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Regional migration to Hamilton City

Prepared for Hamilton City Council

Benje Patterson

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www.benjepatterson.co.nz

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Report overview

This report provides a detailed analysis of regional migration to Hamilton. The period covered for the report is the four years to June 2017. This time horizon coincides with the period for which detailed regional migration insight is available from Statistics New Zealand.

Regional migration is defined as internal movements of people from other parts of New Zealand to Hamilton.

The report investigates where in New Zealand these regional migrants have come from (or left to) and the age profile of regional migrants compared to the general population of Hamilton. Mobility of existing Hamilton residents within Hamilton is also considered. Some of the rationale of these migratory patterns are discussed.

Key findings

The key findings of the report are:

- Hamilton's population growth averaged 2.4%pa over the four years to June 2017. By comparison, population growth averaged 2.0%pa in Waikato Region and 1.9% nationally.
- Approximately one third of Hamilton's population growth was driven by regional migration from other parts of New Zealand.
- Hamilton City's cumulative net regional migration gain from other parts of New Zealand over the four years to June 2017 was approximately 2,943 people.
- Auckland was the largest contributor to regional migration in Hamilton City. Severely unaffordable housing has pushed people from Auckland into regional New Zealand.
- Most other key sources of regional migration to Hamilton were generally focussed on surrounding districts in the Waikato. There were also significant inflows from Northland, as well as pockets of regional migration from Palmerston North and New Plymouth.
- The key destinations for regional migration away from Hamilton City were Waikato District and Waipa District. Hamilton also had net losses to several urban areas, including: Wellington, Christchurch and Dunedin.
- Rates of net regional migration to Hamilton by age group vary widely.
- Extremely high net regional migration gains are evident for people aged 15-19 years. These people are likely to be coming to Hamilton for education or training purposes.
- There also appears to be a positive net inflow of young families.
- Although there are some modest loses of regional migrants in the later stages of people's working life, regional migration to Hamilton rises again as people enter retirement.
- Hamilton residents had relatively high mobility within the city. Approximately 13.8% of Hamilton residents moved within Hamilton in 2017. By comparison, 9.6% of people on average across New Zealand moved within the territorial authority they already resided in.

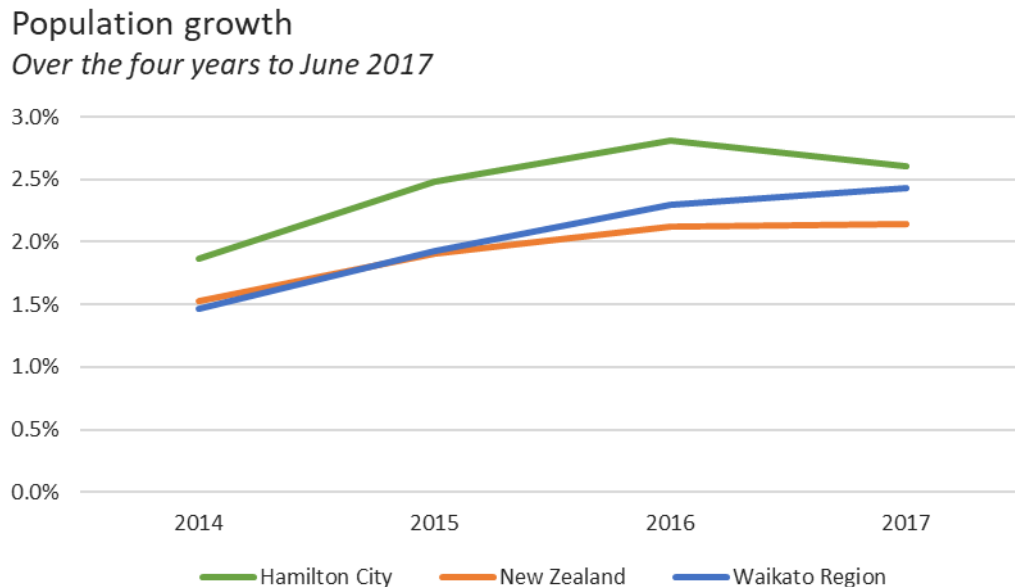
Data sources

This analysis is based on Statistics New Zealand's subnational population estimates and experimental internal migration dataset. More details of data sources can be found in the technical appendix to the report.

