



Hawkes Bay Region

Demographic Profile 1986-2031

Professor Natalie Jackson,
Director, NIDEA

New Zealand Regional Demographic Profiles 1986-2031. No. 3
February 2012

Hawkes Bay Region: Demographic Profile 1986-2031

Referencing information:

Jackson, N.O. (2012). Hawke's Bay Region: Demographic Profile 1986-2031. *New Zealand Regional Demographic Profiles 1986-2031. No. 3*. University of Waikato. National Institute of Demographic and Economic Analysis.

ISSN 2324-5484 (Print)

ISSN 2324-5492 (Online)

Te Rūnanga Tātari Tatauranga | National Institute of Demographic and Economic Analysis
Te Whare Wānanga o Waikato | The University of Waikato
Private Bag 3105 | Hamilton 3240 | Waikato, New Zealand
Email: nojacks@waikato.ac.nz | visit us at: www.waikato.ac.nz/nidea/

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EXECUTIVE SUMMARY

1. The population of the Hawke's Bay region has grown slowly over the past three decades, from 140,844 in 1986 to 155,300 in 2011. Slow growth is projected to continue throughout the projection period, reaching around 158,340 in 2031 (2.0 per cent above 2011). Almost all growth is at 65+ years.
2. The majority of the region's population growth since 1986 has occurred in Hastings, secondly Napier and thirdly Central Hawke's Bay. Overall population decline in Wairoa has slightly offset the region's growth; however both Napier and Central Hawke's Bay have also experienced minor declines from time to time across the period.
3. The Hawke's Bay region has a fractionally larger proportion of European/New Zealand/ Other ethnicity than does Total New Zealand, and a substantially larger proportion of Māori (22 and 14 per cent respectively). Reflecting these shares, the region has proportionately fewer people of Pacific Island, Asian and Middle Eastern/Latin American/African population (MELAA) origin.
4. In all cases, the number in each ethnic group has grown, but substantially less so for the European/New Zealander/Other group, which actually declined slightly between 1996 and 2001. For Hawke's Bay this group grew overall by less than one per cent during the period 1996-2006, although accounting for 15 per cent of the region's growth, while the Māori population grew by 4.3 per cent, accounting for 26 per cent of growth. The region's Pacific Island and Asian populations each grew by over 44 per cent, contributing respectively 32 and 21 per cent of growth, and the relatively small MELAA doubled in size to contribute 5.7 per cent of growth.
5. The main component of the Hawke's Bay region's growth is natural increase. Net migration loss across most of the period 1991-2011 partially (and in 1998-2001 fully) offset that growth. Exceptions occurred in 2002-04 and 2009-10 when net migration gain added to natural increase.
6. The region's TA's all experienced strong natural increase; however that for Wairoa District was insufficient to completely cover for its migration loss, except for one year (2009-10). Data for the remaining TA's also show that net migration loss occurring in many years has been typically offset by natural increase, although somewhat less so for the Central Hawke's Bay District.
7. Components of change by age (which are free of cohort size effects) show that most of the Hawke's Bay region's net migration loss between 1996 and 2006 was concentrated at 15-19 and 20-24 years of age. The region also saw small net migration gains at 5-14 and 30-44 years between 2001 and 2006.
8. From a cross-sectional perspective (that is, change by age group rather than cohort), overall numbers declined between 1996 and 2011 at 0-9 and 20-39 years, and increased at all other ages, most particularly across the Baby Boomer age groups. As noted these changes are partly due to cohort size effects.
9. As elsewhere, the population of the Hawke's Bay region is ageing. However like many 'rural' areas its ageing is being accelerated because sustained net migration loss at young adult ages has caused a deep bite to develop in the age structure across age 20-39 years. Migration gains at older ages also add to structural population ageing.
10. The changes by age have important implications for the labour market. The Labour Market 'entry/exit ratio' (population aged 15-24 : 55-64 years) for the region has fallen steadily since 1996, from 15.9 people at labour market entry age for every 10 in the retirement age zone, to just 10.5 in 2011. By comparison, Total New Zealand still has 13 people at entry age per 10 at



exit age. If older age groupings are used, for example 20-29 and 60-69 years, Hawke's Bay region in 2011 had 10.3 entrants per 10 exits, compared with 14.8 for Total New Zealand. Again this is a reflection of the deeper bite in the Hawke's Bay region's age structure at ages 20-34.

11. As elsewhere in New Zealand, the age structures of the Hawke's Bay region's major ethnic groups differ markedly, with the European/New Zealander/Other population relatively old and the Māori and Pacific Island populations relatively young. The Asian population falls somewhere between, closer to the older age structure of European. There is a very strong correspondence between the overall bite in the age structure, and the age structure of the European population.
12. The very youthful age structure of the Hawke's Bay region's Māori population saw over one-third aged 0-14 years across the period 1996-2006 (falling from 37.5 to 35.4 per cent). These proportions are in stark contrast to the Māori population's 22.0 per cent share of the region's total population and are clearly where the Māori population's contribution to the region's growth is concentrated.
13. While the population of the Hawke's Bay region is projected to grow slightly across the projection period (medium variant), all growth is expected to be at 65+ years, with decline at all younger ages partially offsetting that growth. Growth at 75+ years will be particularly pronounced for Central Hawke's Bay, Hastings and Wairoa. The data indicate continued absolute decline for Wairoa, and for Central Hawke's Bay to also slip into decline. Napier may grow by a fraction, while Hastings may grow by around 6.6 per cent – again mostly at older ages.
14. Projections for the region by major ethnic group show the Māori population increasing between 2011 and 2021 by approximately 11.1 per cent and the European/Other population declining by 0.2 per cent. There are, however, marked differences by age, with all age groups for Māori projected to increase substantially, and all age groups except 65+ years for European/Other to decline. Projected increases for the Pacific Island and Asian populations (31.4 and 32.6 per cent respectively) are somewhat larger, partly reflecting their smaller bases; all age groups increase.
15. The data suggest there will be relatively little change in the overall ethnic composition over time, with European/Other retaining the major population share and Māori second; however there will greater change by age. Māori, Pacific Island and Asian are projected to increase their share of each age group resulting in a slightly diminished proportion of European at each age.
16. The projections show the region's labour market entry / exit ratio falling below 1:1 (entrant per exit) between 2016 and 2021, depending on which age groupings are used (15-24:55-64 or 20-29:60-69 years). The trends are similar for Total New Zealand, although the ratio of entrants to exits does not fall below parity during the projection period.
17. The projections also show a rapid decline in the region's natural increase that has significant implications for future growth. The trend is driven by a cross-over to more elderly than children around 2021 in Hawke's Bay (compared with 2026 for Total New Zealand), and a relatively small proportion projected to be at the key reproductive ages (21-22 per cent by 2031) compared with 25-27 per cent for Total New Zealand.
18. A special topic section provides an overview of the Hawke's Bay region's changing industrial age structure across the 1996-2006 period, focussing on 18 industries which employ more than 1,000 people. Entry / exit ratios in key industries for the Hawke's Bay region are generally lower than for Total New Zealand and are declining at a faster rate, pointing to an urgent need to engage in succession planning, especially in the Government Administration and Marketing/ Business Services industries.



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

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

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

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

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



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

Projections: The population projections used in this paper are in most cases based on Statistics New Zealand's medium set of assumptions, but comparison with the high and low variants have been included where useful. At national level the medium assumptions are that the total fertility rate (TFR) will decline from its present 2.1 births per woman to 1.9 births per woman by 2026; that life expectancy will continue to increase, but at a decelerating rate, and that annual net international migration will be 10,000 per year. International and internal migration at the subnational level is also accounted for, the assumptions reflecting observed net migration during each five-year period 1981-2006. The assumptions are included at Appendix 3. 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 6) are drawn from a time-series database developed by Statistics New Zealand to NIDEA specifications. They pertain to the employed population only. Data are given for three Census observations (1996, 2001 and 2006) and have been customised so that the industrial classification and geographic region is internally consistent across the period. The industrial classification is based on ANZSIC96 V4.1 at the three digit level. Aggregation by employment status (employer, self-employed, paid employee etc.,) is another case where the totals in this report may differ from those in other collections.

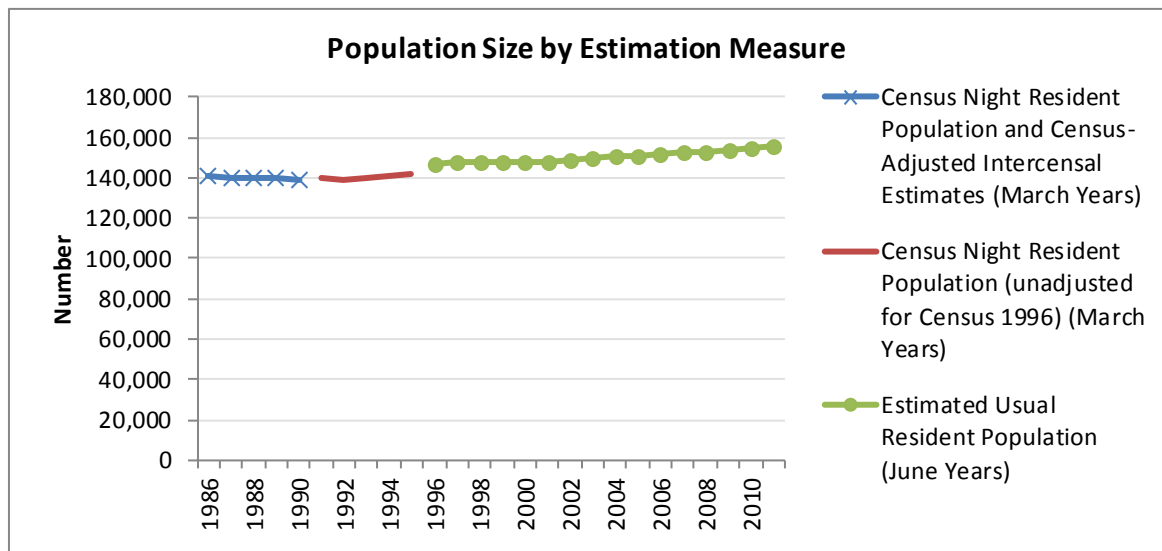


1.0 Population Trends

1.1 Population Size and Growth

The population of the Hawke's Bay Region has grown slowly but generally steadily over the past three decades, from 140,844 in 1986 to 155,300 in 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 since the 1990s (see Appendix 1.1 for underlying data).

Figure 1.1.1: Population of Hawke's Bay Region, 1986-2011



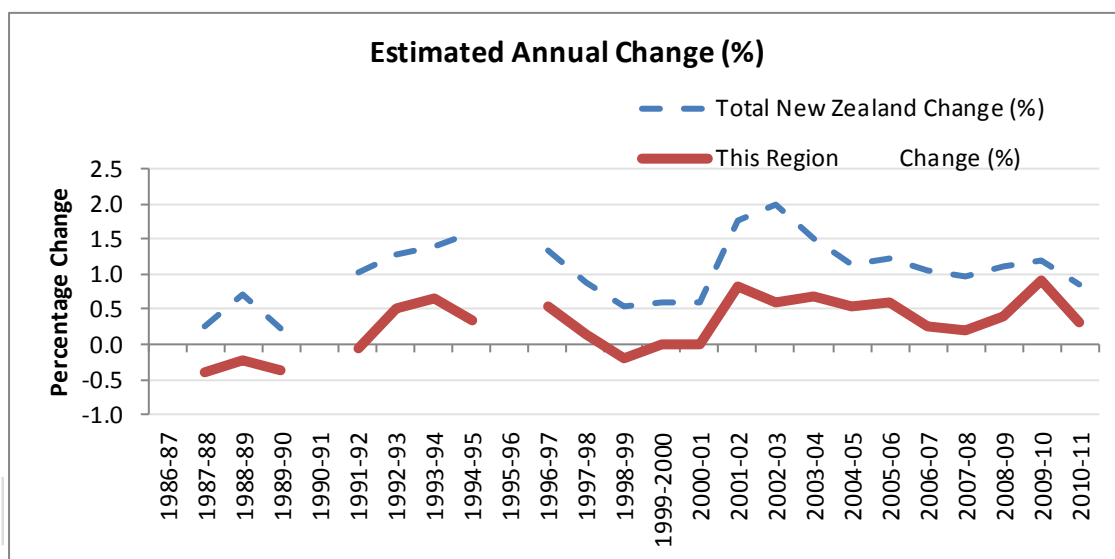
Source: Statistics New Zealand Infoshare, Tables DPE006AA; DPE051AA

Notes: Changes in the timing and method of estimating Resident Population between 1990-1991 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 gaps. Data are also compared with Total New Zealand. Growth for the Hawke's Bay across this period has been consistently at a lower rate than for Total New Zealand. However the perturbations have been remarkably similar for both.



Figure 1.1.2: Annual Population Growth Rate, Hawke’s Bay RC and Total New Zealand, 1986-2011



Source: Statistics New Zealand Infoshare, Tables DPE006AA; DPE051AA

Notes: Changes in the timing and method of estimating Resident Population between 1990-1991 and 1995-1996 mean that the three sets of trends should be understood as discontinuous

Table 1.1.1 compares the annual growth rates of the four Territorial Authority (TA) areas which comprise the Hawke’s Bay Region, and Table 1.1.2, the contribution of each TA to the region’s population (see Appendix 1.2 for underlying numbers).

Hastings comprises the largest proportion of the region’s population (in 2011, almost half – Table 1.1.2) and has accounted for the majority of the region’s growth over the period, followed by Napier and the Central Hawke’s Bay District. Overall population decline in Wairoa has slightly offset the region’s growth; however both Napier and Central Hawke’s Bay District have also experienced minor declines from time to time across the period.



Table 1.1.1: Population Change (%), Hawke's Bay Region, TA's, Total New Zealand 1986-2011

	Central Hawkes Bay	Hastings	Napier	Wairoa	Hawke's Bay Regional Council	Total New Zealand
1986 Pop.	13,054	64,371	52,512	10,680	140,844	3,307,084
1986-87	...	...	...	...	...	...
1987-88	-0.8	0.0	-0.6	-0.7	-0.4	0.3
1988-89	-0.4	0.0	-0.6	-0.5	-0.2	0.7
1989-90	-1.2	0.2	-0.6	-0.9	-0.4	0.2
1990-91	...	...	...	...	...	...
1991-92	-0.3	0.2	-0.3	-0.2	-0.1	1.0
1992-93	-0.4	0.8	0.6	-0.5	0.5	1.3
1993-94	0.4	0.6	1.0	0.0	0.6	1.4
1994-95	-0.4	0.5	0.6	-1.0	0.4	1.6
1995-96	...	...	...	...	...	...
1996-97	-0.4	0.7	0.5	-1.5	0.5	1.3
1997-98	-0.8	0.4	0.4	-1.3	0.1	0.9
1998-99	-0.4	0.1	-0.2	-1.8	-0.2	0.5
1999-2000	0.0	0.4	0.0	-2.2	0.0	0.6
2000-01	0.4	0.4	-0.2	-2.8	0.0	0.6
2001-02	0.0	1.1	0.5	-0.8	0.8	1.8
2002-03	0.0	1.0	0.7	-1.3	0.6	2.0
2003-04	0.0	1.1	0.5	-1.7	0.7	1.5
2004-05	0.0	0.7	0.5	-1.3	0.5	1.1
2005-06	0.4	1.1	0.5	-0.9	0.6	1.2
2006-07	0.0	0.5	0.2	-1.6	0.3	1.0
2007-08	0.4	0.4	0.2	-1.2	0.2	1.0
2008-09	0.4	0.5	0.4	-0.7	0.4	1.1
2009-10	1.1	1.1	0.7	0.2	0.9	1.2
2010-11	0.0	0.5	0.3	-1.1	0.3	0.9
1986-2011	3.4	17.3	10.1	-21.8	10.3	33.2

Source: Statistics New Zealand Infoshare, Tables DPE006AA; DPE051AA

Notes: Changes in the timing and method of estimating Resident Population between 1990-1991 and 1995-1996 mean that the three sets of trends should be understood as discontinuous



Table 1.1.2: Contribution (%) to the Hawke's Bay Region's Population Change by TA, 1986-2011

	Central Hawkes Bay	Hastings	Napier	Wairoa	Hawke's Bay Regional Council
1986	9.3	45.7	37.3	7.6	100.0
1987	9.2	45.9	37.2	7.6	100.0
1988	9.2	46.0	37.1	7.5	100.0
1989	9.1	46.2	37.0	7.5	100.0
1990	9.1	46.3	37.0	7.5	100.0
1991	9.0	46.4	37.0	7.4	100.0
1992	9.0	46.5	36.9	7.4	100.0
1993	8.9	46.6	37.0	7.4	100.0
1994	8.9	46.6	37.1	7.3	100.0
1995	8.8	46.6	37.2	7.2	100.0
1996	9.1	46.5	37.4	7.0	100.0
1997	9.0	46.5	37.4	6.8	100.0
1998	8.9	46.7	37.5	6.7	100.0
1999	8.9	46.8	37.5	6.6	100.0
2000	8.9	47.0	37.5	6.5	100.0
2001	9.0	47.3	37.5	6.3	100.0
2002	8.9	47.4	37.4	6.2	100.0
2003	8.8	47.6	37.4	6.1	100.0
2004	8.8	47.8	37.4	5.9	100.0
2005	8.7	47.9	37.4	5.8	100.0
2006	8.7	48.1	37.3	5.7	100.0
2007	8.7	48.3	37.3	5.6	100.0
2008	8.7	48.4	37.3	5.5	100.0
2009	8.7	48.4	37.3	5.5	100.0
2010	8.7	48.5	37.2	5.5	100.0
2011	8.7	48.6	37.2	5.4	100.0
1986-2011*	3.1	77.0	36.6	-16.1	100.0

Source: Statistics New Zealand Infoshare, Tables DPE006AA; DPE051AA

Notes: *Changes in the timing and method of estimating Resident Population between 1990-1991 and 1995-1996 mean that the three sets of trends should be understood as discontinuous



1.2 Ethnic Composition and Growth

Figure 1.2.1 indicates the extent to which the major ethnic groups comprise, and have contributed to, the region's growth (see also Table 1.2.1). These 'multiple ethnic group' data¹ show that the proportion identifying as European/New Zealander/Other in the Hawke's Bay Region has declined slightly over the years but by 2006 was also slightly larger than for Total New Zealand (72.0 and 70.1 per cent respectively). The Hawke's Bay Region has a significantly larger – and stable – proportion of Māori, around 22 per cent, and somewhat lower proportions of Pacific Island, Asian, and Middle Eastern/Latin American/African (MELAA) people than does Total New Zealand.

In all cases the number in each ethnic group has grown, but substantially less so for the European/New Zealander/Other group. For the Hawke's Bay Region this group grew by 0.7 per cent during the period 1996-2006 (declining between 1996 and 2001) compared with 4.5 per cent for Total New Zealand (Table 1.2.1). Despite growing only minutely between 1996 and 2006, the dominant size of the European/New Zealander/Other means that it accounted for 15.1 per cent of the Hawke's Bay's growth over the period, and 28.2 per cent of Total New Zealand's growth.

The Māori population of the Hawke's Bay Region grew by 4.3 per cent (Table 1.2.1), accounting for approximately 26 per cent of Hawke's Bay's growth, compared to 10.4 per cent of the growth for Total New Zealand.

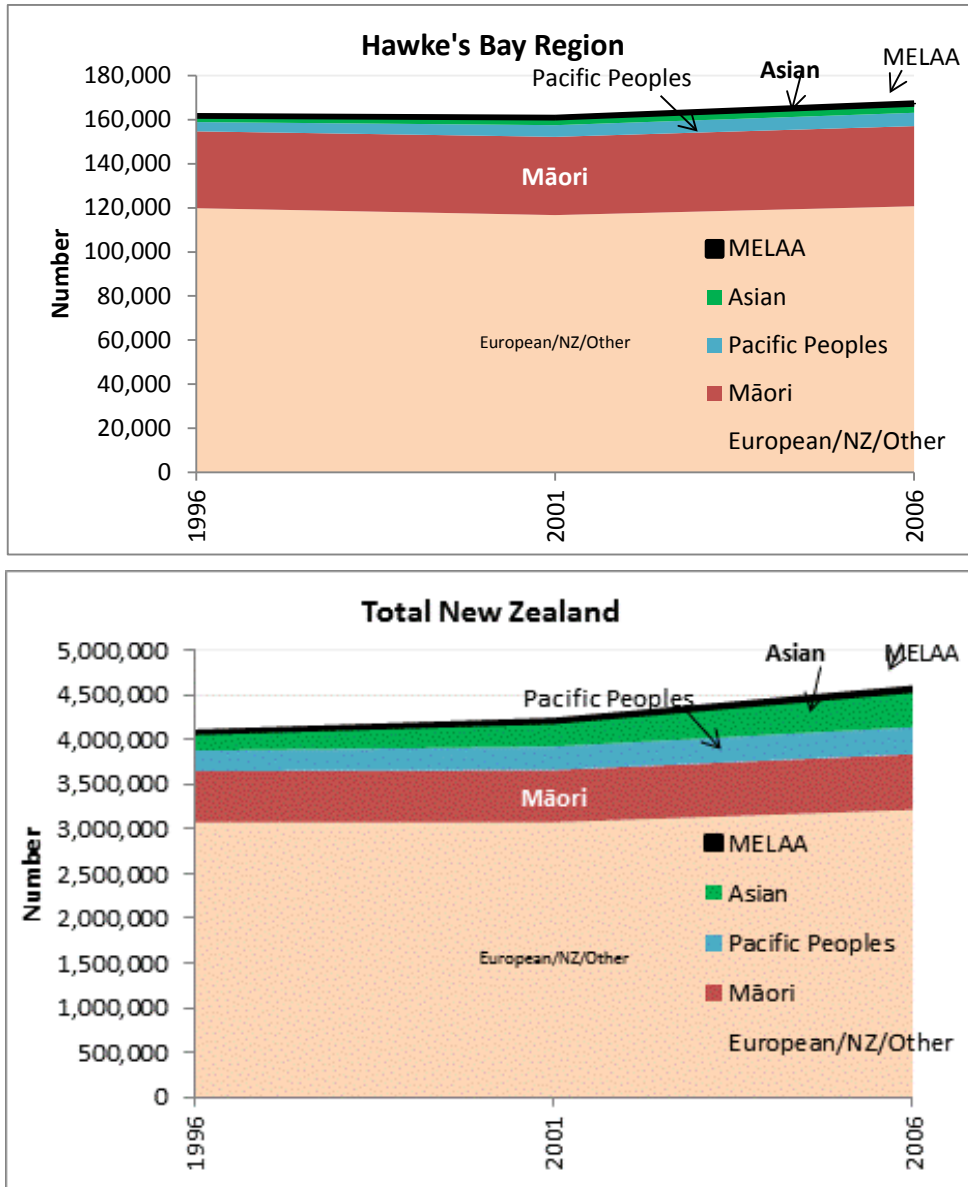
Pacific Peoples also experienced significant growth between 1996 and 2006, almost 44 per cent for Hawke's Bay compared with 32 per cent for Total New Zealand. They accounted for 32.1 per cent of the Hawke's Bay Region's growth over the period, compared to 14.7 per cent of that for Total New Zealand.

The Asian-origin and MELAA populations of the Hawke's Bay region also experienced significant growth (Table 1.2.1), the MELAA population more than doubling in size, similar to Total New Zealand. The Asian-origin population accounted for 21.1 per cent of the Hawke's Bay region's growth compared with 42.6 per cent for Total New Zealand; the MELAA population accounted for 5.7 and 4.1 per cent of growth respectively.

¹ 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 1.2.1: Population by Major Ethnic Group (Multiple Count), Hawke's Bay Region and Total New Zealand 1996-2006



Statistics New Zealand, *Estimated Subnational Ethnic Population (RC, TA) by*
 Notes: *People may be counted in more than one ethnic group



Table 1.2.1: Population by Major Ethnic Group* (Multiple Count), Hawke's Bay Region and Total New Zealand 1996-2006

	1996	2001	2006	Change (%)	1996	2001	2006	Contribution to Change 1996-2006	
	NUMBER				DISTRIBUTION (%)*			Number	(%)
Hawke's Bay Region									
European/NZ/Other	119,860	116,720	120,730	0.7	74.0	72.4	72.0	870	15.1
Māori	34,880	35,520	36,380	4.3	21.5	22.0	21.7	1,500	26.0
Pacific Peoples	4,210	5,300	6,060	43.9	2.6	3.3	3.6	1,850	32.1
Asian	2,650	3,270	3,870	46.0	1.6	2.0	2.3	1,220	21.1
MELAA#	295	325	625	111.9	0.2	0.2	0.4	330	5.7
TOTAL	161,895	161,135	167,665	3.6	100.0	100.0	100.0	5,770	100.0
Total without multiple count	146,600	147,300	152,100	3.8	...	...	...
Ethnic 'overcount' (%)	10.4	9.4	10.2	-1.9	...	...	...
TOTAL NEW ZEALAND									
European/NZ/Other	3,074,610	3,074,010	3,213,330	4.5	75.2	72.8	70.1	138,720	28.2
Māori	573,180	585,970	624,310	8.9	14.0	13.9	13.6	51,130	10.4
Pacific Peoples	229,280	261,820	301,640	31.6	5.6	6.2	6.6	72,360	14.7
Asian	194,750	272,440	404,320	107.6	4.8	6.5	8.8	209,570	42.6
MELAA#	18,450	27,660	38,550	108.9	0.5	0.7	0.8	20,100	4.1
TOTAL	4,090,270	4,221,900	4,582,150	12.0	100.0	100.0	100.0	491,880	100.0
Total without multiple count	3,732,000	3,880,500	4,184,500	12.1	...	...	...	...	...
Ethnic 'overcount' (%)	9.6	8.8	9.5	-1.0	...	...	...	...	...

