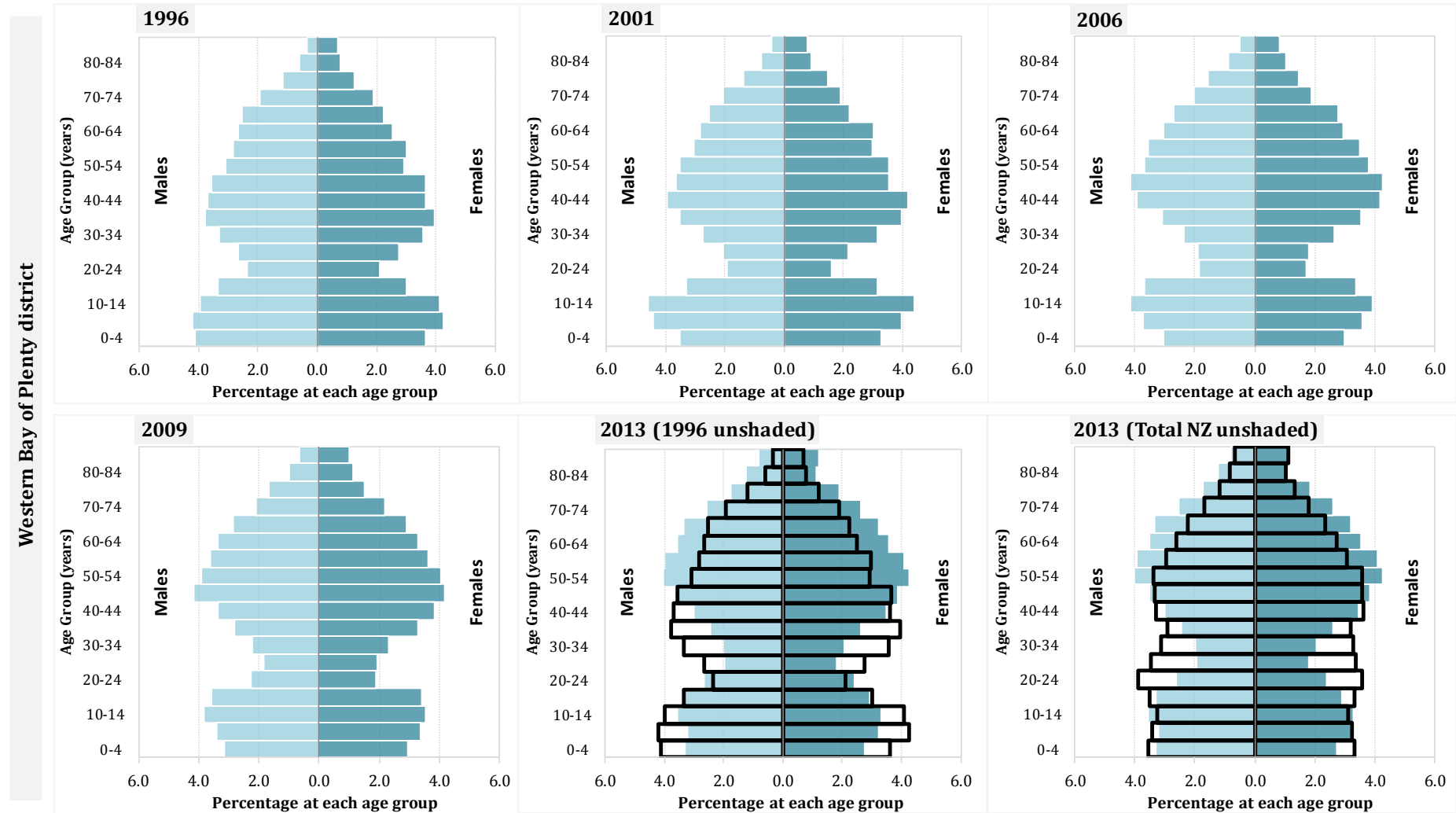
Migration is also playing a role. As indicated above, Western Bay of Plenty's structural ageing is accelerated in the first instance because of net migration loss at 15-24 years. The loss of people at these youthful ages accelerates the structural ageing process in two ways, firstly as a direct result of the reduction in their own numbers; secondly because when compounded over time it removes their reproductive potential, along with any children they may have. It is accelerated in the second instance by net gains at older ages (for Western Bay of Plenty at 65-69 years), which add to both numerical and structural ageing.

Figure 4.1.1 illustrates the outcome of these trends over the period 1996-2013 (see Table 4.1.1 for summary data). Most obvious from Figure 4.1.1 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 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, Western Bay of Plenty is not alone in experiencing this age structural bite; it is evident across most of New Zealand's non-urban regions, and is also partly a reflection of declining birth rates at the time the current population aged 20-39 years was born. The bite is, however, significantly deeper for Western Bay of Plenty District than for Total New Zealand, as can be seen in the lower right-hand panel of Figure 4.1.1.

As Table 4.1.1 shows, the trends have resulted in the Western Bay of Plenty's population aged 65+ years increasing from 13.4 per cent in 1996 to 19.5 per cent in 2013, making it somewhat older than both Total New Zealand (14.2 per cent), and the overall Bay of Plenty Region (17.6 per cent).



Figure 4.1.1: Age-Sex Structure of Western Bay of Plenty District 1996-2013 compared with New Zealand 2013



Source: Jackson/Subnational Age Structure Resource, 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 2006-2013 (2006 Boundaries)



Table 4.1.1: Summary Indicators of Change by Age, 1996-2013, Western Bay of Plenty District

Distribution of population over broad age groups								
Broad Age Group (Yrs)	Population					Average Annual Change (%)		Annual Change (%) 2011-13
	1996	2001	2006	2011	2013	1996-2006	2006-2013	
0-14	8,710	9,460	9,250	9,090	8,880	+0.6	-0.6	-1.2
15-24	3,880	3,890	4,600	5,160	5,180	+1.9	+1.8	+0.2
25-54	14,540	15,640	17,010	16,930	16,090	+1.7	-0.8	-2.5
55-64	3,930	4,650	5,650	6,640	6,950	+4.4	+3.3	+2.3
65+	4,790	5,610	6,780	8,260	9,010	+4.2	+4.7	+4.5
Western Bay of Plenty district	35,850	39,250	43,290	46,080	46,110	+2.1	+0.9	+0.0
Bay of Plenty REGION	230,700	246,900	265,400	277,200	278,100	+1.5	+0.7	+0.2
New Zealand	3,732,000	3,880,500	4,184,500	4,405,200	4,471,000	+1.2	+1.0	+0.7
Broad Age Group (Yrs)	Percentage Distribution					Average Annual Change (%)		Annual Change (%) 2011-13
	1996	2001	2006	2011	2013	1996-2006	2006-2013	
0-14	24.3	24.1	21.4	19.7	19.3	-1.2	-2.0	-1.2
15-24	10.8	9.9	10.6	11.2	11.2	-0.2	+1.1	+0.2
25-54	40.6	39.8	39.3	36.7	34.9	-0.3	-2.2	-2.5
55-64	11.0	11.8	13.1	14.4	15.1	+1.9	+3.1	+2.3
65+	13.4	14.3	15.7	17.9	19.5	+1.7	+5.0	+4.5
Western Bay of Plenty district	100.0	100.0	100.0	100.0	100.0	+0.0	-0.0	+0.0
Bay of Plenty REGION 65+ yrs	12.9	13.7	14.8	16.2	17.6	+1.5	+3.8	+4.0
Total NZ 65+ yrs	11.5	11.9	12.2	13.3	14.2	+0.6	+3.2	+3.3
Ratio Labour Market Entrants to Exits (Number aged 15-29 : Number aged 55-69)								
	Ratio					Average Annual Change (%)		Annual Change (%) 2011-13
	1996	2001	2006	2011	2013	1996-2006	2006-2013	
Western Bay of Plenty district	1.0	0.9	0.8	0.7	0.7	-2.5	-2.1	-3.5
Bay of Plenty REGION	1.5	1.3	1.1	1.1	1.0	-2.6	-1.9	-2.6
New Zealand	1.9	1.6	1.5	1.4	1.3	-2.3	-2.1	-2.3
Ratio Elderly to Children (Number 65+ per Child 0-14)								
	Ratio					Average Annual Change (%)		Annual Change (%) 2011-13
	1996	2001	2006	2011	2012	1996-2006	2006-2013	
Western Bay of Plenty district	0.5	0.6	0.7	0.9	1.0	+3.3	+7.7	+5.8
Bay of Plenty REGION	0.5	0.6	0.7	0.8	0.8	+2.6	+5.6	+5.1
New Zealand	0.5	0.5	0.6	0.7	0.7	+1.5	+4.8	+4.3

Source: Jackson/Subnational Age Structure Resource, National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato; Notes: Source data from Stats NZ Infoshare Estimated Subnational Population (RC, T,A,U) by Age and Sex at 30 June 1996, 2001 and 2006-2013 (2006 Boundaries)

Overall trends by five-year age group are summarised in Figure 4.1.2 (see Table 4.1.2 for comparison with Total New Zealand and Bay of Plenty Region). Importantly, as indicated in Section 3 (above), some of these changes reflect cohort size effects, with smaller cohorts replacing larger cohorts at the younger ages, and vice-versa at older ages; however the data provide important information for planning and resource allocation.



Figure 4.1.2: Change by Age (number), Western Bay of Plenty District 1996-2013

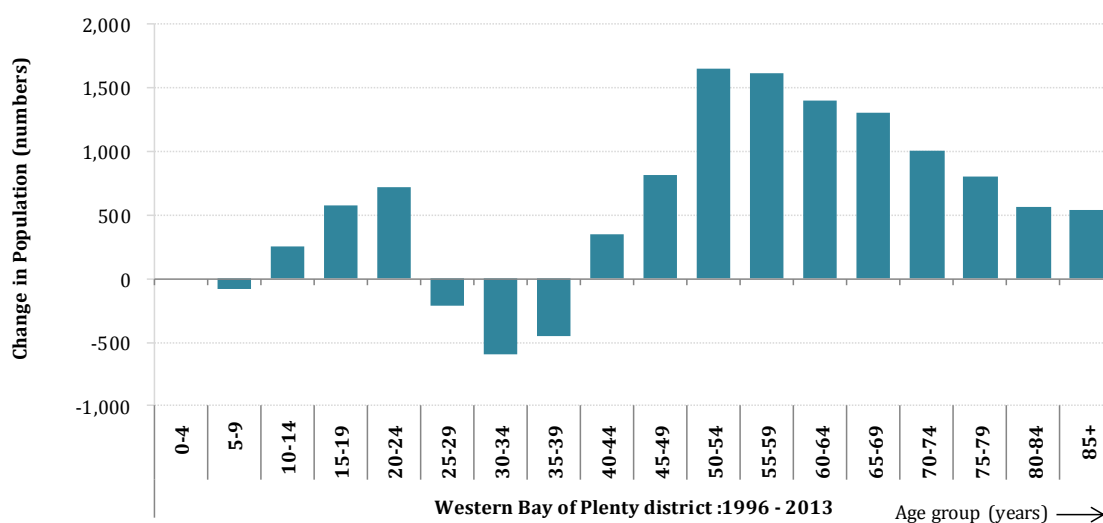


Table 4.1.2: Change by Age (%), Western Bay of Plenty District, Bay of Plenty, and Total New Zealand, 1996-2013

	Western Bay of Plenty district		Bay of Plenty REGION		New Zealand	
	Change in Population	% Change	Change in Population	% Change	Change in Population	% Change
0-4	-	+0.0	10	+0.1	12,920	+4.4
5-9	(80)	-2.6	(320)	-1.6	2,150	+0.7
10-14	250	+8.7	1,340	+7.4	16,460	+6.1
15-19	580	+25.4	2,500	+15.6	35,120	+13.0
20-24	720	+45.0	2,880	+20.3	53,510	+19.1
25-29	(210)	-10.8	(800)	-5.2	20,460	+7.2
30-34	(600)	-24.3	(2,890)	-16.7	(15,740)	-5.2
35-39	(450)	-16.2	(2,130)	-12.2	(22,270)	-7.5
40-44	350	+13.4	2,540	+16.1	46,370	+17.6
45-49	810	+31.4	3,820	+25.8	59,180	+23.7
50-54	1,650	+76.4	7,680	+64.2	118,790	+61.6
55-59	1,620	+77.9	7,070	+65.8	105,580	+64.2
60-64	1,400	+75.7	6,580	+68.9	101,270	+73.7
65-69	1,300	+76.5	5,270	+54.8	69,990	+51.8
70-74	1,010	+73.7	3,730	+44.9	39,760	+34.4
75-79	800	+93.0	3,190	+54.7	28,010	+33.4
80-84	570	+116.3	3,160	+87.8	27,990	+49.6
85+	540	+145.9	3,750	+156.9	39,510	+100.8
Total	10,260	+369.1	47,380	+241.5	739,060	+250.8

Source: Jackson/Subnational Age Structure Resource, 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 2006-2013 (2006 Boundaries)



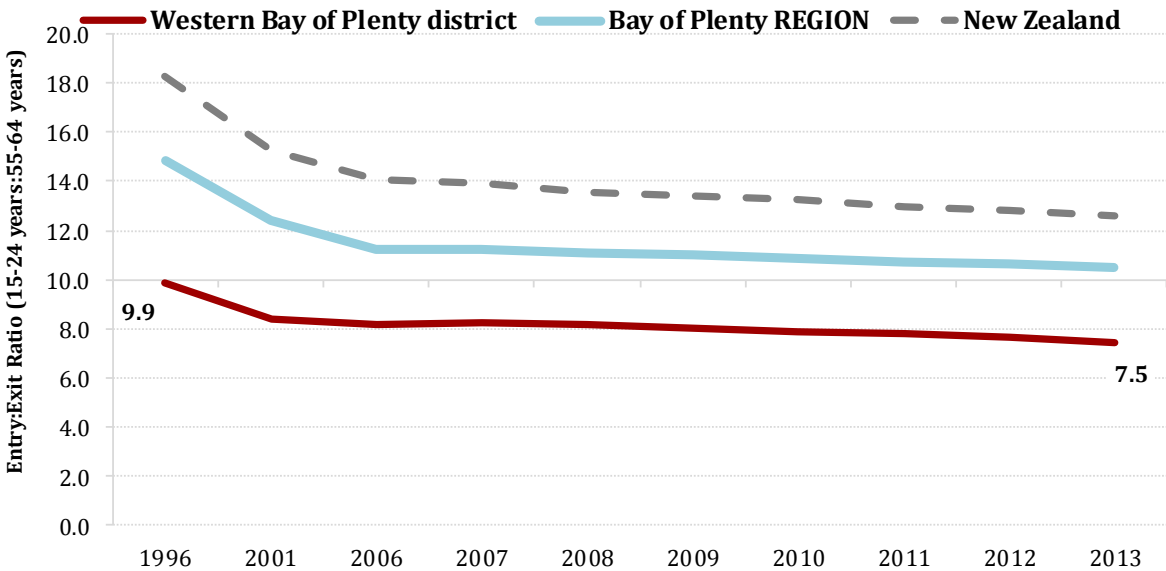
4.2 Labour Market Implications

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 (e.g., 15-24 years) to those entering the ‘retirement zone’ (e.g., 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.

Figure 4.2.1 shows that Western Bay of Plenty District’s labour market ‘entry/exit ratio’ has fallen since 1996, from 9.9 people at labour market entry age for every 10 in the retirement age zone, to just 7.5 per 10 in 2012. By comparison, the Bay of Plenty Region and Total New Zealand still have respectively around 10.5 and 12.6 people at entry age per 10 at exit age.

If older age groupings are used, for example 20-29 and 60-69 years, the entry/exit ratio for Western BOP is even lower: 6.5 at entry age for every 10 at exit age, compared with 14.4 for Total New Zealand and 10.2 for Bay of Plenty. Again this is a reflection of Western Bay of Plenty’s older age structure and greater bite at ages 20-29. This issue is returned to further below.

Figure 4.2.1: Labour Market Entry/Exit Ratio, Western Bay of Plenty District, Bay of Plenty Region and Total New Zealand, 1996-2013



Source: Jackson/Subnational Age Structure Resource, 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 2006-2013 (2006 Boundaries)



5. Ethnic Composition and Growth

5.1 Ethnic Composition and Growth

Figure 5.1.1 provides an indication of the extent to which the major ethnic groups have contributed to the region's growth (see also Table 5.1.1). Very clear from these 'multiple ethnic group' data³ is that Western Bay of Plenty District has a larger proportion of those of European/New Zealand/Other ethnicity than either the Bay of Plenty Region or Total New Zealand. It also has a smaller proportion of both Māori and Pacific Island people than the overall Bay of Plenty, but for Māori, a larger proportion than is the case nationally. The Western Bay of Plenty in 2013 also has a slightly higher proportion of people of Asian origin than in the total Bay of Plenty, but somewhat lower than is the case nationally.

In all cases, the number in each ethnic group has grown. Māori grew by 18.3 per cent, accounting for approximately 16.5 per cent of the Western Bay of Plenty's District's growth; however the largest increase was for the European/New Zealand/Other ethnicity with a lower absolute increase of 9.9 per cent, but contributing 44.4 per cent to the growth of the district (Table 5.1.1). Emerging as a major component of the District's population, the Asian population more than doubled in size between 2001 and 2013, accounting for 22.3 per cent of growth. Pacific Peoples, and those of Middle Eastern/Latin American/African origin (MELAA) also experienced significant growth, but these higher growth rates reflect relatively smaller bases and population shares.

