Southland Workforce Strategy Update

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Executive Summary

1. Between 2013 and 2018 the population of Southland Region grew by 4,400 people (+4.6%), accelerating the previous steady return to growth experienced since 2000.
2. The primary cause of the growth was a shift from modestly negative net migration loss in previous years to strongly positive net migration gain between 2013 and 2018 (+2,634), the majority of which occurred across the main workforce ages while simultaneously offsetting continuing—but reducing—net migration loss at 15-24 years.
3. In sum, net migration gain accounted for 60 per cent of population growth between 2013 and 2018, and natural increase, 40 per cent.
4. The novel net migration gain was solely due to international sources, with a net gain of 5,106 international migrants more than offsetting a net internal migration loss of 2,452.
5. Population growth was not shared evenly by age. There were declines at 15-24 and 40-54 years, the former primarily caused by net migration loss and the latter by reduction in cohort size, as the tail end of the baby boom cohort moved into the immediately older age groups. There was substantial growth at 25-39 primarily caused by net migration gain, and at 55+ years by increased cohort size as it received the tail end baby boomers.
6. There was a general stabilization of numbers aged 5-9 and 10-14 years as a slightly larger birth cohort originating from 2002-2010 passed through these age groups, leaving a small decline at 0-4 years in its wake. On the assumption that many will remain in the Southland Region, they are likely to cause a slight swelling in numbers aged 15-24 years over the next 10-15 years, or at least a slowing of the previous reduction in numbers at these ages. High School and tertiary education providers should keep an eye on the progression of this cohort through the age structure.
7. The labour force (15+ years, employed plus unemployed) grew by a somewhat greater margin than the total population, 10.1 per cent, in part in part because of increased numbers due to both migration gain and cohort size at older ages, and in part because of increased participation at many ages, particularly 15-24 years, and especially by women (overall, the male participation rate declined by -0.4 per cent while that of females increased by 2.4 per cent). Around 22 per cent of increased labour force numbers was due to increased participation, and the balance to the combination of migration gain and cohort size. Of the total 1,053 additional labour force participants generated by changing participation rates, females accounted for almost 91 per cent.
8. The trends suggest that all four **2015 Strategy targets** were met or partially met. **Scenario 1** (attracting a net 300 migrants of workforce age per annum) was almost met. At 15-64 years, average annual net migration between 2013 and 2018 was 265, and at 15-69 years, 290. **Scenario 2** (increasing labour force participation rates at 55+ years to match

those of the preceding age group by 2021) was partially met. The participation rate at 55+ years rose from 49.2 to 51.2 per cent, however the rates for each contributing age group remained lower than those of each preceding age group. **Scenario 3** (increasing labour force participation rates at 15-24 by 12 per cent by 2021) was almost met. Between 2013 and 2018 the labour force participation rate at 15-24 years increased by 5.6 per cent (an average of 1.1 per cent per annum). A continuation of the average annual increase to 2021 would see a total nine per cent increase. **Scenario 4** (raising the female participation rate relative to males) was only partially achieved, because while the female rate increased, that of males fell.

9. All but one of the 18 **industries** and all 20 **occupations** employing over 1,000 people in 2018 increased in size between 2013 and 2018, compared with nine industries and eight occupations declining between 2006 and 2013. In 2018 the 18 largest industries accounted for just over 7 in every 10 employed Southlanders, up from 68 per cent in 2006, while the 20 largest occupations accounted for 75.3 per cent, up from 72.5 per cent in 2006.
10. All industries and occupations in 2018 had older workforces than they did in 2006, although there was some slowing of the trend between 2013 and 2018 due to the relative increase in younger participants. Several industries and occupations had extremely low ratios of people at 'entry' to 'exit' age, with four of the 18 largest industries and seven of the 20 largest occupations having fewer than five people aged 15-29 years per ten at 55+ years—in several cases the ratios are below two per ten. These low ratios point to vulnerability in recruitment going forward.
11. While both participation and labour demand increased substantially between 2013 and 2018, future labour supply is projected to decline as structural ageing generates more people at older ages and fewer at younger ages. Most age groups below age 65 are projected to decline, or to remain the same size or grow slightly only under the high variant projections. Accommodating further growth in demand would thus require further increases in labour force participation, further gains in net migration, and/or an expansion of the 'main' working age population from 15-64 years to 15-74 years.
12. Achieving additional labour supply from those not in the labour force is also likely to be limited, as the majority not participating were aged 15-19 years, or disproportionately females at key parental and caring ages, or 65+ years, indicating other life-stage considerations. Despite minor declines in Southland Region's male participation rate, that rate is nevertheless the highest of all regions. The situation is similar for Southland's females, whose participation rate grew across the period and is second-highest nationally. The potential to expand participation among those not already in the labour force is thus limited, unless very specific support is put in place to assist that participation.