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

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

MELAA = Middle Eastern/Latin American/African



Table 1.2.2 gives these data for the TA's which comprise the Hawke's Bay Region. They show the European/NZ/Other share declining in the Central Hawke's Bay and Wairoa Districts (by 1.9 and 21.9 per cent respectively), and that for Māori also declining in Wairoa (13.3 per cent). By contrast the share for Pacific and Asian Peoples increased universally, especially in Hastings, while that for the MELAA populations of both Hastings and Napier also grew significantly.

These trends are reflected in sizeable differences by TA in terms of each ethnic group's contribution to overall growth. The loss of European/NZ/Other from both the Hawke's Bay and Wairoa Districts accounted for the majority of each TA's net loss, with that for Māori compounding the situation for Wairoa. The greatest positive contributions to growth for both the Central Hawke's Bay District and Napier City were by Māori, and for Hastings by European/NZ/Other followed by Pacific Peoples.

Table 1.2.2: Population by Major Ethnic Group* (Multiple Count), TA's of the Hawke's Bay Region 1996-2006

	1996	2001	2006	Change (%)	1996	2001	2006	Contribution to Change 1996-2006	
	NUMBER				DISTRIBUTION (%)*			Number	(%)
Central Hawke's Bay District									
European/NZ/Other	11,590	11,280	11,370	-1.9	78.4	77.9	77.8	-220	-137.5
Māori	2,850	2,870	2,880	1.1	19.3	19.8	19.7	30	18.8
Pacific Peoples	250	240	265	6.0	1.7	1.7	1.8	15	9.4
Asian	90	85	95	5.6	0.6	0.6	0.6	5	3.1
MELAA#	-	-	10	...	0.0	0.0	0.1	10	6.3
TOTAL	14,780	14,475	14,620	-1.1	100.0	100.0	100.0	-160	-100.0
Total without multiple count	13,300	13,200	13,250	-0.4	...	...	...
Ethnic 'overcount' (%)	11.1	9.7	10.3	-7.1	...	...	...
Hastings District									
European/NZ/Other	54,530	53,650	56,380	3.4	72.4	70.4	69.9	1,850	34.0
Māori	16,790	17,120	17,770	5.8	22.3	22.5	22.0	980	18.0
Pacific Peoples	2,720	3,630	4,070	49.6	3.6	4.8	5.0	1,350	24.8
Asian	1,065	1,635	2,140	100.9	1.4	2.1	2.7	1,075	19.7
MELAA#	165	170	355	115.2	0.2	0.2	0.4	190	3.5
TOTAL	75,270	76,205	80,715	7.2	100	100	100	5,445	100.0
Total without multiple count	68,100	69,600	73,100	7.3	...	...	...
Ethnic 'overcount' (%)	10.5	9.5	10.4	-1.1	...	...	...
Napier City									
European/NZ/Other	47,830	46,970	48,240	0.9	80.2	78.6	77.7	410	17.0
Māori	9,320	9,990	10,540	13.1	15.6	16.7	17.0	1,220	50.5
Pacific Peoples	1,040	1,255	1,535	47.6	1.7	2.1	2.5	495	20.5
Asian	1,350	1,440	1,525	13.0	2.3	2.4	2.5	175	7.2
MELAA#	105	130	220	109.5	0.2	0.2	0.4	115	4.8
TOTAL	59,645	59,785	62,060	4.0	100.0	100.0	100.0	2,415	100.0
Total without multiple count	54,900	55,200	56,800	3.5	...	...	...
Ethnic 'overcount' (%)	8.6	8.3	9.3	7.1	...	...	...
Wairoa District									
European/NZ/Other	5,800	4,720	4,580	-21.0	48.3	45.2	45.6	-1,220	-62.2
Māori	5,940	5,520	5,150	-13.3	49.5	52.9	51.3	-790	-40.3
Pacific Peoples	185	125	195	5.4	1.5	1.2	1.9	10	0.5
Asian	75	70	120	60.0	0.6	0.7	1.2	45	2.3
MELAA#	5	-	-	-100.0	0.0	0.0	0.0	-5	-0.3
TOTAL	12,005	10,435	10,045	-16.3	100.0	100.0	100.0	-1,960	-100.0
Total without multiple count	10,250	9,260	8,720	-14.9	...	...	...
Ethnic 'overcount' (%)	17.1	12.7	15.2	-11.3	...	...	...

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

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

MELAA = Middle Eastern/Latin American/African

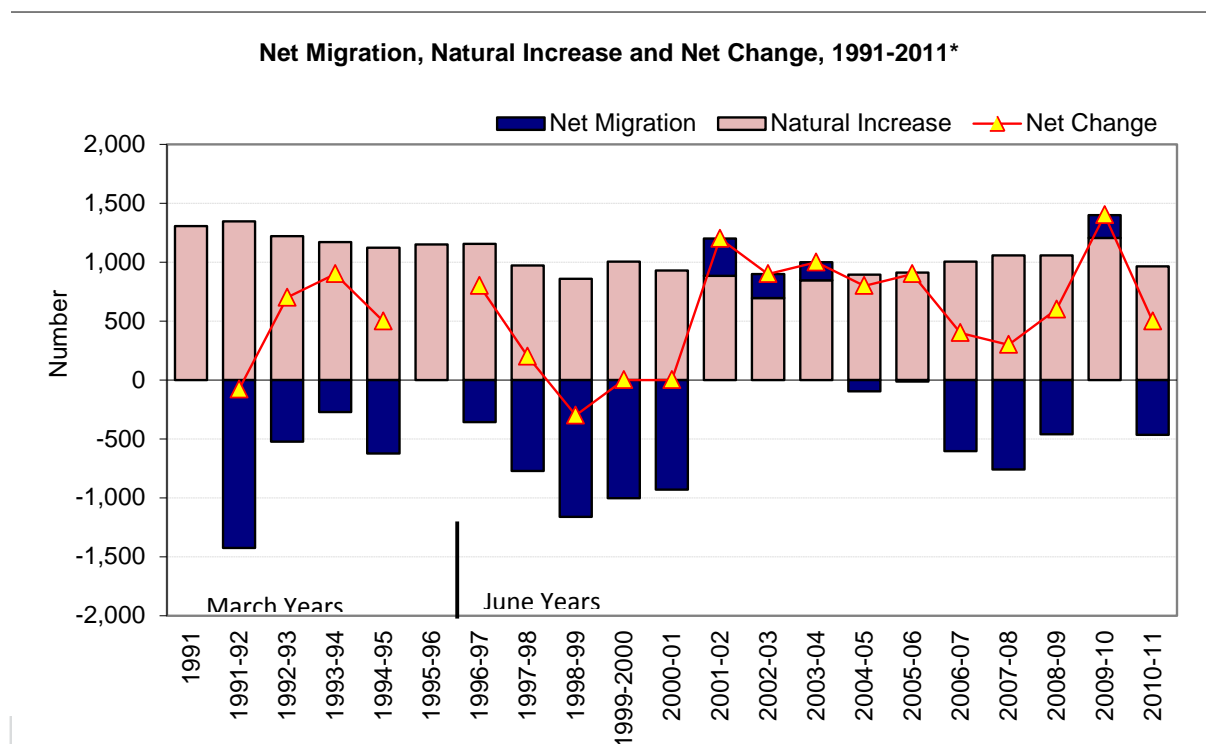


2.0 Components of Change

2.1 Natural Increase and Net Migration

Figure 2.1.1 shows the estimated components of change contributing to growth for the Hawke’s Bay Region across the period 1991-2011 (see Table 2.1.1 for underlying data). Overwhelmingly the main component of growth has been natural increase (the difference between births and deaths), with net migration gains between 2001 and 2004 and in 2009-10 only. Net migration loss across the remaining years partially offset that growth.

Figure 2.1.1: Natural Increase, Net Migration and Net Change 1991-2011, Hawke’s Bay RC

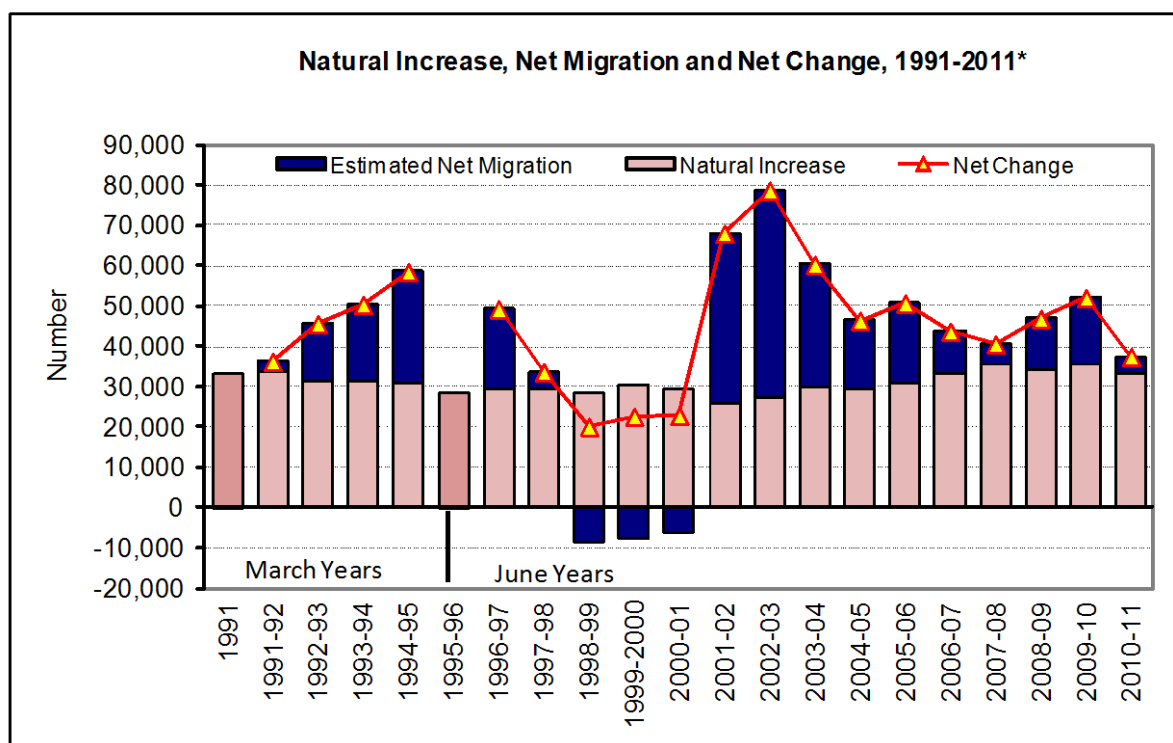


*Changes in the timing and method of estimating Resident Population between 1995 and 1996 mean that only natural increase can be shown for that year

Comparison with data for Total New Zealand (Figure 2.1.2) indicates similar trends. In both cases, net migration was negative in the late 1990s to 2001 and positive across the 2002-2004 period. National trends since 2004 have been for a general reduction in net migration gain which has been experienced as a net loss in the Hawke’s Bay, except for the 2009-10 year when Total New Zealand also saw a small increase in net gain.



Figure 2.1.2: Natural Increase, Net Migration and Net Change 1991-2011, Total New Zealand

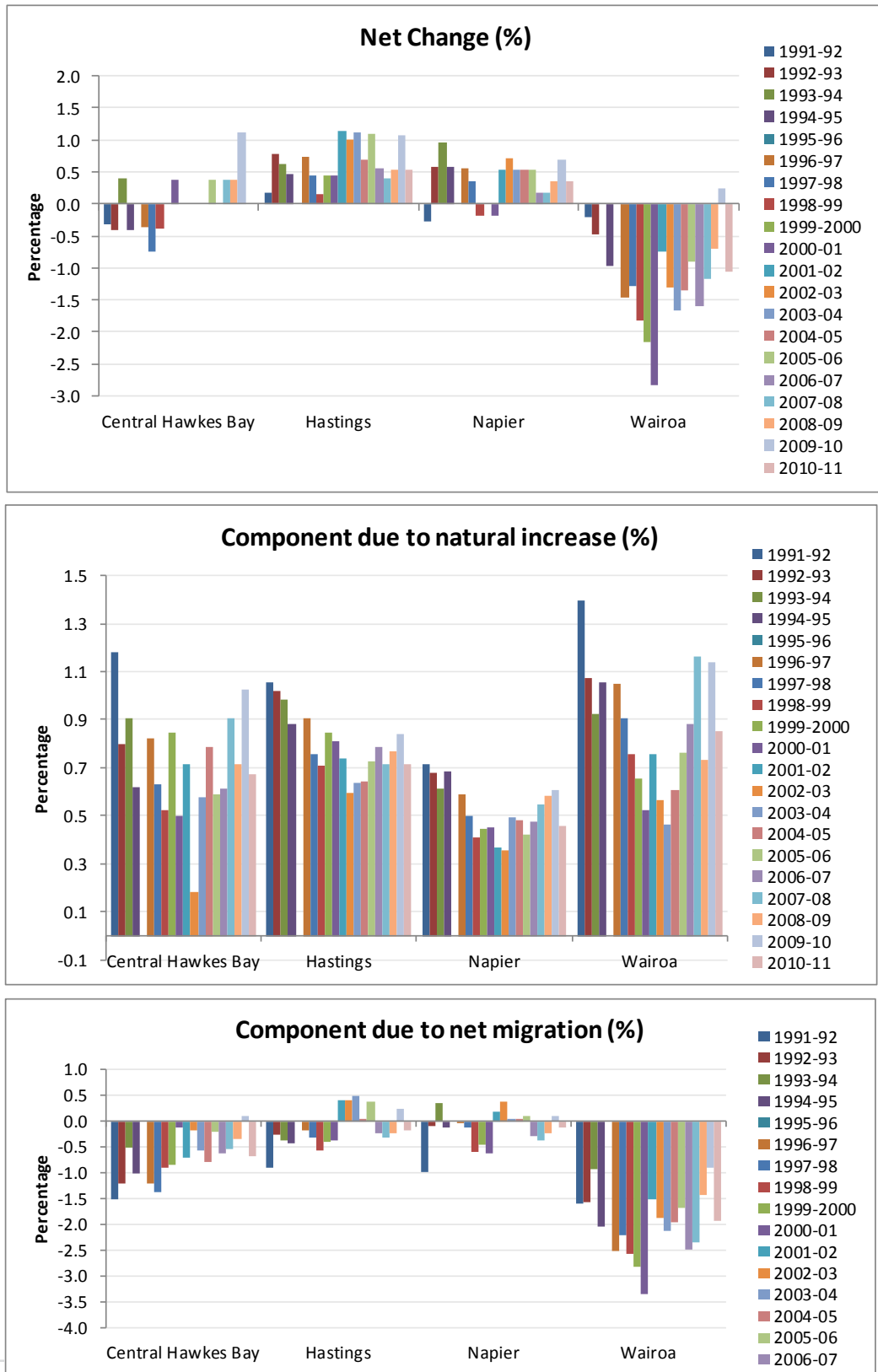


**Changes in the timing and method of estimating Resident Population between 1995 and 1996 mean that only natural increase can be shown for that year*

Comparative data for the TA's comprising the Hawke's Bay region are given in Figure 2.1.3. All TA's show strong natural increase. That for Wairoa District substantially offsets its disproportionate net migration loss; however it has been insufficient to completely cover for the migration loss except for one year (2009-10) across the period. The remaining TA's also show that net migration loss occurring in many years is typically offset by natural increase. This is somewhat less so for the Central Hawke's Bay District.



Figure 2.1.3: Net change and components of change, TA's of the Hawke's Bay Region, 1991-2011



Compiled from Statistics New Zealand Infoshare: Tables DPE051AA, VSB016AA, VSD018AA
 (a) 1991-1995 Estimated Defacto; 1996-2011 Estimated Usual Resident
 Natural Increase, Net Migration and Net Change as a percentage of previous year's URP



Table 2.1.1: Components of Change, 1991-2011, Hawke's Bay Region and Total New Zealand

	Hawke's Bay Region							Total New Zealand				
	Components					Contribution to Net Change		Contribution to Net Change				
	Births	Deaths	Increase	Resident Net Change	Migration	Natural	Migration~	Change~	Natural	Migration~	Change~	
March Year												
1991	2,512	1,206	1,306	139,479	...	...	...	...	...	...	...	...
1992	2,539	1,193	1,346	139,400	-79	-1425	0.97	-1.02	-0.06	0.95	0.08	1.03
1993	2,465	1,243	1,222	140,100	700	-522	0.88	-0.37	0.50	0.89	0.40	1.28
1994	2,408	1,236	1,172	141,000	900	-272	0.84	-0.19	0.64	0.87	0.53	1.40
1995	2,394	1,271	1,123	141,500	500	-623	0.80	-0.44	0.35	0.84	0.76	1.60
June Year												
1996	2,364	1,212	1,152	146,600								
1997	2,399	1,242	1,157	147,400	800	-357	0.79	-0.24	0.55	0.79	0.53	1.32
1998	2,223	1,251	972	147,600	200	-772	0.66	-0.52	0.14	0.78	0.11	0.89
1999	2,114	1,254	860	147,300	-300	-1160	0.58	-0.79	-0.20	0.75	-0.22	0.53
2000	2,220	1,216	1,004	147,300	0	-1004	0.68	-0.68	0.00	0.79	-0.20	0.59
2001	2,133	1,204	929	147,300	0	-929	0.63	-0.63	0.00	0.76	-0.17	0.59
2002	2,125	1,241	884	148,500	1,200	316	0.60	0.21	0.81	0.67	1.08	1.75
2003	1,988	1,292	696	149,400	900	204	0.47	0.14	0.61	0.69	1.30	1.99
2004	2,098	1,252	846	150,400	1,000	154	0.57	0.10	0.67	0.74	0.76	1.50
2005	2,188	1,293	895	151,200	800	-95	0.60	-0.06	0.53	0.72	0.41	1.14
2006	2,170	1,258	912	152,100	900	-12	0.60	-0.01	0.60	0.75	0.48	1.23
2007	2,268	1,264	1,004	152,500	400	-604	0.66	-0.40	0.26	0.79	0.25	1.04
2008	2,298	1,240	1,058	152,800	300	-758	0.69	-0.50	0.20	0.84	0.12	0.96
2009	2,250	1,191	1,059	153,400	600	-459	0.69	-0.30	0.39	0.80	0.30	1.10
2010	2,465	1,260	1,205	154,800	1,400	195	0.79	0.13	0.91	0.82	0.39	1.20
2011	2,212	1,246	966	155,300	500	-466	0.62	-0.30	0.32	0.76	0.10	0.86

Compiled from Statistics New Zealand Infoshare: Usual Resident Population, Table DPE051AA; Births, Table VSB016AA; Deaths, Table VSD018AA

(a) 1991-1995 Estimated Defacto; 1996-2011 Estimated Usual Resident

~ Births minus Deaths

* Residual (Net Change minus Natural Increase)

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



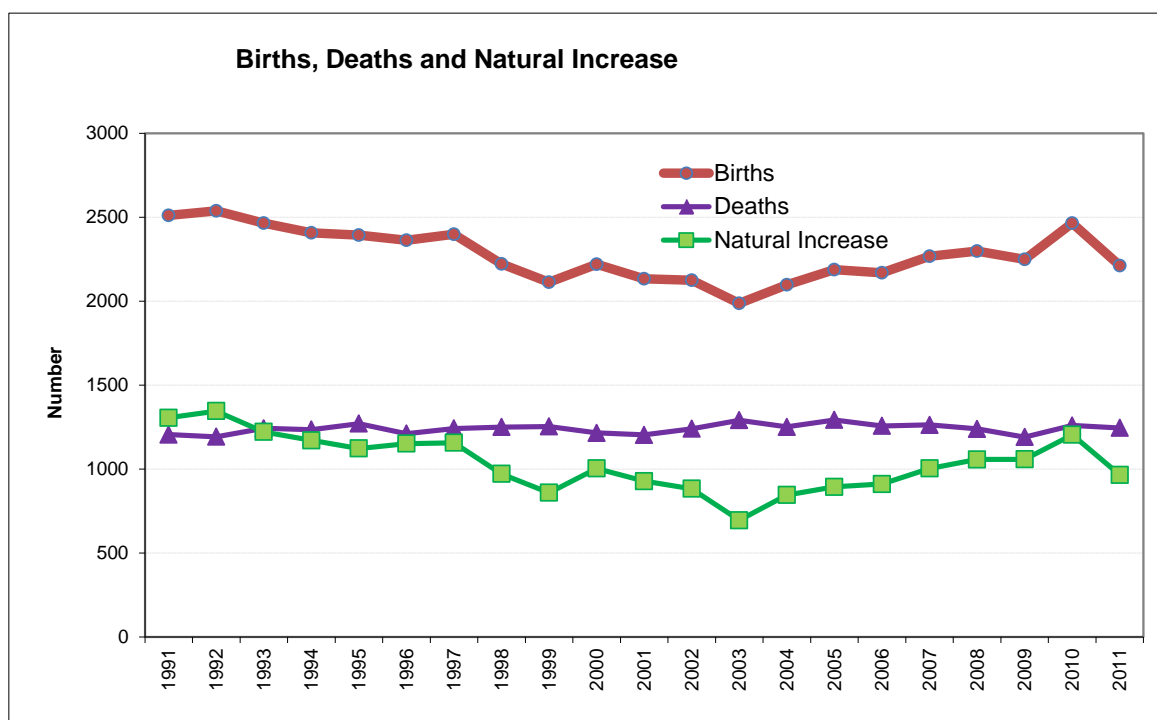
2.2 Births, Deaths and Natural Increase

Underlying the trends in natural increase shown above are those for births and deaths, depicted in Figure 2.2.1. Here as might be expected we see that the main driver of natural increase has been a reasonably steady stream of births. Numbers fell somewhat during the late 1990s through to 2003, and then – as elsewhere in most New Zealand – increased, peaking in 2010. 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.

Deaths have also remained remarkably stable across the period, ending the period at 1,246, just fractionally above their 1991 level of 1,206. However, the overall minor increase will almost certainly soon accelerate as the Baby Boomer wave moves through the older age groups.

As the projections further below will show, the overall outcome of these opposing trends will be a steady reduction in natural increase. As indicated above, this trend will have a significant impact on the region's potential for continued growth.

Figure 2.2.1: Births, Deaths and Natural Increase, Hawke's Bay Region 1991-2011



Compiled from Statistics New Zealand Infoshare: Births, Table VSB016AA; Deaths, Table VSD018AA

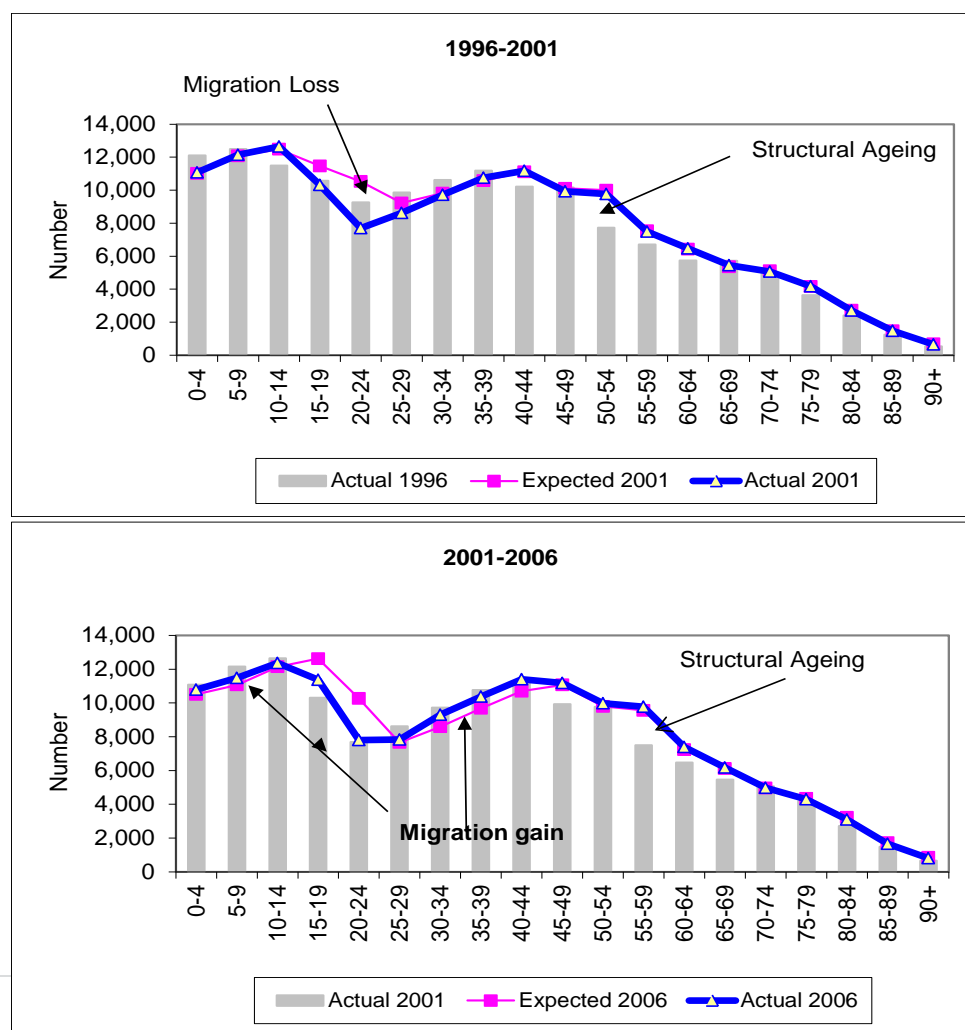


3.0 Components of Change by Age

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 the net migration losses indicated earlier in Figure 2.1.1 and Table 2.1.1 have occurred primarily at ages 15-19 and 20-24, while between 2001 and 2006, minor gain was experienced at 5-14 and 30-44 years. Notable also 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. See Appendices 2.1 and 2.2 for underlying data.