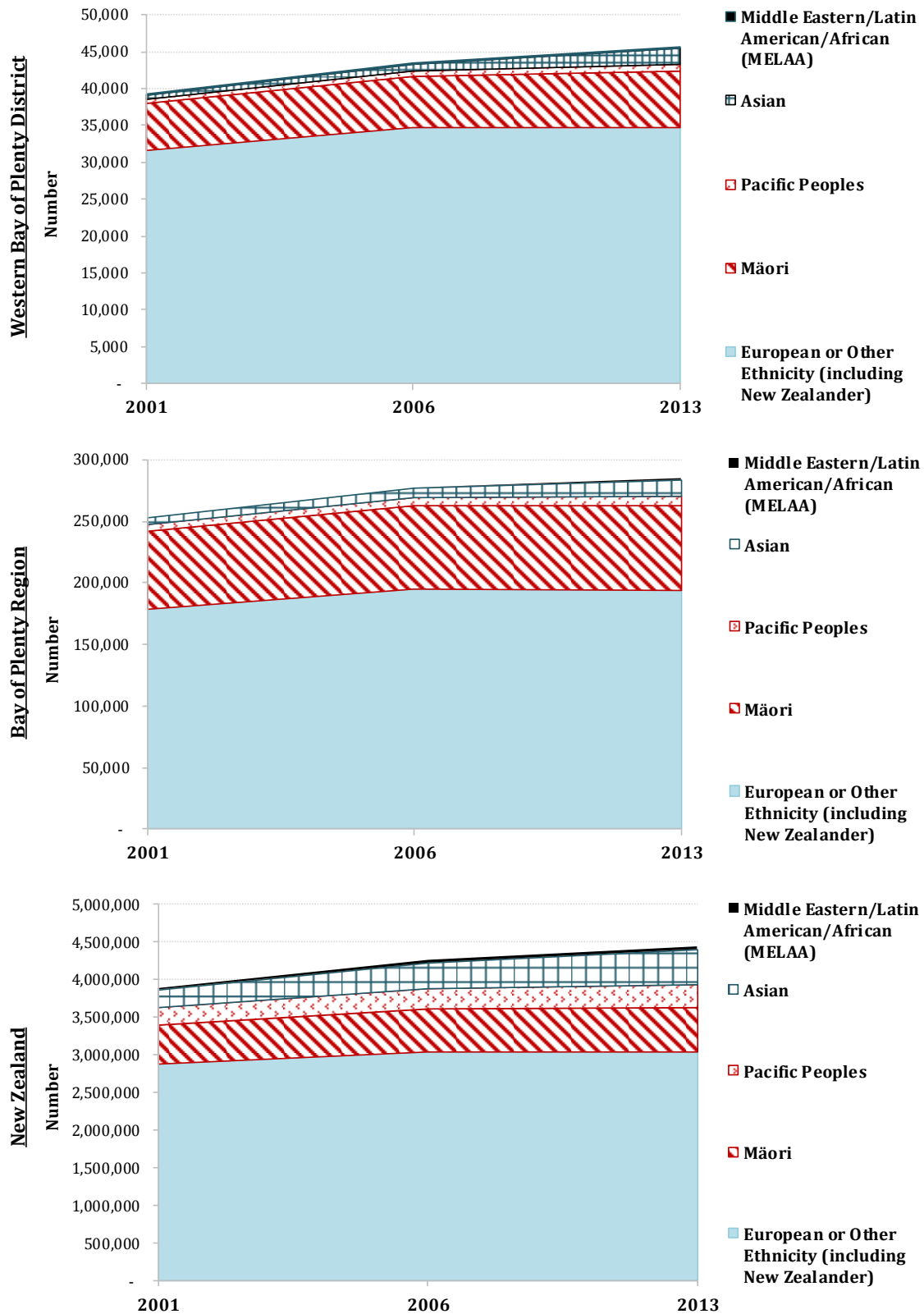
It is important to note that these 'Usually Resident Population' (URP) data are still missing adjustments for people temporarily overseas on Census night, and Census Night Undercount, so may change once the Estimated Resident Population (ERP) counts are available. The 'Not Elsewhere Included' population is notably large. However the URP dataset is internally consistent over time, thus the relative trends and distributions discussed above are unlikely to differ greatly.

The issue of ethnic 'over-count' should also be kept in mind when interpreting these data: 9.5 per cent for the Western Bay of Plenty District, 12.5 per cent for the total Bay of Plenty Region, and 10.3 per cent for New Zealand (2013 values). That is, the aggregate population for each area is inflated by the given proportion as the result of multiple counting by ethnicity, and is generally (but not definitively) higher where the proportion Māori is higher.

³ The multiple ethnic group method of enumeration means that a proportion of people are counted more than once. Table 1.2.1 gives an approximation of the extent to which the method results in an over-count.



Figure 5.1.1: Population by Major Ethnic Group* (Multiple Count), Western Bay of Plenty District, Bay of Plenty Region, and Total New Zealand 2001-2013



Statistics New Zealand, Area of Usual Residence (2001, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the census usually resident population count

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



Table 5.1.1: Usually Resident Population by Major Ethnic Group* (Multiple Count), Western Bay of Plenty District, Bay of Plenty Region, and Total New Zealand, 2001-2013

Usually Resident Population Count		Population			Change: 2001-2013			Distribution (%)*		
		2001	2006	2013	Number	% Change	Contribution to Change (%)	2001	2006	2013
Western Bay of Plenty District	European or Other Ethnicity (including New Zealander)	31,665	34,749	34,809	+3,144	+9.9	+44.4	77.7	76.2	72.8
	Māori	6,393	6,912	7,560	+1,167	+18.3	+16.5	15.7	15.1	15.8
	Pacific Peoples	543	723	996	+453	+83.4	+6.4	1.3	1.6	2.1
	Asian	549	981	2,130	+1,581	+288.0	+22.3	1.3	2.2	4.5
	Middle Eastern/Latin American/African (MELAA)	48	69	120	+72	+150.0	+1.0	0.1	0.2	0.3
	Not Elsewhere Included (NEI)	1,563	2,190	2,226	+663	+42.4	+9.4	3.8	4.8	4.7
	Total	40,761	45,624	47,841	+7,080	+17.4	100.0	100.0	100.0	100.0
	Total People (without multiple count)	37,995	41,826	43,692	...	+15.0	...	...	...	...
Ethnic 'overcount' (%)	7.3	9.1	9.5	...	...	...	...	...	...
Bay of Plenty Region	European or Other Ethnicity (including New Zealander)	178,671	195,135	194,004	+15,333	+8.6	+40.9	67.5	67.4	64.2
	Māori	63,654	67,662	68,940	+5,286	+8.3	+14.1	24.1	23.4	22.8
	Pacific Peoples	5,463	6,465	7,728	+2,265	+41.5	+6.0	2.1	2.2	2.6
	Asian	5,202	7,821	12,963	+7,761	+149.2	+20.7	2.0	2.7	4.3
	Middle Eastern/Latin American/African (MELAA)	444	783	1,266	+822	+185.1	+2.2	0.2	0.3	0.4
	Not Elsewhere Included (NEI)	11,112	11,607	17,157	+6,045	+54.4	+16.1	4.2	4.0	5.7
	Total	264,546	289,473	302,058	+37,512	+14.2	100.0	100.0	100.0	100.0
	Total People (without multiple count)	239,415	257,379	267,744	...	+11.8	...	...	...	...
Ethnic 'overcount' (%)	10.5	12.5	12.8	...	...	...	...	...	...
New Zealand	European or Other Ethnicity (including New Zealander)	2,872,233	3,040,512	3,037,152	+164,919	+5.7	+25.9	71.0	68.7	64.9
	Māori	526,281	565,329	598,602	+72,321	+13.7	+11.3	13.0	12.8	12.8
	Pacific Peoples	231,798	265,974	295,944	+64,146	+27.7	+10.1	5.7	6.0	6.3
	Asian	238,179	354,552	471,708	+233,529	+98.0	+36.6	5.9	8.0	10.1
	Middle Eastern/Latin American/African (MELAA)	24,084	34,746	46,956	+22,872	+95.0	+3.6	0.6	0.8	1.0
	Not Elsewhere Included (NEI)	150,636	167,784	230,646	+80,010	+53.1	+12.5	3.7	3.8	4.9
	Total	4,043,211	4,428,897	4,681,008	+637,797	+15.8	100.0	100.0	100.0	100.0
	Total People (without multiple count)	3,737,277	4,027,947	4,242,048	...	+13.5	...	...	...	...
Ethnic 'overcount' (%)	8.2	10.0	10.3	...	...	...	...	...	...

Source: Statistics New Zealand, Area of Usual Residence (2001, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the census usually resident population count

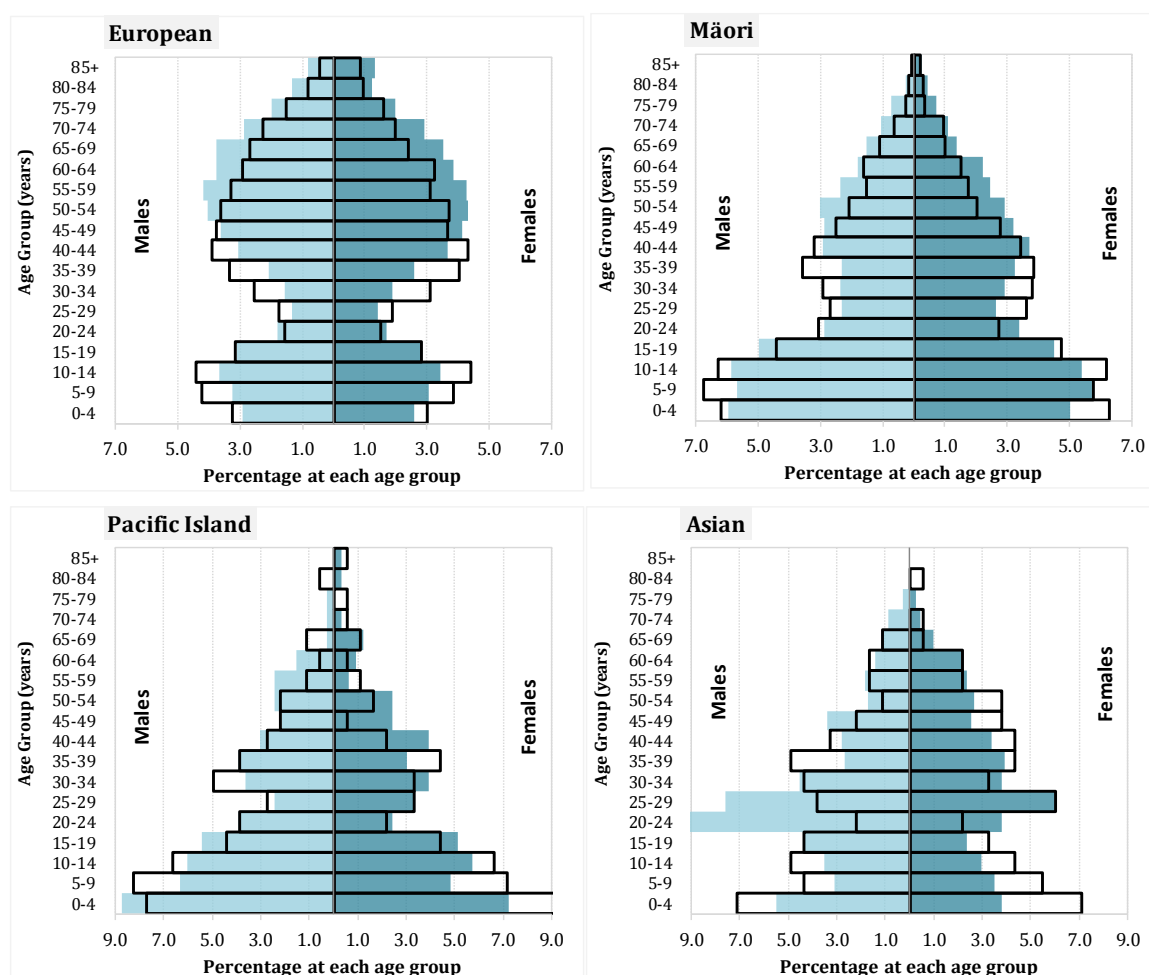
Notes: *Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows



5.2 Ethnic Age Composition

Figure 5.2.1 provides a comparison of the Western Bay of Plenty District's major ethnic groups in 2013 by age (shaded bars), also comparing each with their age structure in 2001 (unshaded bars) to show the extent of population ageing. The above caveats regarding multiple ethnic count and usually resident population count should be kept in mind. However, as can be seen by the markedly different age structures of each group in Figure 5.2.1, and summarised in Table 5.2.1 in terms of median age, these methodological complexities would have very little impact on the story by age composition. By comparison with the district's relatively old European population, the Māori and Pacific Island populations are extremely youthful, with the Asian and MELAA populations falling in between (data for MELAA not shown in Figure 5.2.1).

Figure 5.2.1: Age-Sex Structure by Major Ethnic Group*, Western Bay of Plenty District, 2013 (shaded bars) and 2001 (unshaded bars), Usually Resident Population Count



Source: Statistics New Zealand, Area of Usual Residence (2201, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the Census Usually Resident Population Count

Notes: *Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows Table 6.1.1

Different Y-axis scale for the Pacific Island and Asian populations



Of note from Table 5.2.1 is that the Western Bay of Plenty District's European, Māori and MELAA populations are older than both their Bay of Plenty Region and national counterparts, particularly so in the case of European (see also Figure 6.2.2). The District's Pacific Island population is older than its regional counterpart but younger than is the case nationally, while the District's Asian population is younger than both regional and national counterparts.

Table 5.2.1: Usually Resident Population Count, Western Bay of Plenty District, Total Bay of Plenty Region and Total New Zealand, Major Ethnic Groups by Median Age (Years), 2013

	European	Māori	Pacific Island	Asian	MELAA	TOTAL REGION
Western Bay of Plenty District	47.6	25.5	20.3	27.5	31.3	46.6
Bay of Plenty Region	44.1	24.9	18.4	28.8	30.9	40.7
Total New Zealand	40.1	24.0	22.2	30.7	28.6	37.9

Source: Statistics New Zealand, Area of Usual Residence (2201, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the Census Usually Resident Population Count

*Notes: *Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows Table 5.1.1*

Reflecting these age structural differences, the underlying data (Table 5.2.2) identify that the district's Māori population aged 0-14 and 15-24 years greatly exceeds its total population share. At age 0-14, for example, Māori account for 24.3 per cent of the population of that age, compared to 15.8 per cent for all age groups combined, while above age 55 they account for much smaller shares. The opposite is the case for European. Accounting for much smaller numbers, the District's Pacific Island and Asian youth populations also exceed their total shares, particularly the Asian population with 8.2 per cent aged 15-24 years compared with their total share of 4.5 per cent.

Also of interest from Table 5.2.2 are the measures for ethnic over-count by age (right-hand column). These data provide an intuitively correct indication of the extent to which 'ethnic mobility' is greater for children and young adults than for the older age groups, children being somewhat more likely to have their ethnicity recorded as Māori (often along with another ethnicity) than older people.



Table 5.2.2: Usually Resident Population Ethnic Group* Percentage Share by Broad Age Group and Region, 2013

		European	Māori	Pacific		MELAA	Not Elsewhere Included	TOTAL REGION		Total without multiple ethnic count	Overcount * by Age
				Island	Asian			(%)	Number*		
Percentage Distribution											
Western Bay of Plenty District	0-14	63.0	24.3	3.7	4.6	0.3	4.1	100.0	10,461	8,736	19.7
	15-24	60.9	22.0	3.1	8.2	0.3	5.6	100.0	5,397	4,695	15.0
	25-54	70.9	15.7	2.2	5.8	0.3	5.1	100.0	16,584	15,339	8.1
	55-64	82.5	9.8	0.8	2.4	0.1	4.4	100.0	6,756	6,468	4.5
	65+	88.1	6.5	0.3	0.9	0.0	4.0	100.0	8,631	8,448	2.2
	TOTAL	72.8	15.8	2.1	4.5	0.3	4.7	100.0	47,841	43,692	9.5
	85+	94.3	3.4	0.0	0.0	0.0	2.3	100.0	789	783	0.8
Bay of Plenty Region	0-14	53.4	32.1	4.6	4.4	0.5	5.0	100.0	72,462	57,726	25.5
	15-24	53.4	30.1	3.6	5.8	0.4	6.7	100.0	37,587	31,590	19.0
	25-54	63.0	22.3	2.2	5.7	0.6	6.1	100.0	108,627	98,181	10.6
	55-64	74.4	16.2	1.1	2.6	0.2	5.6	100.0	35,211	33,375	5.5
	65+	84.2	9.2	0.6	1.1	0.1	4.9	100.0	48,192	46,872	2.8
	TOTAL	64.2	22.8	2.6	4.3	0.4	5.7	100.0	302,058	267,744	12.8
	85+	90.4	4.3	0.4	0.5	0.0	4.5	100.0	5,661	5,571	1.6

Source: Statistics New Zealand, Area of Usual Residence (2001, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the Census. Notes: *Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' column

Table 5.2.3 provides summary data for the Western Bay of Plenty District's major ethnic groups by broad age group across the period 2001-2013. As noted above, all ethnic groups grew across the period; however the European population experienced a decline in numbers at 0-14 and 25-54 years. In all cases there was a reduction in population share at 0-14 years, reflecting structural population ageing.

(NB. The numbers for each ethnic group do not sum to the total because the total here is *not* the multiple ethnic count; it also includes people who were not included elsewhere, and who did not state their ethnicity).