Regional migration's role in Hamilton's population growth

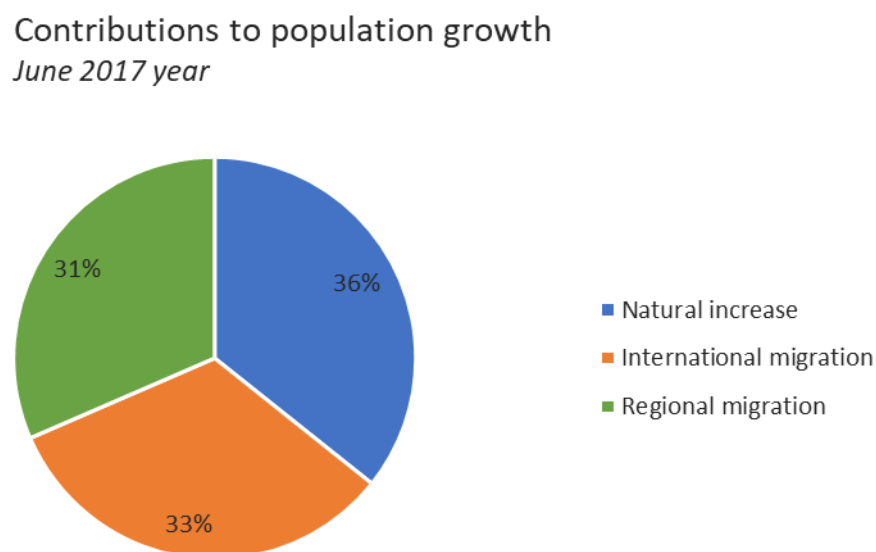
Hamilton's population increased from 150,200 to 165,400 over the four years to June 2017, at an average growth rate of 2.4%pa. By comparison, population growth averaged 2.0%pa across Waikato Region and 1.9% nationally over the same period.

Graph 1



Graph 2 shows that population growth in the June 2017 year was spread relatively evenly between regional migration, international migration, and natural increase.

Graph 2 – Contributions to population growth in Hamilton City



The remainder of this report focusses on regional migration flows in more detail.

In this report we define regional migration as net flows of people to Hamilton from all other parts of New Zealand. This concept is sometimes called internal migration.

Table 1 shows that net regional migration flows to Hamilton ranged from 405 people in 2014 to 1,323 people in 2017. Hamilton City on average gained a net 736 people per annum from other parts of New Zealand over the four years to June 2017. Hamilton's cumulative net regional migration gain from other parts of New Zealand over this four-year period was approximately 2,943 people.

Table 1 – Net regional migration to Hamilton City from other parts of New Zealand

Net regional migration	
<i>From all other parts of NZ, June years</i>	
Year	Net migration
2014	405
2015	549
2016	666
2017	1,323
Average (2014-17)	736

Hamilton's Future Proof partners, Waipa and Waikato District, have also benefited significantly from regional migrants, while Auckland to the south has lost a lot of residents to the rest of New Zealand. We will explore bilateral migration flows between Hamilton and other areas in the next section to see which areas contributed to Hamilton's overall regional migration gain.

Table 2 – Net regional migration flows for Hamilton City, Future Proof partners and Auckland

Net regional migration

From all other parts of NZ, June years

Year	Hamilton City	Waikato District	Waipa District	Auckland
2014	405	96	-120	-2,727
2015	549	525	411	-6,924
2016	666	669	684	-10,332
2017	1,323	888	588	-12,942
Average (2014-17)	736	545	391	-8,231

Where are Hamilton residents moving from and to?

This section of the report explores Hamilton City's regional migration gain in more detail by looking at the key parts of New Zealand which the regional migrants have come from.

Although Hamilton has experienced a net regional migration gain from most territorial authorities, we also explore places that Hamilton has lost residents to. These losses were mostly concentrated to Waipa and Waikato District on the fringe of Hamilton.

A full summary of net regional migration flows with Hamilton on a territorial authority by territorial authority basis is contained in Table 5.

Key sources of regional migrants

The following table summarises the ten territorial authorities from which Hamilton City has gained the most regional migrants over the four years to June 2017.

Table 3 – Key sources of regional migration to Hamilton City

Top 10: Net regional migration gains		
<i>Regional migration gain from selected areas</i>		
Net gain from:	Average migration 2014-17 (pa)	Total migration 2014-17
Auckland	382	1,527
Rotorua District	134	537
Matamata-Piako District	65	258
Hauraki District	44	177
Whangarei District	41	162
Thames-Coromandel District	40	159
Palmerston North City	39	156
Far North District	38	153
New Plymouth District	38	153
South Waikato District	36	144

Not surprisingly, Auckland was the largest contributor to regional migration in Hamilton City. Severely unaffordable housing has pushed people from Auckland into regional New Zealand. Auckland lost an average of 8,231 people per annum to other parts of New Zealand over the four years to June 2017.