Figure 3.1.1: Expected and Actual Population by Age, 1996-2001 and 2001-2006, Hawke's Bay RC



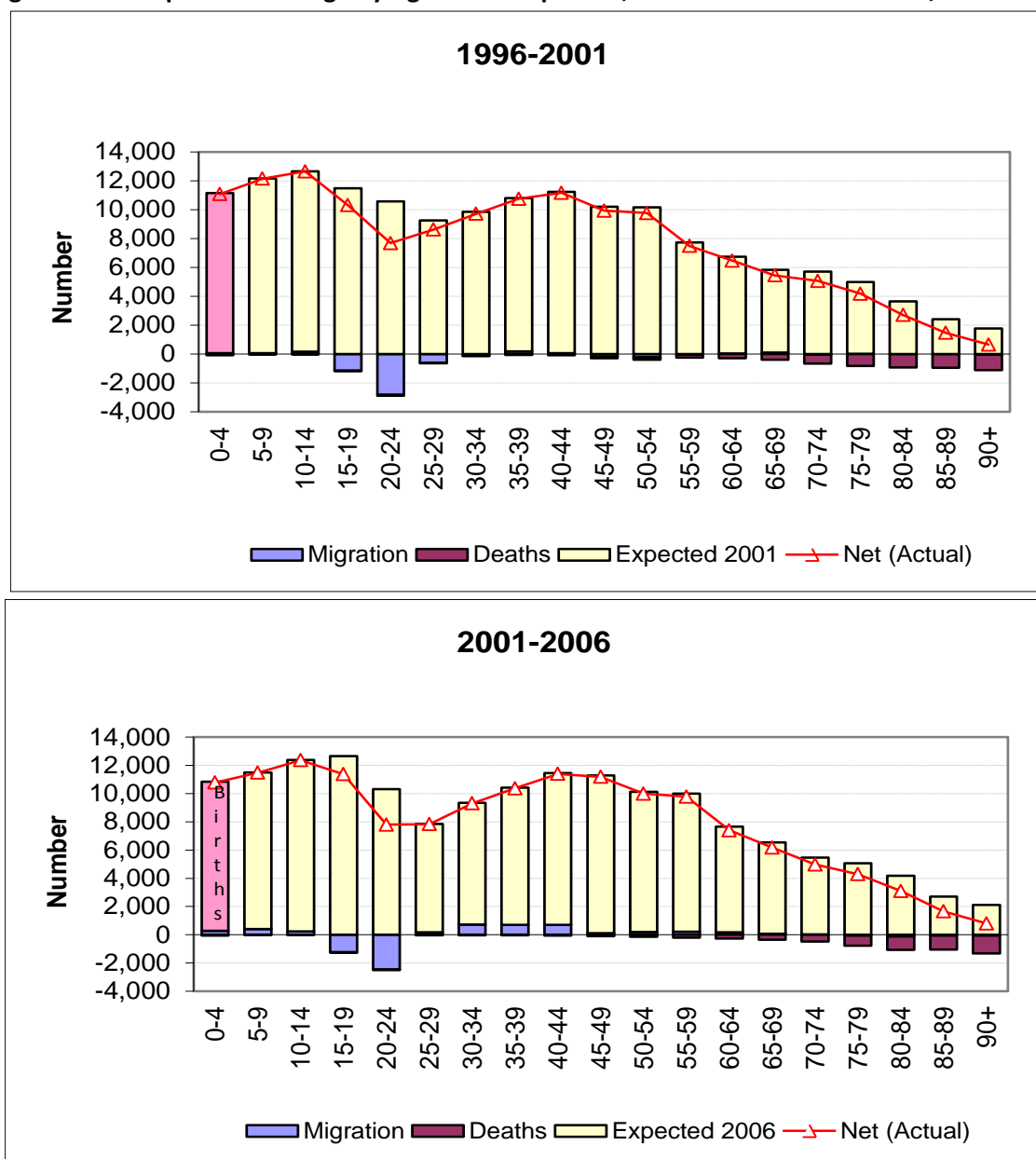
Source: Jackson from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007



3.2 Expected versus Actual Change by Component

The same data are plotted in Figure 3.2.1, this time to highlight the role of other components of change. As indicated above, the primary driver reducing the expected numbers at the younger adult ages is migration, while at older ages it is deaths. Minor net migration gain is again confirmed at 5-14 and 30-44 years between 2001 and 2006. The information in Sections 3.1 and 3.2 is important because it is free of cohort size effects, which have already been accounted for in the methodology.

Figure 3.2.1: Population Change by Age and Component, 1996-2001 and 2001-2006, Hawke's Bay



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



4.0 Age Structure and Population Ageing

4.1 Numerical and Structural Ageing

As elsewhere, the population of the Hawke's Bay Region 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 relatively 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.

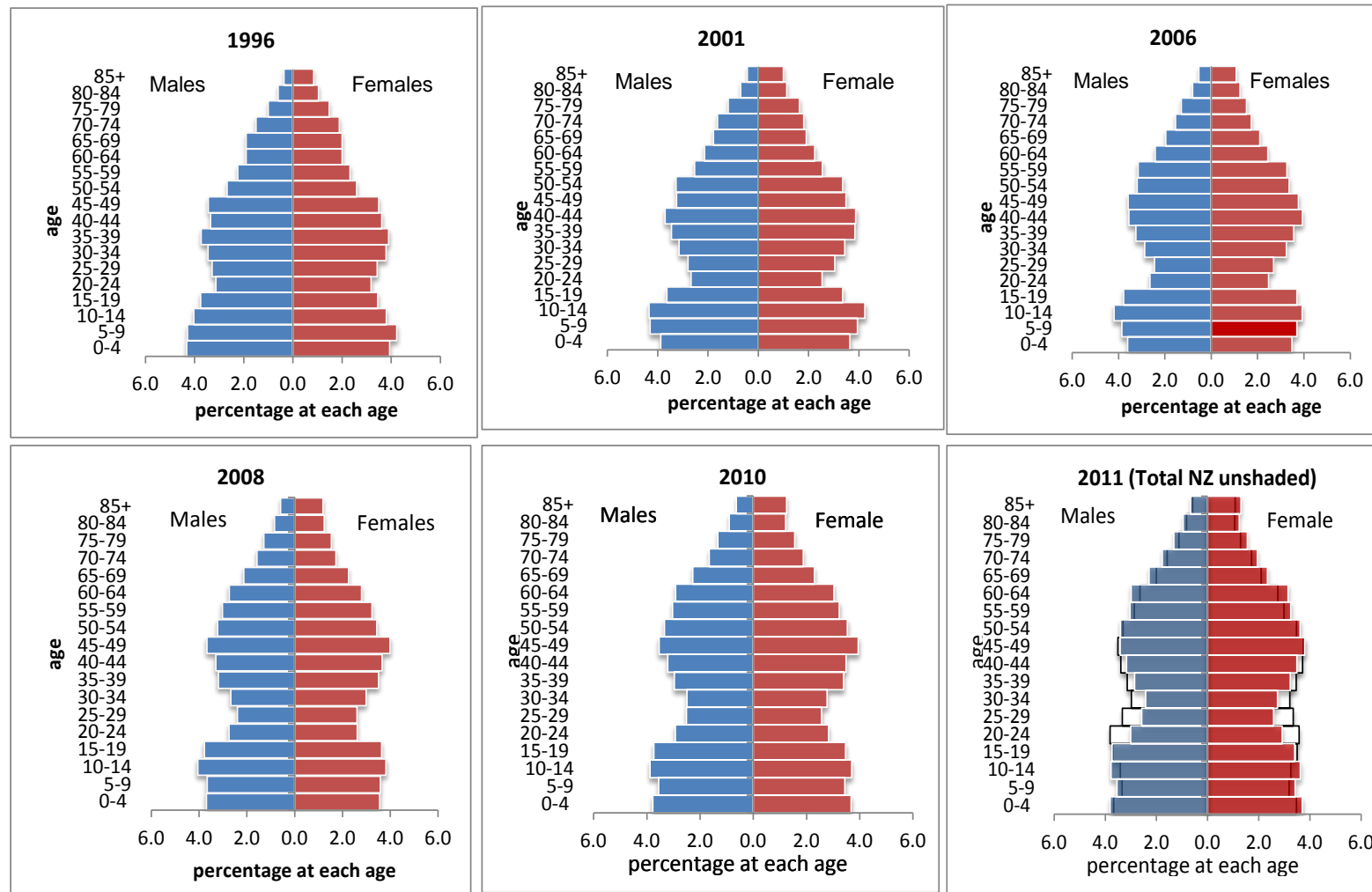
Migration is also playing a role. As indicated above, the region's structural ageing is accelerated in the first instance because of net migration loss at the young adult ages, particularly 20-24 years. The loss of people at these youthful ages accelerates the structural ageing process in two ways, firstly as a direct result of the reduction in their own numbers; secondly because it removes their reproductive potential, along with any children they may have. It is accelerated in the second instance by modest net gains at older ages, which add to both numerical and structural ageing.

Figure 4.1.1 illustrates the outcome of these trends over the period 1996-2011 (see Table 4.1.1 for summary data). Most obvious from Figure 4.1.1 is the shift from a relatively youthful age structure in 1996 to a deeply waisted ('hour glass') structure by 2001, indicating significant net migration loss at 20-34 years. The bite deepens at each observation until 2008, while in 2011 there is evidence of a small increase at 20-24 and 25-29 years (reflected also in a small numerical increase). Importantly, the Hawke's Bay is not alone in experiencing this youthful deficit, which is evident across most of New Zealand's non-urban regions, and which is also partly a reflection of declining birth rates at the time the current population aged 20-34 years was born. The bite is, however, significantly deeper for the Hawke's Bay than for Total New Zealand, as can be seen in the lower right-hand panel.

Compression at the youngest ages due to declining birth rates over the period 1996-2006 is clear, followed by a small resurgence in births since 2008. Of note is that the proportion at the youngest ages (0-4 years) in 2011 is slightly larger for the Hawke's Bay Region than for Total New Zealand – despite the relative lack of people at the key reproductive ages, implying somewhat higher birth rates per woman. The region also has a greater proportion at the older ages. As Table 4.1.1 shows, the Hawke's Bay population aged 65+ years has increased from 12.6 per cent in 1996 to 15.4 per cent in 2011, making it somewhat older than Total New Zealand (13.3 per cent in 2011).



Figure 4.1.1: Age-Sex Structure Hawke’s Bay Region, 1996-2011, and 2011 compared with Total New Zealand



Source: Jackson, N.O (2012) Subnational Age Structure Resource 1996-2011, NIDEA, University of Waikato

Source data from Stats NZ Infoshare Estimated Subnational Population

Notes: (RC, TA,AU) by Age and Sex at 30 June 1996, 2001, 2006-2011



Table 4.1.1: Summary Indicators of Change by Age, 1996-2011, Hawke's Bay Region and Total New Zealand

Hawke's Bay RC	1996	2001	2006	2007	2008	2009	2010	2011	1996-01	2001-06	2006-11	2006-07	2007-08	2008-09	2009-10	2010-11
Number									Av. Annual Change (%)			Annual Change (%)				
Broad Age Group																
0-14	36,080	35,880	34,640	34,390	34,180	34,040	34,100	33,940	-0.1	-0.7	-0.4	-0.7	-0.6	-0.4	0.2	-0.5
15-24	19,830	18,000	19,180	19,360	19,520	19,740	20,080	20,280	-1.8	1.3	1.1	0.9	0.8	1.1	1.7	1.0
25-54	59,760	59,970	60,090	59,690	59,080	58,660	58,460	57,870	0.1	0.0	-0.7	-0.7	-1.0	-0.7	-0.3	-1.0
55-64	12,440	13,960	17,180	17,550	18,030	18,490	18,910	19,290	2.4	4.6	2.5	2.2	2.7	2.6	2.3	2.0
65+	18,520	19,530	21,010	21,570	21,980	22,530	23,220	23,880	1.1	1.5	2.7	2.7	1.9	2.5	3.1	2.8
Hawke's Bay Regi ⁱ	146,630	147,340	152,100	152,560	152,790	153,460	154,770	155,260	0.1	0.6	0.4	0.3	0.2	0.4	0.9	0.3
Total NZ	3,731,970	3,880,500	4,184,600	4,228,330	4,315,770	4,268,870	4,367,780	4,405,180	0.8	1.6	1.1	1.0	2.1	-1.1	2.3	0.9
Percentage									Av. Annual Change (%)			Annual Change (%)				
0-14	24.6	24.4	22.8	22.5	22.4	22.2	22.0	21.9	-0.2	-1.3	-0.8	-1.0	-0.8	-0.8	-0.7	-0.8
15-24	13.5	12.2	12.6	12.7	12.8	12.9	13.0	13.1	-1.9	0.6	0.7	0.6	0.7	0.7	0.9	0.7
25-54	40.8	40.7	39.5	39.1	38.7	38.2	37.8	37.3	0.0	-0.6	-1.1	-1.0	-1.2	-1.1	-1.2	-1.3
55-64	8.5	9.5	11.3	11.5	11.8	12.0	12.2	12.4	2.3	3.8	2.0	1.8	2.6	2.1	1.4	1.7
65+	12.6	13.3	13.8	14.1	14.4	14.7	15.0	15.4	1.0	0.8	2.3	2.4	1.7	2.1	2.2	2.5
Hawke's Bay Regi ⁱ	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	...	...	...	...	...	...	...	...
Total NZ %65+ year	11.5	11.9	12.2	12.5	12.8	12.6	13.0	13.3	0.6	0.6	1.8	1.9	2.8	-1.6	3.4	2.3
Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)																
	1996	2001	2006	2007	2008	2009	2010	2011	1996-01	2001-06	2006-11	2006-07	2007-08	2008-09	2009-10	2010-11
Number									Av. Annual Change (%)			Annual Change (%)				
Hawke's Bay RC	15.9	12.9	11.2	11.0	10.8	10.7	10.6	10.5	-3.8	-2.7	-1.2	-1.2	-1.9	-1.4	-0.5	-1.0
Total NZ	18.3	15.2	14.1	13.9	13.4	13.6	13.2	13.0	-3.3	-1.5	-1.5	-1.2	-3.7	1.5	-2.6	-1.9
Ratio Elderly to Children (Number 65+ per Child 0-14)																
	1996	2001	2006	2007	2008	2009	2010	2011	1996-01	2001-06	2006-11	2006-07	2007-08	2008-09	2009-10	2010-11
Number									Av. Annual Change (%)			Annual Change (%)				
Hawke's Bay RC	0.51	0.54	0.61	0.63	0.64	0.66	0.68	0.70	1.2	2.3	3.2	3.4	2.5	2.9	2.9	3.3
Total NZ	0.50	0.53	0.58	0.59	0.62	0.60	0.64	0.66	1.0	1.9	2.8	2.9	4.6	-2.5	5.2	3.1

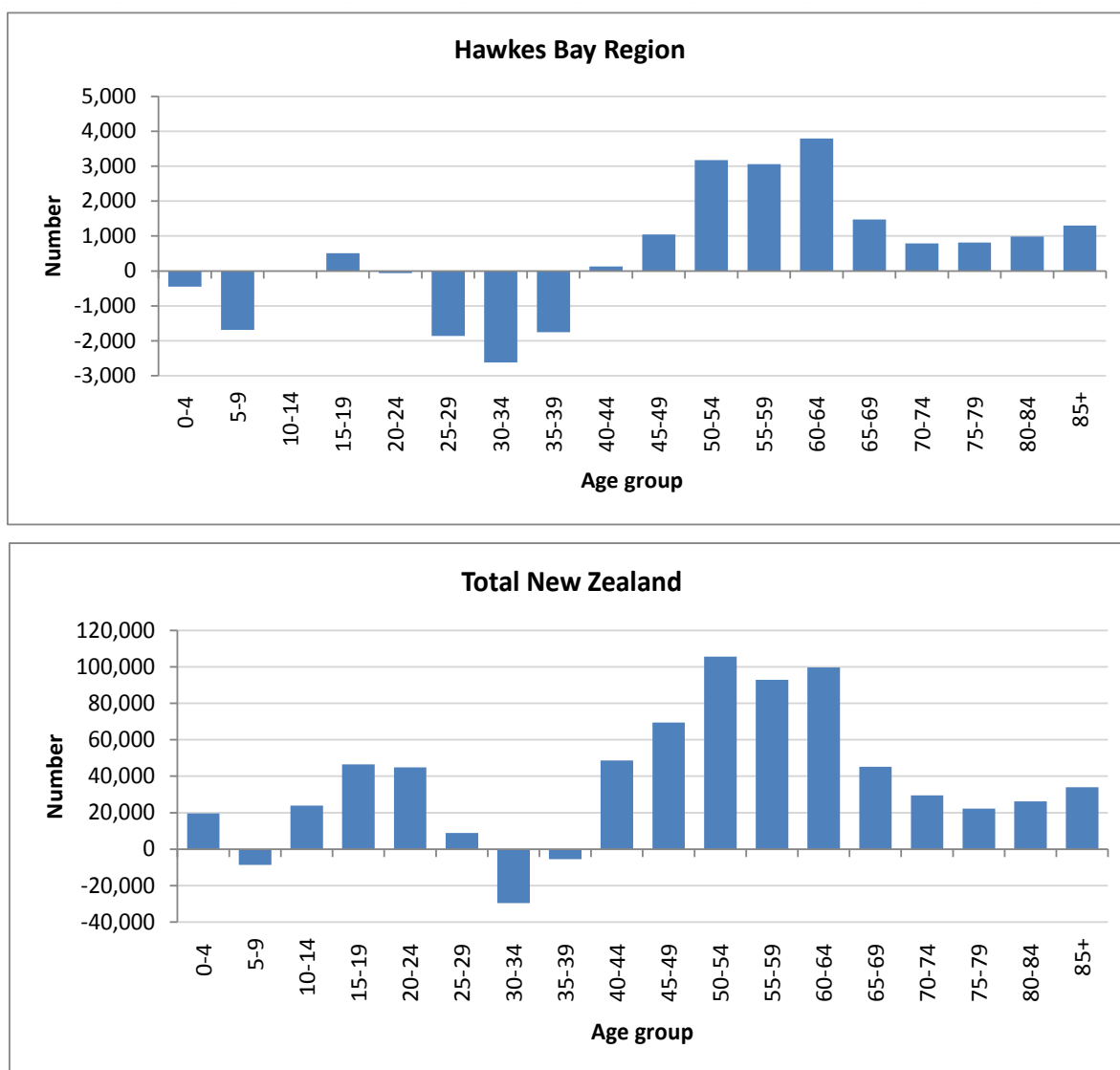
Source: Jackson, N.O (2012) Subnational Age Structure Resource 1996-2011, National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato

Notes: Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TA,AU) by Age and Sex at 30 June 1996, 2001 and 2006-2011 (2006 Boundaries)



Overall trends by five-year age group are summarised in Figure 4.1.2 (see also Table 4.1.2). Between 1996 and 2011, numbers for the Hawke’s Bay Region declined at the youngest childhood ages and also at 25-39 years, suggesting a link between the two (parents and children), while numbers increased at all older ages, most particularly across the Baby Boomer age groups. However, 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. The data for Total New Zealand similarly show net decline at ages 5-9 and 30-39 years (albeit somewhat smaller).

Figure 4.1.2: Change by Age (Number), Hawke’s Bay Region and Total New Zealand, 1996-2011



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



Table 4.1.2: Change by Age (%), Hawke's Bay Region and Total New Zealand, 1996-2011

	Central Hawkes Bay				Hawke's Bay Region		Total New Zealand
	Bay	Hastings	Napier	Wairoa	Number	%	%
0-4	-2.8	0.5	-3.8	-27.7	(450)	-3.7	6.6
5-9	-27.0	-8.7	-11.0	-36.3	(1,690)	-13.5	-2.9
10-14	-19.7	9.0	0.5	-29.9	-	0.0	8.9
15-19	-11.2	13.2	3.3	-22.1	510	4.8	17.2
20-24	2.9	4.5	-5.4	-14.3	(60)	-0.6	16.0
25-29	-22.2	-17.3	-17.8	-32.8	(1,860)	-18.9	3.1
30-34	-29.8	-21.8	-22.7	-48.6	(2,620)	-24.7	-9.8
35-39	-30.9	-11.9	-10.1	-46.9	(1,750)	-15.7	-1.8
40-44	-18.1	7.1	5.7	-32.8	130	1.3	18.4
45-49	4.2	18.5	7.0	-16.4	1,040	10.2	27.8
50-54	43.5	53.0	27.5	35.4	3,170	41.0	54.8
55-59	72.9	52.6	35.5	22.2	3,060	45.7	56.5
60-64	88.0	70.2	63.1	29.3	3,790	66.0	72.5
65-69	45.7	31.6	19.7	-2.5	1,470	25.7	33.5
70-74	29.3	20.3	9.8	3.7	790	15.9	25.5
75-79	31.0	25.2	14.0	50.0	810	22.3	26.4
80-84	58.8	38.3	41.0	54.5	990	41.1	46.4
85+	50.0	84.4	67.5	62.5	1,300	73.4	86.6
Total	1.1	10.9	5.3	-18.5	8,700	5.9	18.0

Source: Jackson, N.O (2012) *Subnational Age Structure Resource 1996-2011*, NIDEA, University of Waikato

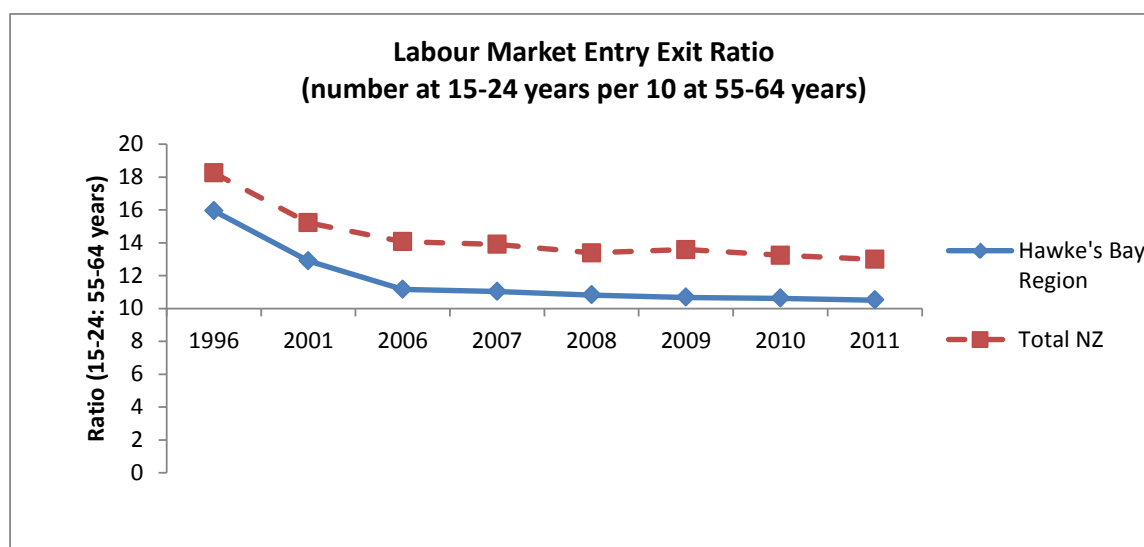
Notes: Source data from Stats NZ TableBuilder Estimated Subnational Population by Age and Sex at 30 June

4.2 Labour Market Implications

Table 4.1.1 (above) also showed that the Hawke's Bay Region's Labour Market 'entry/exit ratio' has fallen since 1996, from 15.9 people at labour market entry age (15-24 years) for every 10 in the retirement age zone (55-64 years), to just 10.5 per 10 in 2011 (see Figure 4.2.1). By comparison, Total New Zealand still has 13.0 people at entry age per 10 at exit age (down from 18.3 in 1996). If older age groupings are used, for example 20-29 and 60-69 years, Hawke's Bay Region in 2011 had 10.3 entrants per 10 exits, while Total New Zealand had 14.8 (not shown on Table 4.1.1). In both cases the disparity reflects the significantly deeper bite at ages 20-34 for the Hawke's Bay region than for Total New Zealand. This issue is returned to further below.