Table 5.2.3: Usually Resident Population of the Western Bay of Plenty, Number and Age Distribution (%) by Major Ethnic Group* and Broad Age Group 2001, 2006, 2013

Western Bay of Plenty		2001	2006	2013	2001	2006	2013	Change 2001-2013	
		Number			Age Distribution (%)			in Number	in Percentage Point
European	0-14	7,332	7,302	6,588	23.2	21.0	18.9	-744	-4.23
	15-24	2,856	3,264	3,285	9.0	9.4	9.4	429	0.42
	25-54	12,561	13,374	11,754	39.7	38.5	33.8	-807	-5.90
	45-54	3,981	4,845	5,574	12.6	14.0	16.0	1,593	3.44
	65+	4,938	5,946	7,608	15.6	17.1	21.9	2,670	6.26
	Total	31,668	34,731	34,809	100.0	100.0	100.0	3,141	...
	85+	420	522	744	1.3	1.5	2.1	324	0.81
Māori	0-14	2,403	2,328	2,538	37.6	33.7	33.6	135	-3.97
	15-24	951	1,101	1,188	14.9	15.9	15.7	237	0.86
	25-54	2,322	2,562	2,601	36.3	37.0	34.4	279	-1.87
	45-54	402	486	663	6.3	7.0	8.8	261	2.49
	65+	318	438	564	5.0	6.3	7.5	246	2.49
	Total	6,396	6,915	7,554	100.0	100.0	100.0	1,158	...
	85+	15	27	27	0.2	0.4	0.4	12	0.12
Pacific Island	0-14	246	294	390	45.3	40.8	39.2	144	-6.15
	15-24	78	108	165	14.4	15.0	16.6	87	2.20
	25-54	189	273	360	34.8	37.9	36.1	171	1.34
	45-54	18	33	51	3.3	4.6	5.1	33	1.81
	65+	12	12	30	2.2	1.7	3.0	18	0.80
	Total	543	720	996	100.0	100.0	100.0	453	...
	85+	-	-	-	0.0	0.0	0.0	0	0.00
Asian	0-14	177	252	480	32.4	25.7	22.5	303	-9.88
	15-24	66	162	441	12.1	16.5	20.7	375	8.62
	25-54	246	447	963	45.1	45.6	45.2	717	0.16
	45-54	42	84	165	7.7	8.6	7.7	123	0.05
	65+	15	36	81	2.7	3.7	3.8	66	1.06
	Total	546	981	2,130	100.0	100.0	100.0	1,584	...
	85+	3	3	-	0.5	0.3	0.0	-3	-0.55
MELAA	0-14	21	21	33	38.9	28.0	28.9	12	-9.94
	15-24	6	9	18	11.1	12.0	15.8	12	4.68
	25-54	24	39	54	44.4	52.0	47.4	30	2.92
	45-54	3	3	9	5.6	4.0	7.9	6	2.34
	65+	-	3	-	0.0	4.0	0.0	0	0.00
	Total	54	75	114	100.0	100.0	100.0	60	...
	85+	-	-	-	0.0	0.0	0.0	0	0.00
Western Bay of Plenty without Multiple Ethnic Count*	0-14	9,186	9,042	8,736	24.2	21.6	20.0	-450	-4.18
	15-24	3,675	4,299	4,695	9.7	10.3	10.7	1,020	1.07
	25-54	15,159	16,491	15,339	39.9	39.4	35.1	180	-4.79
	45-54	4,515	5,481	6,468	11.9	13.1	14.8	1,953	2.92
	65+	5,460	6,516	8,448	14.4	15.6	19.3	2,988	4.97
	Total	37,995	41,829	43,686	100.0	100.0	100.0	5,691	...
	85+	471	555	783	1.2	1.3	1.8	312	0.55

Source: Statistics New Zealand, Area of Usual Residence (2001, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the Census Usually Resident Population Count

Notes: *Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows Table 5.1.1

People who did not state their ethnicity are included in the total count

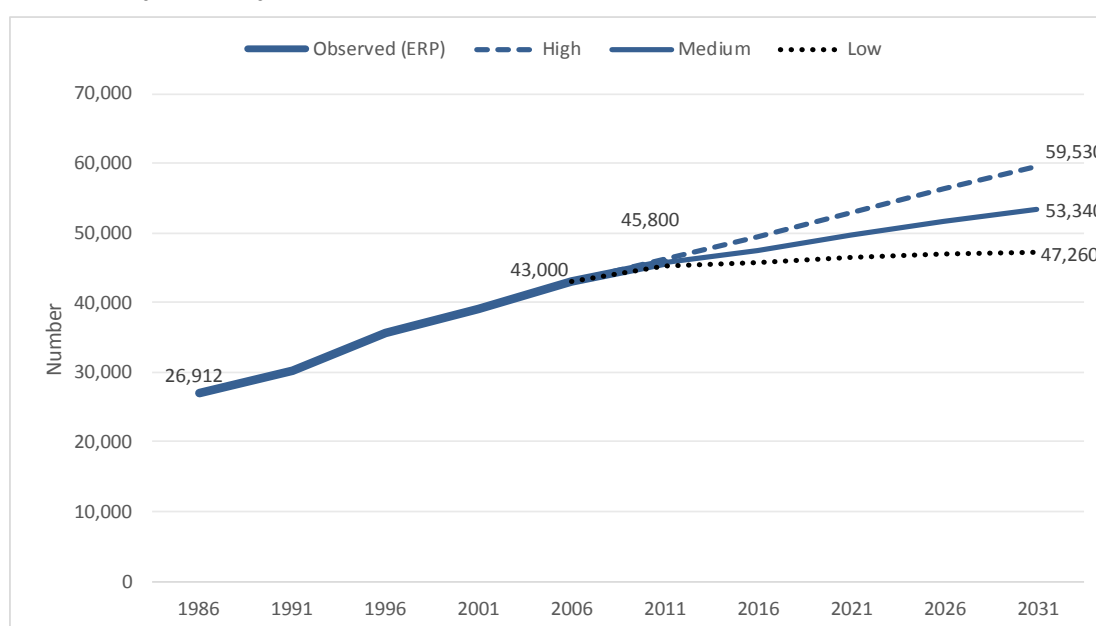


6. Population Projections

6.1 Size, Growth and Population Ageing

Under the medium series assumptions, the population of the Western Bay of Plenty is projected to grow steadily, reaching approximately 53,340 by 2031, an increase of 16.6 per cent over 2011 (Figure 6.1.1 and Table 6.1.1). The high variant projections produce a 2031 population of 59,530 (+ 28.4 per cent), and the low projections, 47,260 (+4.5 per cent) (see Appendices 3.1 and 3.2 for projection assumptions).

Figure 6.1.1: Observed (1986-2013) and Projected Population Change by Projection Series, Western Bay of Plenty District



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

The growth is not evenly shared by age. Numbers at 15-24 and 40-54 years are projected to decline overall (-15.9 and -11.7 per cent respectively), while the population aged 65+ years is anticipated to grow both numerically (by 96.6 per cent between 2011 and 2031) and structurally (from 17.8 per cent in 2011 to 30.0 per cent by 2031), with the changes even more marked at 75+ and 85+ years (see Appendix 3.4 for Total New Zealand). Between 2011 and 2031, some important inter-censal changes are also projected to occur. For example, at 15-24 years, numbers decline between 2011 and 2026, then modest growth resumes—although this is expected to be temporary, reflecting the movement of the recently born baby blip through the age structure. The oscillations have important planning implications, especially at school and labour market entry ages.



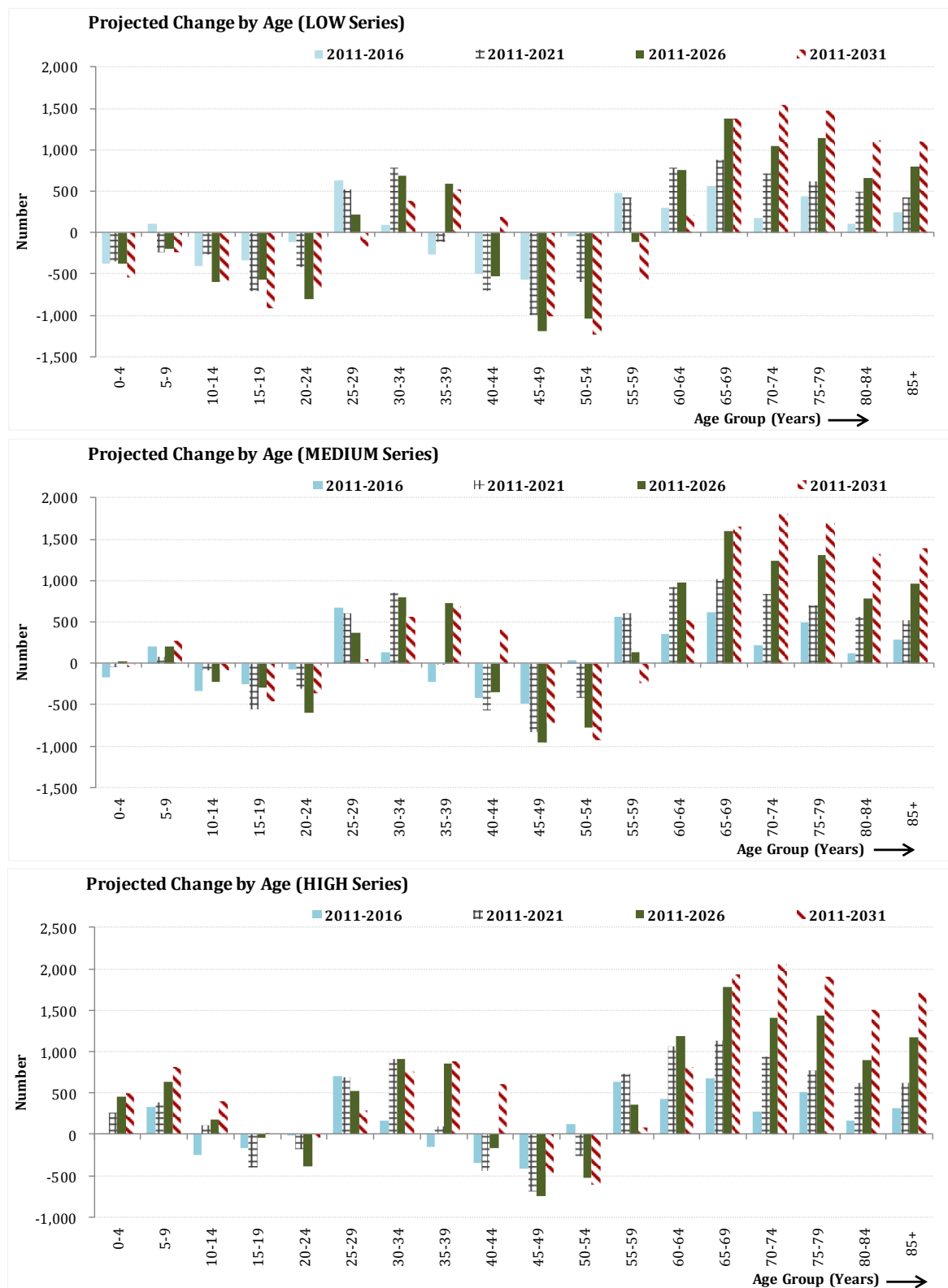
Table 6.1.1: Projected population, Western Bay of Plenty District, 2006-2031 (Medium Series)

	Numbers by age						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
0-14 years	9,190	9,070	8,780	9,030	9,080	9,220	+1.7
15-24 years	4,570	5,110	4,790	4,260	4,210	4,300	-15.9
25-39 years	6,590	6,290	6,870	7,740	8,190	7,600	+20.8
40-54 years	10,320	10,550	9,690	8,730	8,460	9,320	-11.7
55-64 years	5,610	6,590	7,510	8,130	7,710	6,880	+4.4
65-74 years	4,040	4,800	5,640	6,660	7,640	8,270	+72.3
75-84 years	2,140	2,510	3,120	3,780	4,590	5,520	+119.9
85+ years	570	840	1,120	1,360	1,800	2,230	+165.5
Total	43,030	45,760	47,520	49,690	51,680	53,340	+16.6
65+ years	6,750	8,150	9,880	11,800	14,030	16,020	+96.6
	Intercensal Change by Age (Numbers)						Change (N)
	2006-2011	2011-2016	2016-2021	2021-2026	2026-2031	2011-2031	
0-14 years	...	(120)	(290)	250	50	140	150
15-24 years	...	540	(320)	(530)	(50)	90	(810)
25-39 years	...	(300)	580	870	450	(590)	1,310
40-54 years	...	230	(860)	(960)	(270)	860	(1,230)
55-64 years	...	980	920	620	(420)	(830)	290
65-74 years	...	760	840	1,020	980	630	3,470
75-84 years	...	370	610	660	810	930	3,010
85+ years	...	270	280	240	440	430	1,390
Total	...	2,730	1,760	2,170	1,990	1,660	7,580
65+ years	...	1,400	1,730	1,920	2,230	1,990	7,870
	Age Distribution (% at each age group)						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
0-14 years	21.4	19.8	18.5	18.2	17.6	17.3	-12.8
15-24 years	10.6	11.2	10.1	8.6	8.1	8.1	-27.8
25-39 years	15.3	13.7	14.5	15.6	15.8	14.2	+3.7
40-54 years	24.0	23.1	20.4	17.6	16.4	17.5	-24.2
55-64 years	13.0	14.4	15.8	16.4	14.9	12.9	-10.4
65-74 years	9.4	10.5	11.9	13.4	14.8	15.5	+47.8
75-84 years	5.0	5.5	6.6	7.6	8.9	10.3	+88.7
85+ years	1.3	1.8	2.4	2.7	3.5	4.2	+127.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	+0.0
65+ years	15.7	17.8	20.8	23.7	27.1	30.0	+68.6
	Summary Measures						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
LM Entrants/Exits							
(15-24/55-64 years)	0.8	0.8	0.6	0.5	0.5	0.6	-19.4
(20-29/60-69 years)	0.6	0.7	0.7	0.5	0.4	0.5	-33.1
Elderly/Children	0.7	0.9	1.1	1.3	1.5	1.7	+93.4
Reproductive (20-39 yrs)	18.9	18.5	18.9	19.3	18.9	17.6	-4.6
Proportion 65+ years	15.7	17.8	20.8	23.7	27.1	30.0	+68.6
Proportion 75+ years	6.3	7.3	8.9	10.3	12.4	14.5	+98.5
Growth (%) in 5 years	...	+6.3	+3.8	+4.6	+4.0	+3.2	+16.6
Annual average growth (%)	...	+1.3	+0.8	+0.9	+0.8	+0.6	+0.8

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



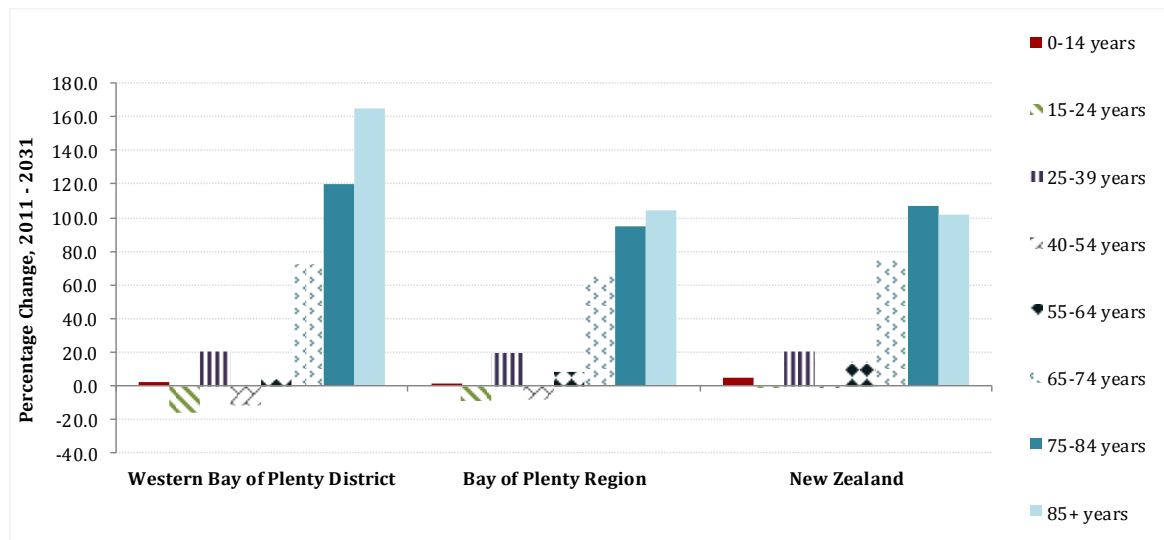
Figure 6.1.1: Projected Population Change by Age and Projection Series, Western Bay of Plenty District



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



Figure 6.1.2: Projected Change 2011-2031 by Broad Age Group (%), Western Bay of Plenty District, Bay of Plenty Region and Total New Zealand, Medium Series



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

Table 6.1.2: Projected Change 2011-2031 by Broad Age Group (%), Western Bay of Plenty District, Bay of Plenty Region and Total New Zealand

	Western Bay of Plenty District	Bay of Plenty Region	New Zealand
0-14 years	+1.7	+0.3	+4.5
15-24 years	-15.9	-8.8	-1.1
25-39 years	+20.8	+20.0	+20.7
40-54 years	-11.7	-8.4	-1.2
55-64 years	+4.4	+8.7	+14.2
65-74 years	+72.3	+65.5	+74.8
75-84 years	+119.9	+95.1	+107.2
85+ years	+165.5	+104.0	+101.5
Total	+16.6	+14.5	+17.9
65+ years	+96.6	+80.0	+88.5

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 Western Bay of Plenty District are available for two ethnic groups only: European-origin and Māori (Table 6.2.1). They show the Māori population increasing between 2011 and 2021 by approximately 14.5 per cent, and the European-origin population by 10.4 per cent. There are, however, marked differences by age. The 65+ year Māori population is projected to increase by 66.7 per cent (from 600 to 1000), and the European-origin population of the same age by 41.3 per cent. The Māori population is also projected to increase across all age groups under 65 years, while there is projected to be only a marginal increase in the European/Other population at these ages. Notably, natural increase for Māori is already greater than that for European in absolute terms, despite its smaller population share. While natural increase falls for both populations, the gap also grows over time, to see natural increase for Māori outnumbering that for European by around 400 (per five years) in 2021 (up from 100 in 2011).