Many other key sources of regional migration to Hamilton were generally focussed on Rotorua and surrounding districts in the Waikato. There were also significant inflows from Northland, as well as pockets of regional migration from Palmerston North and New Plymouth.

Where Hamilton lost residents to in New Zealand

The following table summarises the ten territorial authorities that Hamilton lost the most migrants to over the four years to June 2017.

The key destinations for regional migration away from Hamilton City were Waikato District and Waipa District, with average net losses of 112 and 63 people per annum respectively. This trend may be driven by housing considerations, with those that move still being close enough to Hamilton to maintain existing social and professional networks.

Hamilton also had net losses to several urban areas, including: around Wellington, Christchurch and Dunedin.

Table 4 – Key destinations for regional migration from Hamilton City

Bottom 10: Net regional migration losses

Regional migration loss from selected areas

Net loss to:	Average migration 2014-17 (pa)	Total migration 2014-17
Waikato District	-112	-447
Waipa District	-63	-252
Wellington City	-56	-225
Christchurch City	-30	-120
Dunedin City	-25	-99
Lower Hutt City	-14	-57
Queenstown-Lakes District	-14	-54
Selwyn District	-11	-45
Clutha District	-9	-36
Upper Hutt City	-9	-36

Table 5 – Net regional migration flows to Hamilton City from other territorial authorities

Net regional migration					
<i>Regional migration from other territorial authorities</i>					
Net migration from:	Average migration 2014-17 (pa)	2014	2015	2016	2017
Auckland	382	-84	339	507	765
Rotorua District	134	144	81	114	198
Matamata-Piako District	65	66	81	48	63
Hauraki District	44	42	33	45	57
Whangarei District	41	36	33	39	54
Thames-Coromandel District	40	48	42	42	27
Palmerston North City	39	27	21	51	57
Far North District	38	0	36	48	69
New Plymouth District	38	21	54	27	51
South Waikato District	36	69	51	12	12
Waitomo District	32	54	24	18	33
Whakatane District	29	45	27	3	39
Porirua City	28	21	15	39	36
Ruapehu District	27	24	27	39	18
Opotiki District	19	18	18	24	15
South Taranaki District	17	18	-15	24	42
Taupo District	17	54	-15	21	6
Western Bay of Plenty District	17	6	48	6	6
Otorohanga District	15	-3	12	21	30
Kawerau District	14	12	9	27	9
Gisborne District	13	21	0	12	18
Ashburton District	11	-6	12	18	18
Kaipara District	10	30	-12	9	12
Invercargill City	7	-6	3	18	12
Waitaki District	7	-3	12	18	0
Gore District	4	9	0	-9	15
Mackenzie District	3	3	0	9	0
Marlborough District	2	-12	6	0	15
Nelson City	2	-9	12	-12	18
Rangitikei District	2	12	-3	-6	6
Horowhenua District	2	0	9	-6	3
Stratford District	2	-3	-6	0	15
Masterton District	1	9	0	3	-9
Napier City	1	9	21	-21	-6
Waimate District	1	6	0	-6	3
Westland District	1	0	-6	6	3
Carterton District	0	3	3	0	-6
Grey District	0	3	-6	12	-9
Kaikoura District	0	-3	3	-3	3
Tauranga City	0	-51	-30	12	69
Wairoa District	0	9	6	0	-15
Central Otago District	-1	-12	6	9	-6
Waimakariri District	-2	-9	-12	9	3
Hastings District	-3	-6	-15	6	3
Manawatu District	-4	-21	-6	12	0
Southland District	-4	-12	-3	0	0
Tararua District	-4	-9	-3	-9	6
Timaru District	-4	-6	-6	-12	9
Whanganui District	-4	0	3	-12	-6
Central Hawke's Bay District	-5	-9	-15	-3	9
Kapiti Coast District	-5	-33	-6	6	15
Hurunui District	-5	-6	0	-3	-12
Tasman District	-5	-9	-6	0	-6
South Wairarapa District	-6	-3	-12	-6	-3
Buller District	-8	-6	-18	-6	0
Clutha District	-9	-12	0	-9	-15
Upper Hutt City	-9	0	-15	-18	-3
Selwyn District	-11	-15	-9	-24	3
Queenstown-Lakes District	-14	-18	0	-27	-9
Lower Hutt City	-14	-39	-6	-15	3
Dunedin City	-25	-39	-15	-21	-24
Christchurch City	-30	-87	-36	3	0
Wellington City	-56	3	-63	-60	-105
Waipa District	-63	18	-27	-156	-87
Waikato District	-112	96	-132	-207	-204
Total migration into Hamilton	736	405	549	666	1,323