13. Projecting labour force numbers based on 2018 participation rates by age and population projection variant (high, medium and low), and placing them alongside moderate growth in demand (1% per annum, being half that achieved between 2013 and 2018) indicates that projected labour supply will not meet demand under the medium and low variant labour supply projections, irrespective of expanding the age of the workforce, and will do so under the high variant only with substantial increase in participation at older ages than is presently the case.

14. These findings suggest that future attempts to increase Southland's labour supply will need to involve refining both the migration and participation rate targets from the 2015 Strategy—for example, through reducing net internal migration loss as much as increasing international gain, raising participation rates for males aged 25-59 years, and further extending working age and raising participation rates for those aged 65+ years.

15. **Part B** of this Report found that the labour force status, industry and occupation of employment, and highest post-school qualifications of the region's 'movers and stayers' (Internal Arrivals, Internal Leavers, Overseas Arrivals, and 'Stayers') contributes useful information towards such an exercise.

16. Most mover-stayer diversity within Southland's labour force pertains to age, with Overseas Arrivals having the youngest age distribution, followed by Internal Leavers and Internal Arrivals; Stayers had the oldest age distribution. Overall, this resulted in Stayers having a slightly more advantageous labor force attachment than Movers, but this also occurred irrespective of age (i.e., Stayers of all ages tended to fare better than most Movers). With few exceptions Overseas Arrivals of all ages had the lowest participation rates and the highest unemployment rates, followed by Internal Arrivals and Leavers—although only slightly so. Most people aged 20-59 years were more likely to work full-time than part-time, irrespective of mover-stayer category, while proportions not in the labour force tended to be higher than proportions working part-time, particularly at 15-19 and 60+ years, and for Internal Arrivals and Leavers and Overseas Arrivals.

17. As measured by the Index of Dissimilarity there was minimal diversity in the overall mover-stayer distribution by industrial sector (i.e., all industries employed people of all mover-stayer categories, in relatively similar proportions); slightly greater—but still modest—diversity by occupational sector; and somewhat more diversity by highest qualification, with Overseas Arrivals and Internal Arrivals somewhat more likely to hold higher qualifications than Stayers, especially at 35-44 years followed by 15-24 years. However, given their greater numbers, Stayers accounted for the majority of higher qualification holders.

18. Key industries employing 15-24 year olds, such as Manufacturing, Construction, and Retail, are largely reliant on the local (Stayer) population, while industries employing

those aged 25-34 years draw somewhat more heavily on Internal and Overseas Arrivals. Professionals aged 15-24 and 25-34 years are also substantially more reliant on Internal Arrivals than other occupations, while Community and Service Workers aged 25-34 years are substantially more reliant on Overseas Arrivals than other occupations.

19. With few exceptions there is a substantial diminishing in the proportion of employees who are Internal and Overseas Arrivals from age 35-44 across all industries and occupations, while industries and occupations employing those aged 45-54 years and above are heavily reliant on the local (Stayer) population.

20. Otago followed by Canterbury account for the majority of internal movers in both directions, with Auckland, Wellington and Waikato playing smaller but generally more prominent roles than most other regions, almost irrespective of labour force status, industry or occupation of employment, or highest post school qualification. Only for those not in the labour force were proportions from or to these five regions slightly lower, reflecting the involvement of more regions as source or destination.

21. These findings suggest that activities designed to attract internal movers to Southland Region can be focused on a relatively narrow range of regions, while efforts to retain those who might move elsewhere should focus on assessing the opportunities offered by those regions as indicated by industry, occupation, qualifications and age of internal movers.

Preamble

This *Great South Workforce Strategy Update* (2020) has been prepared by Natalie Jackson of Natalie Jackson Demographics Ltd. For background it draws on two main documents: *Southland Workforce Strategy 2014-2031* (Jackson 2015), and *Southland Region Labour Market Assessment (LMA) 2014-2031* (Roskruge and Pawar 2014).

The *Update* is intended to assess, update and extend the population, labour market and labour force analysis contained in the 2015 Strategy and 2014 LMA; evaluate key elements of the previous Strategy, and provide a 'pre-Covid' baseline against which post-Covid population, labour market and labour force changes can be assessed.

Assessing and updating the data involved extending the time-series to 2018 by adding data from the 2018 census, and extending the projection horizon to 2035, whilst taking account of the fact that Statistics New Zealand's 2015 projections used in the Strategy were updated in 2017.

The reason for **framing the analysis as a 'pre-Covid' baseline** is that all currently existing data were collected prior to the appearance of Covid-19 in New Zealand in March 2020, and cannot account for the extent to which the population, labour force and labour market are currently being, and will be for the foreseeable future, impacted. The extent of that impact will be able to be evaluated against the baseline.

Preliminary analysis also indicated that Southland Region's population and labour force had grown substantially across the 2013-2018 period, suggesting that elements of the 2015 Strategy had been successful.

Accordingly, it was determined to develop the Update in two Parts. **Part A** updates and extends the previous analyses and evaluates key aspects of the 2015 Strategy. **Part B** undertakes a detailed analysis of the characteristics of migrants into and out of Southland Region to provide a strategic basis for refining future actions. Both Parts provide the pre-Covid baseline against which post-Covid changes can be assessed.