Table 6.2.1: Population Projections for Western Bay of Plenty District by Ethnic Group and Broad Age Group

Western Bay of Plenty 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	7,300	9,300	10,300	4,500	31,400	...	...	...	...	...	38.2
2001	7,700	8,800	12,000	5,300	33,700	...	...	...	...	...	40.8
2006 (base)	7,600	8,900	14,100	6,400	37,000	...	...	...	...	...	43.3
2011	7,400	9,200	15,300	7,500	39,400	2,100	1,400	700	1,700	0	45.6
2016	7,400	9,400	15,600	9,000	41,500	2,100	1,600	400	1,700	0	47.4
2021	7,600	9,700	15,500	10,600	43,500	2,100	1,900	300	1,700	0	48.9
<i>Change 2011-2021 (%)</i>	<i>+2.7</i>	<i>+5.4</i>	<i>+1.3</i>	<i>+41.3</i>	<i>+10.4</i>	...	...	...	...	...	...
Māori											
1996	2,500	2,600	1,400	300	6,700	...	...	...	...	...	22.9
2001	2,600	2,500	1,600	300	7,100	...	...	...	...	...	23.1
2006 (base)	2,500	2,600	2,000	500	7,600	...	...	...	...	...	25.7
2011	2,700	2,700	2,200	600	8,300	1,000	200	800	0	-100	25.4
2016	2,900	2,900	2,300	800	8,900	1,000	200	800	0	-100	25.9
2021	3,200	3,000	2,400	1,000	9,500	1,000	300	700	0	-100	26.7
<i>Change 2011-2021 (%)</i>	<i>+18.5</i>	<i>+11.1</i>	<i>+9.1</i>	<i>+66.7</i>	<i>+14.5</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.



Because the data in Table 6.2.1 do not account for all ethnic groups, they cannot be graphed to show future ethnic composition, nor analysed in terms of future contribution to growth. Instead, Figure 6.2.1 gives an overview for the overall Bay of Plenty Region (see Appendix 3.5 for the underlying assumptions and other information). It should, however, be noted that the data still pertain to four ethnic groups only. The fifth group (MELAA) is not projected 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 change in the overall ethnic composition of the region will be relatively minor. Young Māori (0-14 years) are projected to maintain their share of the region's youthful population at 34.9 per cent in 2021, while young Pacific Islanders are projected to increase their share from 4.8 to 6.1 per cent, and Asian from 3.7 to 5.6 per cent (Table 6.2.2). The trends result in a diminishing share for the youthful European/Other population, from 56.6 to 53.4 per cent.

Changes are equally evident for each successively older age group. For example, at 40-64 years, Māori increase their share from 19.3 to 20.3 per cent (5 per cent increase), and at 65+ years, from 9.0 to 10.4 per cent (15 per cent). The percentage magnitude of the changes are even greater for the Pacific Island and Asian populations; however, as Figure 6.2.1 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 6.2.2: Projected Distribution by Age and Ethnic Group,* Bay of Plenty Region

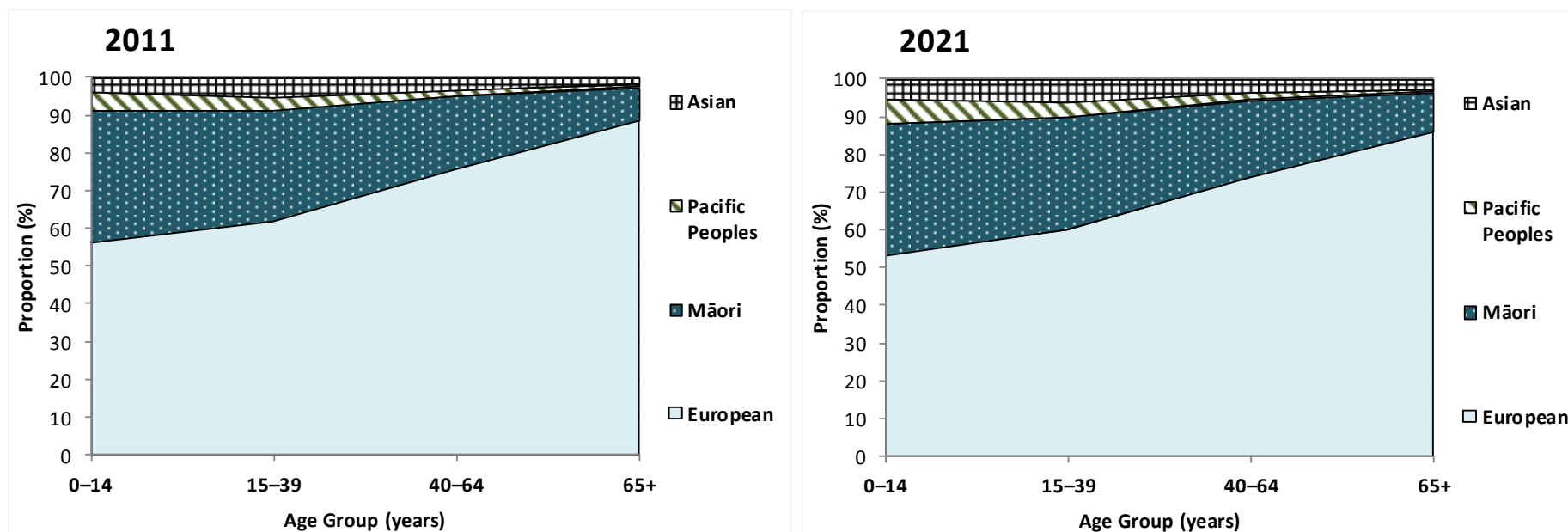
	0-14	15-39	40-64	65+	All ages
2011					
European	56.6	62.1	76.0	88.8	69.0
Māori	34.9	29.7	19.3	9.0	24.7
Pacific Peoples	4.8	3.4	1.5	0.7	2.8
Asian	3.7	4.8	3.1	1.5	3.5
Total	100.0	100.0	100.0	100.0	100.0
Number ⁽¹⁾	76,300	95,100	97,700	45,400	314,400
2016					
European	54.9	61.0	74.9	87.6	68.1
Māori	34.9	29.8	20.0	9.6	24.8
Pacific Peoples	5.6	3.8	1.8	0.8	3.1
Asian	4.6	5.4	3.4	2.1	4.0
Total	100.0	100.0	100.0	100.0	100.0
Number ⁽¹⁾	79,000	98,200	101,000	53,200	331,200
2021					
European	53.4	60.1	74.1	86.1	67.2
Māori	34.9	29.9	20.3	10.4	24.8
Pacific Peoples	6.1	4.2	2.0	0.8	3.4
Asian	5.6	5.9	3.6	2.6	4.6
Total	100.0	100.0	100.0	100.0	100.0
Number ⁽¹⁾	82,000	102,400	101,400	61,300	347,100

Source and Notes same as Table 5.2.1

(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 6.2.1: Projected Population of the Bay of Plenty Region by Major Ethnic Group* and Broad Age Group, 2011 and 2021



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



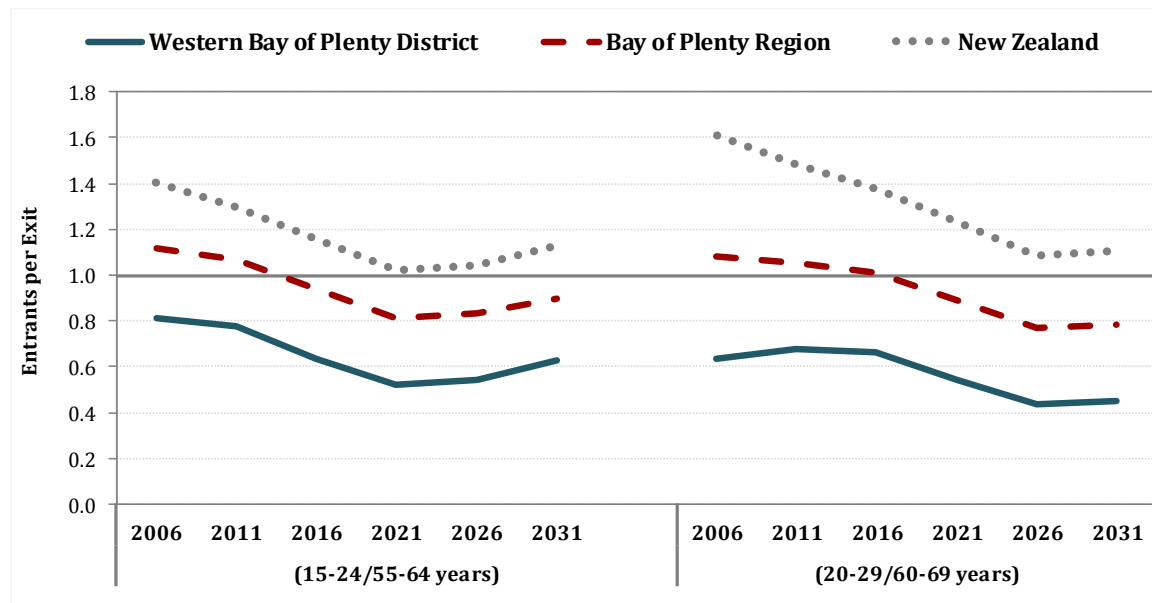
6.3 Labour Market Implications of Changing Age Structure

As noted earlier, population ageing drives other very important demographic 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 again use two: people aged 15-24 to those aged 55-64 years, and people aged 20-29 to those aged 60-69 years (Figure 6.3.1). Both indices show that Western Bay of Plenty District already has fewer ‘entrants’ than ‘exits’ by 2016, and will reach a low point of between 0.4 and 0.5 (4-5 entrants per 10 exits) across the 2021-2026 period (see also Table 6.1.1 above). Ratios will then increase slightly—but temporarily—as a recently born baby blip arrives at labour market entry age.

Trends for the Bay of Plenty Region similarly show fewer people at entry than exit age from around 2016, both indices reaching a low of 0.8 (8 entrants per 10 exits) around 2021 and 2016 (see also Appendix 3.3). For Total New Zealand the ratios similarly decline, but do not fall below 1.0 during the projection period (Appendix 3.4). 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 6.3.1: Projected Ratio of People at Labour Market Entry Age to those approaching Exit Age, Western Bay of Plenty District, Western Bay of Plenty Region and Total New Zealand, 2006-2031



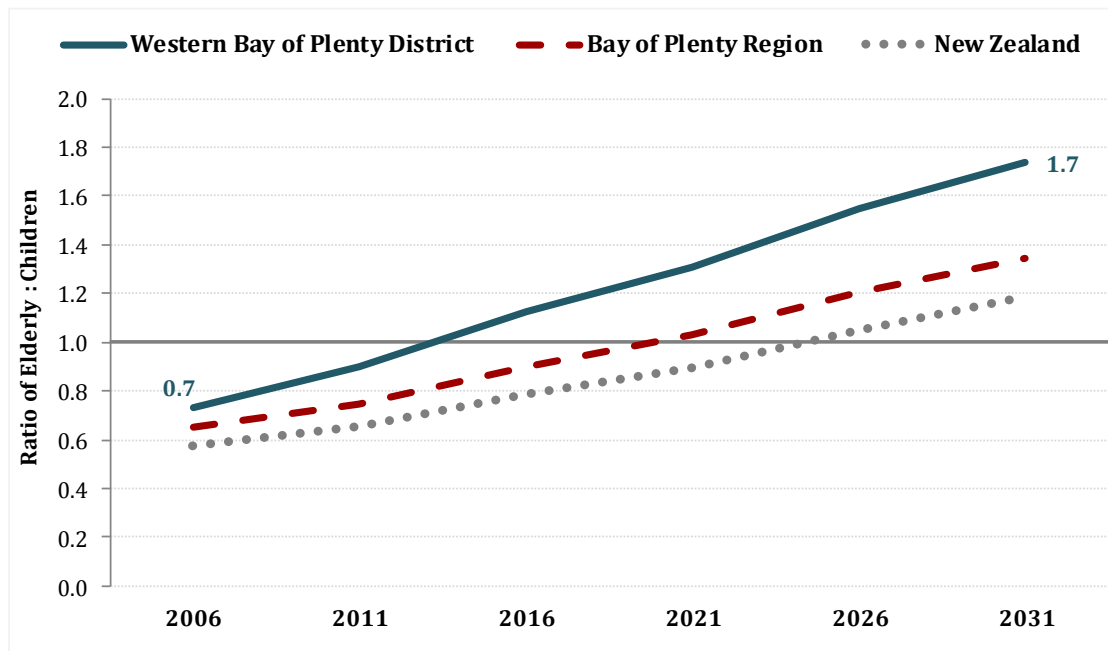
Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)

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 Western Bay of Plenty District, the projected ratio of elderly to children increases rapidly from its present 0.7 (7 elderly for every 10 children), to 1.7 by 2031 (Figure 6.4.1). This profound shift to more elderly than children (the crossover for Western Bay of Plenty District occurring between 2011 and 2016) will by then be contributing to rapidly diminishing levels of natural increase (Figure 6.4.2), as will the relatively small (but stable) proportion projected to be at the key reproductive ages (18-19 per cent) compared with Total New Zealand (25-27 per cent) (Figure 6.4.3). For both the total Bay of Plenty Region and Total New Zealand, the crossover to more elderly than children will occur around 2021 and 2026 respectively (see also Appendices 3.3 and 3.4).



Figure 6.4.1: Projected Ratio of Elderly (65+ years) to Children (0-14 years), Western Bay of Plenty District, Bay of Plenty Region and Total New Zealand, 2006-2031

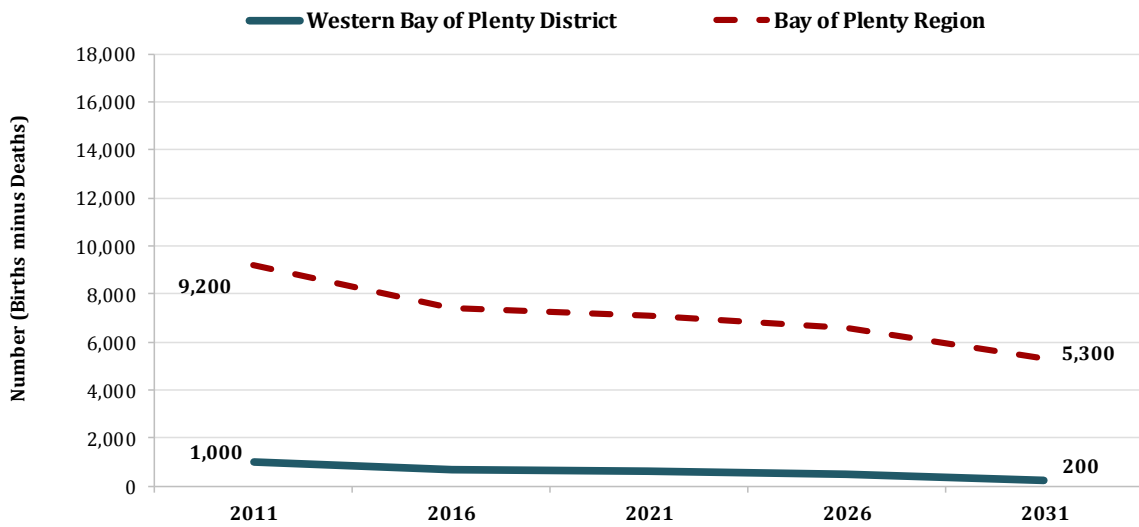


Source: Statistics New Zealand, *Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)*

The proportion at key reproductive ages (Figure 6.4.3) 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 one of the major components of Western Bay of Plenty’s growth. As that component declines, growth – or maintenance of population size – will become ever more dependent on migration.

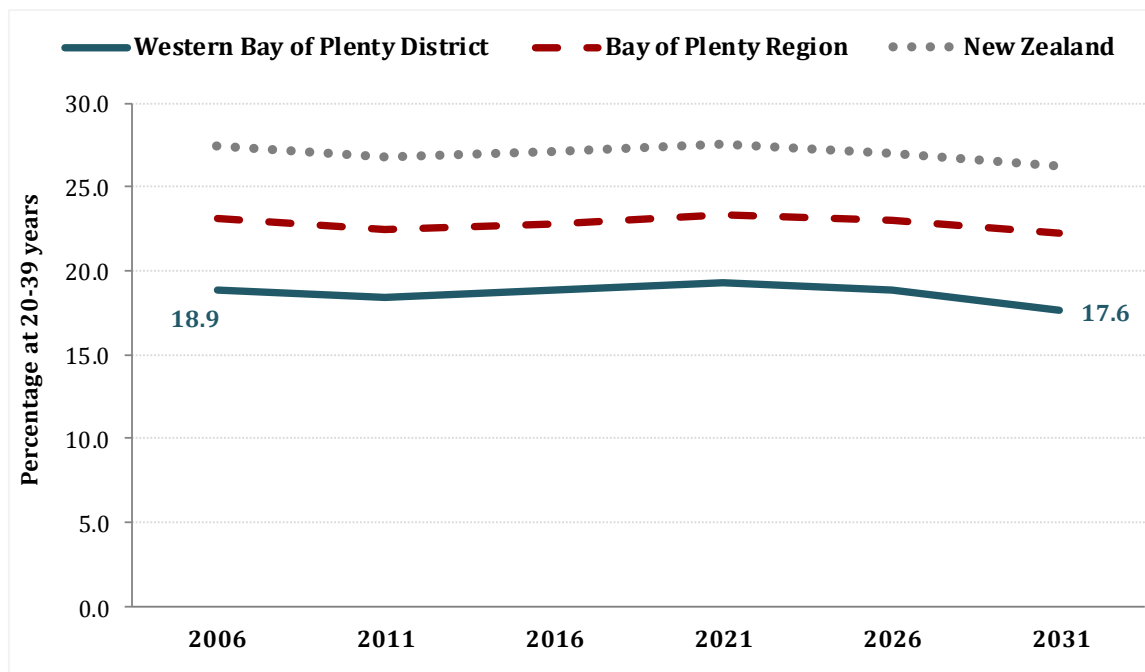


Figure 6.4.2: Projected Natural Increase (per five years), Western Bay of Plenty District and Bay of Plenty Region, 2011-2031



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

Figure 6.4.3: Projected Proportion at Key Reproductive Ages (20-39 years), Western Bay of Plenty District, Bay of Plenty Region and Total New Zealand, 2006-2031



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



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 the labour market entry/exit ratios also differs 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, training, and succession planning.