At what age are people migrating regionally to Hamilton?

This section considers the age profile of Hamilton's net regional migration. The analysis identifies whether regional migrants are of working age, and if they are older or younger than Hamilton's existing population.

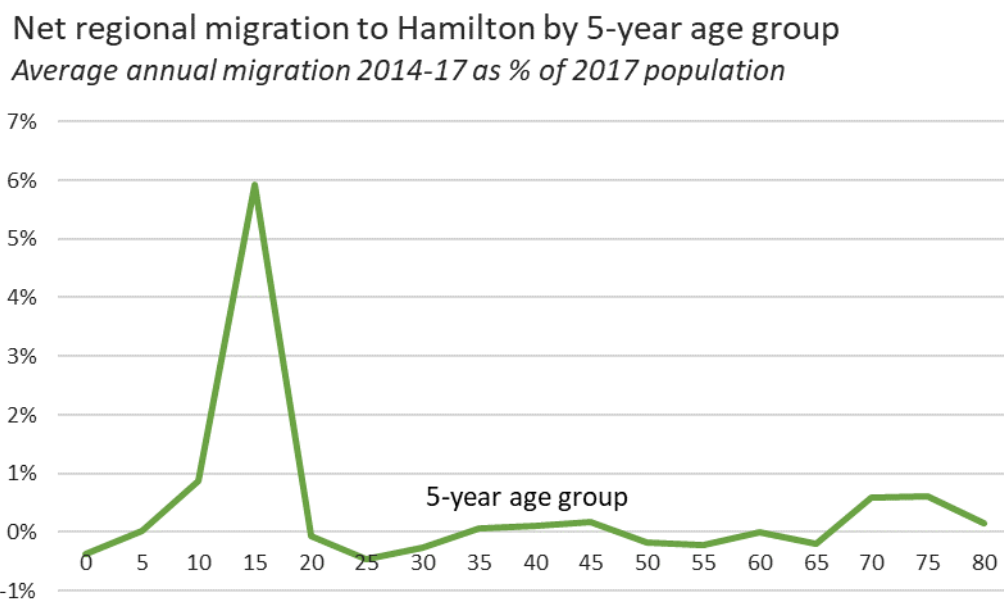
Rates of net regional migration to Hamilton by 5-year age group, measured as a percentage of the total population in Hamilton, can vary widely.

Extremely high net regional migration gains are evident for people aged 15-19 years (see Graph 3). These people are likely to be coming to Hamilton for education or training purposes. There is a small loss of people post-study, but not enough to offset the student influx. In other words, many students appear to remain in Hamilton for work opportunities post-study.

There also appears to be a small positive net inflow of young families. This trend is apparent in the net inflows of children (5-14 years) and adults in their thirties and forties.

Although there are some modest losses of regional migrants in the later stages of people's working life, regional migration to Hamilton rises again as people enter retirement.