Figure 4.2.1: Labour Market Entry/Exit Ratio, Hawke’s Bay RC and Total New Zealand, 1996-2011



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

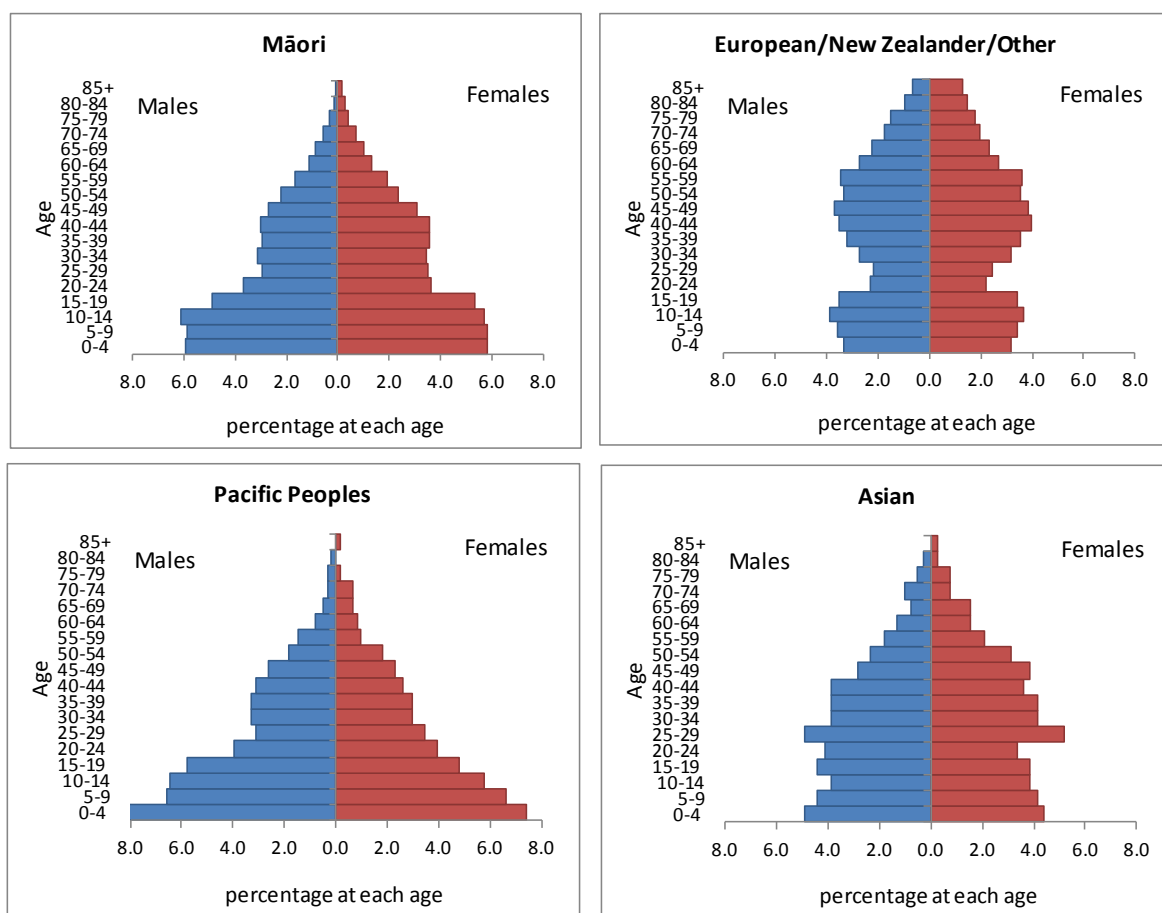
4.3 Ethnic Age Composition and Ageing

Figure 4.3.1 provides a comparison of the Hawke’s Bay Region’s major ethnic groups in 2006, according to the multiple count enumeration method discussed above. As was indicated in Table 1.2.1 above, this method of enumeration means that a portion of the population is counted in more than one ethnic group. In Hawke’s Bay’s case, the over-count for 2006 (when the totals by ethnic group are summed) was approximately 10.2 per cent. However, as can be seen by the markedly different age structures of each group in Figure 4.3.1, this methodological complexity would have very little impact on the story by age composition.

The data suggest that the bite in the overall age structure is very much connected with net outmigration of the European/New Zealander/Other population at those ages, although it will be also compounded by the relatively youthful age structures of the region’s Māori and Pacific Island populations. Elements of the bite also appear for the Asian population; however it is difficult to say that its cause is the same. For example, for the European/New Zealander/Other population, the bite would appear to be related to net migration loss and/or in-migration at older ages, while for the Asian population it may reflect an influx of children and young parental age adults. Numbers for the Middle Eastern/Latin/American/ African (MELAA) population are too small to give a reliable picture by age.



Figure 4.3.1: Age-Sex Structure by Major Ethnic Group*, Hawke’s Bay Region, 2006

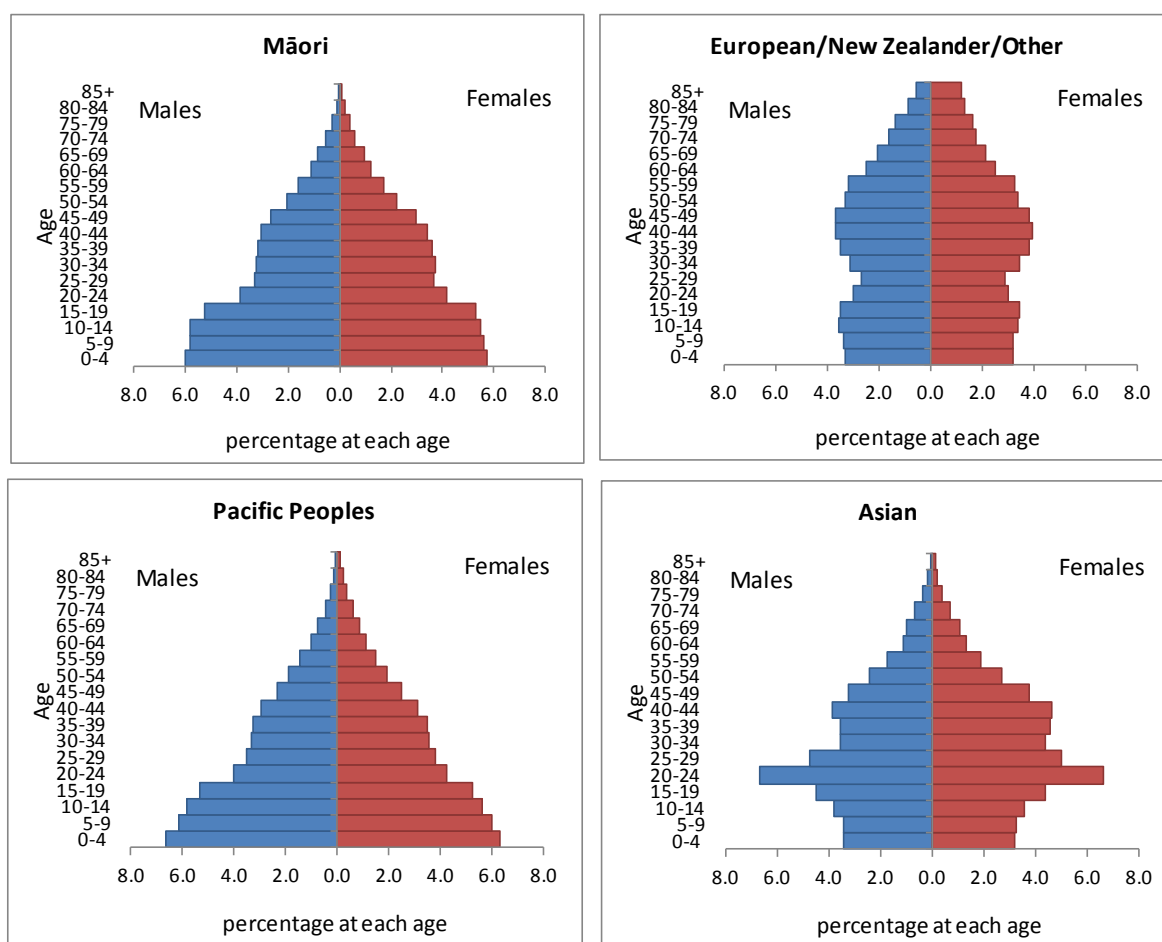


Source: Statistics New Zealand, *Estimated Subnational Ethnic Population (RC, TA) by Age and Sex at 30 June 2006*
 Notes: Multiple count ethnicity means that people may be counted in both populations

Figure 4.3.2 provides a comparison with Total New Zealand. In each case the age structures for each ethnic group are similar to those for the Hawke’s Bay Region. However some distinctive features stand out. Most notable at Total New Zealand level is the shallower bite at 20-39 years for the European/New Zealander/Other population, the ‘wings’ at 20-24 years for the Asian group (presumably reflecting educational migration), and the slightly older age structure of the Pacific Islands population (denoted by smaller proportions at the youngest ages). By contrast it is difficult to discern many disparities for the Māori population; for this we need to turn to Table 4.3.1 below.



Figure 4.3.2: Age-Sex Structure by Major Ethnic Group*, Total New Zealand, 2006



Source: Statistics New Zealand, Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June 2006
 Notes: *Multiple count ethnicity means that people may be counted in more than one ethnic group

Tables 4.3.1- 4.3.4 provide summary data for the Hawke’s Bay Region’s Māori, Pacific Island, Asian, and European/New Zealander/Other populations by age. As above, data for the Middle Eastern/Latin American/African population are not presented because of very small numbers by age.

Table 4.3.1 shows that the very youthful age structure of the Hawke’s Bay Māori population results in over one-third aged 0-14 years across all three observations, falling from 37.5 per cent in 1996 to 35.4 per cent in 2006. These proportions are in stark contrast to that population’s 22.0 per cent total share shown earlier in Table 1.2.1, and are clearly where Māori contribution to the region’s growth is concentrated, ie., at the youngest ages. The population’s relative youth is also evidenced in its very high labour market entry exit ratio of 29 at labour market entry age in 2006, per 10 in the retirement zone. However the region’s Māori population is also ageing, with that (Labour Market) ratio having fallen from 38:10 in 1996.



At 65+ years, both numbers and proportions have grown, albeit the proportion in 2006 is still only just above 4.5 per cent. Overall the data indicate that the Hawke's Bay Māori population is slightly older than its Total New Zealand counterpart, where the proportion aged 65+ is a little lower (4.1 per cent), and the labour market entry/exit ratio fractionally higher (see Section 6 on this topic).

Table 4.3.1: Summary Indicators, Hawke's Bay RC Māori Population, 1996, 2001, 2006

Māori	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Broad Age Group						
0-14	13,090	13,400	12,870	...	2.4	-4.0
15-24	6,470	6,110	6,390	...	-5.6	4.6
25-54	12,410	12,920	13,280	...	4.1	2.8
55-64	1,690	1,740	2,200	...	3.0	26.4
65+	1,220	1,350	1,640	...	10.7	21.5
Hawke's Bay RC	34,880	35,520	36,380	...	1.8	2.4
Total NZ Māori	573,180	585,970	624,310	...	2.2	6.5
	Percentage					
0-14	37.5	37.7	35.4	...	0.5	-6.2
15-24	18.5	17.2	17.6	...	-7.3	2.1
25-54	35.6	36.4	36.5	...	2.2	0.4
55-64	4.8	4.9	6.0	...	1.1	23.4
65+	3.5	3.8	4.5	...	8.7	18.6
Hawke's Bay RC	100.0	100.0	100.0	...	...	...
Total NZ Māori % 65+ years	3.0	3.4	4.1	...	11.8	22.0
Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)						
	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Hawke's Bay RC	38.3	35.1	29.0	...	-8.3	-17.3
Total NZ Māori	42.0	36.9	33.1	...	-12.1	-10.2
Ratio Elderly to Children (Number 65+ per Child 0-14)						
	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Hawke's Bay RC	0.09	0.10	0.13	...	7.5	26.5
Total NZ Māori	0.08	0.09	0.12	...	11.8	30.5

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

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

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



The Pacific Island population of the Hawke's Bay region is even more youthful than Māori, with over 40 per cent aged 0-14 years at each observation (Table 4.3.2). Reflecting this concentration at younger ages, only 3.0 per cent of Hawke's Bay's Pacific Island population in 2006 was aged 65+ years. This was lower than for Total New Zealand (3.8 per cent), although as can be seen from Table 4.3.2, both populations are also ageing. As was the case for Māori, the Pacific Island population's contribution to the growth of the region is clearly also heavily concentrated at the youngest ages.

Table 4.3.2: Summary Indicators, Hawke's Bay RC Pacific Island Population, 1996, 2001, 2006

Pacific Island	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Broad Age Group						
0-14	1,780	2,190	2,480	...	23.0	13.2
15-24	790	920	1,120	...	16.5	21.7
25-54	1,370	1,860	2,030	...	35.8	9.1
55-64	160	190	250	...	...	...
65+	110	140	180	...	...	...
Hawke's Bay RC	4,210	5,300	6,060	...	25.9	14.3
Total NZ Pacific Island	229,280	261,820	301,640	...	14.2	15.2
	Percentage					
0-14	42.3	41.3	40.9	...	-2.3	-1.0
15-24	18.8	17.4	18.5	...	-7.5	6.5
25-54	32.5	35.1	33.5	...	7.8	-4.5
55-64	3.8	3.6	4.1	...	-5.7	15.1
65+	2.6	2.6	3.0	...	1.1	12.4
Hawke's Bay RC	100.0	100.0	100.0	...	...	...
Total NZ Pacific Island	3.1	3.4	3.8	...	11.8	11.8
Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)						
	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Hawke's Bay RC	49.4	48.4	44.8	...	-1.9	-7.5
Total NZ Pacific Island	47.1	40.0	37.2	...	-14.9	-7.0
Ratio Elderly to Children (Number 65+ per Child 0-14)						
	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Hawke's Bay RC	0.06	0.06	0.07	...	3.4	13.5
Total NZ Pacific Island	0.08	0.09	0.10	...	12.0	16.8

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

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

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



As indicated above, the region's Asian population has a significantly different age structure, with just one-quarter aged 0-14 years in 2006, and 6.2 per cent aged 65+ years (Table 4.3.3). This is also a slightly older population than its national counterpart, which has only 4.7 per cent aged 65+ years. Another distinctive feature of the region's Asian population is the relatively large proportion at 25-54 years, and, as Figure 4.3.1 showed, a particularly large disproportion at 25-29 years, plausibly reflecting the region's industrial composition. At 23:10 in 2006, the ratio of people of Asian origin at labour market entry age to exit age remains strongly positive, albeit having fallen from 30:10 in 1996.

Table 4.3.3: Summary Indicators, Hawke's Bay RC Asian Population, 1996, 2001, 2006

Asian	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Broad Age Group						
0-14	720	790	990	...	9.7	25.3
15-24	450	580	610	...	28.9	5.2
25-54	1,190	1,500	1,770	...	26.1	18.0
55-64	150	200	260	...	33.3	30.0
65+	140	200	240	...	42.9	20.0
Hawke's Bay RC	2,650	3,270	3,870	...	23.4	18.3
Total NZ Asian	194,750	272,440	404,320	...	39.9	48.4
	Percentage					
0-14	27.2	24.2	25.6	...	-11.1	5.9
15-24	17.0	17.7	15.8	...	4.5	-11.1
25-54	44.9	45.9	45.7	...	2.2	-0.3
55-64	5.7	6.1	6.7	...	8.1	9.8
65+	5.3	6.1	6.2	...	15.8	1.4
Hawke's Bay RC	100.0	100.0	100.0	...	...	...
Total NZ Asian	3.0	4.2	4.7	...	37.9	11.4
Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)						
	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Hawke's Bay RC	30.0	29.0	23.5	...	-3.3	-19.1
Total NZ Asian	51.0	37.5	36.3	...	-26.3	-3.3
Ratio Elderly to Children (Number 65+ per Child 0-14)						
	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Hawke's Bay RC	0.19	0.25	0.24	...	30.2	-4.2
Total NZ Asian	0.12	0.19	0.23	...	58.7	21.6

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

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

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



The data for Hawke's Bay's European/New Zealander/Other population (Table 4.3.4) also stand in stark contrast to that for the other ethnic groups. Between 1996 and 2001, net loss was broadly experienced below 54 years, but gains above those ages partially offset the losses. Between 2001 and 2006 the losses at younger ages reduced (becoming positive at 15-24 years) and the gains at older ages increased. With 16.0 per cent aged 65+ years in 2006, the European/New Zealander/Other population of the Hawke's Bay is somewhat older than its Total New Zealand counterpart (14.4 per cent). This disparity is also evident in the entry exit ratio for the region's European/New Zealand/Other population having fallen below parity (one for one) between 2001 and 2006, while it remains above parity for Total New Zealand.

Table 4.3.4: Summary Indicators, Hawke's Bay Region European/NZ/Other Population, 1996, 2001, 2006

European/NZ/Other	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Broad Age Group						
0-14	27,370	26,070	25,380	...	-4.7	-2.6
15-24	15,030	12,890	13,840	...	-14.2	7.4
25-54	49,130	47,530	47,220	...	-3.3	-0.7
55-64	10,910	12,160	14,980	...	11.5	23.2
65+	17,420	18,070	19,310	...	3.7	6.9
Hawke's Bay RC	119,860	116,720	120,730	...	-2.6	3.4
Total NZ European/Other/NZ	3,074,610	3,074,010	3,213,330	...	0.0	4.5
	Percentage					
0-14	22.8	22.3	21.0	...	-2.2	-5.9
15-24	12.5	11.0	11.5	...	-11.9	3.8
25-54	41.0	40.7	39.1	...	-0.7	-4.0
55-64	9.1	10.4	12.4	...	14.5	19.1
65+	14.5	15.5	16.0	...	6.5	3.3
Hawke's Bay RC	100.0	100.0	100.0	...	...	...
Total NZ European/Other/NZ	13.2	13.8	14.4	...	4.6	4.1
Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)						
	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Hawke's Bay RC	13.8	10.6	9.2	...	-23.1	-12.8
Total NZ European/Other/NZ	15.9	12.7	11.3	...	-20.1	-11.0
Ratio Elderly to Children (Number 65+ per Child 0-14)						
	1996	2001	2006	...	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Hawke's Bay RC	0.64	0.69	0.76	...	8.9	9.8
Total NZ European/Other/NZ	0.61	0.65	0.72	...	6.1	10.0

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

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

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



Table 4.3.5 provides an overview of each ethnic group's resulting population share by age. As indicated above, the general picture is that the Māori and Pacific Island populations increase their share as age decreases, while the European/New Zealander/Other population increases its share as age increases. The picture is significantly less linear for the Asian population, where the largest shares are concentrated at 15-24 and 25-54 years.

Within that picture, young Māori comprise a significantly larger share of the Hawke's Bay region's youth (30.7 per cent) than they do at Total New Zealand level (20.2 per cent), and the situation is similar at each older age. By contrast, both the Hawke's Bay region's Pacific Island and Asian populations claim a smaller share of each age group than they do nationally.

Table 4.3.5: Ethnic Group* Percentage Share by Age Group and Region, 2006

	Māori	Pacific Island	Asian	MELAA	European/ NZ/Other	Total*	Number*
Hawke's Bay Region							
0-14	30.7	5.9	2.4	0.4	60.6	100.0	41,890
15-24	28.9	5.1	2.8	0.5	62.7	100.0	22,075
25-54	20.6	3.1	2.7	0.5	73.1	100.0	64,610
55-64	12.4	1.4	1.5	0.1	84.6	100.0	17,710
65+	7.7	0.8	1.1	0.0	90.3	100.0	21,380
Total	21.7	3.6	2.3	0.4	72.0	100.0	167,665
Total NZ							
0-14	20.2	10.4	7.9	1.0	60.6	100.0	1,064,730
15-24	17.0	8.3	13.1	1.1	60.5	100.0	684,330
25-54	12.4	5.8	10.0	1.0	70.8	100.0	1,870,490
55-64	7.9	3.4	5.6	0.4	82.7	100.0	442,280
65+	4.9	2.2	3.6	0.2	89.0	100.0	520,320
Total	13.6	6.6	8.8	0.8	70.1	100.0	4,582,150

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

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

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

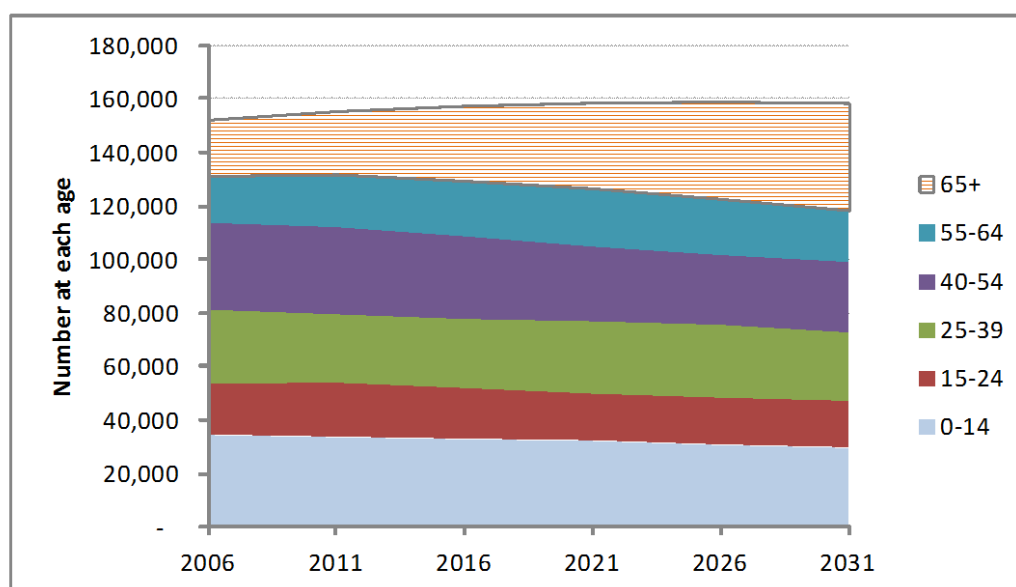


5.0 Population Projections

5.1 Size, Growth and Population Ageing

Under the medium series assumptions, the population of the Hawke's Bay Region is projected to continue to grow, but only slowly, reaching approximately 158,340 by 2031, an increase of 2.0 per cent over 2011 (Table 5.1.1). Decline is projected to occur for all age groups below 65 years, offsetting significant growth above age 65. The 65+ population is anticipated to grow both numerically (by 70 per cent between 2011 and 2031) and structurally (from 15.2 per cent in 2011 to 25.3 per cent by 2031). Figure 5.1.1 provides a graphical overview.

Figure 5.1.1: Projected Change in Numbers by Broad Age Group, Hawke's Bay Region, 2006-2031, Medium Series



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

Figure 5.1.2 compares these changes under the low and high variant assumptions (see also Appendices 3.1-3.3). As would be expected, Figure 5.1.1 shows that the losses by age are greater under the low variant assumptions, and range from substantially lower to small positive gains under the high variant assumptions. However, even under the high assumptions, loss is projected for several age groups, suggesting that it is unavoidable.