This section provides an overview of the changing age-sex structure of the Bay of Plenty 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: School Education; Horticulture and Fruit Growing; Building and Construction; and Supermarket and Grocery (see also Appendix 4). 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 Bay of Plenty Region's industries employing more than 1,000 people in 2006.

Figure 7.1.1 provides data for the Bay of Plenty Region's total employed labour force (see also Appendix 4.1). Reflecting the trends outlined above, the average age of employed persons at each census was respectively 39.1, 41.1 and 42.3 years, an overall increase of 3.2 years (8.2 per cent). This is only fractionally above 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 Bay of Plenty 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 12.7 per cent in 1996 to 20.8 per cent in 2006 (63.8 per cent), and the ratio of those at labour force entry to exit age (15-24:55+ years) falling from 14 per 10 in 1996, to just 7 per 10 in 2006. Note that we are now referring to the employed labour *force*, as opposed to the (potential) labour *market*.

Differing somewhat from the total employed labour force is the region's single largest industrial grouping, School Education (ANZSIC96 V4.1 code N842), which is heavily feminised (Figure 7.1.2). The sex ratio (males per female) has reduced over time, from 0.4 in 1996 to 0.3 in 2006, but remains female-dominated (Appendix 4.2). The average age of Bay of Plenty persons employed in this industry (45.1 years in 2006) is a little greater than the region's total labour force, and has not aged as rapidly, shifting upwards since 1996 by 2.3 years (5.4 per cent). This is



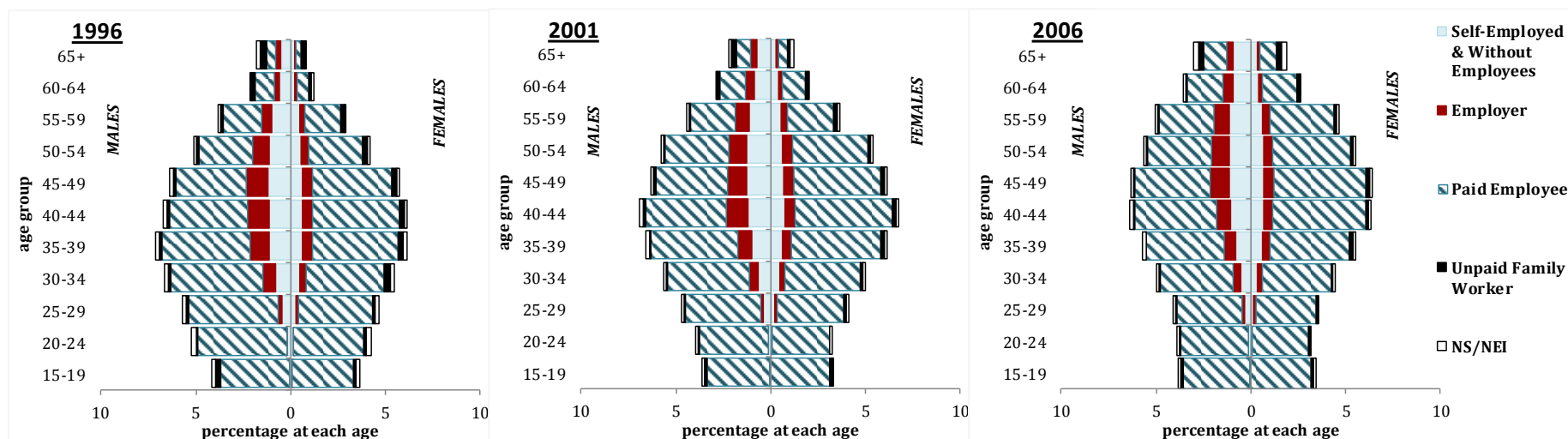
about the same rate of structural ageing as for the Total New Zealand School Education labour force.



Figure 7.1.1: Age-Sex Structure and Employment Status of Employed Labour Force 1996, 2001, 2006, Bay of Plenty Region

Bay of Plenty Region

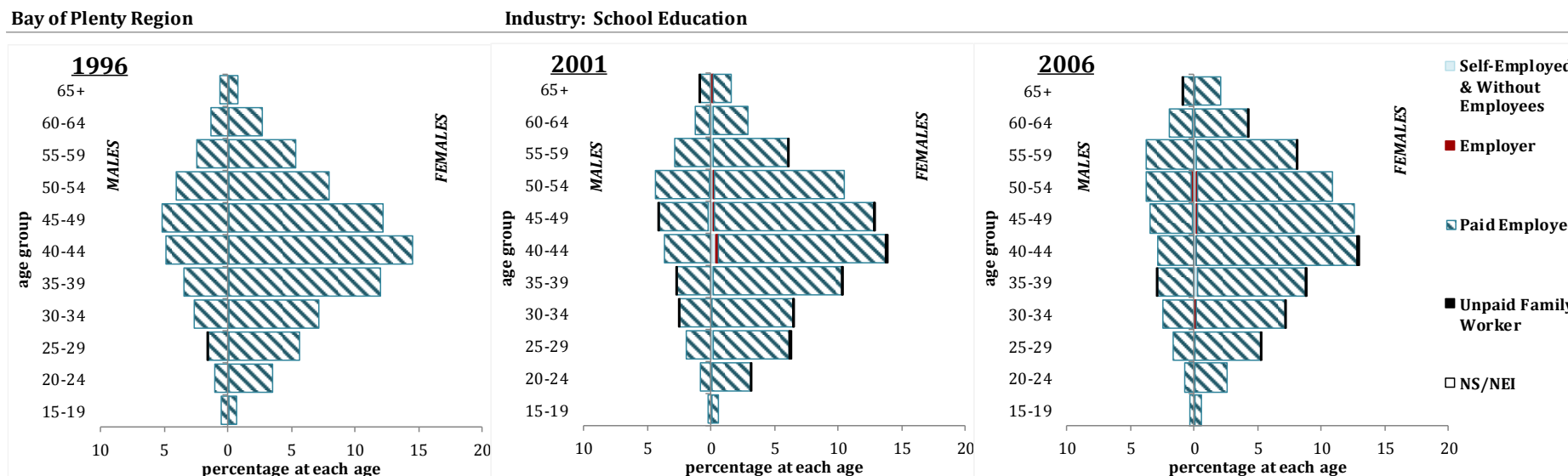
Industry: Total



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 7.1.2: Age-Sex Structure and Employment Status of the School Education Industry [N842] 1996, 2001, 2006, Bay of Plenty 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



In contrast to the region's female dominated School Education industry is the Bay of Plenty's second largest industry, Horticulture and Fruit Growing industry, employing somewhat more males (Figure 7.1.3, Appendix 4.3). Structural ageing in this industry is also more advanced than in the school education industry, with an average age in 2006 of 48.7 years (having increased by 3.8 years since 1996, 8.5 per cent). In 1996, just 26.4 per cent of those employed in this industry were aged 55+ years, while by 2006 that had increased to 39.0 per cent (a 47.8 per cent increase). The trends resulted in the employed labour force entry: exit ratio falling from 4 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 3,327) is Building and Construction (Figure 7.1.4, Appendix 4.4). The average age of employees in this industry increased from 38.6 years in 1996 to 40.5 years in 2006 (1.9 years, 4.9 per cent), although it declined fractionally between 2001 and 2006. This relatively slow ageing reflects both intake at youthful ages and a significant increase in employment this industry *per se*, which in 1996 employed just 2,004 persons (a 66.0 per cent increase), taking it from eighth largest in 1996 to third largest in 2006. Nevertheless the industry's entry: exit ratio fell from 17 per 10 (entrants per those in the retirement zone) in 1996, to 10 per 10 in 2006.

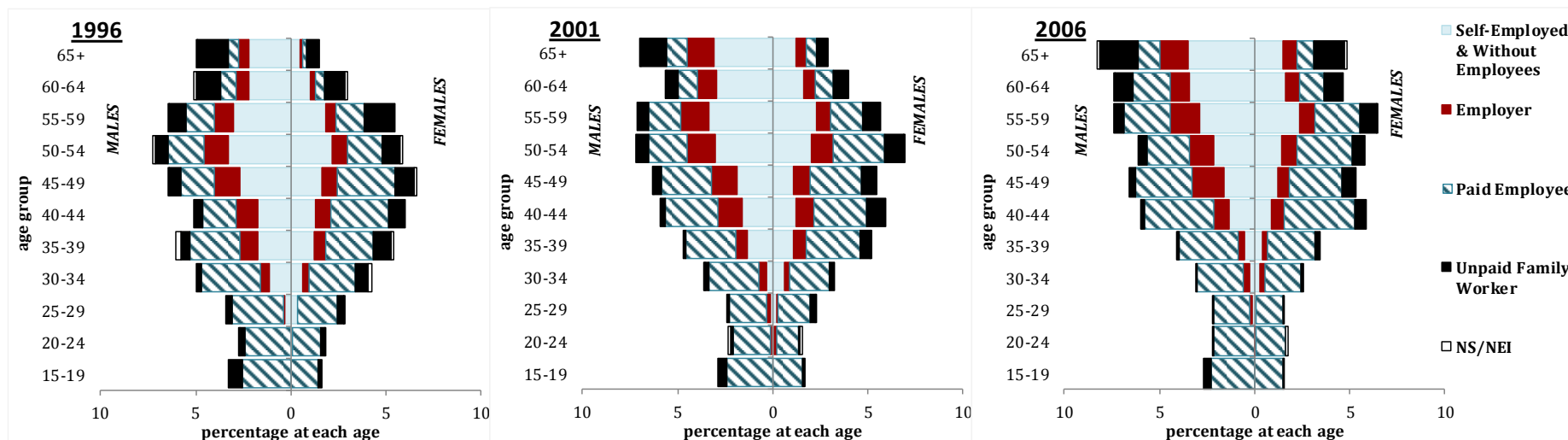
The region's fourth largest industry is Supermarket and Grocery Stores, in 2006 employing 3,099 people (Figure 7.1.5, Appendix 4.5), significantly more than in 1996 (2,361) and explaining its rise from sixth to fourth rank. Its age-sex structure contrasts substantially with those for the three largest industries, albeit like School Education it is also heavily feminised (sex ratio in 2006, 0.6 males per female, up from 0.5 in 1996). Widely understood as one of the youngest industries in terms of age structure, the average age of the Bay of Plenty Region's Supermarket and Grocery Store increased from 30.0 years in 1996 to 33.3 years in 2006 (3.3 years, 11.0 per cent), making it the region's second-youngest industry of the 158 measured at 3-digit level. Nevertheless it is also ageing. Between 1996 and 2006 the proportion aged 55+ years increased from 4.7 to 11.5 per cent, and the entry: exit ratio fell from 11 per 10, to just 4 per 10 in 2006. Notably also, the region's Supermarket and Grocery Store population is a little older on average than its New Zealand counterpart.



Figure 7.1.3: Age-Sex Structure and Employment Status, Horticulture and Fruit Growing Industry [A011] 1996, 2001, 2006, Bay of Plenty Region

Bay of Plenty Region

Industry: A011 Horticulture and Fruit Growing



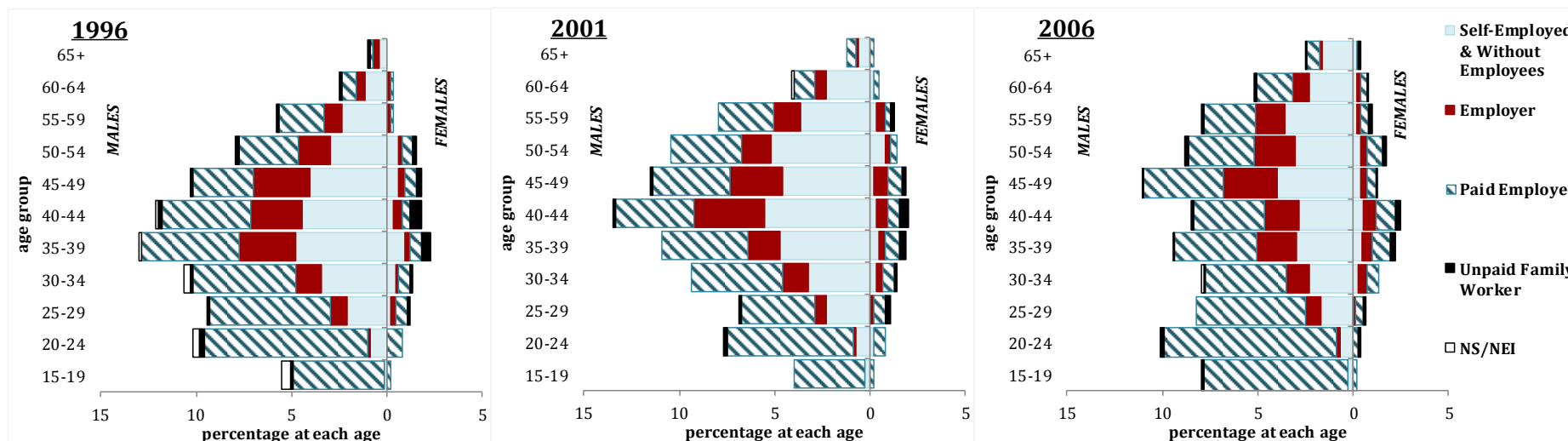
Source: Jackson/Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006



Figure 7.1.4: Age-Sex Structure and Employment Status, Building and Construction Industry [E411] 1996, 2001, 2006, Bay of Plenty Region

Bay of Plenty Region

Industry: Building Construction



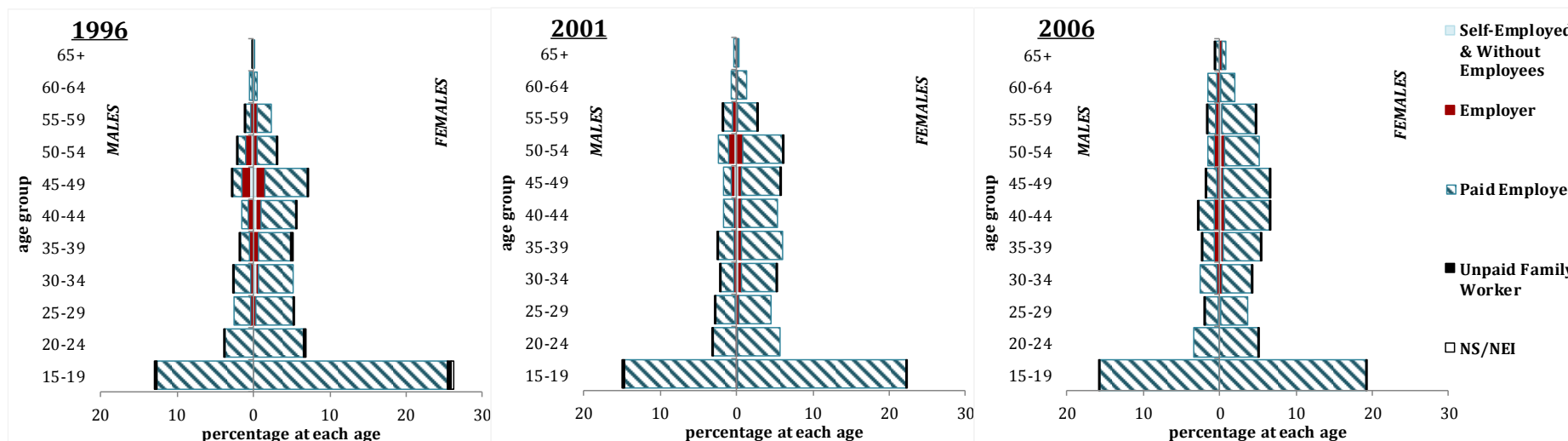
Source: Jackson/Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006



Figure 7.1.5: Age-Sex Structure and Employment Status, Supermarket and Grocery Stores Industry [G511] 1996, 2001, 2006, Bay of Plenty Region

Bay of Plenty Region

Industry: Supermarket & Grocery Stores



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 7.1.1 gives data for all Bay of Plenty industries employing over 1,000 people in 2006 (accounting for 77 per cent of the region's employed workforce). As indicated above, the region's two largest industries have average ages above that of the total employed workforce. Offsetting this workforce ageing to some extent are the below-average ages of the three next-largest industries: Building and Construction, Supermarket and Grocery Stores, and Cafes and Restaurants. However, the two next-largest industries—Hospitals and Nursing Homes, and Community Care Services—again have relatively old age structures, as do a further 22 of the region's 57 industries employing over 1,000 people, while 31 have entry: exit ratios below parity (10 for 10). It goes without saying that people and skills are not exact replacements for each other.