Graph 3



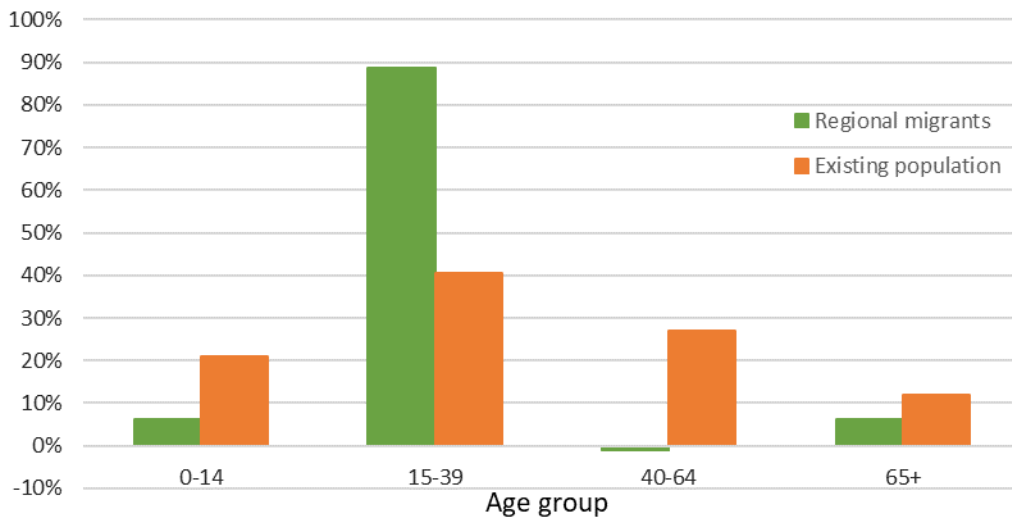
The median age of a regional migrant to Hamilton over the four years to June 2017 was in the 15-19 year age bracket. By comparison the median age of residents in Hamilton as at June 2017 was 32 years old. The median age across New Zealand is 37 years old.

Hamilton's young regional migration age profile is an opportunity for the future, particularly as many other parts of the country are beginning to face skills shortages because of a rapidly an aging population.

Graph 4 shows that almost 90% of regional migrants to Hamilton across the 2014-2017 period were in the first half of their working life (15-39 years).

Graph 4 - Age profile of regional migration to Hamilton compared to Hamilton’s existing population

Are migrants more likely to be of working age?
Regional migrants & existing population split into age groups



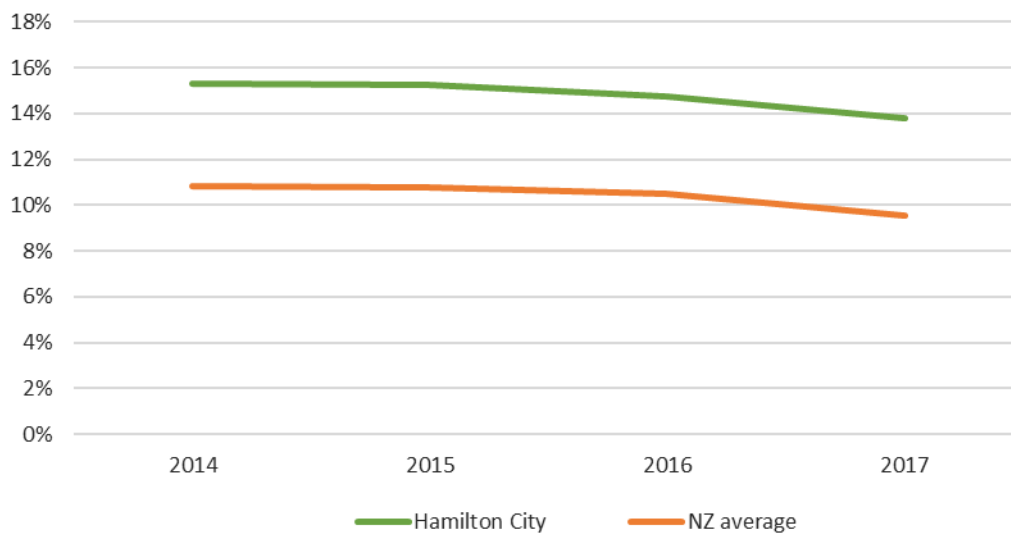
How likely are people to move within Hamilton?

This section takes a slightly different tack. Rather than considering regional migration flows with other parts of New Zealand, here we investigate the likelihood of existing residents of Hamilton to move within Hamilton.

The data shows that Hamilton residents have relatively high mobility within the city (see Graph 5). In 2017, approximately 13.8% of Hamilton residents moved within Hamilton. By comparison, the average across New Zealand was 9.6% of people moving within the territorial authority in which they already resided.

Graph 5

People also move within the same territorial authority *% of population moving within the same territorial authority*



The propensity of Hamilton residents to move within the district is similar to Aucklanders, but higher than both Waikato District and Waipa District, as evident by Table 6.