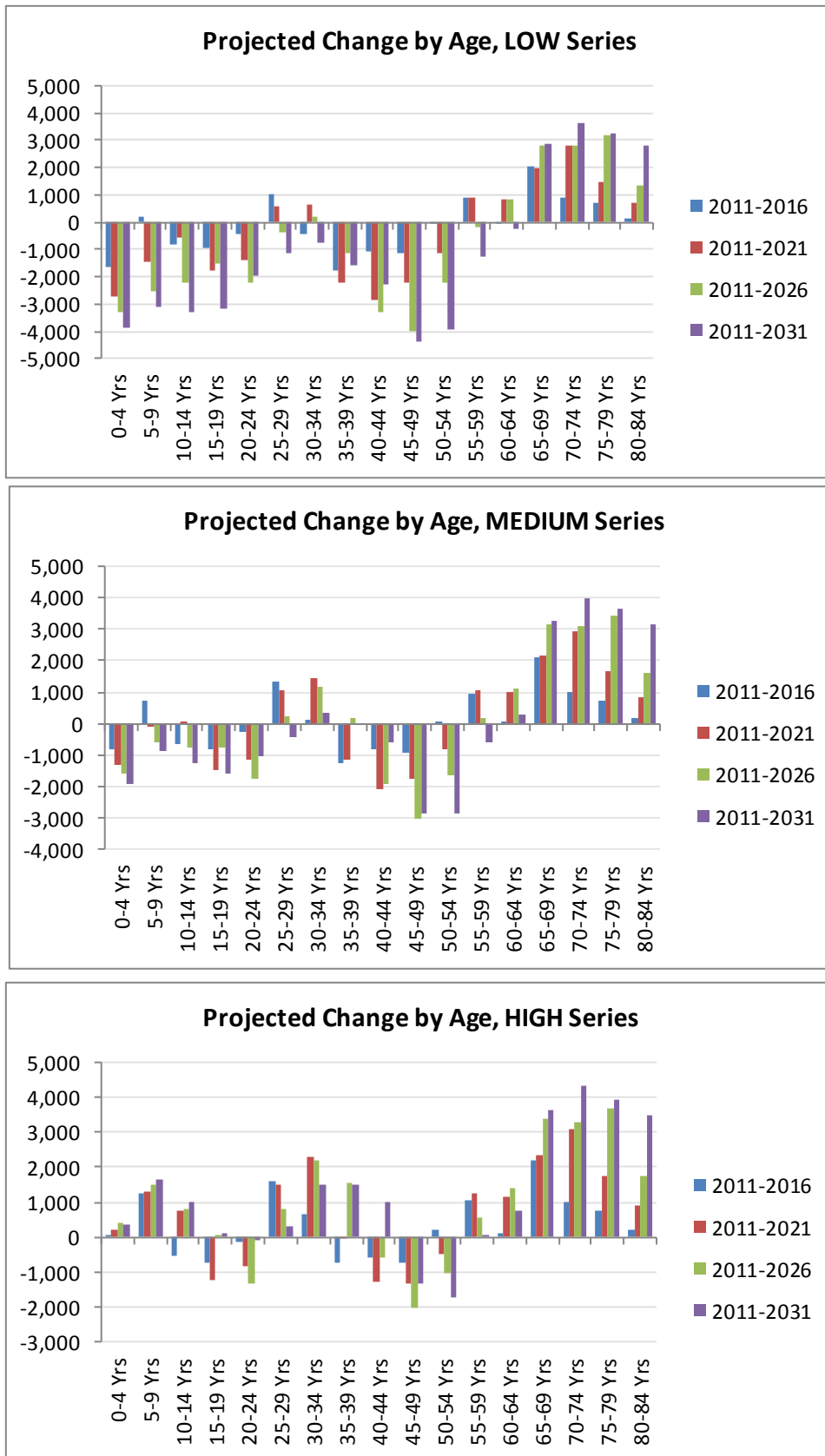
Table 5.1.1: Projected Population, Hawke's Bay Region, 2006-2021 (Medium Series)

Hawke's Bay Region	2006	2011	2016	2021	2026	2031	Change (%) 2011-2031
Numbers by age							
0-14	34,640	33,830	33,050	32,470	30,900	29,830	-11.8
15-24	19,180	20,240	19,120	17,620	17,710	17,610	-13.0
25-39	27,510	25,550	25,730	26,930	27,130	25,430	-0.5
40-54	32,580	32,650	30,970	27,990	26,090	26,350	-19.3
55-64	17,180	19,360	20,360	21,410	20,650	19,020	-1.8
65-74	11,160	12,920	16,000	18,040	19,110	20,170	56.1
75-84	7,390	7,780	8,680	10,240	12,840	14,580	87.4
85+	2,460	2,940	3,380	3,720	4,390	5,350	82.0
Total	152,100	155,270	157,290	158,420	158,820	158,340	2.0
65+	21,010	23,640	28,060	32,000	36,340	40,100	69.6
Intercensal Change by Age - Numbers							
		2006-2011	2011-2016	2016-2021	2021-2026	2026-2031	Change (N) 2011-2031
0-14	...	-810	-780	-580	-1570	-1070	-4000
15-24	...	1060	-1120	-1500	90	-100	-2630
25-39	...	-1960	180	1200	200	-1700	-120
40-54	...	70	-1680	-2980	-1900	260	-6300
55-64	...	2180	1000	1050	-760	-1630	-340
65-74	...	1760	3080	2040	1070	1060	7250
75-84	...	390	900	1560	2600	1740	6800
85+	...	480	440	340	670	960	2410
Total	...	3170	2020	1130	400	-480	3070
65+	...	2630	4420	3940	4340	3760	16460
Age Distribution (percentage at each age)							
	2006	2011	2016	2021	2026	2031	Change (%) 2011-2031
0-14	22.8	21.8	21.0	20.5	19.5	18.8	-13.5
15-24	12.6	13.0	12.2	11.1	11.2	11.1	-14.7
25-39	18.1	16.5	16.4	17.0	17.1	16.1	-2.4
40-54	21.4	21.0	19.7	17.7	16.4	16.6	-20.9
55-64	11.3	12.5	12.9	13.5	13.0	12.0	-3.7
65-74	7.3	8.3	10.2	11.4	12.0	12.7	53.1
75-84	4.9	5.0	5.5	6.5	8.1	9.2	83.8
85+	1.6	1.9	2.1	2.3	2.8	3.4	78.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	...
65+	13.8	15.2	17.8	20.2	22.9	25.3	66.3
Summary measures							
	2006	2011	2016	2021	2026	2031	2011-2031
LM Entrants/Exits							
(15-24/55-64 years)	1.1	1.0	0.9	0.8	0.9	0.9	...
(20-29/60-69 years)	1.2	1.0	1.0	0.9	0.7	0.8	...
Elderly/Children	0.61	0.70	0.85	0.99	1.18	1.34	...
Reproductive (20-39 yrs)	23.2	22.4	22.0	22.1	21.7	21.2	...
65+	13.8	15.2	17.8	20.2	22.9	25.3	...
75+	6.5	6.9	7.7	8.8	10.8	12.6	...
Growth (%) - 5 years	...	2.08	1.30	0.72	0.25	-0.30	1.98
Annual average growth (%)	...	0.42	0.26	0.14	0.05	-0.06	0.10

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



Figure 5.1.2: Projected Population Change by Age and Projection Series, Hawke's Bay Region



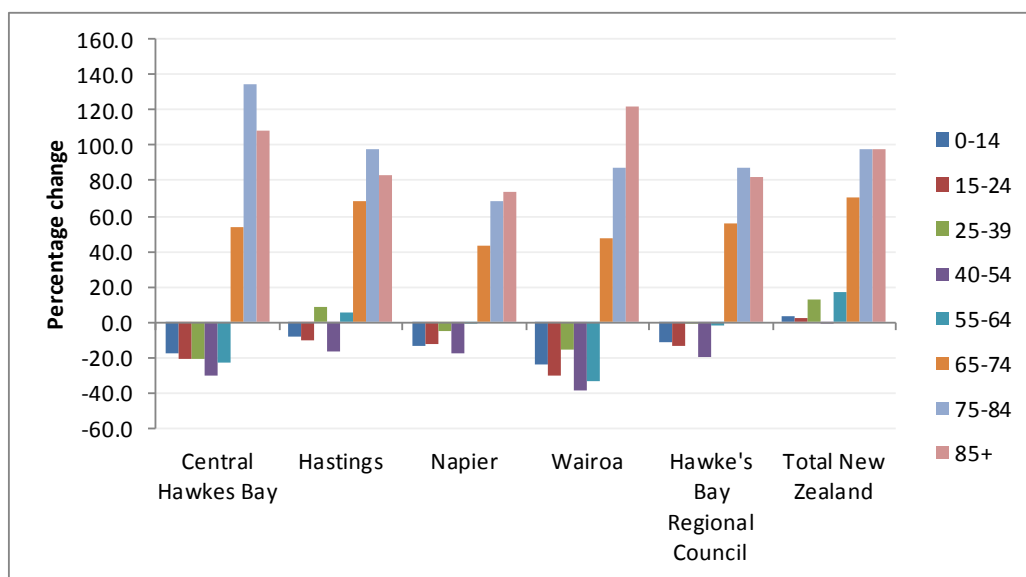
Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 Update



Figure 5.1.3 and Table 5.1.2 summarise the changes for the region, its TA's, and total New Zealand. Reflecting the trends at regional council level, all TA's but one are projected to experience population loss at all ages below 65 years. The exception is Hastings, which shows small gains at ages 25-39 and 55-64. Trends at the older ages differ slightly, but in all cases show substantial growth, especially at 75+ years for for Central Hawke's Bay, Hastings and Wairoa, more so than for the total region. Notably, Total New Zealand experiences only minor gains across all younger age groups, while trends at older ages are similar.

The overall outcome of these shifts (Table 5.1.2) is continued absolute decline for Wairoa, a situation that is also projected to become the experience of Central Hawkes Bay within the next five years. By comparison, Napier is projected to grow by less than one per cent across the projection period, while Hastings may experience growth of around 6.6 per cent – notably the majority of it at older ages, as is the case for the Hawke's Bay Region.

Figure 5.1.3: Projected Change (%) in Numbers by Broad Age Group, Hawke's Bay Region, its TA's, and Total New Zealand 2011-2031, Medium Series



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



Table 5.1.2: Projected Change (%) in Numbers by Broad Age Group, Hawke's Bay Region, its TA's and Total New Zealand, 2011-2031, Medium Series

	Central Hawkes Bay	Hastings	Napier	Wairoa	Hawke's Bay Regional Council	Total New Zealand
0-14	-17.9	-7.8	-14.0	-24.2	-11.8	3.2
15-24	-21.2	-9.9	-12.7	-30.3	-13.0	2.2
25-39	-20.6	8.4	-5.4	-15.9	-0.5	12.7
40-54	-29.9	-17.1	-17.4	-38.5	-19.3	0.0
55-64	-22.4	5.7	-0.4	-33.0	-1.8	16.9
65-74	53.3	68.7	43.4	47.8	56.1	70.7
75-84	134.4	98.0	68.7	86.8	87.4	97.9
85+	108.7	83.2	74.2	122.2	82.0	98.1
Total	-6.5	6.6	0.5	-15.4	2.0	16.3
65+	83.8	80.0	55.9	66.7	69.6	82.8

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

5.2 Projections by Ethnicity

While counting population by ethnicity is difficult, projecting populations based on ethnic affiliation is even more difficult. The following projections have many caveats attached to them and should be read as indicative only. Among them is their multiple count base, the high degree of rounding of numbers involved, and the fact that some ethnic groups are not projected for all areas (such as Central Hawke's Bay, Napier and Wairoa) because of very small cell sizes by age and sex.

Table 5.2.1 shows the European/Other population of the Hawke's Bay region declining slightly (0.2 per cent) between 2011 and 2021 against an 11.1 per cent increase for Māori. The percentage increases projected for the Pacific Islands and Asian populations (31.4 and 32.6 per cent respectively) are somewhat larger, partly reflecting their smaller bases.

In all cases, natural increase is the primary driver of growth, and for the European and Māori populations, offsets accompanying net migration loss. For Māori, natural increase is notably somewhat larger than for European/Other in absolute terms (in 2011, 4,200 compared with 3,000). There are also marked differences by age. The 65+ year European/Other population is projected to increase by 32.1 per cent, compared with 63.2 per cent for Māori, while decline is projected for the European/Other population at all other ages, against an increase for all other population/age groups.



Table 5.2.1: Population Projections for Hawke's Bay RC by Ethnic Group and Broad Age Group

Hawke's Bay 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	27,400	40,200	34,900	17,400	119,900	...	...	...	...	...	35.8
2001	26,100	34,900	37,700	18,100	116,700	...	...	...	...	...	38.4
2006 (base)	25,400	34,600	41,400	19,300	120,700	...	...	...	...	...	40.2
2011	25,000	32,800	43,000	21,500	122,200	8200	5200	3000	-1500	0	42.0
2016	24,400	30,900	42,000	25,300	122,400	7400	5500	1900	-1700	0	44.0
2021	23,700	29,800	39,900	28,400	121,900	7000	5800	1200	-1700	0	45.7
Change 2011-2021 (%)	-5.2	-9.1	-7.2	32.1	-0.2	...	...	...	...	...	...
Māori											
1996	13,100	14,200	6,300	1,200	34,900	...	...	...	...	...	21.4
2001	13,400	13,700	7,100	1,400	35,500	...	...	...	...	...	21.7
2006 (base)	12,900	13,500	8,400	1,600	36,400	...	...	...	...	...	23.0
2011	13,400	14,000	9,200	1,900	38,600	5200	1000	4200	-1500	-500	23.0
2016	14,000	14,600	9,800	2,500	40,900	5000	1100	4000	-1200	-600	23.8
2021	14,500	15,200	10,000	3,100	42,900	5000	1200	3800	-1200	-600	24.8
Change 2011-2021 (%)	8.2	8.6	8.7	63.2	11.1	...	...	...	...	...	...
Pacific Islands											
1996	1,800	1,700	600	100	4,200	...	...	...	...	...	18.8
2001	2,200	2,100	900	100	5,300	...	...	...	...	...	19.6
2006 (base)	2,500	2,300	1,100	200	6,100	...	...	...	...	...	19.4
2011	2,900	2,600	1,300	200	7,000	1200	100	1100	0	-100	18.9
2016	3,400	3,000	1,500	200	8,100	1200	100	1100	0	-100	18.9
2021	3,800	3,400	1,600	300	9,200	1300	100	1200	0	-100	19.0
Change 2011-2021 (%)	31.0	30.8	23.1	50.0	31.4	...	...	...	...	...	...
Asian											
1996	700	1,200	600	100	2,600	...	...	...	...	...	28.5
2001	800	1,400	900	200	3,300	...	...	...	...	...	29.8
2006 (base)	1,000	1,600	1,000	200	3,900	...	...	...	...	...	29.3
2011	1,200	1,900	1,200	300	4,600	500	100	400	300	0	29.3
2016	1,500	2,200	1,300	400	5,300	600	100	500	300	0	30.0
2021	1,800	2,300	1,400	600	6,100	600	100	500	300	0	30.4
Change 2011-2021 (%)	50.0	21.1	16.7	100.0	32.6	...	...	...	...	...	...

Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update) Tables 3e, 3m, 3p, 3a

(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.



Table 5.2.2 and Figure 5.2.1 provide an overview in terms of resulting population share by age. The data suggest that there will be relatively little change in the overall ethnic composition of the region over time, with European/Other continuing to hold the major share and Māori the second largest share. However the share held by the European/Other population will diminish and will do so for all age groups. By 2021, the European/Other population is projected to account for little more than two-thirds of the total Hawke’s Bay population (down from 71 per cent in 2011), while Māori will comprise approximately one-quarter (up from 22 per cent).

Equivalent data are not available for all TA’s of the region and thus projected contribution for each ethnic group by TA cannot be shown.

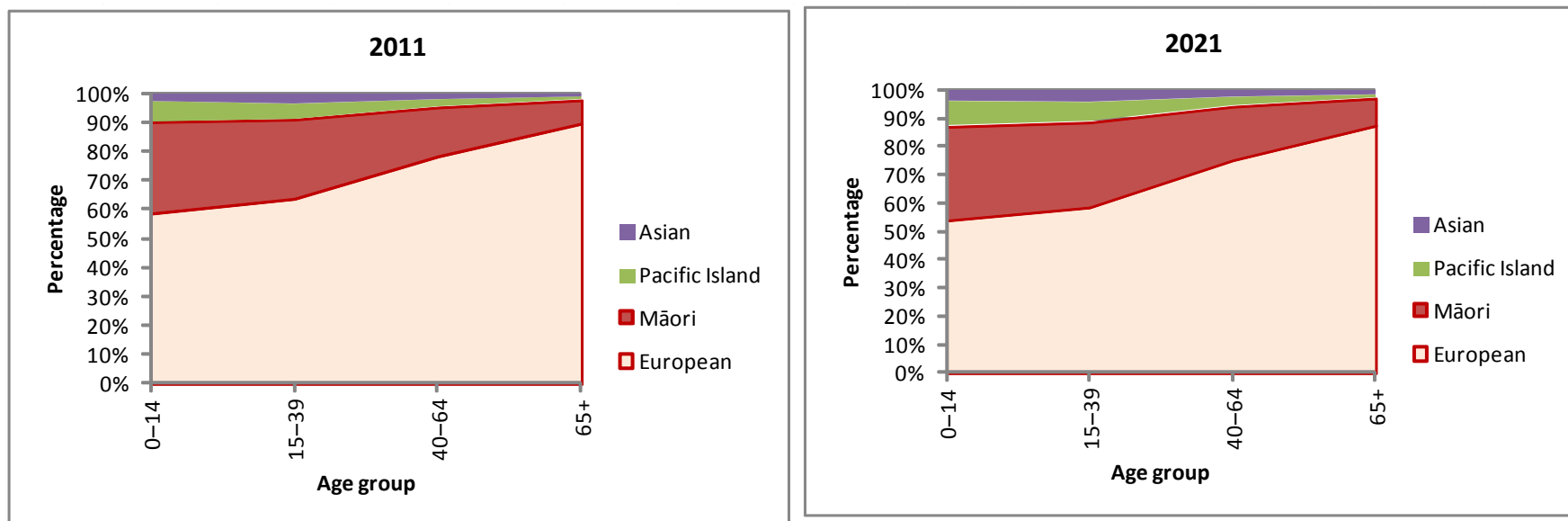
Table 5.2.2: Projected Distribution (% Share) by Age and Ethnic Group*, Hawke’s Bay Region

	0–14	15–39	40–64	65+	All ages
2011					
European	58.8	63.9	78.6	90.0	70.9
Māori	31.5	27.3	16.8	7.9	22.4
Pacific Island	6.8	5.1	2.4	0.8	4.1
Asian	2.8	3.7	2.2	1.3	2.7
Total	100.0	100.0	100.0	100.0	100.0
Number	42,500	51,300	54,700	23,900	172,400
2016					
European	56.4	60.9	76.9	89.1	69.3
Māori	32.3	28.8	17.9	8.8	23.1
Pacific Island	7.9	5.9	2.7	0.7	4.6
Asian	3.5	4.3	2.4	1.4	3.0
Total	100.0	100.0	100.0	100.0	100.0
Number	43,300	50,700	54,600	28,400	176,700
2021					
European	54.1	58.8	75.4	87.7	67.7
Māori	33.1	30.0	18.9	9.6	23.8
Pacific Island	8.7	6.7	3.0	0.9	5.1
Asian	4.1	4.5	2.6	1.9	3.4
Total	100.0	100.0	100.0	100.0	100.0
Number	43,800	50,700	52,900	32,400	180,100

Source and Notes: same as Table 5.2.1



Figure 5.2.1: Projected Population of the Hawke’s Bay 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 3e, 3m, 3p, 3a

(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.

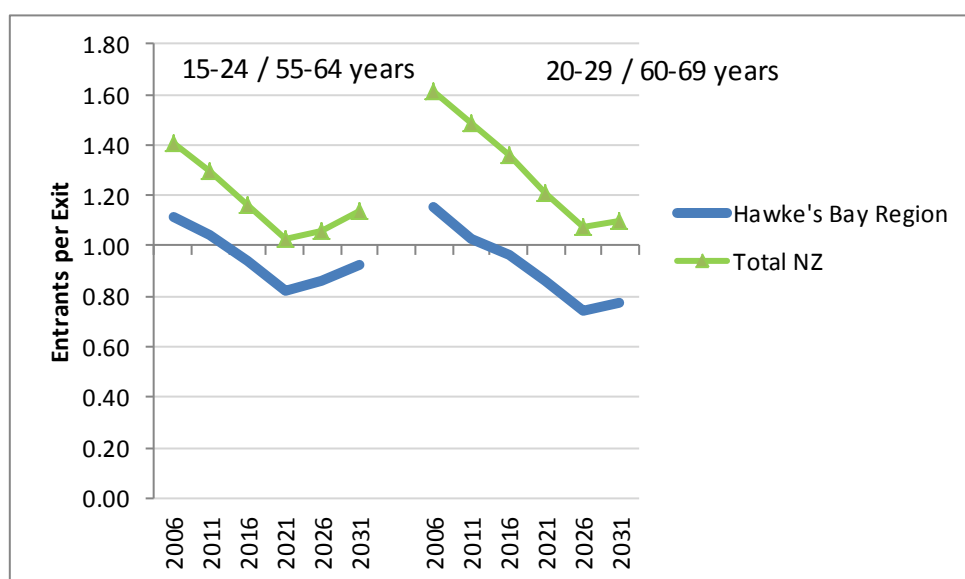


5.3 Labour Market Implications of Changing Age Structure

As noted earlier, population ageing drives other important changes. One of the most important is change in the ratio of people at labour market entry age to those at 'exit' age. As noted, various age groupings can be employed to calculate this ratio; here I use two: people aged 15-24 to those aged 55-64 years, and people aged 20-29 to those aged 60-69 years (Figure 5.3.1). Based on the first of these indices, the Hawke's Bay Region can expect to have fewer 'entrants' than 'exits' by 2016, reaching a low point of 0.8 (nine entrants per ten exits) around 2021, then returning again to 0.9 (see also Table 5.1.1 above). When the ratio is based on those aged 20-29 and 60-69 years, it similarly falls below one between 2016 and 2021, dropping as low as 0.7 in 2026 then rising a little in 2031.

For Total New Zealand the ratios similarly decline, but do not fall below one during the projection period (Appendix 3.3). All are of course linked, however, 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 in the following special topic (Section 6.0).

Figure 5.3.1: Projected Ratio of People at Labour Market Entry Age to Those Approaching Exit Age, Hawke's Bay Region and Total New Zealand, 2006-2031



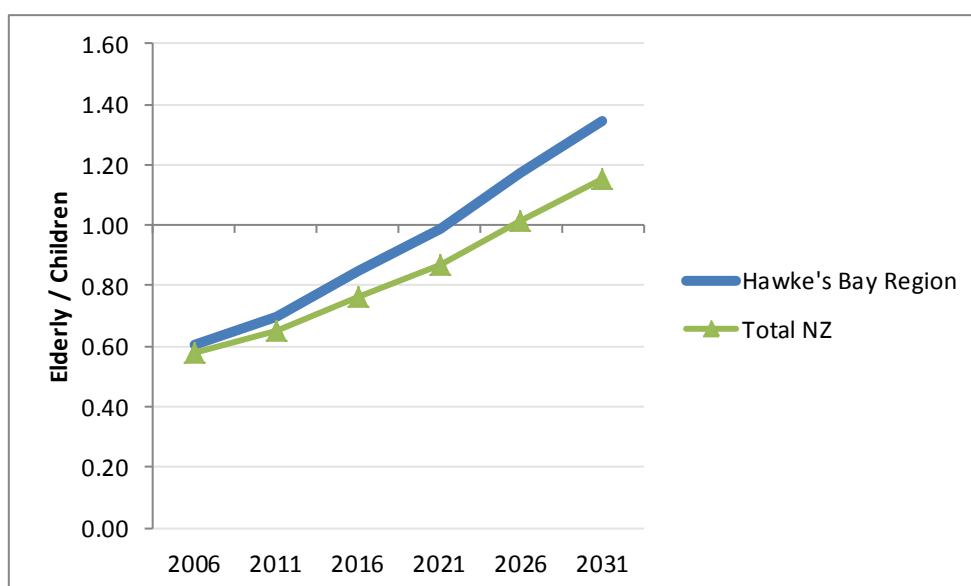
Source: Statistics New Zealand, *Subnational Population Projections by Age and Sex, 2006(base)-2031 Update*



5.4 Natural Increase Implications of Changing Age Structure

For the Hawke's Bay Region, the ratio of elderly (65+ years) to children (0-14 years) is projected to increase rapidly from its present 0.7 (seven elderly for every ten children), to 1.34 by 2031 (13 for every 10 - Figure 5.4.1). This profound shift to more elderly than children (cross over around 2021, about five years ahead of Total New Zealand) will by then be contributing to rapidly diminishing levels of natural increase (Figure 5.4.2), as will the relatively small proportion projected to be at the key reproductive ages (21-22 per cent) compared with Total New Zealand (25-27 per cent) (Figure 5.4.3).

Figure 5.4.1: Projected Ratio of Elderly (65+ Years) to Children (0-14 Years), Hawke's Bay Region and Total New Zealand, 2006-2031

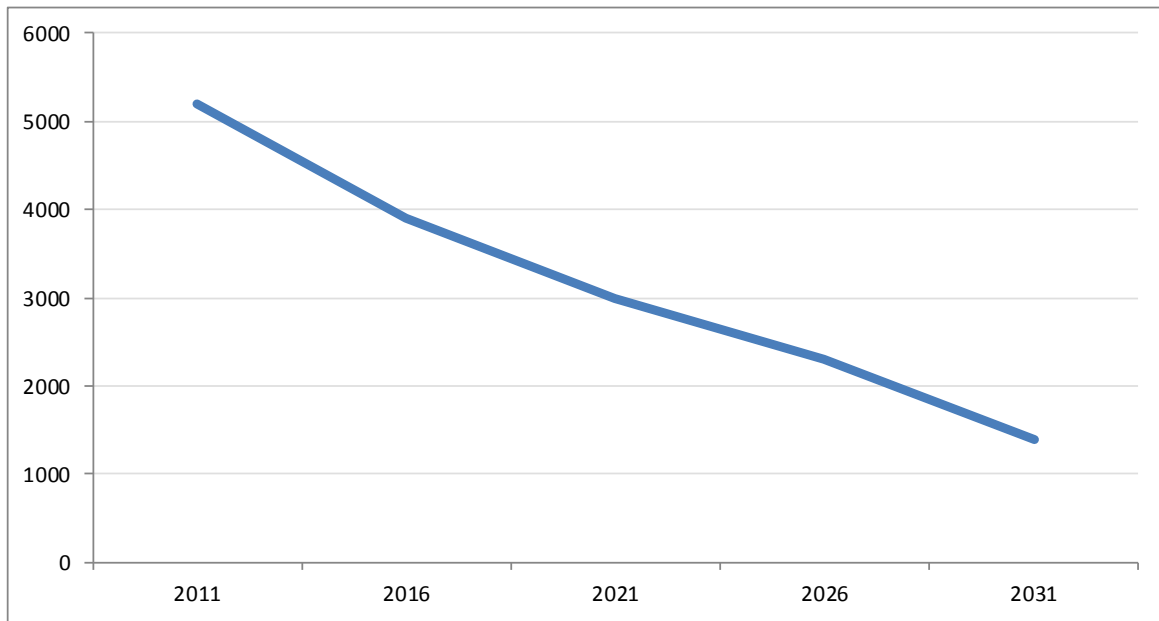


Source: Statistics New Zealand, *Subnational Population Projections by Age and Sex, 2006(base)-2031 Update*

The proportion at key reproductive ages (Figure 5.4.3) 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 currently the major component of Hawke's Bay's growth. As that component declines, growth – or maintenance of population size - will become ever more dependent on migration.