Table 7.1.1: Bay of Plenty Industries Employing over 1,000 persons in 2006, Number, Average Age, and Change (%) 1996, 2001 and 2006 (Ranked largest to smallest)

Bay of Plenty Region	Number Employed			% Change 1996-2006	Average Age (in years)			% Change 1996-2006	Entry(15-24yrs): Exit(55-64 yrs) Ratio			% Change 1996-2006
	1996	2001	2006		1996	2001	2006		1996	2001	2006	
N842 School Education	4077	5100	5277	+29.4	42.8	43.8	45.1	+5.3	0.5	0.4	0.2	-52.9
A011 Horticulture and Fruit Growing	3501	3516	3489	-0.3	44.8	47.1	48.7	+8.5	0.5	0.4	0.3	-34.7
E411 Building Construction	1986	1959	3330	+67.7	38.8	41.3	40.4	+4.3	1.7	0.9	1.3	-26.7
G511 Supermarket and Grocery Stores	2349	2670	3084	+31.3	29.9	31.6	33.3	+11.1	11.5	7.1	4.4	-62.1
H573 Cafes and Restaurants	1884	2319	2886	+53.2	31.3	31.0	32.0	+2.2	7.6	8.7	6.0	-20.8
O861 Hospitals and Nursing Homes	2622	2631	2859	+9.0	41.3	42.7	44.9	+8.7	0.7	0.4	0.3	-58.0
O872 Community Care Services	1539	2460	2859	+85.8	41.8	45.0	47.4	+13.5	0.9	0.4	0.2	-72.8
G532 Motor Vehicle Services	2340	2349	2589	+10.6	34.6	37.0	39.1	+12.7	4.9	2.6	1.6	-67.3
O863 Other Health Services	924	2169	2565	+177.6	42.5	44.6	45.5	+6.9	0.5	0.3	0.3	-42.1
M811 Government Administration	2523	2274	2508	-0.6	41.0	43.7	44.5	+8.6	0.6	0.3	0.3	-49.9
G525 Other Personal and Household Good Retailing	1623	1899	2325	+43.3	39.7	41.1	42.5	+6.9	1.5	1.0	0.9	-36.0
H571 Accommodation	1944	2175	2286	+17.6	38.3	40.7	41.9	+9.5	1.9	1.2	1.0	-45.8
L785 Marketing and Business Management Services	852	1665	2241	+163.0	40.2	40.8	43.5	+8.0	1.2	1.1	0.5	-61.9
L786 Other Business Services	1407	1674	2235	+58.8	39.5	41.6	43.3	+9.5	1.4	1.0	0.6	-56.7
G512 Specialised Food Retailing	1944	1974	2115	+8.8	34.3	34.0	34.5	+0.7	4.6	4.2	3.8	-18.0
A013 Dairy Cattle Farming	2484	2262	2055	-17.3	39.4	41.5	42.5	+7.8	1.7	1.2	1.1	-36.9
Q952 Other Personal Services	1698	1644	2049	+20.7	37.2	40.1	40.8	+9.7	2.6	1.2	1.1	-55.9
A021 Services to Agriculture	849	1551	2034	+139.6	38.5	42.3	44.0	+14.3	1.8	0.8	0.7	-58.4
E423 Installation Trade Services	1206	1542	2028	+68.2	38.1	40.3	41.3	+8.6	1.9	1.1	1.1	-39.1
L784 Legal and Accounting Services	1401	1527	1947	+39.0	39.1	41.4	43.3	+10.9	2.2	0.9	0.6	-72.7
E424 Building Completion Services	1167	1311	1794	+53.7	37.3	38.9	39.3	+5.5	2.7	1.4	1.4	-46.5
I611 Road Freight Transport	1302	1398	1677	+28.8	39.2	41.4	44.3	+13.0	1.3	0.6	0.4	-71.2
C286 Industrial Machinery and Equipment Manufacturing	1260	1455	1620	+28.6	37.2	39.6	42.0	+13.0	2.8	1.2	0.9	-68.7
L782 Technical Services	846	978	1608	+90.1	39.3	41.9	42.5	+8.0	1.5	0.7	0.7	-55.5
L772 Real Estate Agents	969	969	1485	+53.3	44.7	46.6	47.5	+6.2	0.4	0.2	0.2	-46.0
C231 Log Sawmilling and Timber Dressing	1329	1584	1422	+7.0	35.3	37.0	39.4	+11.4	4.3	2.7	1.4	-67.8
G523 Furniture, Houseware and Appliance Retailing	999	1020	1419	+42.0	39.0	40.6	39.2	+0.5	1.8	1.3	1.7	-7.4
L771 Property Operators and Developers	867	1068	1407	+62.3	43.0	46.8	46.6	+8.2	0.8	0.3	0.4	-41.1
O862 Medical and Dental Services	864	1125	1398	+61.8	42.4	44.1	45.7	+7.9	0.6	0.3	0.2	-63.9
E412 Non-Building Construction	822	1023	1383	+68.2	39.4	40.8	42.0	+6.5	1.2	1.0	0.9	-29.5
A030 Forestry and Logging	1932	1542	1242	-35.7	34.5	36.1	39.6	+14.8	6.2	3.2	1.2	-80.3
N844 Other Education	687	903	1176	+71.2	41.4	42.5	45.0	+8.5	0.9	0.7	0.4	-48.4
A012 Grain, Sheep and Beef Cattle Farming	1050	921	1146	+9.1	46.8	47.9	49.7	+6.1	0.4	0.4	0.4	+19.1
F453 Builders Supplies Wholesaling	885	954	1140	+28.8	38.0	40.3	41.2	+8.5	2.0	1.0	0.9	-54.8
G522 Clothing and Soft Good Retailing	936	867	1119	+19.6	40.4	42.2	40.2	-0.6	1.4	1.0	1.5	+10.1
F461 Machinery and Equipment Wholesaling	816	1062	1092	+33.8	38.2	40.1	41.4	+8.3	1.8	1.1	0.9	-50.7
K732 Deposit Taking Financiers	1011	840	1068	+5.6	37.0	40.3	41.6	+12.4	3.6	1.1	0.8	-78.5
Q963 Public Order and Safety Services	774	843	1026	+32.6	39.4	40.8	43.2	+9.5	1.0	0.4	0.3	-73.2
N843 Post School Education	486	729	1011	+108.0	42.1	43.5	44.9	+6.6	0.6	0.5	0.2	-66.8
F471 Food, Drink and Tobacco Wholesaling	816	894	981	+20.2	38.0	41.0	41.1	+8.3	1.9	0.7	1.0	-46.5
C232 Other Wood Product Manufacturing	582	963	960	+64.9	36.3	38.3	40.2	+10.8	2.6	1.7	1.3	-50.5
G531 Motor Vehicle Retailing	900	873	945	+5.0	37.3	39.9	41.1	+10.2	2.4	1.8	1.0	-58.8
N841 Preschool Education	522	717	936	+79.3	38.6	40.2	41.1	+6.6	2.0	1.0	0.9	-54.2
P931 Sport	576	702	897	+55.7	37.7	38.3	38.8	+2.9	2.2	1.7	1.9	-11.2
O871 Child Care Services	411	621	867	+110.9	36.3	37.1	38.2	+5.1	3.0	2.5	1.8	-41.4
E422 Building Structure Services	516	549	861	+66.9	34.8	37.5	36.6	+5.3	5.3	2.7	2.3	-55.6
G524 Recreational Good Retailing	600	651	816	+36.0	38.3	38.0	38.5	+0.7	2.6	1.9	1.8	-31.5
G521 Department Stores	690	747	801	+16.1	29.3	33.4	34.3	+17.1	12.8	4.3	4.2	-67.3
J711 Postal and Courier Services	723	762	795	+10.0	36.6	39.2	41.4	+13.0	3.2	1.9	1.0	-67.7
Q962 Interest Groups	549	660	777	+41.5	41.1	43.0	45.1	+9.6	1.1	0.7	0.5	-57.0
L783 Computer Services	147	327	666	+353.1	38.7	39.3	39.6	+2.4	3.0	1.5	1.4	-52.9
C211 Meat and Meat Product Manufacturing	732	723	621	-15.2	37.5	39.6	39.5	+5.2	1.7	1.2	1.6	-4.0
E421 Site Preparation Services	234	294	552	+135.9	38.6	41.4	43.6	+13.1	1.3	0.5	0.5	-60.0
A015 Other Livestock Farming	630	792	486	-22.9	43.6	46.5	47.5	+9.0	0.7	0.6	0.4	-41.7
C276 Fabricated Metal Product Manufacturing	282	324	435	+54.3	37.4	40.0	41.2	+10.2	2.3	1.3	1.0	-56.3
L781 Scientific Research	501	387	381	-24.0	38.2	42.5	44.6	+16.7	1.8	0.3	0.2	-88.1
C212 Dairy Product Manufacturing	522	396	372	-28.7	37.2	39.6	43.1	+15.9	1.9	1.1	0.4	-78.5
Industries employing over 1,000 persons in 2006	68,088	77,334	91,143	+33.9								
Bay of Plenty Region: Total Employed Labour Force	91,767	100,755	118,473	+29.1	39.1	41.1	42.3	+8.2	1.7	1.1	0.9	-47.0

Source: Jackson/Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC6 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



8. Movers and Stayers 2008-2013 – Special Topic 2

This section looks at the ‘usual residence five years ago’ indicator collected at each Census. At Census 2013, this indicator referred to a person’s usual residence in March 2008, linked by where they were living on census night in 2013. We split movers into *arrivals* (in Western Bay of Plenty in 2013 by where lived in 2008) and *leavers* (in Western Bay of Plenty 2008 by where living in 2013). It should be noted that there are no data for people overseas or not born in 2008, as such people are not enumerated by the Census. Their absence means that on the leavers map (Figure 8.1.1), ‘stayers’ account for a larger proportion (77.3 per cent) than on the arrivals map (60.1 per cent), although they are exactly the same number (26,160 persons).

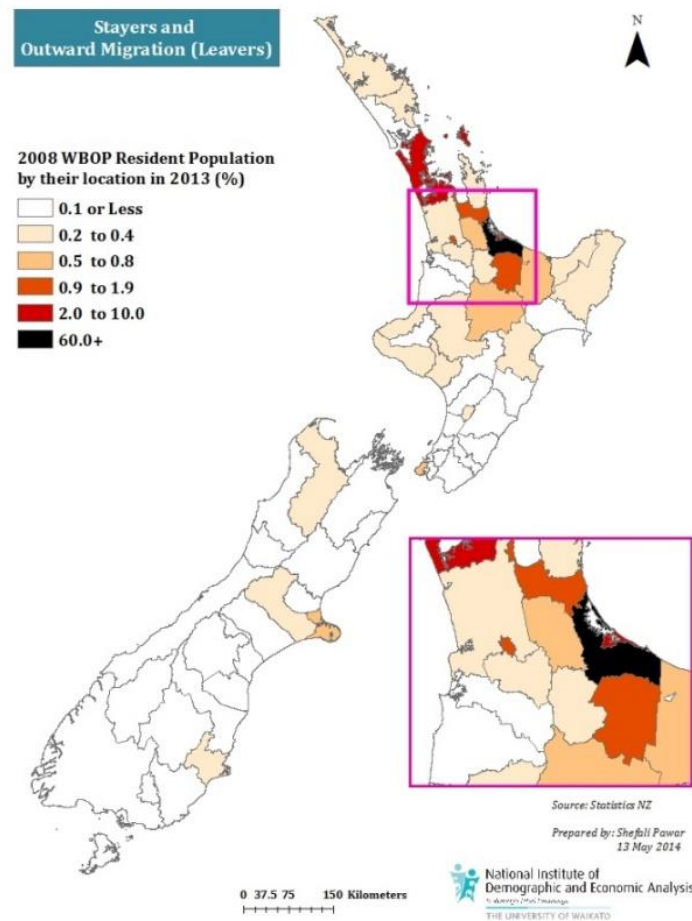
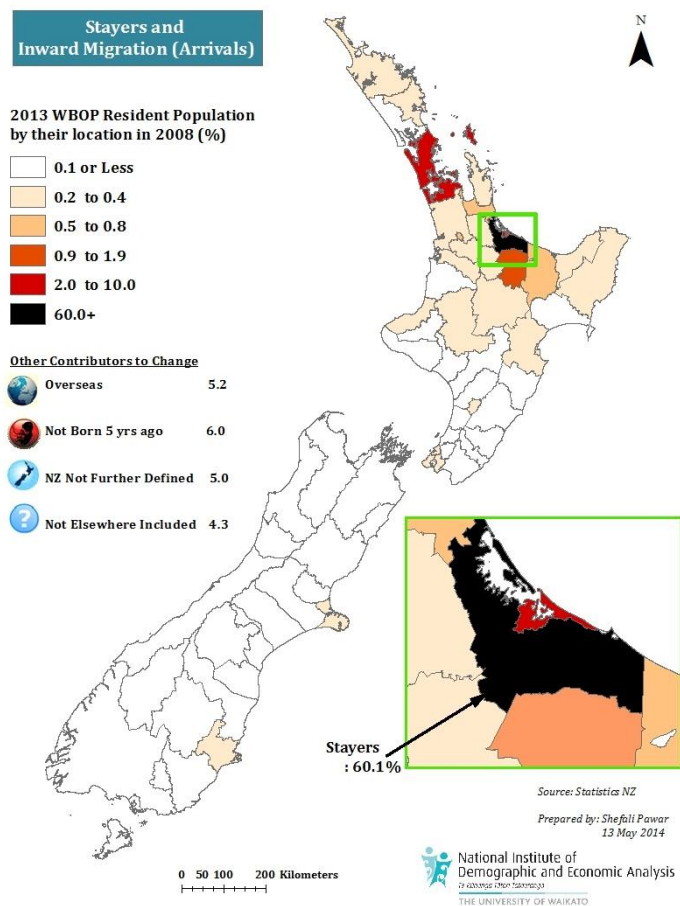
The 2013 Census population enumerated approximately 43,692 persons living in the Western Bay of Plenty District. As indicated, Figure 8.1.1 (left hand panel, arrivals) shows that 60.1 per cent had also been residing there in 2008—the stayer population. Those who had been living in Tauranga City accounted for the single largest component of arrivals to the Western Bay of Plenty (7.9 per cent), followed by those who had not been born in 2008 (6.0 per cent) and those who were living overseas (5.2 per cent). These components can be seen in the box to the left of the map.

The next single-largest proportion of arrivals to Western Bay of Plenty was those living elsewhere in New Zealand but not further defined (5.0 per cent). Singularly a large proportion came from those who did not state where they had been living in 2008 (4.3 per cent). Returning to internal migration, the next largest contribution came from Auckland Region (2.9 per cent), followed by Rotorua District (0.9 per cent), Hamilton City (0.7 per cent) and Hauraki District (0.6 per cent).

The right hand panel of Figure 8.1.1 gives the data for those who had lived in Western Bay of Plenty District in 2008 by where they were living in 2013. The data show marked similarity between the main origin and destination districts, the single-largest proportion of leavers having gone to Tauranga City (9.8 per cent), followed by Auckland (2.5 per cent), Hamilton City (1.2 per cent) and Hauraki District (0.9 per cent).



Figure 8.1.1: Movers and Stayers 2008-2013, Western Bay of Plenty District



Appendix 1.0: Population Size and Growth, Western Bay of Plenty District, Bay of Plenty Region and Total New Zealand, 1986-2013

		Western Bay of Plenty District		Bay of Plenty 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	26,912	...	194,622	...	3,307,084	...
	1987	27,500	+2.2	196,500	+1.0	3,315,410	+0.3
	1988	28,200	+2.5	199,500	+1.5	3,339,160	+0.7
	1989	28,500	+1.1	201,200	+0.9	3,347,140	+0.2
	1990	29,100	+2.1	203,700	+1.2	3,373,400	+0.8
Estimated Defacto Population (unadjusted for Census 1996) (March Years) ⁽¹⁾	1991	30,137	...	208,163	...	3,515,980	...
	1992	30,800	+2.2	210,500	+1.1	3,552,240	+1.0
	1993	31,600	+2.6	213,800	+1.6	3,597,850	+1.3
	1994	32,300	+2.2	217,700	+1.8	3,648,260	+1.4
	1995	33,000	+2.2	221,600	+1.8	3,706,710	+1.6
Estimated Usual Resident Population (June Years) ⁽²⁾	1996	35,600	....	230,600	....	3,732,000	....
	1997	36,500	+2.5	235,400	+2.1	3,781,300	+1.3
	1998	37,400	+2.5	239,600	+1.8	3,815,000	+0.9
	1999	38,000	+1.6	242,500	+1.2	3,835,100	+0.5
	2000	38,700	+1.8	245,200	+1.1	3,857,700	+0.6
	2001	39,000	+0.8	246,900	+0.7	3,880,500	+0.6
	2002	39,700	+1.8	250,700	+1.5	3,948,500	+1.8
	2003	40,600	+2.3	255,000	+1.7	4,027,200	+2.0
	2004	41,400	+2.0	259,100	+1.6	4,087,500	+1.5
	2005	42,300	+2.2	262,200	+1.2	4,133,900	+1.1
	2006	43,000	+1.7	265,300	+1.2	4,184,600	+1.2
	2007	43,600	+1.4	267,700	+0.9	4,228,300	+1.0
	2008	44,200	+1.4	269,900	+0.8	4,268,900	+1.0
	2009	44,800	+1.4	272,300	+0.9	4,315,800	+1.1
	2010	45,400	+1.3	275,100	+1.0	4,367,800	+1.2
2011	45,800	+0.9	277,100	+0.7	4,405,200	+0.9	
2012	45,700	-0.2	277,300	+0.1	4,433,000	+0.6	
2013	45,800	+0.2	278,100	+0.3	4,470,800	+0.9	
1986-2013*		+18,888	+70.2	+83,478	+42.9	+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 2.1: Components of Change by age (Western Bay of Plenty District 1996-2001)