Table 6

Movements of people within the same territorial authority

Proportion of the population who move within the same territorial authority in a given year

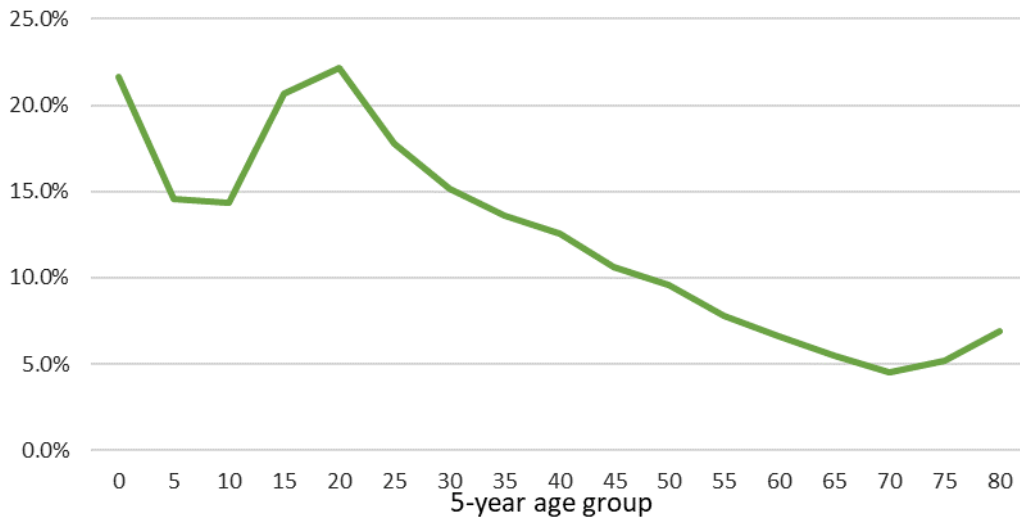
Year	Hamilton City	Waikato District	Waipa District	Auckland
2014	15.3%	6.8%	9.3%	15.8%
2015	15.3%	7.0%	9.7%	15.7%
2016	14.7%	6.5%	9.7%	14.8%
2017	13.8%	5.8%	7.9%	13.7%
Average (2014-17)	14.8%	6.5%	9.2%	15.0%

An analysis of mobility within Hamilton by age group shows that young people leaving home, and young families are most likely to move within the city (see Graph 6).

The likelihood of residents moving within Hamilton generally decreases as people age, but pushes higher again for people aged over 75. The peak among elderly is likely to be related to downsizing homes or moving into retirement villages and aged-care facilities.

Graph 6

People moving within Hamilton by 5-year age group
Annual moves within Hamilton 2014-17 as % of 2017 population



Technical appendix

About the regional migration data source

Net regional migration has been estimated by analysing flows of people in Statistics New Zealand's experimental internal migration dataset.

The data has ultimately been extracted from the Integrated Data Infrastructure (IDI) for the period 2014-17. The IDI is a large administrative dataset that links together several government sources into a centralised database about people and households. The data in IDI is being used by Statistics NZ to patch up Census 2018.

Using the IDI, Statistics NZ has been able to form detailed population estimates, with characteristics of individuals also available based on the sorts of personal details consistently captured by government forms. Administrative data performs well for core demographic details such as age and sex, while residential addresses are also captured in the data.

When an individual engages with a government service in New Zealand (such as health care, education, or tax services), or when a New Zealand resident notifies an agency of an address change, the address information is updated in an individual's address history in the IDI. These observed changes in residential address across all individuals form the basis for estimating migration internally within New Zealand.

The sources in IDI that are used for collecting information on residential address and address changes are:

- 2013 Census (Stats NZ)
- tax registrations (Inland Revenue)
- National Health Index and Primary Health Organisation enrolments (Ministry of Health)
- working age benefits and superannuation (Ministry of Social Development)
- primary and secondary school rolls (Ministry of Education)
- ACC claims (Accident Compensation Corporation).

For confidentiality reasons Statistics NZ has released its most detailed internal migration on movements of people between places by sex and age bracket into groupings of three people. The provision of this data allows for granular analysis of regional migration, but can cause rounding errors in aggregate.

About the population data source

The estimated resident population of an area in New Zealand is an estimate of all people who usually live in that area at a given date. Estimates have been sourced from Statistics New Zealand.

The estimated resident population used in this report spans the June 2013 to 2017 years and is based on the 2013 Census usually resident population count, updated using IDI for the following:

- net census undercount (based on the 2013 Post-enumeration Survey)
- residents temporarily overseas on census night
- births, deaths, and net migration between census night and the date of the estimate
- reconciliation with demographic estimates at ages 0–9 years.

The estimated resident population is not directly comparable with the census usually resident population count because of these adjustments.