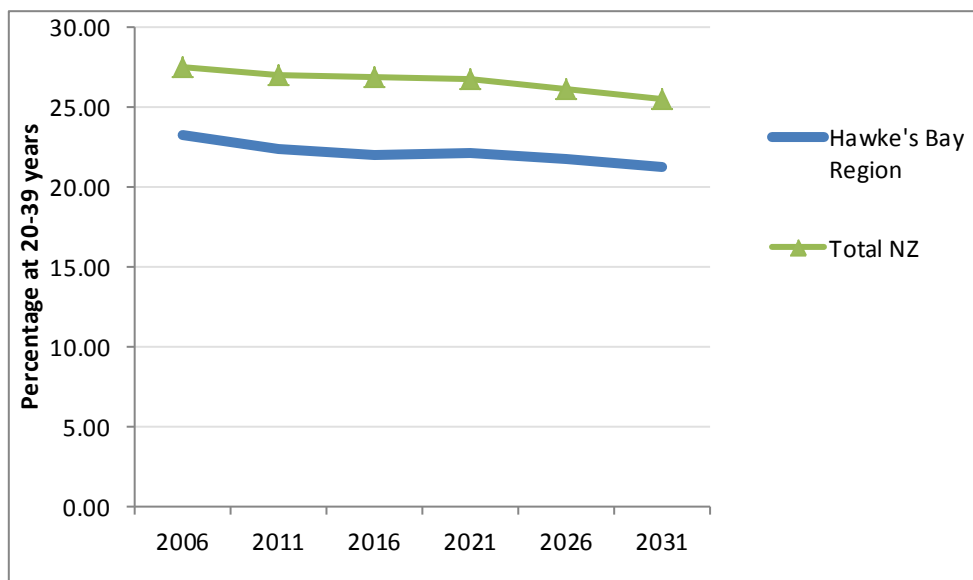


Figure 5.4.2: Projected Natural Increase, Hawke's Bay Region, 2011-2031



Source: Statistics NZ Subnational Projected Population Characteristics, 2006(base)-2031 Update

Figure 5.4.3: Projected Proportion at Key Reproductive Ages (20-39 Years), Hawke's Bay Region and Total New Zealand, 2006-2031



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



6.0 Industrial Change – Special Topic 1

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

The extent (and speed) of population ageing and its impact on Labour Market entry/exit ratios also 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 and succession planning.

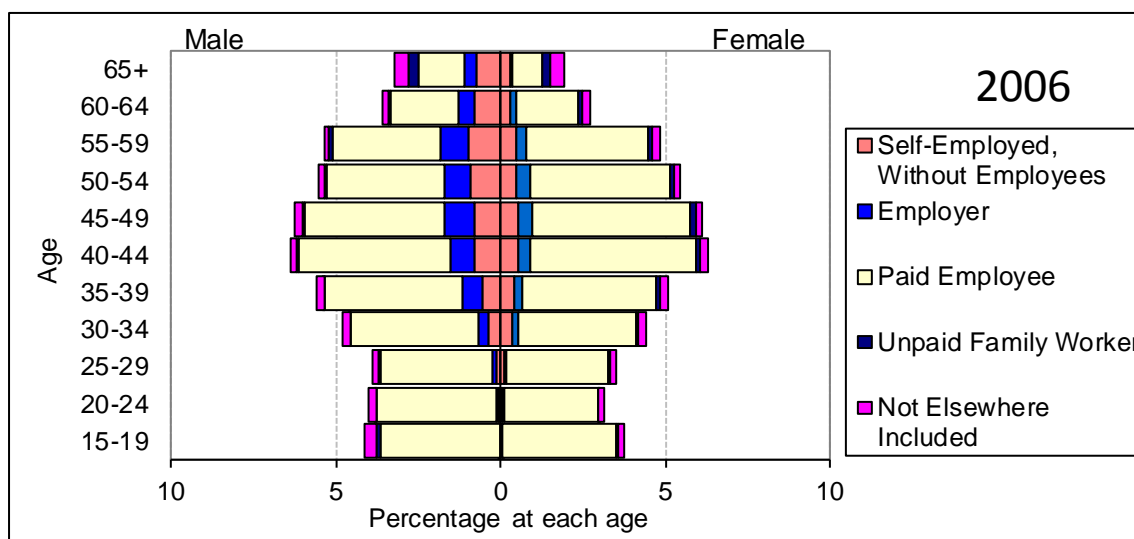
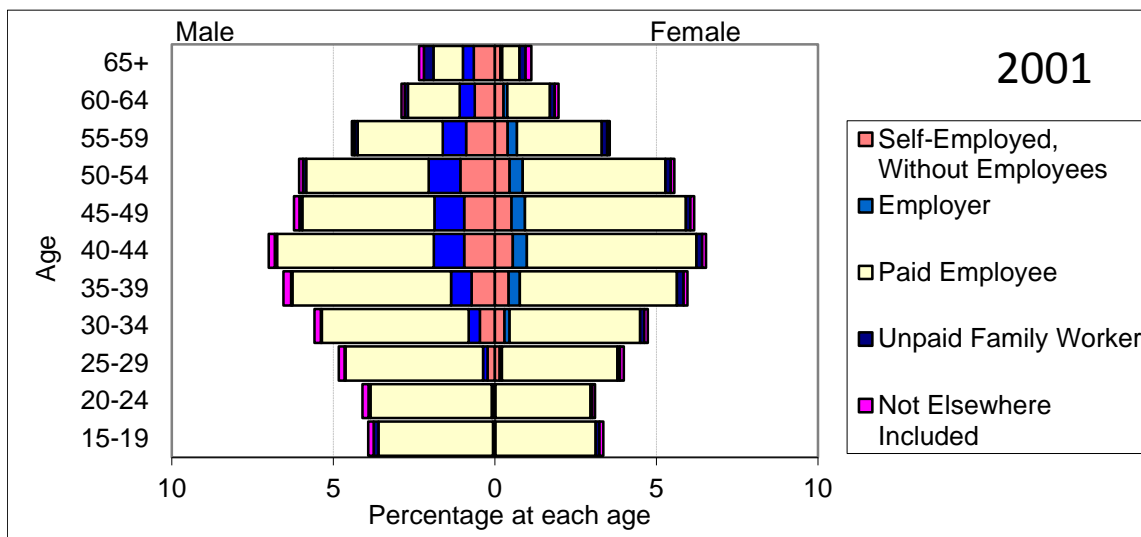
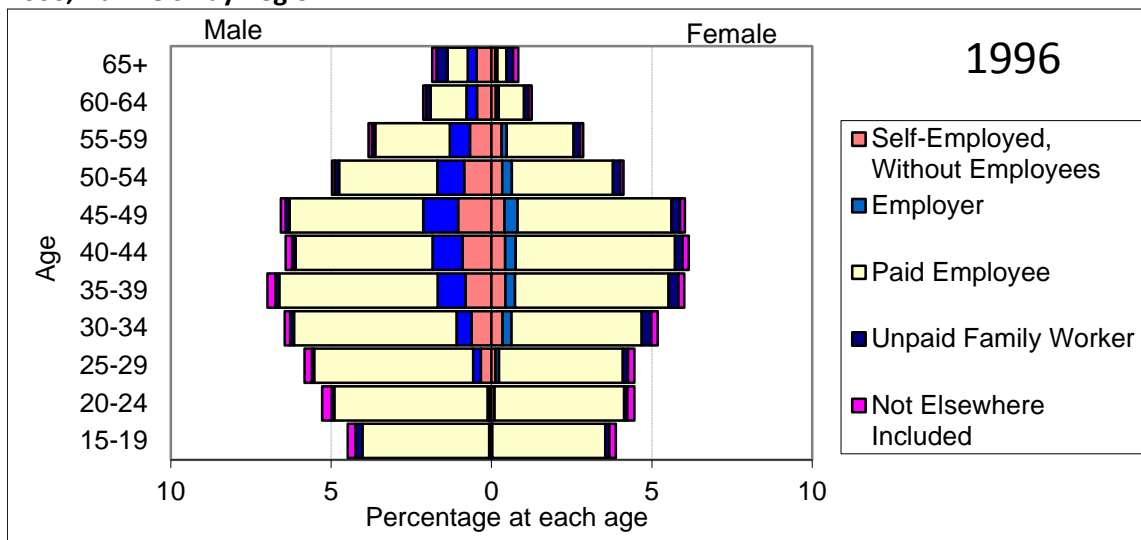
This section provides an overview of the changing age-sex structure of the Hawke's Bay Region's employed labour force by employment status (self-employed, employer, paid employee etc.), first for the total labour force, then for the region's five largest industries at the three digit level: School Education; Horticulture and Fruit Growing; Grain, Sheep and Beef Farming; Meat and Meat Product Manufacturing; and Community Care Services (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.

Figure 6.1.1 provides data for the Hawke's Bay Region's total employed labour force. Reflecting the trends outlined above, the average age of employed persons at each census was respectively 39.1, 41.2 and 42.4 years (see Appendix 4.1 for average age by employment status), an overall increase of 3.4 years (8.7 per cent). By comparison the average age for the Total New Zealand employed labour force at each observation was 38.3, 40.1 and 41.2 years (2.9 years, 7.6 per cent). As might be expected, employers and the self-employed tend to have the oldest average ages, around nine years greater than paid employees, with those from the Hawke's Bay Region a year or two older than for New Zealand generally.

A significant departure from the picture for the total employed labour force is that for the region's single largest industrial grouping, School Education (ANZSIC96 V4.1 code N842), which is heavily feminised and – as would be expected - contains very few people enumerated as anything other than paid employees (Figure 6.1.2). The average age of persons in the Hawke's Bay employed in this industry (46.7 years in 2006) is around four years greater than the region's total labour force, and has shifted upwards since 1996 by 3.6 years (8.5 per cent). This is a somewhat greater rate of structural ageing than for the Total New Zealand School Education labour force (Appendix 4.2).



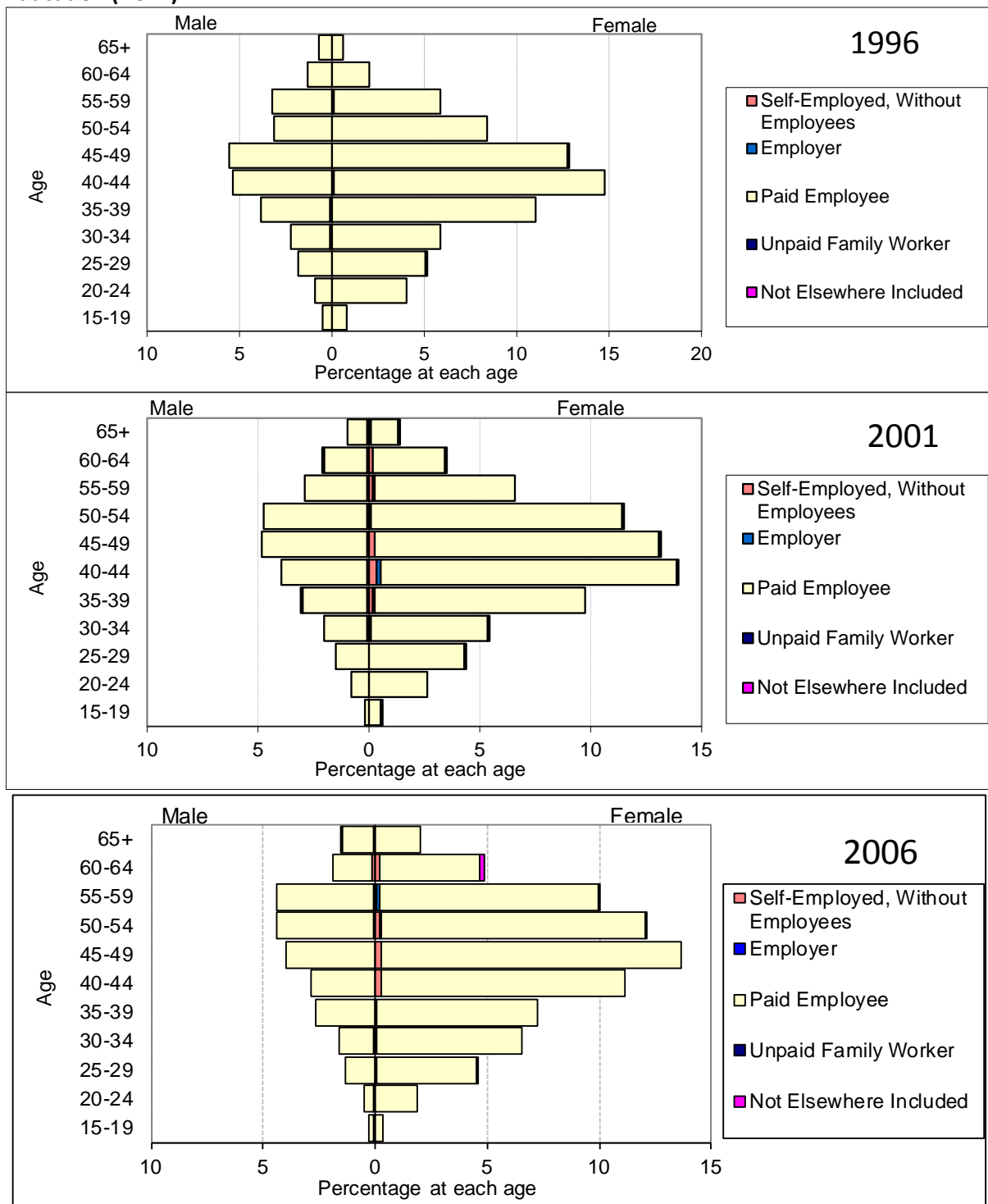
Figure 6.1.1: Age-Sex Structure and Employment Status of Employed Labour Force 1996, 2001, 2006, Hawke's Bay Region



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 and Over, 1996, 2001, 2006



Figure 6.1.2: Age-Sex Structure of Major Industries 1996, 2001, 2006, Hawke's Bay Region: School Education (N842)



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 and Over, 1996, 2001, 2006



While structurally younger, substantial ageing is also evident in the Hawke's Bay's second largest industry (in 2006 employing 3,084), Horticulture and Fruit Growing (Figure 6.1.3, Appendix 4.3). The average age of Hawke's Bay employees in this somewhat masculinised industry is similar to the region's total employed labour force, but it is ageing faster, increasing from 37.8 years in 1996 to 40.5 years in 2006 (4.7 years, 12.5 per cent). Employees are around 2 years younger than the New Zealand average for this industry. At the same time, Hawke's Bay employers tend to be a little older than the New Zealand average for the industry, and the self-employed, a little younger.

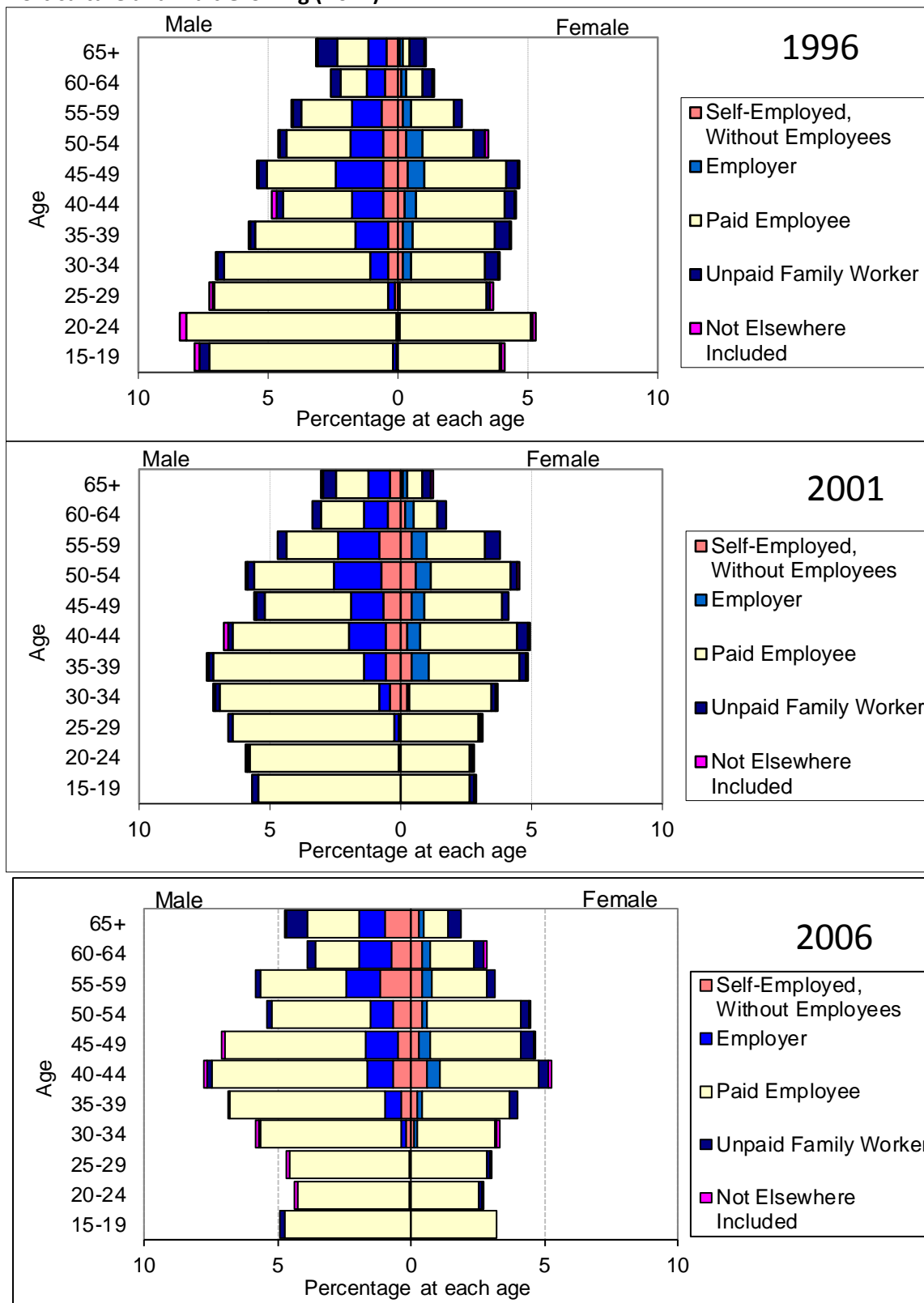
Also dominated by males, the Grain, Sheep and Beef Cattle Farming industry is the region's third largest, in 2006 employing 3,036 people (Figure 6.1.4). Its age-sex structures contrast significantly with those for Horticulture and Fruit Growing. Generally understood as one of the older industries (in terms of age structure), the average age of Hawke's Bay's Grain, Sheep and Beef farmers increased from 43.5 years in 1996 to 46.5 years in 2006 (7.0 per cent). In 1996 this meant that the region's farmers were a little older on average than their New Zealand counterparts, but in 2001 and 2006 a little younger (Appendix 4.4). Again however the region's employers in this industry were older than those across the rest of the country. The relatively small proportion of paid employees at the younger ages *vis-à-vis* the bulk of employers at older ages has significant implications for succession of these farms.

Somewhat younger in age structure – but nevertheless ageing as well, and also heavily male dominated - is the Hawke's Bay region's Meat and Meat Product Manufacturing industry (Figure 6.1.5), in 2006 employing around 2,460 people (the region's 5th largest). Similar to the total employed labour force of the region, the average age of employees in this industry in 2006 was 41.1 years, having increased by 3.1 years (8.1 per cent) since 1996 (Appendix 4.5). Of note is that this industry has relatively few employers or self-employed living in the Hawke's Bay region; however this situation is similar across Total New Zealand.

Contrasting completely with the large male dominated industries is Community Care Services. Like School Education, this industry is disproportionately staffed by females (Figure 6.1.6, Appendix 4.6). The extent and speed of ageing in this industry is also more profound than in general, the average age of 47.6 years in 2006 having increased by 6.5 years since 1996, almost 16 per cent.



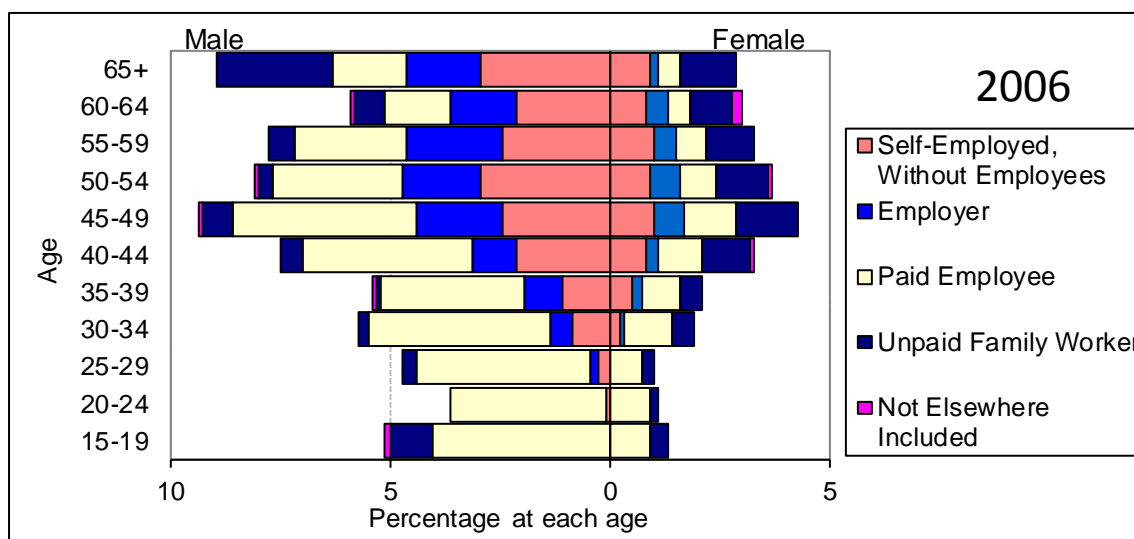
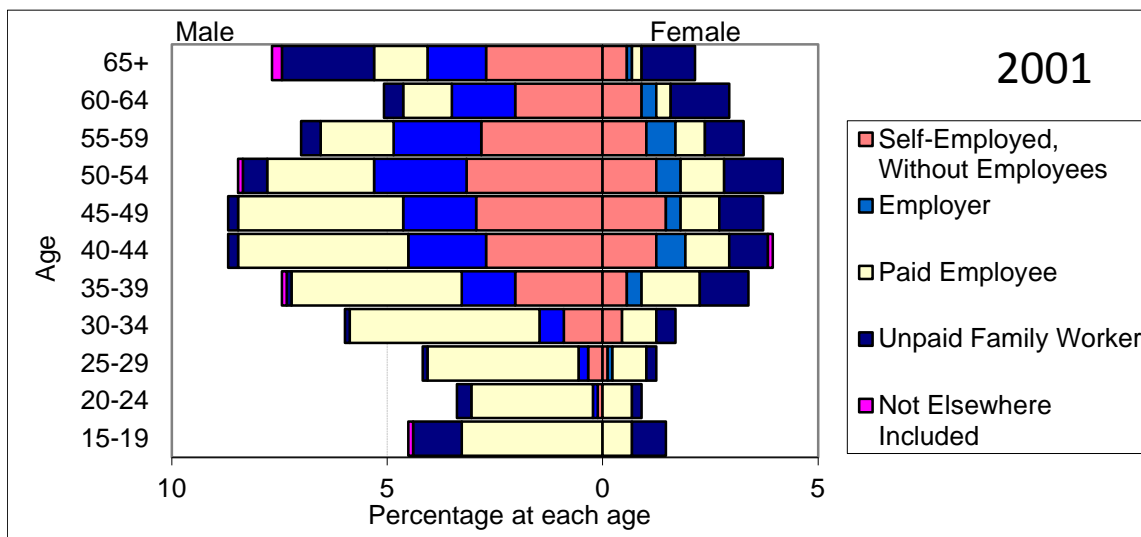
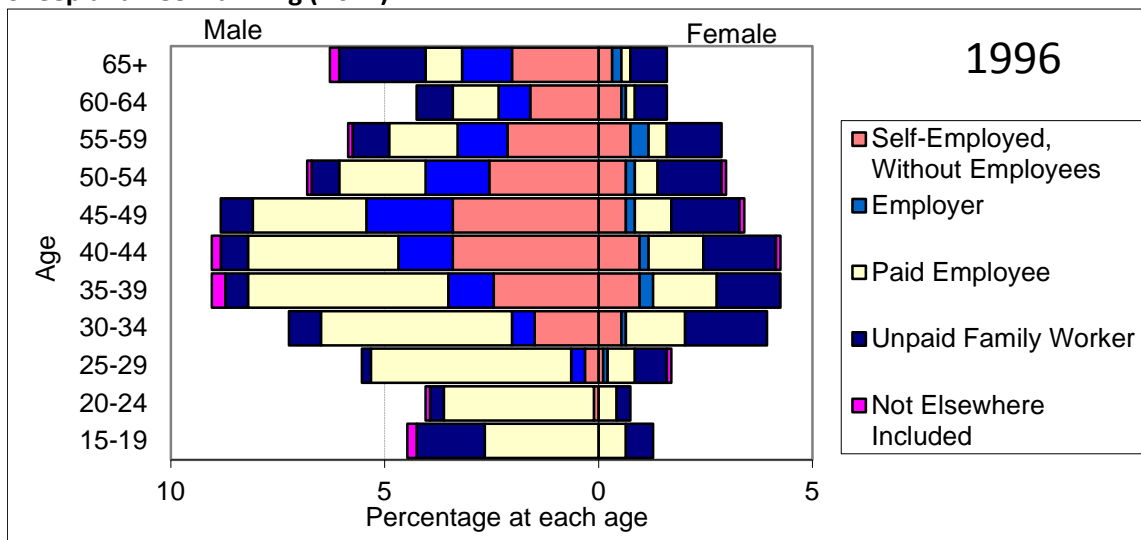
Figure 6.1.3: Age-Sex Structure of Major Industries 1996, 2001, 2006, Hawke's Bay Region: Horticulture and Fruit Growing (A011)