<i>Western Bay of Plenty 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	2,780	2,592	2,660	-120	68	-18	-170	-4.3	2.4	-0.6	-6.1
5-9 Years	3,040	2,776	3,280	240	504	-4	-260	7.9	16.6	-0.1	-8.6
10-14 Years	2,890	3,038	3,520	630	482	-2	150	21.8	16.7	-0.1	5.2
15-19 Years	2,280	2,884	2,520	240	-364	-6	610	10.5	-15.9	-0.3	26.8
20-24 Years	1,600	2,270	1,370	-230	-900	-10	680	-14.4	-56.2	-0.6	42.5
25-29 Years	1,940	1,593	1,650	-290	57	-7	-340	-14.9	3.0	-0.4	-17.5
30-34 Years	2,470	1,931	2,310	-160	379	-9	-530	-6.5	15.3	-0.4	-21.5
35-39 Years	2,770	2,458	2,940	170	482	-12	-300	6.1	17.4	-0.4	-10.8
40-44 Years	2,620	2,752	3,170	550	418	-18	150	21.0	15.9	-0.7	5.7
45-49 Years	2,580	2,595	2,810	230	215	-25	40	8.9	8.3	-1.0	1.6
50-54 Years	2,160	2,539	2,760	600	221	-41	420	27.8	10.2	-1.9	19.4
55-59 Years	2,080	2,104	2,350	270	246	-56	80	13.0	11.8	-2.7	3.8
60-64 Years	1,850	1,993	2,300	450	307	-87	230	24.3	16.6	-4.7	12.4
65-69 Years	1,700	1,724	1,840	140	116	-126	150	8.2	6.8	-7.4	8.8
70-74 Years	1,370	1,516	1,550	180	34	-184	330	13.1	2.5	-13.4	24.1
75-79 Years	860	1,140	1,100	240	-40	-230	510	27.9	-4.6	-26.8	59.3
80-84 Years	490	635	640	150	5	-225	370	30.6	1.1	-46.0	75.5
85-89 Years	261	295	334	74	40	-195	229	28.2	15.1	-74.8	87.9
90+ Years	109	142	146	36	4	-228	261	33.3	3.5	-209.0	238.9
Total	35,850	36,975	39,250	3,400	2,275	-1,485	2,610	9.5	6.3	-4.1	7.3

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

Notes: ~ As a percentage of Previous Observed Population



Appendix 2.2: Components of Change by age (Western Bay of Plenty District 2001-2006)

<i>Western Bay of Plenty 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	2,660	2,491	2,600	-60	109	-15	-154	-2.3	4.1	-0.5	-5.8
5-9 Years	3,280	2,657	3,160	-120	503	-3	-620	-3.7	15.3	-0.1	-18.9
10-14 Years	3,520	3,278	3,490	-30	212	-2	-240	-0.9	6.0	-0.1	-6.8
15-19 Years	2,520	3,513	3,050	530	-463	-7	1,000	21.0	-18.4	-0.3	39.7
20-24 Years	1,370	2,511	1,550	180	-961	-9	1,150	13.1	-70.2	-0.6	83.9
25-29 Years	1,650	1,365	1,610	-40	245	-5	-280	-2.4	14.9	-0.3	-17.0
30-34 Years	2,310	1,644	2,160	-150	516	-6	-660	-6.5	22.3	-0.3	-28.6
35-39 Years	2,940	2,300	2,870	-70	570	-10	-630	-2.4	19.4	-0.4	-21.4
40-44 Years	3,170	2,922	3,510	340	588	-18	-230	10.7	18.5	-0.6	-7.3
45-49 Years	2,810	3,142	3,630	820	488	-28	360	29.2	17.4	-1.0	12.8
50-54 Years	2,760	2,771	3,230	470	459	-39	50	17.0	16.6	-1.4	1.8
55-59 Years	2,350	2,700	3,060	710	360	-60	410	30.2	15.3	-2.5	17.4
60-64 Years	2,300	2,268	2,590	290	322	-82	50	12.6	14.0	-3.6	2.2
65-69 Years	1,840	2,172	2,360	520	188	-128	460	28.3	10.2	-7.0	25.0
70-74 Years	1,550	1,672	1,700	150	28	-168	290	9.7	1.8	-10.9	18.7
75-79 Years	1,100	1,323	1,320	220	-3	-227	450	20.0	-0.3	-20.6	40.9
80-84 Years	640	845	830	190	-15	-255	460	29.7	-2.3	-39.9	71.9
85-89 Years	334	403	386	52	-17	-237	306	15.4	-5.1	-70.8	91.4
90+ Years	146	191	184	38	-7	-289	334	26.4	-5.0	-198.3	229.7
Total	39,250	40,166	43,290	4,040	3,124	-1,590	2,506	10.3	8.0	-4.0	6.4

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

Notes: ~ As a percentage of Previous Observed Population



Appendix 2.3: Components of Change by age (Bay of Plenty Region 1996-2001)

<i>Bay of Plenty 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	19,620	18,863	18,940	-680	77	-128	-629	-3.5	0.4	-0.7	-3.2
5-9 Years	19,960	19,591	20,510	550	919	-29	-340	2.8	4.6	-0.1	-1.7
10-14 Years	18,160	19,944	20,950	2,790	1,006	-16	1,800	15.4	5.5	-0.1	9.9
15-19 Years	15,990	18,119	16,900	910	-1,219	-41	2,170	5.7	-7.6	-0.3	13.6
20-24 Years	14,180	15,920	12,560	-1,620	-3,360	-70	1,810	-11.4	-23.7	-0.5	12.8
25-29 Years	15,310	14,116	14,150	-1,160	34	-64	-1,130	-7.6	0.2	-0.4	-7.4
30-34 Years	17,320	15,242	16,530	-790	1,288	-68	-2,010	-4.6	7.4	-0.4	-11.6
35-39 Years	17,510	17,235	18,380	870	1,145	-85	-190	5.0	6.5	-0.5	-1.1
40-44 Years	15,790	17,399	18,500	2,710	1,101	-111	1,720	17.2	7.0	-0.7	10.9
45-49 Years	14,820	15,638	16,380	1,560	742	-152	970	10.5	5.0	-1.0	6.5
50-54 Years	11,970	14,586	15,380	3,410	794	-234	2,850	28.5	6.6	-2.0	23.8
55-59 Years	10,750	11,659	12,380	1,630	721	-311	1,220	15.2	6.7	-2.9	11.3
60-64 Years	9,550	10,301	11,400	1,850	1,099	-449	1,200	19.4	11.5	-4.7	12.6
65-69 Years	9,610	8,908	9,730	120	822	-642	-60	1.2	8.6	-6.7	-0.6
70-74 Years	8,300	8,584	9,200	900	616	-1,026	1,310	10.8	7.4	-12.4	15.8
75-79 Years	5,830	6,925	7,280	1,450	355	-1,375	2,470	24.9	6.1	-23.6	42.4
80-84 Years	3,600	4,333	4,520	920	187	-1,497	2,230	25.6	5.2	-41.6	61.9
85-89 Years	1,684	2,180	2,230	546	50	-1,420	1,916	32.4	3.0	-84.3	113.7
90+ Years	706	916	980	274	64	-1,474	1,684	38.9	9.0	-208.9	238.7
Total	230,660	240,457	246,900	16,240	6,443	-9,194	18,991	7.0	2.8	-4.0	8.2

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

Notes: ~ As a percentage of Previous Observed Population



Appendix 2.4: Components of Change by age (Bay of Plenty Region 2001-2006)

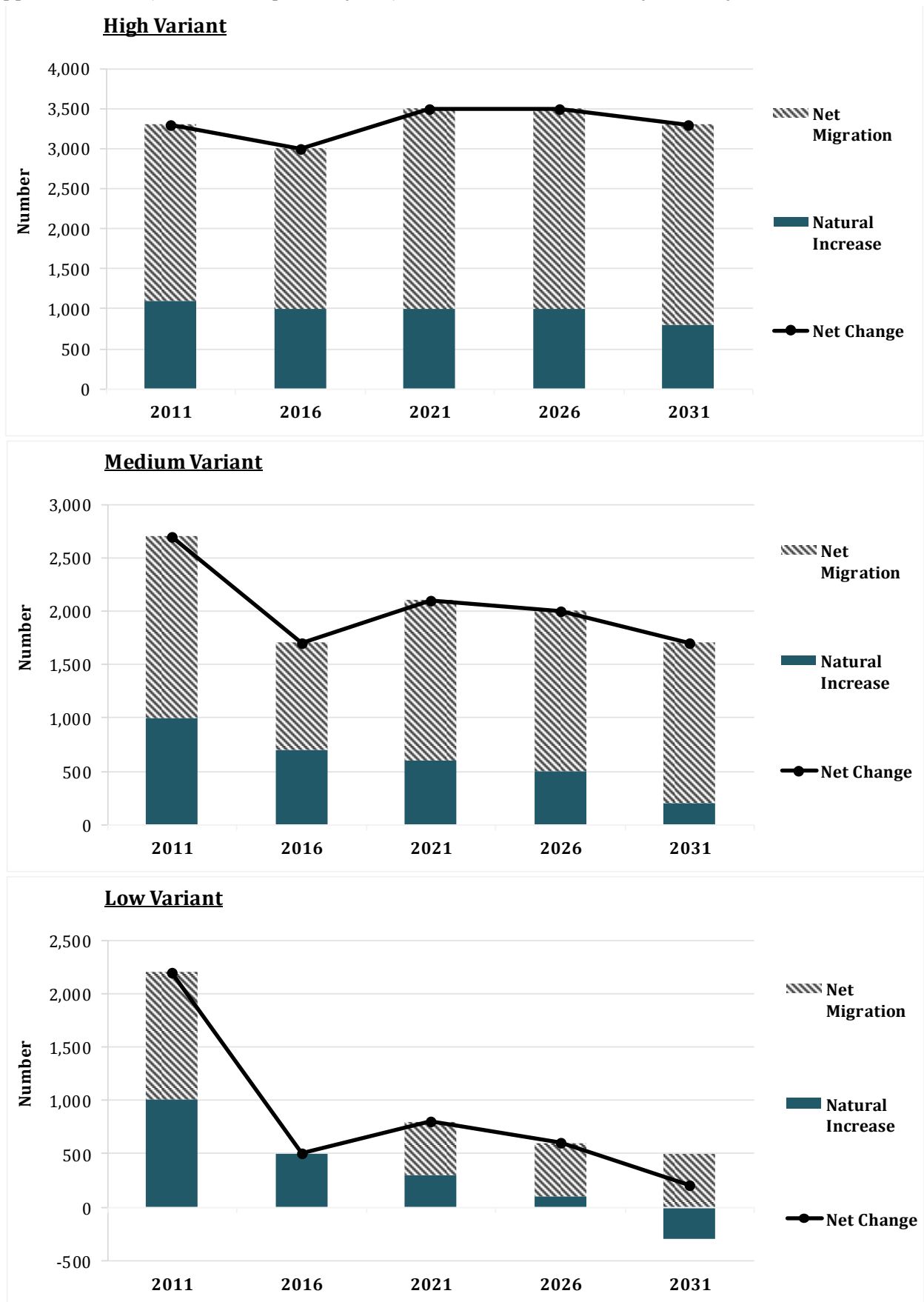
<i>Bay of Plenty Region</i>	Actual (Observed) 2001	Expected 2001	Actual (Observed) 2006	Actual (Observed) Change 2001-2006	Change due to Migration	Change due to Deaths	Change to cohort size	Actual (Observed) change 2001-2006	Change due to Migration ~	Change due to Deaths~	Change to cohort size~
	Number							Percentage (%)			
0-4 Years	18,940	18,338	18,750	-190	412	-107	-495	-1.0	2.2	-0.6	-2.6
5-9 Years	20,510	18,916	20,120	-390	1,204	-24	-1,570	-1.9	5.9	-0.1	-7.7
10-14 Years	20,950	20,496	21,450	500	954	-14	-440	2.4	4.6	-0.1	-2.1
15-19 Years	16,900	20,910	19,200	2,300	-1,710	-40	4,050	13.6	-10.1	-0.2	24.0
20-24 Years	12,560	16,840	13,350	790	-3,490	-60	4,340	6.3	-27.8	-0.5	34.6
25-29 Years	14,150	12,513	13,700	-450	1,187	-47	-1,590	-3.2	8.4	-0.3	-11.2
30-34 Years	16,530	14,097	16,100	-430	2,003	-53	-2,380	-2.6	12.1	-0.3	-14.4
35-39 Years	18,380	16,455	18,260	-120	1,805	-75	-1,850	-0.7	9.8	-0.4	-10.1
40-44 Years	18,500	18,268	19,700	1,200	1,432	-112	-120	6.5	7.7	-0.6	-0.6
45-49 Years	16,380	18,335	19,270	2,890	935	-165	2,120	17.6	5.7	-1.0	12.9
50-54 Years	15,380	16,157	17,160	1,780	1,003	-223	1,000	11.6	6.5	-1.5	6.5
55-59 Years	12,380	15,047	15,980	3,600	933	-333	3,000	29.1	7.5	-2.7	24.2
60-64 Years	11,400	11,948	13,070	1,670	1,122	-432	980	14.6	9.8	-3.8	8.6
65-69 Years	9,730	10,765	11,890	2,160	1,125	-635	1,670	22.2	11.6	-6.5	17.2
70-74 Years	9,200	8,857	9,310	110	453	-873	530	1.2	4.9	-9.5	5.8
75-79 Years	7,280	7,872	8,170	890	298	-1,328	1,920	12.2	4.1	-18.2	26.4
80-84 Years	4,520	5,606	5,700	1,180	94	-1,674	2,760	26.1	2.1	-37.0	61.1
85-89 Years	2,230	2,873	2,808	579	-64	-1,647	2,290	25.9	-2.9	-73.9	102.7
90+ Years	980	1,286	1,352	371	66	-1,924	2,230	37.9	6.7	-196.3	227.5
Total	246,900	255,579	265,340	18,440	9,761	-9,766	18,445	7.5	4.0	-4.0	7.5

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

Notes: ~ As a percentage of Previous Observed Population



Appendix 3.1: Projected Assumptions by Projection Variant, Western Bay of Plenty District



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



Appendix 3.2: Projection Assumptions by Variant and Region, Western Bay of Plenty District and Bay of Plenty Region

Western Bay of Plenty District	2011	2016	2021	2026	2031	Change 2011-2031 (%)
HIGH						
Births (Live) - 5 years ended 30 June	2700	2800	3100	3200	3300	22.2
Deaths - 5 years ended 30 June	1700	1800	2100	2300	2500	47.1
Natural Increase - 5 years ended 30 June	1100	1000	1000	1000	800	-27.3
Net Migration - 5 years ended 30 June	2200	2000	2500	2500	2500	13.6
Population at 30 June	46300	49300	52800	56300	59500	28.5
Median Age (Years) at 30 June	43.9	45.8	46.7	47.1	47.5	8.2
MEDIUM						
Births (Live) - 5 years ended 30 June	2700	2600	2700	2800	2700	0.0
Deaths - 5 years ended 30 June	1700	1900	2100	2300	2600	52.9
Natural Increase - 5 years ended 30 June	1000	700	600	500	200	-80.0
Net Migration - 5 years ended 30 June	1700	1000	1500	1500	1500	-11.8
Population at 30 June	45800	47500	49700	51700	53400	16.6
Median Age (Years) at 30 June	43.9	46	47.3	48	48.5	10.5
LOW						
Births (Live) - 5 years ended 30 June	2700	2400	2400	2400	2200	-18.5
Deaths - 5 years ended 30 June	1700	1900	2100	2300	2600	52.9
Natural Increase - 5 years ended 30 June	1000	500	300	100	-300	-130.0
Net Migration - 5 years ended 30 June	1200	0	500	500	500	-58.3
Population at 30 June	45300	45700	46500	47100	47200	4.2
Median Age (Years) at 30 June	44	46.3	47.8	48.8	49.5	12.5

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

Bay of Plenty Region	2011	2016	2021	2026	2031	Change 2011-2031 (%)
HIGH						
Births (Live) - 5 years ended 30 June	20400	20600	21700	22800	23400	14.7
Deaths - 5 years ended 30 June	10900	11400	12200	13000	14100	29.4
Natural Increase - 5 years ended 30 June	9500	9200	9500	9800	9200	-3.2
Net Migration - 5 years ended 30 June	5500	5000	10200	10200	10200	85.5
Population at 30 June	280400	294600	314300	334400	353800	26.2
Median Age (Years) at 30 June	39.1	40.1	40.5	40.9	41.8	6.9
MEDIUM						
Births (Live) - 5 years ended 30 June	20100	19100	19500	19800	19600	-2.5
Deaths - 5 years ended 30 June	10900	11700	12400	13200	14300	31.2
Natural Increase - 5 years ended 30 June	9200	7400	7100	6600	5300	-42.4
Net Migration - 5 years ended 30 June	2800	-500	4700	4700	4700	67.9
Population at 30 June	277300	284200	296000	307300	317400	14.5
Median Age (Years) at 30 June	39.1	40.4	41	41.6	42.7	9.2
LOW						
Births (Live) - 5 years ended 30 June	19900	17600	17400	17100	16200	-18.6
Deaths - 5 years ended 30 June	11000	11900	12600	13200	14300	30.0
Natural Increase - 5 years ended 30 June	8900	5700	4800	3800	2000	-77.5
Net Migration - 5 years ended 30 June	0	-6000	-800	-800	-800	...
Population at 30 June	274200	273900	277800	280800	282000	2.8
Median Age (Years) at 30 June	39.2	40.7	41.5	42.4	43.6	11.2

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



Appendix 3.3: Projected Population, Bay of Plenty Region, 2006-2031 (Medium Series)