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 and Over, 1996, 2001, 2006



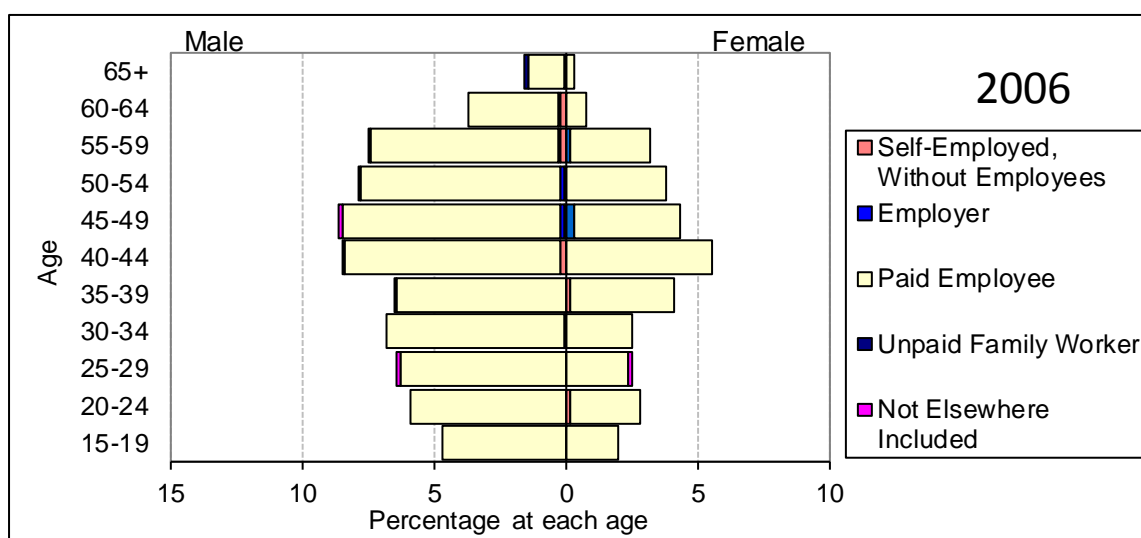
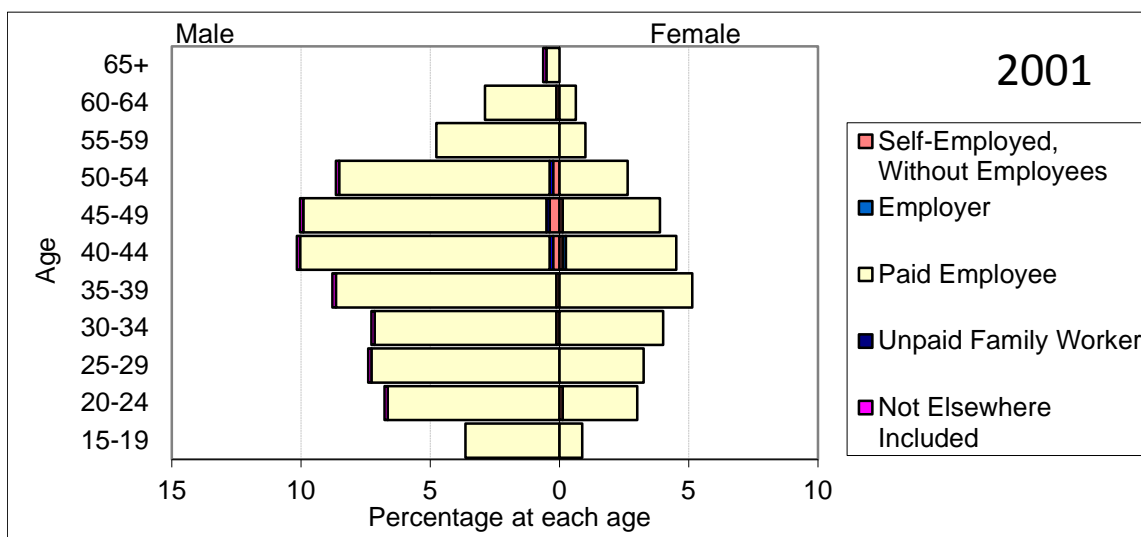
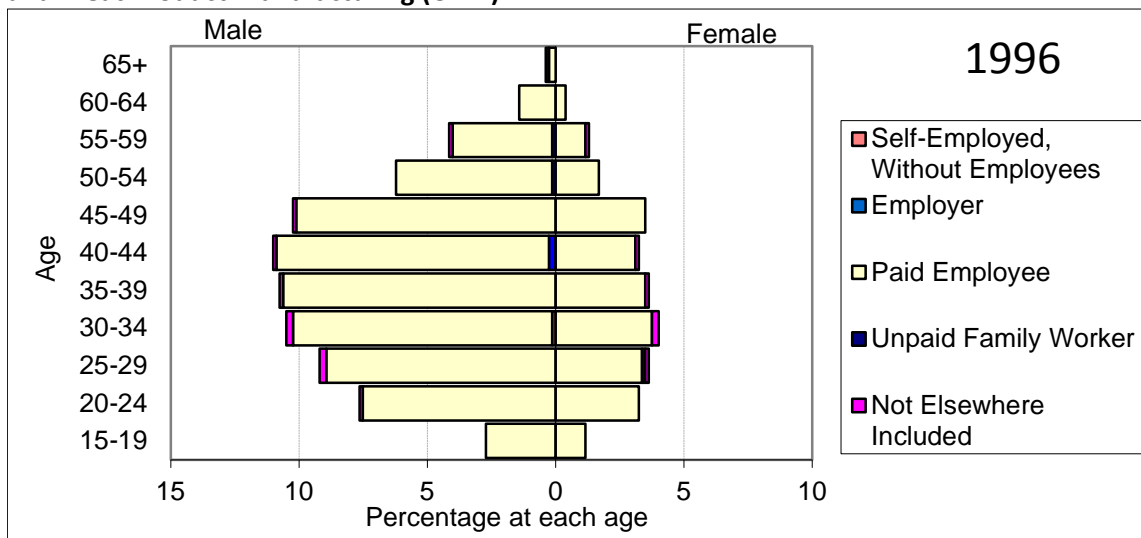
Figure 6.1.4: Age-Sex Structure of Major Industries 1996, 2001, 2006, Hawke's Bay Region: Grain, Sheep and Beef Farming (A012)



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 and Over, 1996, 2001, 2006



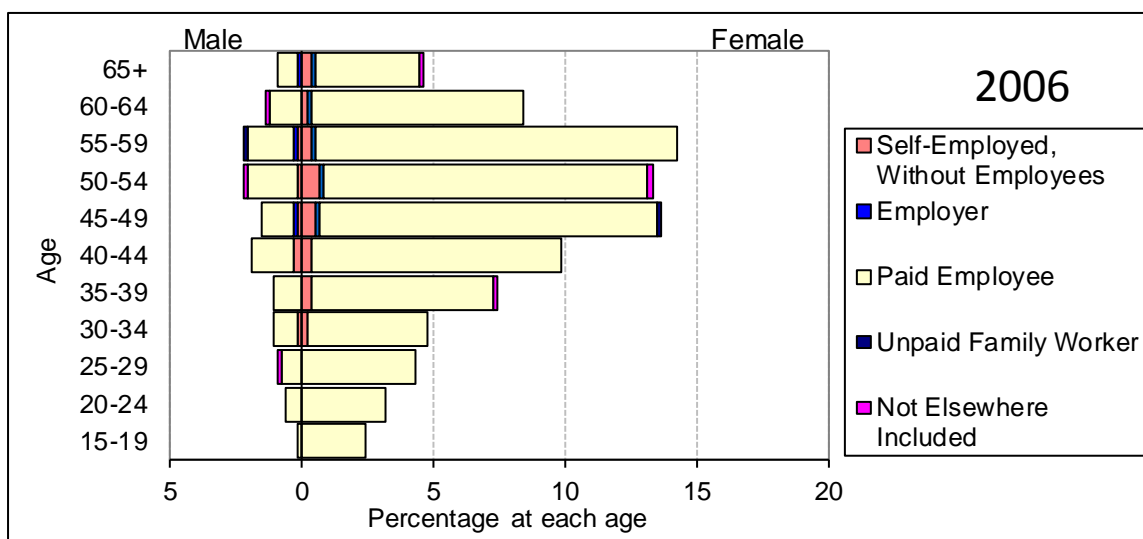
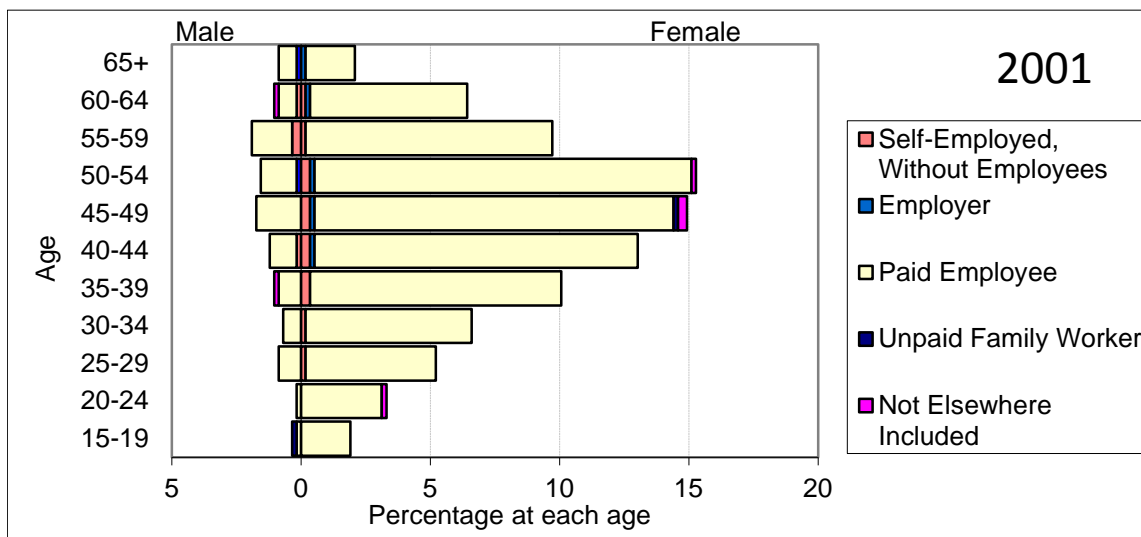
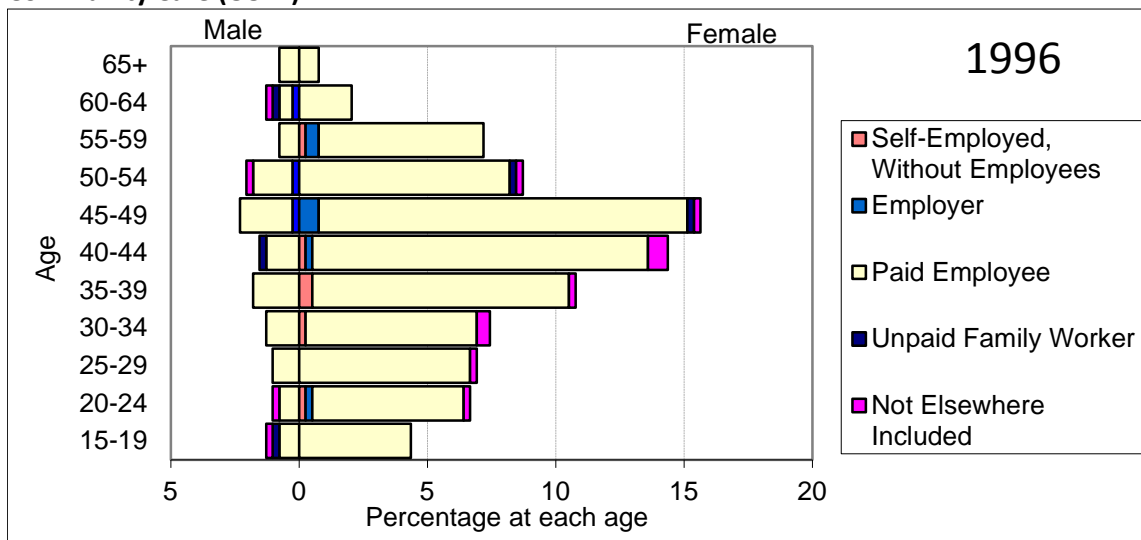
Figure 6.1.5: Age-Sex Structure of Major Industries 1996, 2001, 2006, Hawke's Bay Region: Meat and Meat Product Manufacturing (C211)



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 and Over, 1996, 2001, 2006



Figure 6.1.6: Age-Sex Structure of Major Industries 1996, 2001, 2006, Hawke's Bay Region: Community Care (O872)



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 and Over, 1996, 2001, 2006



Drawing on the 'entry/exit ratio' index, Table 6.1.1 provides a summary perspective on these trends, including also data for all industries with more than 1,000 employed persons in the Hawke's Bay Region (together accounting for half of the region's employed persons) (see also Appendix 4.7).

The data show the ratio of people employed in the labour market entry ages (15-24 years) to those in the retirement zone (55-64 years) for each of the selected industries. Notable are the extremely low 2006 ratios for some industries, such as 0.1 for School Education (one person at 15-24 years for every 10 at 55-64 years), Community Care Services (0.2) and Other Health Services (0.2) for the Hawke's Bay region. These ratios will of course reflect the relatively low proportions of people at younger ages with relevant qualifications or experience; however in each case they are lower than for Total New Zealand, and most have declined at a faster rate. Other industries with ratios already well below 1.0 (ie, ten entrants per ten exits) are Grain, Sheep and Beef Farming (0.6), Hospitals and Nursing Homes (0.3), Government Administration (0.3), Other Business Services (0.7) and Marketing and Business management Services (0.6). In some cases these are also below those for Total New Zealand (eg., Government Administration, Other Business Services, and Marketing and Business Management Services), but in others they are above. Either way, they point to an urgent need to engage with the rapid ageing of, and succession planning within, many local industries.

Table 6.1.1: Ratio of People at Labour Market Entry Age (15-24) to Exit Age (55-64) in Industries Employing over 1,000 persons, Hawke's Bay Region and Total New Zealand, 1996 and 2006

	Hawke's Bay Region			Total New Zealand		
	1996	2006	Change (%)	1996	2006	Change (%)
School Education (N842)	0.5	0.1	-71.7	0.6	0.3	-57.9
Horticulture and Fruit Growing (A011)	2.4	1.0	-59.9	1.6	0.7	-56.5
Grain Sheep and Beef Farming (A012)	0.7	0.6	-22.6	0.7	0.4	-44.7
Meat and Meat Product Manufacturing (C211)	2.0	1.0	-50.1	2.1	1.2	-40.1
Community Care Services (O872)	1.2	0.2	-79.6	1.0	0.3	-67.5
Supermarkets and Grocery Stores (G511)	2.0	3.4	65.6	2.1	4.8	131.0
Fruit and Vegetable Processing (C213)	3.3	1.6	-51.6	4.0	1.4	-63.9
Services to Agriculture (A021)	4.4	1.7	-61.3	2.9	1.4	-52.5
Hospitals and Nursing Homes (O861)	0.6	0.3	-59.7	0.9	0.3	-61.7
Government Administration (M811)	0.5	0.3	-47.5	0.9	0.5	-39.8
Building Construction (E411)	1.4	1.4	-2.6	1.9	1.4	-25.2
Cafes and Restaurants (H573)	8.3	7.2	-13.4	10.5	7.2	-31.9
Other Health Services (O863)	0.4	0.2	-45.1	0.9	0.4	-61.8
Motor Vehicle Services (G532)	3.9	1.5	-61.9	5.0	1.9	-61.3
Specialised Food Retailing (G512)	5.1	4.4	-14.1	5.7	4.7	-18.5
Other Business Services (L786)	1.2	0.7	-44.2	1.9	1.1	-40.6
Marketing and Business Management Services (L785)	2.3	0.6	-75.3	2.1	0.9	-57.3
Other Personal and Household Good Retailing (G525)	1.8	1.2	-32.0	1.9	1.5	-23.9
Hawke's Bay Total Employed Labour Force	1.8	0.9	-49.0	2.0	1.12	-45.4

Source: Stats 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 and Over, 1996, 2001, 2006



Appendix 1.1: Population Size and Growth, Hawke's Bay Region and Total New Zealand 1986-2011

Hawke's Bay Region	Night Resident Population and Census-Adjusted	Night Resident Population (unadjusted for Census)	Estimated Usual Resident Population (June Years)	Hawke's Bay Region	Change (%)	Total New Zealand Change (%)
1986	140,844	...	...	
1987	140,300	...	...	1986-87	...	...
1988	140,000	...	...	1987-88	-0.4	0.3
1989	139,500	...	...	1988-89	-0.2	0.7
1990	139,300	...	...	1989-90	-0.4	0.2
1991	...	139,479	...	1990-91	...	...
1992	...	139,400	...	1991-92	-0.1	1.0
1993	...	140,100	...	1992-93	0.5	1.3
1994	...	141,000	...	1993-94	0.6	1.4
1995	...	141,500	...	1994-95	0.4	1.6
1996	146,600	1995-96	...	...
1997	147,400	1996-97	0.5	1.3
1998	147,600	1997-98	0.1	0.9
1999	147,300	1998-99	-0.2	0.5
2000	147,300	1999-2000	0.0	0.6
2001	147,300	2000-01	0.0	0.6
2002	148,500	2001-02	0.8	1.8
2003	149,400	2002-03	0.6	2.0
2004	150,400	2003-04	0.7	1.5
2005	151,200	2004-05	0.5	1.1
2006	152,100	2005-06	0.6	1.2
2007	152,500	2006-07	0.3	1.0
2008	152,800	2007-08	0.2	1.0
2009	153,400	2008-09	0.4	1.1
2010	154,800	2009-10	0.9	1.2
2011	155,300	2010-11	0.3	0.9
1986-2011	14,456		10.3	33.2

Source: Statistics New Zealand Infoshare, Tables DPE006AA; DPE051AA

Notes: Changes in the timing and method of estimating Resident Population between 1990-1991 and 1995-1996 mean that the three sets of trends should be understood as discontinuous



Appendix 1.2: Population Size and Growth, Hawke's Bay Region and its Territorial Authorities, 1986-2011

	Central Hawkes Bay	Hastings	Napier	Wairoa	Hawke's Bay Regional Council
1986	13,054	64,371	52,512	10,680	140,844
1987	12,950	64,400	52,200	10,600	140,300
1988	12,900	64,400	51,900	10,550	140,000
1989	12,750	64,500	51,600	10,450	139,500
1990	12,650	64,500	51,500	10,400	139,300
1991	12,590	64,693	51,645	10,371	139,479
1992	12,550	64,800	51,500	10,350	139,400
1993	12,500	65,300	51,800	10,300	140,100
1994	12,550	65,700	52,300	10,300	141,000
1995	12,500	66,000	52,600	10,200	141,500
1996	13,350	68,100	54,900	10,200	146,600
1997	13,300	68,600	55,200	10,050	147,400
1998	13,200	68,900	55,400	9,920	147,600
1999	13,150	69,000	55,300	9,740	147,300
2000	13,150	69,300	55,300	9,530	147,300
2001	13,200	69,600	55,200	9,260	147,300
2002	13,200	70,400	55,500	9,190	148,500
2003	13,200	71,100	55,900	9,070	149,400
2004	13,200	71,900	56,200	8,920	150,400
2005	13,200	72,400	56,500	8,800	151,200
2006	13,250	73,200	56,800	8,720	152,100
2007	13,250	73,600	56,900	8,580	152,500
2008	13,300	73,900	57,000	8,480	152,800
2009	13,350	74,300	57,200	8,420	153,400
2010	13,500	75,100	57,600	8,440	154,800
2011	13,500	75,500	57,800	8,350	155,300
1986-2011*	446	11,129	5,288	-2,330	14,456

Source: Statistics New Zealand Infoshare, Tables DPE006AA; DPE051AA

Notes: *Changes in the timing and method of estimating Resident Population between 1990-1991 and 1995-1996 mean that the three sets of trends should be understood as discontinuous



Appendix 2.1:

Components of Change by age (Hawke's Bay RC 1996-2001)

Actual and Expected Population by Age, 1996-2001: Hawke's Bay Region

	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	12,100	11,014	11,080	-1,020	66	-75	-1,011	-8.4	0.5	-0.6	-8.4	
5-9	12,490	12,082	12,150	-340	68	-18	-390	-2.7	0.5	-0.1	-3.1	
10-14	11,490	12,480	12,650	1,160	170	-10	1,000	10.1	1.5	-0.1	8.7	
15-19	10,570	11,464	10,310	-260	-1,154	-26	920	-2.5	-10.9	-0.2	8.7	
20-24	9,260	10,523	7,690	-1,570	-2,833	-47	1,310	-17.0	-30.6	-0.5	14.1	
25-29	9,860	9,218	8,620	-1,240	-598	-42	-600	-12.6	-6.1	-0.4	-6.1	
30-34	10,620	9,816	9,720	-900	-96	-44	-760	-8.5	-0.9	-0.4	-7.2	
35-39	11,180	10,568	10,760	-420	192	-52	-560	-3.8	1.7	-0.5	-5.0	
40-44	10,210	11,109	11,170	960	61	-71	970	9.4	0.6	-0.7	9.5	
45-49	10,160	10,112	9,930	-230	-182	-98	50	-2.3	-1.8	-1.0	0.5	
50-54	7,730	10,000	9,770	2,040	-230	-160	2,430	26.4	-3.0	-2.1	31.4	
55-59	6,700	7,529	7,490	790	-39	-201	1,030	11.8	-0.6	-3.0	15.4	
60-64	5,740	6,419	6,470	730	51	-281	960	12.7	0.9	-4.9	16.7	
65-69	5,720	5,355	5,450	-270	95	-385	20	-4.7	1.7	-6.7	0.3	
70-74	4,980	5,114	5,070	90	-44	-606	740	1.8	-0.9	-12.2	14.9	
75-79	3,640	4,166	4,180	540	14	-814	1,340	14.8	0.4	-22.4	36.8	
80-84	2,410	2,717	2,710	300	-7	-923	1,230	12.4	-0.3	-38.3	51.0	
85-89	1,245	1,468	1,469	225	1	-942	1,165	18.0	0.1	-75.6	93.6	
90+	525	682	651	125	-32	-1088	1,245	23.9	-6.0	-207.1	237.0	
Total	146,630	151,835	147,340	710	-4,495	-5884	11,089	0.5	-3.1	-4.0	7.6	

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

Notes: ~As a percentage of Previous Observed Population



Appendix 2.2: Components of Change by age (Hawke's Bay RC 2001-2006)

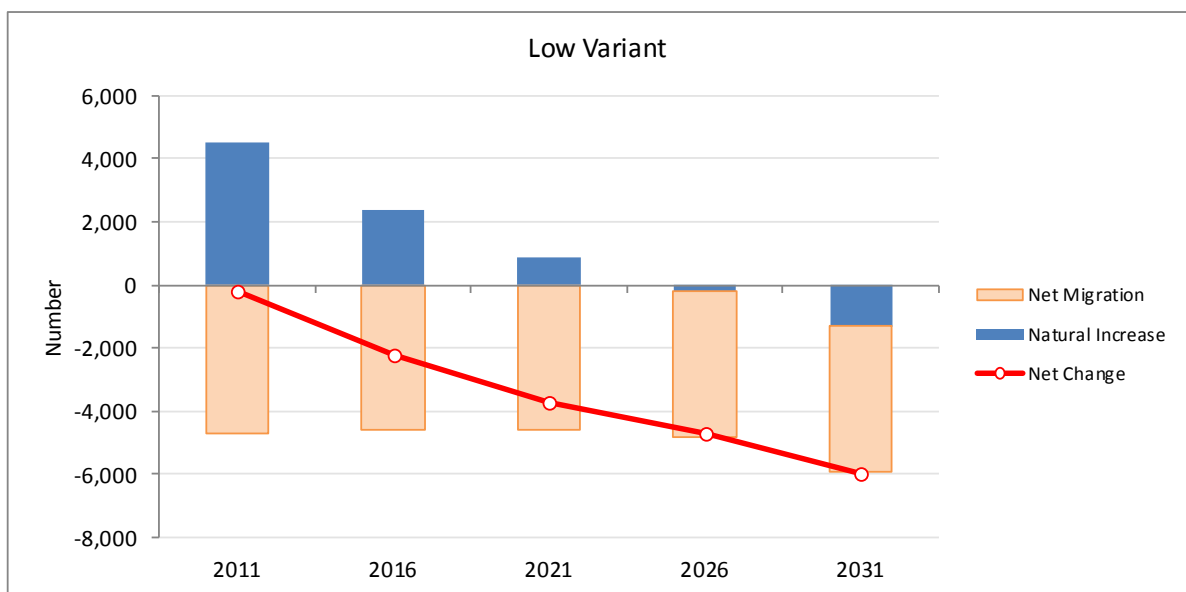
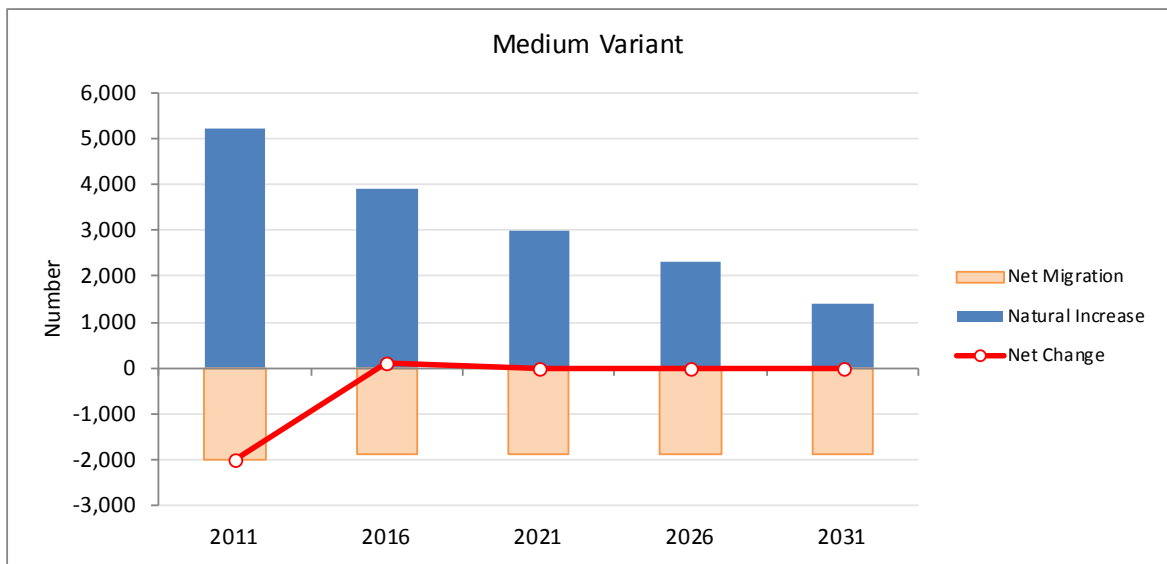
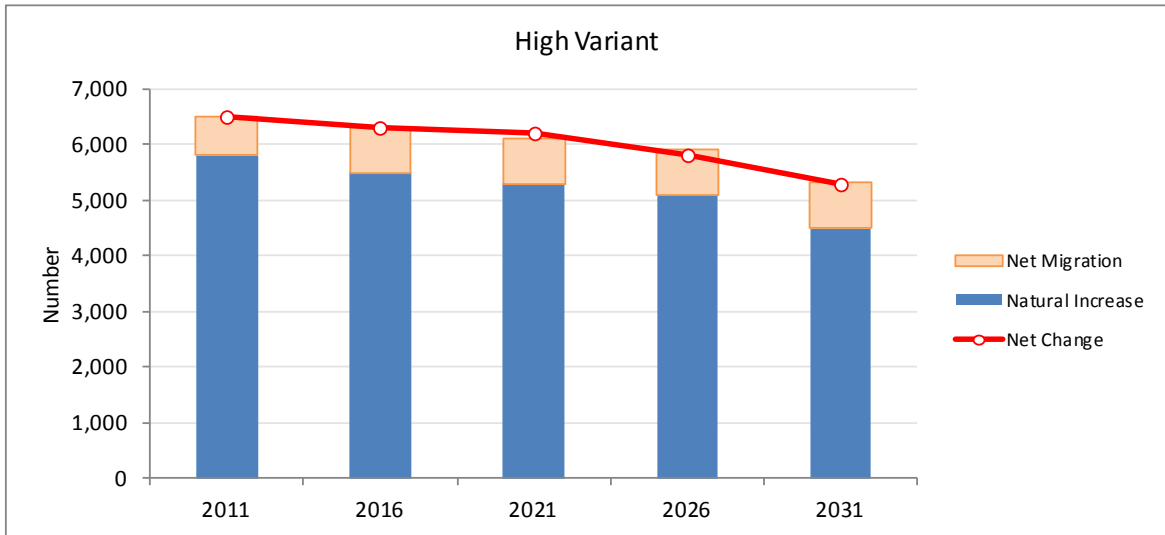
Actual and Expected Population by Age, 2001-2006:				Hawke's Bay Region								
	Actual (Observed) 2001	Expected 2006	Actual (Observed) 2006	Actual (Observed) change 2001-06	Change due to migration	Change due to Deaths	Change to cohort size	Actual (Observed) change (2001- 2006)	Change due to migration~	Change due to Deaths~	Change to cohort size~	
	Number				Percentage							
0-4	11,080	10,508	10,790	-290	282	-61	-511	-2.6	2.5	-0.6	-4.6	
5-9	12,150	11,066	11,480	-670	414	-14	-1,070	-5.5	3.4	-0.1	-8.8	
10-14	12,650	12,141	12,370	-280	229	-9	-500	-2.2	1.8	-0.1	-4.0	
15-19	10,310	12,626	11,380	1,070	-1,246	-24	2,340	10.4	-12.1	-0.2	22.7	
20-24	7,690	10,273	7,800	110	-2,473	-37	2,620	1.4	-32.2	-0.5	34.1	
25-29	8,620	7,661	7,830	-790	169	-29	-930	-9.2	2.0	-0.3	-10.8	
30-34	9,720	8,587	9,310	-410	723	-33	-1,100	-4.2	7.4	-0.3	-11.3	
35-39	10,760	9,676	10,370	-390	694	-44	-1,040	-3.6	6.5	-0.4	-9.7	
40-44	11,170	10,695	11,400	230	705	-65	-410	2.1	6.3	-0.6	-3.7	
45-49	9,930	11,070	11,190	1,260	120	-100	1,240	12.7	1.2	-1.0	12.5	
50-54	9,770	9,795	9,990	220	195	-135	160	2.3	2.0	-1.4	1.6	
55-59	7,490	9,558	9,780	2,290	222	-212	2,280	30.6	3.0	-2.8	30.4	
60-64	6,470	7,228	7,400	930	172	-262	1,020	14.4	2.7	-4.0	15.8	
65-69	5,450	6,108	6,180	730	72	-362	1,020	13.4	1.3	-6.6	18.7	
70-74	5,070	4,962	4,980	-90	18	-488	380	-1.8	0.3	-9.6	7.5	
75-79	4,180	4,342	4,290	110	-52	-728	890	2.6	-1.2	-17.4	21.3	
80-84	2,710	3,230	3,100	390	-130	-950	1,470	14.4	-4.8	-35.0	54.2	
85-89	1,469	1,727	1,658	189	-69	-983	1,241	12.9	-4.7	-66.9	84.4	
90+	651	853	802	151	-51	-1267	1,469	23.2	-7.8	-194.8	225.9	
Total	147,340	152,106	152,100	4,760	-6	-5803	10,569	3.2	0.0	-3.9	7.2	

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

Notes: ~As a percentage of Previous Observed Population



Appendix 3.1: Projected Assumptions by Projection Variant, Hawke's Bay Region



Note different Y-axis

Source: Statistics NZ Subnational Projected Population Characteristics, 2006(base)-2031 Update



Appendix 3.2: Projection Assumptions by Variant, Hawke's Bay RC

Hawke's Bay Region	2011	2016	2021	2026	2031	Change 2011-2031 (%)
HIGH						
Births (Live) - 5 years ended 30 June	11900	12000	12100	12300	12200	2.5
Deaths - 5 years ended 30 June	6100	6500	6800	7200	7800	27.9
Natural Increase - 5 years ended 30 June	5800	5500	5300	5100	4500	-22.4
Net Migration - 5 years ended 30 June	710	810	810	810	810	14.1
Population at 30 June	158600	164900	171100	176900	182200	14.9
Median Age (Years) at 30 June	38.5	39.3	39.7	40.2	41.1	6.8
MEDIUM						
Births (Live) - 5 years ended 30 June	11400	10600	10100	9800	9500	-16.7
Deaths - 5 years ended 30 June	6300	6600	7000	7500	8100	28.6
Natural Increase - 5 years ended 30 June	5200	3900	3000	2300	1400	-73.1
Net Migration - 5 years ended 30 June	-2000	-1900	-1900	-1900	-1900	-5.0
Population at 30 June	155300	157300	158400	158800	158300	1.9
Median Age (Years) at 30 June	39.0	40.4	41.3	42.2	43.2	10.8
LOW						
Births (Live) - 5 years ended 30 June	11000	9300	8200	7600	7100	-35.5
Deaths - 5 years ended 30 June	6400	6800	7300	7800	8400	31.3
Natural Increase - 5 years ended 30 June	4500	2400	900	-200	-1300	-128.9
Net Migration - 5 years ended 30 June	-4710	-4610	-4610	-4610	-4610	-2.1
Population at 30 June	151900	149700	146000	141300	135300	-10.9
Median Age (Years) at 30 June	39.4	41.5	43.3	44.8	46.2	17.3

Source: Statistics NZ Subnational Projected Population Characteristics, 2006(base)-2031 Update



Appendix 3.3: Projected Population, Total New Zealand, 2006-2021 (Medium Series)

Total New Zealand

	2006	2011	2016	2021	2026	2031	Change (%) 2011-2031
Numbers by age							
0-14	888,320	898,880	917,400	936,520	928,840	928,020	3.2
15-24	604,740	642,530	631,120	611,040	635,720	656,930	2.2
25-39	858,960	867,230	915,380	977,760	992,370	977,670	12.7
40-54	891,290	935,560	924,010	886,920	888,330	935,510	0.0
55-64	429,670	494,900	544,530	593,920	602,570	578,610	16.9
65-74	275,700	325,340	397,410	458,230	507,220	555,350	70.7
75-84	177,780	188,360	214,970	257,970	320,330	372,710	97.9
85+	58,140	72,560	85,950	95,590	116,530	143,740	98.1
Total	4,184,600	4,425,360	4,630,770	4,817,950	4,991,910	5,148,540	16.3
65+	511,620	586,260	698,330	811,790	944,080	1,071,800	82.8

Intercensal Change by Age - Numbers							Change (N) 2011-2031
	2006-2011	2011-2016	2016-2021	2021-2026	2026-2031		
0-14	...	10560	18520	19120	-7680	-820	29140
15-24	...	37790	-11410	-20080	24680	21210	14400
25-39	...	8270	48150	62380	14610	-14700	110440
40-54	...	44270	-11550	-37090	1410	47180	-50
55-64	...	65230	49630	49390	8650	-23960	83710
65-74	...	49640	72070	60820	48990	48130	230010
75-84	...	10580	26610	43000	62360	52380	184350
85+	...	14420	13390	9640	20940	27210	71180
Total	...	240760	205410	187180	173960	156630	723180
65+	...	74640	112070	113460	132290	127720	485540

Age Distribution (percentage at each age)							Change (%) 2011-2031
	2006	2011	2016	2021	2026	2031	
0-14	21.2	20.3	19.8	19.4	18.6	18.0	-11.3
15-24	14.5	14.5	13.6	12.7	12.7	12.8	-12.1
25-39	20.5	19.6	19.8	20.3	19.9	19.0	-3.1
40-54	21.3	21.1	20.0	18.4	17.8	18.2	-14.1
55-64	10.3	11.2	11.8	12.3	12.1	11.2	0.5
65-74	6.6	7.4	8.6	9.5	10.2	10.8	46.7
75-84	4.2	4.3	4.6	5.4	6.4	7.2	70.1
85+	1.4	1.6	1.9	2.0	2.3	2.8	70.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	...
65+	12.2	13.2	15.1	16.8	18.9	20.8	57.1

Summary measures							2011-2031
	2006	2011	2016	2021	2026	2031	
LM Entrants/Exits							
(15-24/55-64 years)	1.4	1.3	1.2	1.0	1.1	1.1	...
(20-29/60-69 years)	1.6	1.5	1.4	1.2	1.1	1.1	...
Elderly/Children	0.58	0.65	0.76	0.87	1.02	1.15	...
Reproductive (20-39 yrs)	27.5	26.9	26.9	26.8	26.1	25.5	...
65+	12.2	13.2	15.1	16.8	18.9	20.8	...
75+	5.6	5.9	6.5	7.3	8.8	10.0	...
Growth (%) - 5 years	...	5.75	4.64	4.04	3.61	3.14	16.34
Annual average growth r	...	1.15	0.93	0.81	0.72	0.63	0.82

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



Appendix 4.1: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region, 1996, 2001, 2006

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	46.9	44.8	46.2	45.1	43.6	44.7
Employer	46.5	44.7	46.1	45.4	43.8	44.9
Paid Employee	37.0	37.5	37.2	36.3	36.5	36.4
Unpaid Family Worker	46.2	44.0	44.9	44.9	42.4	43.4
Not elsewhere defined	37.5	39.2	38.3	37.9	39.2	38.5
Total	39.4	38.7	39.1	38.7	37.7	38.3
Number	34,080	28,140	62,220	890,043	740,769	1,630,812
2001						
Self Employed, no employee	49.2	47.1	48.5	47.4	45.7	46.8
Employer	48.8	46.8	48.2	47.4	45.8	46.9
Paid Employee	38.8	39.7	39.3	37.9	38.4	38.1
Unpaid Family Worker	49.2	46.1	47.4	46.0	44.8	45.3
Not elsewhere defined	39.9	43.8	41.6	40.4	43.2	41.7
Total	41.4	40.9	41.2	40.5	39.7	40.1
Number	34,527	29,472	63,999	923,001	804,321	1,727,322
2006						
Self Employed, no employee	50.8	48.2	49.9	48.7	46.9	48.1
Employer	49.5	47.8	49.0	48.3	46.8	47.9
Paid Employee	40.1	40.9	40.5	38.9	39.5	39.2
Unpaid Family Worker	52.1	47.7	49.4	48.3	46.9	47.5
Not elsewhere defined	42.2	46.2	44.1	42.3	45.9	43.9
Total	42.7	42.2	42.4	41.5	40.8	41.2
Number	38,706	34,446	73,152	1,049,526	936,006	1,985,532

Source: Stats 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 and Over, 1996, 2001, 2006



Appendix 4.2: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region and Total NZ, 1996, 2001, 2006, School Education (N842)

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	32.5	50.0	44.2	47.5	44.7	45.5
Employer	37.5	...	37.5	45.0	45.0	45.0
Paid Employee	44.4	42.5	43.1	44.0	42.1	42.6
Unpaid Family Worker	...	...	...	22.5	25.0	24.2
Not elsewhere defined	...	37.5	37.5	38.6	39.0	38.8
Total	44.4	42.5	43.0	44.0	42.1	42.6
Number	843	2,127	2,970	17,481	46,722	64,203
2001						
Self Employed, no employee	50.3	48.7	49.2	49.2	46.8	47.6
Employer	...	46.5	46.5	46.3	46.3	46.3
Paid Employee	46.3	44.5	45.0	45.0	43.5	43.9
Unpaid Family Worker	...	41.9	41.9	44.0	42.7	43.0
Not elsewhere defined	50.0	46.3	47.5	49.3	46.6	47.4
Total	46.4	44.6	45.1	45.2	43.6	44.0
Number	930	2,484	3,414	19,638	57,549	77,187
2006						
Self Employed, no employee	47.2	47.5	47.4	50.5	48.0	48.9
Employer	...	49.2	49.2	49.8	44.6	45.9
Paid Employee	48.1	46.1	46.6	46.0	44.8	45.1
Unpaid Family Worker	...	...	...	41.1	46.0	44.6
Not elsewhere defined	70.0	52.5	55.4	46.6	47.0	46.9
Total	48.2	46.2	46.7	46.1	44.8	45.1
Number	885	2,583	3,468	19,476	61,254	80,730

Source: Stats 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 and Over, 1996, 2001, 2006



Appendix 4.3: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region and Total NZ, 1996, 2001, 2006, Horticulture and Fruit Growing (A011)

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	49.4	46.4	48.5	50.0	47.9	49.2
Employer	48.1	47.9	48.1	47.6	46.5	47.2
Paid Employee	33.4	35.2	34.1	33.5	36.5	34.9
Unpaid Family Worker	49.9	48.2	49.0	47.4	45.5	46.3
Not elsewhere defined	34.6	38.0	36.1	36.1	38.3	37.0
Total	37.6	38.1	37.8	39.8	40.3	40.0
Number	2,895	1,854	4,749	16,161	12,768	28,929
2001						
Self Employed, no employee	49.6	48.4	49.2	52.3	50.2	51.5
Employer	51.0	49.6	50.6	50.4	49.0	49.9
Paid Employee	36.1	39.0	37.2	35.9	38.7	37.2
Unpaid Family Worker	48.6	48.8	48.7	48.9	47.8	48.3
Not elsewhere defined	43.4	37.8	40.6	40.8	42.3	41.5
Total	39.9	41.3	40.5	42.0	42.5	42.2
Number	2,253	1,368	3,621	15,192	11,709	26,901
2006						
Self Employed, no employee	53.6	52.0	53.1	54.9	52.2	53.8
Employer	53.4	51.0	52.8	52.2	51.3	51.9
Paid Employee	39.2	39.9	39.4	39.3	40.9	40.0
Unpaid Family Worker	55.1	51.1	52.7	53.4	51.8	52.5
Not elsewhere defined	40.4	41.1	40.8	45.0	44.1	44.6
Total	42.7	42.2	42.5	44.5	44.4	44.5
Number	1,899	1,185	3,084	13,317	10,458	23,775

Source: Stats 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 and Over, 1996, 2001, 2006



Appendix 4.4: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region and Total NZ, 1996, 2001, 2006, Grain, Sheep and Beef Cattle Farming Growing (A012)

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	49.1	47.7	48.8	49.1	47.8	48.8
Employer	50.1	49.4	50.0	49.0	47.5	48.7
Paid Employee	37.0	38.9	37.4	35.6	38.2	36.2
Unpaid Family Worker	46.4	44.1	45.1	47.0	44.2	45.4
Not elsewhere defined	42.1	42.5	42.2	45.5	45.6	45.6
Total	43.4	43.6	43.5	44.2	44.2	44.2
Number	2,007	792	2,799	27,864	13,434	41,298
2001						
Self Employed, no employee	51.5	50.4	51.2	51.7	50.4	51.3
Employer	51.2	50.1	50.9	50.4	49.6	50.2
Paid Employee	38.5	40.2	38.9	37.0	39.8	37.7
Unpaid Family Worker	49.9	48.3	48.9	49.4	47.4	48.3
Not elsewhere defined	49.5	42.5	48.3	50.4	53.2	51.4
Total	45.4	46.7	45.8	46.2	47.0	46.4
Number	1,896	777	2,673	24,933	11,694	36,627
2006						
Self Employed, no employee	52.9	53.2	53.0	53.8	52.5	53.4
Employer	53.1	52.3	53.0	52.0	50.9	51.8
Paid Employee	39.0	40.5	39.3	39.0	40.2	39.3
Unpaid Family Worker	52.6	49.8	51.0	52.7	49.9	51.1
Not elsewhere defined	43.5	55.0	48.6	50.9	53.8	51.9
Total	46.0	47.8	46.5	48.0	48.5	48.2
Number	2,199	837	3,036	26,169	12,444	38,613

Source: Stats 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 and Over, 1996, 2001, 2006



Appendix 4.5: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region and Total NZ, 1996, 2001, 2006, Meat and Meat Product Manufacturing (C211)

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	32.5	...	32.5	45.5	45.0	45.4
Employer	48.8	...	48.8	44.9	43.3	44.5
Paid Employee	38.3	36.9	38.0	38.0	35.5	37.6
Unpaid Family Worker	70.0	27.5	48.8	44.2	32.5	40.8
Not elsewhere defined	36.4	38.3	37.2	35.7	33.7	35.3
Total	38.4	36.9	38.0	38.2	35.6	37.7
Number	1,722	603	2,325	16,779	3,981	20,760
2001						
Self Employed, no employee	46.5	37.5	44.4	46.1	43.9	45.7
Employer	47.5	42.5	46.3	48.7	47.4	48.4
Paid Employee	39.9	38.2	39.4	39.6	37.5	39.1
Unpaid Family Worker	...	...	...	54.4	30.0	46.3
Not elsewhere defined	41.6	...	41.6	41.5	40.2	41.2
Total	40.1	38.2	39.6	39.8	37.7	39.4
Number	1,692	705	2,397	16,890	4,764	21,654
2006						
Self Employed, no employee	52.8	30.0	49.0	49.0	45.5	48.5
Employer	55.0	50.8	53.2	50.2	46.1	49.3
Paid Employee	40.9	40.7	40.8	40.6	38.7	40.1
Unpaid Family Worker	70.0	...	70.0	49.4	43.5	47.1
Not elsewhere defined	44.2	27.5	41.8	39.7	36.9	38.8
Total	41.3	40.7	41.1	40.9	38.8	40.3
Number	1,689	771	2,460	15,723	5,760	21,483

Source: Stats 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 and Over, 1996, 2001, 2006



Appendix 4.6: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region and Total NZ, 1996, 2001, 2006, Community Care Services (0872)

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	...	38.3	38.3	51.0	45.7	47.3
Employer	54.2	46.1	48.5	49.9	47.3	48.4
Paid Employee	42.2	40.8	41.0	41.3	41.0	41.1
Unpaid Family Worker	40.8	50.0	44.5	43.0	42.5	42.7
Not elsewhere defined	38.8	38.0	38.2	37.4	39.7	39.4
Total	42.5	40.9	41.1	42.2	41.2	41.3
Number	171	984	1,155	3,546	22,644	26,190
2001						
Self Employed, no employee	55.0	45.0	47.5	50.9	48.1	48.8
Employer	61.3	55.0	56.8	52.4	49.0	50.4
Paid Employee	47.2	45.3	45.5	43.9	44.0	44.0
Unpaid Family Worker	17.5	47.5	32.5	48.8	45.3	46.6
Not elsewhere defined	50.0	42.5	45.0	44.5	45.5	45.2
Total	47.8	45.3	45.6	44.8	44.2	44.3
Number	201	1,524	1,725	5,436	31,770	37,206
2006						
Self Employed, no employee	45.8	50.7	49.5	52.5	49.6	50.3
Employer	58.3	58.0	58.1	53.3	50.4	51.6
Paid Employee	47.0	47.4	47.3	45.2	46.3	46.1
Unpaid Family Worker	57.5	47.5	52.5	44.6	46.6	45.9
Not elsewhere defined	47.5	53.3	50.4	43.8	48.5	47.5
Total	47.4	47.6	47.6	46.0	46.5	46.4
Number	270	1,629	1,899	6,483	36,783	43,266

Source: Stats 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 and Over, 1996, 2001, 2006



Appendix 4.7: Average Age of Employed Persons in Industries Employing over 1,000 persons, Hawke's Bay Region and Total New Zealand, 1996 and 2006

	Hawke's Bay Region			Total New Zealand		
	1996	2006	Change (%)	1996	2006	Change (%)
School Education (N842)	43.0	46.7	8.5	42.6	45.1	5.9
Horticulture and Fruit Growing (A011)	37.8	42.5	12.5	40.0	44.5	11.1
Grain Sheep and Beef Farming (A012)	43.5	46.5	7.0	44.2	48.2	9.0
Meat and Meat Product Manufacturing (C211)	38.0	41.1	8.1	37.7	40.3	7.0
Community Care Services (O872)	41.1	47.6	15.7	41.3	46.4	12.3
Supermarkets and Grocery Stores (G511)	30.6	34.6	13.3	29.2	33.1	13.3
Fruit and Vegetable Processing (C213)	36.2	39.1	7.8	35.8	39.6	10.8
Services to Agriculture (A021)	34.9	39.9	14.3	36.6	40.9	11.8
Hospitals and Nursing Homes (O861)	41.5	45.0	8.6	40.3	44.2	9.8
Government Administration (M811)	41.4	45.6	10.2	40.2	42.7	6.2
Building Construction (E411)	39.7	40.3	1.5	38.0	39.7	4.3
Cafes and Restaurants (H573)	31.7	31.8	0.2	30.7	31.7	3.2
Other Health Services (O863)	43.2	46.2	7.1	40.8	44.5	8.9
Motor Vehicle Services (G532)	35.2	39.8	13.1	34.6	38.5	11.2
Specialised Food Retailing (G512)	33.5	34.3	2.3	33.5	33.9	1.1
Other Business Services (L786)	40.5	43.7	7.7	38.1	40.6	6.5
Marketing and Business Management Services (L785)	39.0	42.8	9.6	37.9	41.1	8.3
Other Personal and Household Good Retailing (G525)	39.7	41.3	4.2	38.6	40.4	4.7
Hawke's Bay Total Employed Labour Force	39.1	42.4	8.7	38.3	41.2	7.6

Source: Stats 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 and Over, 1996, 2001, 2006



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