	Numbers by age						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
0-14 years	60,320	59,900	58,180	59,270	59,250	60,050	+0.3
15-24 years	32,550	35,670	34,300	31,960	32,260	32,530	-8.8
25-39 years	48,060	46,000	48,280	53,770	56,830	55,180	+20.0
40-54 years	56,130	57,520	54,320	50,380	48,940	52,670	-8.4
55-64 years	29,050	33,370	36,570	39,300	38,780	36,280	+8.7
65-74 years	21,200	24,500	28,870	33,670	37,560	40,550	+65.5
75-84 years	13,870	14,810	17,010	20,160	24,440	28,890	+95.1
85+ years	4,160	5,500	6,640	7,450	9,240	11,220	+104.0
Total	265,340	277,270	284,170	295,960	307,300	317,370	+14.5
65+ years	39,230	44,810	52,520	61,280	71,240	80,660	+80.0
	Intercensal Change by Age (Numbers)						Change (N)
	2006-2011	2011-2016	2016-2021	2021-2026	2026-2031		2011-2031
0-14 years	...	(420)	(1,720)	1,090	(20)	800	150
15-24 years	...	3,120	(1,370)	(2,340)	300	270	(3,140)
25-39 years	...	(2,060)	2,280	5,490	3,060	(1,650)	9,180
40-54 years	...	1,390	(3,200)	(3,940)	(1,440)	3,730	(4,850)
55-64 years	...	4,320	3,200	2,730	(520)	(2,500)	2,910
65-74 years	...	3,300	4,370	4,800	3,890	2,990	16,050
75-84 years	...	940	2,200	3,150	4,280	4,450	14,080
85+ years	...	1,340	1,140	810	1,790	1,980	5,720
Total	...	11,930	6,900	11,790	11,340	10,070	40,100
65+ years	...	5,580	7,710	8,760	9,960	9,420	35,850
	Age Distribution (% at each age group)						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
0-14 years	22.7	21.6	20.5	20.0	19.3	18.9	-12.4
15-24 years	12.3	12.9	12.1	10.8	10.5	10.2	-20.3
25-39 years	18.1	16.6	17.0	18.2	18.5	17.4	+4.8
40-54 years	21.2	20.7	19.1	17.0	15.9	16.6	-20.0
55-64 years	10.9	12.0	12.9	13.3	12.6	11.4	-5.0
65-74 years	8.0	8.8	10.2	11.4	12.2	12.8	+44.6
75-84 years	5.2	5.3	6.0	6.8	8.0	9.1	+70.4
85+ years	1.6	2.0	2.3	2.5	3.0	3.5	+78.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	+0.0
65+ years	14.8	16.2	18.5	20.7	23.2	25.4	+57.3
	Summary Measures						Change (%)
	2006	2011	2016	2021	2026	2031	2011-2031
LM Entrants/Exits							
(15-24/55-64 years)	1.1	1.1	0.9	0.8	0.8	0.9	-16.1
(20-29/60-69 years)	1.1	1.1	1.0	0.9	0.8	0.8	-25.4
Elderly/Children	0.7	0.7	0.9	1.0	1.2	1.3	+79.6
Reproductive (20-39 yrs)	23.1	22.5	22.8	23.3	23.1	22.2	-0.9
Proportion 65+ years	14.8	16.2	18.5	20.7	23.2	25.4	+57.3
Proportion 75+ years	6.8	7.3	8.3	9.3	11.0	12.6	+72.5
Growth (%) in 5 years	...	+4.5	+2.5	+4.1	+3.8	+3.3	+14.5
Annual average growth (%)	...	+0.9	+0.5	+0.8	+0.8	+0.7	+0.7

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



Appendix 3.4: Projected Population, Total New Zealand, 2006-2031 (Medium Series)

	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 3.5: Projected Population by Ethnic Group* and Broad Age Group, Bay of Plenty Region

Bay of Plenty 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	41,400	59,700	52,900	27,800	181,800	0	0	0	0	0	36.2
2001	42,400	56,800	60,900	31,300	191,500	0	0	0	0	0	38.7
2006 (base)	43,000	58,200	69,400	35,900	206,500	0	0	0	0	0	40.7
2011	43,200	59,100	74,300	40,300	216,800	14,100	9,000	5,100	5,200	0	42.1
2016	43,400	59,900	75,600	46,600	225,400	13,700	9,800	3,900	4,700	0	43.4
2021	43,800	61,500	75,100	52,800	233,200	13,700	10,600	3,100	4,700	0	44.5
<i>Change 2011-2021 (%)</i>	<i>+1.4</i>	<i>+4.1</i>	<i>+1.1</i>	<i>+31.0</i>	<i>+7.6</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>
Māori											
1996	25,500	27,900	12,400	2,500	68,200	0	0	0	0	0	21.8
2001	26,400	26,900	14,700	2,900	71,000	0	0	0	0	0	22.5
2006 (base)	25,700	27,100	17,000	3,600	73,500	0	0	0	0	0	23.5
2011	26,600	28,200	18,900	4,100	77,800	9,800	2,000	7,800	-2,400	-1,100	23.3
2016	27,600	29,300	20,200	5,100	82,200	9,500	2,200	7,400	-1,900	-1,100	24.1
2021	28,600	30,600	20,600	6,400	86,200	9,400	2,400	7,000	-1,900	-1,200	25.1
<i>Change 2011-2021 (%)</i>	<i>+7.5</i>	<i>+8.5</i>	<i>+9.0</i>	<i>+56.1</i>	<i>+10.8</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>
Pacific Peoples											
1996	2,500	2,200	800	200	5,600	0	0	0	0	0	17.5
2001	2,700	2,300	900	200	6,100	0	0	0	0	0	18.1
2006 (base)	3,100	2,700	1,200	200	7,300	0	0	0	0	0	18.2
2011	3,700	3,200	1,500	300	8,700	1,500	100	1,300	100	-100	18.4
2016	4,400	3,700	1,800	400	10,200	1,600	100	1,400	100	-100	18.6
2021	5,000	4,300	2,000	500	11,800	1,800	200	1,600	100	-100	18.9
<i>Change 2011-2021 (%)</i>	<i>+35.1</i>	<i>+34.4</i>	<i>+33.3</i>	<i>+66.7</i>	<i>+35.6</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>
Asian											
1996	1,300	2,000	900	100	4,300	0	0	0	0	0	26.0
2001	1,600	2,500	1,400	200	5,800	0	0	0	0	0	28.1
2006 (base)	2,300	3,800	2,500	400	8,900	0	0	0	0	0	29.7
2011	2,800	4,600	3,000	700	11,100	1,200	100	1,100	1,200	-100	29.3
2016	3,600	5,300	3,400	1,100	13,400	1,500	100	1,300	1,200	-100	30.5
2021	4,600	6,000	3,700	1,600	15,900	1,700	200	1,500	1,200	-100	31.2
<i>Change 2011-2021 (%)</i>	<i>+64.3</i>	<i>+30.4</i>	<i>+23.3</i>	<i>+128.6</i>	<i>+43.2</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, 4r

(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 4.1: Key Statistics for the Employed Labour Force, Bay of Plenty Region, 1996, 2001, 2006.

Total Bay of Plenty Region	Males	Females	Total	Sex Ratio Males/Females	Average Age (Total)*
1996					
Self Employed, no employee	7,734	3,708	11,442	2.1	45.9
Employer	5,589	2,655	8,244	2.1	45.1
Paid Employee	33,627	31,158	64,785	1.1	36.9
Unpaid Family Worker	1,665	2,160	3,825	0.8	43.8
NS/NEI	1,824	1,650	3,474	1.1	39.1
Total	50,439	41,331	91,770	1.22	39.1
2001					
Self Employed, no employee	8,943	4,596	13,539	1.9	47.8
Employer	6,027	3,078	9,105	2.0	47.2
Paid Employee	35,922	36,414	72,336	1.0	38.8
Unpaid Family Worker	1,164	1,593	2,757	0.7	46.0
NS/NEI	1,629	1,383	3,012	1.2	41.1
Total	53,685	47,064	100,749	1.14	41.1
2006					
Self Employed, no employee	9,759	5,403	15,162	1.8	49.1
Employer	6,699	3,438	10,137	1.9	48.4
Paid Employee	42,729	43,965	86,694	1.0	40.1
Unpaid Family Worker	1,200	1,689	2,889	0.7	48.6
NS/NEI	1,917	1,692	3,609	1.1	42.3
Total	62,304	56,187	118,491	1.11	42.3
Change 1996-2006					
Number	11,865	14,856	26,721		
(%)	23.5	35.9	29.1		
Employment Entry/Exit Ratio	1996	2001	2006	Change 1996-2006 (%)	
15-24: 55+ years	1.4	0.9	0.7	-49.1	
Percentage aged 55+ Years	12.7	16.4	20.8	63.0	
Sex Ratio by age (males/females)	1996	2001	2006	Change 1996-2006 (%)	
15-19	1.2	1.0	1.1	-1.5	
20-24	1.2	1.2	1.2	-0.8	
25-29	1.2	1.2	1.2	-5.4	
30-34	1.2	1.2	1.1	-7.8	
35-39	1.2	1.1	1.0	-11.4	
40-44	1.1	1.1	1.0	-8.0	
45-49	1.1	1.1	1.0	-10.8	
50-54	1.2	1.1	1.0	-16.6	
55-59	1.3	1.3	1.1	-17.5	
60-64	1.8	1.5	1.4	-23.3	
65+	2.2	1.7	1.6	-26.8	
TOTAL*	1.2	1.1	1.1	-9.1	

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 4.2: Key Statistics for the Employed Labour Force, Bay of Plenty Region, 1996, 2001, 2006, School Education (N842)

N842 School Education Bay of Plenty Region	Males	Females	Total	Sex Ratio Males/Females	Average Age (Total)*
1996					
Self Employed, no employee Employer	-	-	-	...	...
Paid Employee	1,137	2,934	4,071	0.4	42.9
Unpaid Family Worker	-	-	-	...	...
NS/NEI	3	-	3	...	42.8
Total	1,140	2,934	4,074	0.39	42.8
2001					
Self Employed, no employee Employer	39	63	102	0.6	47.6
Paid Employee	1,251	3,651	4,902	0.3	43.8
Unpaid Family Worker	-	15	15	0.0	37.5
NS/NEI	12	27	39	0.4	43.8
Total	1,302	3,783	5,085	0.34	43.8
2006					
Self Employed, no employee Employer	36	57	93	0.6	47.7
Paid Employee	1,278	3,867	5,145	0.3	45.0
Unpaid Family Worker	-	9	9	0.0	47.5
NS/NEI	6	15	21	0.4	45.1
Total	1,323	3,966	5,289	0.33	45.1
Change 1996-2006					
Number	183	1,032	1,215		
(%)	16.1	35.2	29.8		
Employment Entry/Exit Ratio	1996	2001	2006	Change 1996-2006 (%)	
15-24: 55+ years	0.4	0.3	0.2	-54.1	
Percentage aged 55+ Years	13.2	15.5	21.0	59.2	
Sex Ratio by age (males/females)	1996	2001	2006	Change 1996-2006 (%)	
15-19	0.9	0.6	0.6	-32.5	
20-24	0.3	0.3	0.3	-3.0	
25-29	0.3	0.3	0.3	7.8	
30-34	0.4	0.4	0.3	-7.6	
35-39	0.3	0.3	0.3	13.4	
40-44	0.3	0.3	0.2	-32.9	
45-49	0.4	0.3	0.3	-33.9	
50-54	0.5	0.4	0.3	-31.5	
55-59	0.5	0.5	0.5	1.4	
60-64	0.5	0.4	0.5	-14.1	
65+	0.9	0.6	0.5	-47.5	
TOTAL*	0.4	0.3	0.3	-13.9	

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 4.3: Key Statistics for Employed Labour Force, Bay of Plenty Region, 1996, 2001, 2006, Horticulture and Fruit Growing (A011)

A011 Horticulture and Fruit Growing Bay of Plenty Region	Males	Females	Total	Sex Ratio Males/Females	Average Age (Total)*
1996					
Self Employed, no employee	639	369	1,008	1.7	50.7
Employer	267	147	414	1.8	48.7
Paid Employee	750	687	1,437	1.1	38.1
Unpaid Family Worker	261	303	564	0.9	49.3
NS/NEI	27	27	54	1.0	44.9
Total	1,944	1,533	3,477	1.27	44.9
2001					
Self Employed, no employee	636	402	1,038	1.6	53.4
Employer	324	210	534	1.5	51.1
Paid Employee	810	732	1,542	1.1	40.5
Unpaid Family Worker	174	225	399	0.8	50.5
NS/NEI	18	15	33	1.2	47.0
Total	1,962	1,584	3,546	1.24	47.0
2006					
Self Employed, no employee	558	336	894	1.7	55.8
Employer	297	177	474	1.7	53.3
Paid Employee	912	786	1,698	1.2	42.0
Unpaid Family Worker	180	213	393	0.8	55.7
NS/NEI	12	12	24	1.0	48.7
Total	1,959	1,524	3,483	1.29	48.7
Change 1996-2006					
	Males	Females	Total		
Number	15	-9	6		
(%)	0.8	-0.6	0.2		
Employment Entry/Exit Ratio	1996	2001	2006	Change 1996-2006 (%)	
15-24: 55+ years	0.4	0.3	0.2	-41.7	
Percentage aged 55+ Years	26.4	32.3	39.0	47.8	
Sex Ratio by age (males/females)	1996	2001	2006	Change 1996-2006 (%)	
15-19	2.0	1.3	1.7	-13.9	
20-24	1.5	1.4	1.3	-14.7	
25-29	1.2	1.2	1.4	19.2	
30-34	1.2	1.1	1.2	1.4	
35-39	1.1	1.1	1.2	6.3	
40-44	0.9	1.3	1.0	20.4	
45-49	1.0	1.3	1.2	25.8	
50-54	1.2	1.2	1.1	-14.2	
55-59	1.2	1.4	1.1	-3.7	
60-64	1.7	1.5	1.6	-8.2	
65+	3.4	1.7	1.7	-49.8	
TOTAL*	1.3	1.3	1.3	0.1	

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 4.4: Key Statistics for Employed Labour Force, Bay of Plenty Region, 1996, 2001, 2006, Building and Construction (E411)

E411 Building Construction Bay of Plenty Region	Males	Females	Total	Sex Ratio Males/Females	Average Age (Total)*
1996					
Self Employed, no employee	540	60	600	9.0	42.8
Employer	288	39	327	7.4	43.6
Paid Employee	888	93	981	9.5	34.6
Unpaid Family Worker	33	36	69	0.9	41.0
NS/NEI	27	-	27	...	38.6
Total	1,776	228	2,004	7.79	38.6
2001					
Self Employed, no employee	651	51	702	12.8	44.9
Employer	273	57	330	4.8	44.8
Paid Employee	774	102	876	7.6	37.3
Unpaid Family Worker	12	30	42	0.4	38.2
NS/NEI	3	-	3	...	41.4
Total	1,713	240	1,953	7.14	41.4
2006					
Self Employed, no employee	849	84	933	10.1	46.7
Employer	453	93	546	4.9	45.2
Paid Employee	1,575	186	1,761	8.5	35.5
Unpaid Family Worker	30	45	75	0.7	44.5
NS/NEI	12	-	12	...	40.5
Total	2,919	408	3,327	7.15	40.5
Change 1996-2006					
Number	1,143	180	1,323		
(%)	64.4	78.9	66.0		
Employment Entry/Exit Ratio	1996	2001	2006	Change 1996-2006 (%)	
15-24: 55+ years	1.7	0.8	1.0	-37.2	
Percentage aged 55+ Years	10.0	15.2	17.9	78.0	
Sex Ratio by age (males/females)	1996	2001	2006	Change 1996-2006 (%)	
15-19	37.0	26.0	44.0	18.9	
20-24	13.6	8.2	28.0	105.9	
25-29	7.9	7.7	13.0	65.1	
30-34	7.9	7.8	5.9	-25.6	
35-39	5.8	7.3	4.4	-24.6	
40-44	6.8	8.2	3.5	-48.4	
45-49	5.8	6.3	8.8	52.8	
50-54	5.3	7.6	5.2	-2.7	
55-59	19.5	7.6	8.0	-59.0	
60-64	8.5	6.5	6.4	-24.2	
65+	...	8.0	7.0	...	
TOTAL*	7.9	7.1	7.2	-9.1	

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 4.5: Key Statistics for Employed Labour Force, Bay of Plenty Region, 1996, 2001, 2006, Supermarket and Grocery Store (G511)

G511 Supermarket and Grocery Store Bay of Plenty Region	Males	Females	Total	Sex Ratio Males/Females	Average Age (Total)*
1996					
Self Employed, no employee Employer	57	48	105	1.2	44.2
Paid Employee	75	69	144	1.1	45.2
Unpaid Family Worker	612	1,419	2,031	0.4	28.1
NS/NEI	18	30	48	0.6	36.3
	12	21	33	0.6	30.0
Total	774	1,587	2,361	0.49	30.0
2001					
Self Employed, no employee Employer	42	36	78	1.2	44.2
Paid Employee	75	69	144	1.1	44.7
Unpaid Family Worker	792	1,608	2,400	0.5	30.4
NS/NEI	15	18	33	0.8	38.9
	6	-	6	...	31.6
Total	930	1,731	2,661	0.54	31.6
2006					
Self Employed, no employee Employer	48	45	93	1.1	46.0
Paid Employee	81	48	129	1.7	46.6
Unpaid Family Worker	978	1,857	2,835	0.5	32.2
NS/NEI	15	18	33	0.8	42.5
	6	3	9	2.0	33.3
Total	1,128	1,971	3,099	0.57	33.3
Change 1996-2006					
Number	Males	Females	Total		
(%)	354	384	738		
	45.7	24.2	31.3		
Employment Entry/Exit Ratio	1996	2001	2006	Change 1996-2006 (%)	
15-24: 55+ years	10.6	6.4	3.8	-64.3	
Percentage aged 55+ Years	4.7	7.2	11.5	145.0	
Sex Ratio by age (males/females)	1996	2001	2006	Change 1996-2006 (%)	
15-19	0.5	0.7	0.8	65.7	
20-24	0.6	0.5	0.7	16.1	
25-29	0.5	0.6	0.5	8.1	
30-34	0.5	0.4	0.6	12.6	
35-39	0.4	0.4	0.4	17.1	
40-44	0.3	0.3	0.4	56.4	
45-49	0.4	0.3	0.3	-31.8	
50-54	0.7	0.5	0.3	-55.6	
55-59	0.5	0.7	0.3	-30.6	
60-64	1.3	0.5	0.8	-39.3	
65+	2.0	1.5	0.9	-56.3	
TOTAL*	0.5	0.5	0.6	17.7	

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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