Evaluation of key elements of the 2015 Strategy involved comparison of the various population, labour market and labour force analyses and projections for the period 2013-2018 with what has actually occurred. The key elements are the Strategy's four tactical targets (see Roskruge and Pawar 2014 Section 3 and Appendix A for more detail) **NB.** these categories are overlapping and therefore not fully additive:

1. A gain of an additional 300+ working age migrants per annum (for the next fifteen years), generating an additional 1,778 labour force participants aged 15-64 years by 2021 (1,111 by 2018);
2. An increase in the labour force participation rate of people aged 55+ years to match the rate for the preceding age group, by 2021, generating an addition 3,858 participants by 2021 (2,411 by 2018);
3. A 12% increase in the labour force participation rate of youth aged 15-24 years by 2021, generating an additional 587 people by 2021 (367 by 2018); and
4. An increase in the labour force participation of women by 2021 to close the gap between male and female participation rates by 25 per cent, generating an additional 1,177 females labour force participants by 2021 (736 by 2018).

Glossary

Population Projections. When interpreting the information provided in this report it is important to remember that neither demographic nor workforce projections are forecasts in the sense that they incorporate interventions to bring about that future. Rather, they indicate what the situation will be if the underlying assumptions regarding demographic change (births, deaths and migration) and economic development prevail.

Labour Supply/Labour Market refers to the population of working age, irrespective of its availability or proclivity to be employed in the formal labour force. Working age can be variously interpreted as 15+ years or any combination of age groups within, such as 15-64 years (often called the 'prime' working age group), 15-69 or 15-74 years. All are used in this Report.

The Labour Force/Work Force refers to the population aged 15+ years that is both employed and unemployed in the formal labour force. Those not in the labour force are categorised as a labour force *status* but are not included *in* the labour force; they currently account for around 25 per cent of the Southland Region's population aged 15+ years. At current labour force participation rates, the working age population would therefore need to exceed demand for labour by approximately 25 per cent to meet that demand.

Demand refers to the number of workers needed under specified hypothetical scenarios, such as 1 per cent per annum increase in economic activity.

Demand versus Supply is an exercise comparing hypothetical demand for labour with the absolute supply of labour under specified scenarios.

Industry, Occupation and **Highest Post-School Qualification** pertain to the employed population only.

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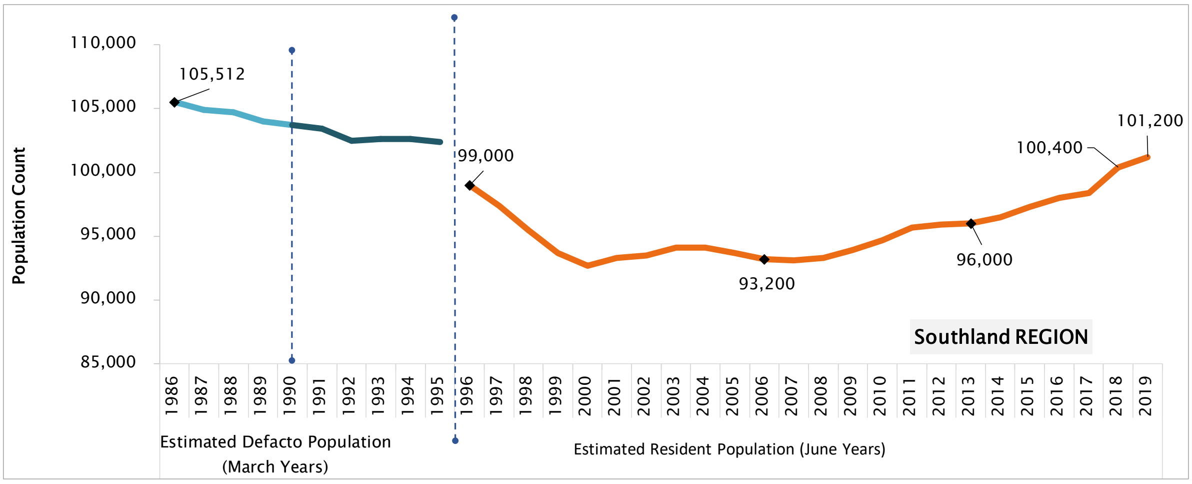
1. Part A Update and Revision

The Southland Region Population: Size and Growth

After a decade of population decline, the Southland Region returned to intermittent growth around the year 2000, and since 2007 has seen sustained growth, increasing by 3.0 per cent (+2,800) between 2006 and 2013 and 4.6 per cent (+4,400) between 2013 and 2018 (Figure 1.1).

Although the population in 2019 is still smaller than in the 1980s, annual growth rates have increasingly moved towards those for total New Zealand, which grew by 6.2 per cent between 2006 and 2013, and 9.0 per cent between 2013 and 2018 (Figure 1.2).

Figure 1.1: Southland Region, Population Size and Growth 1986-2019



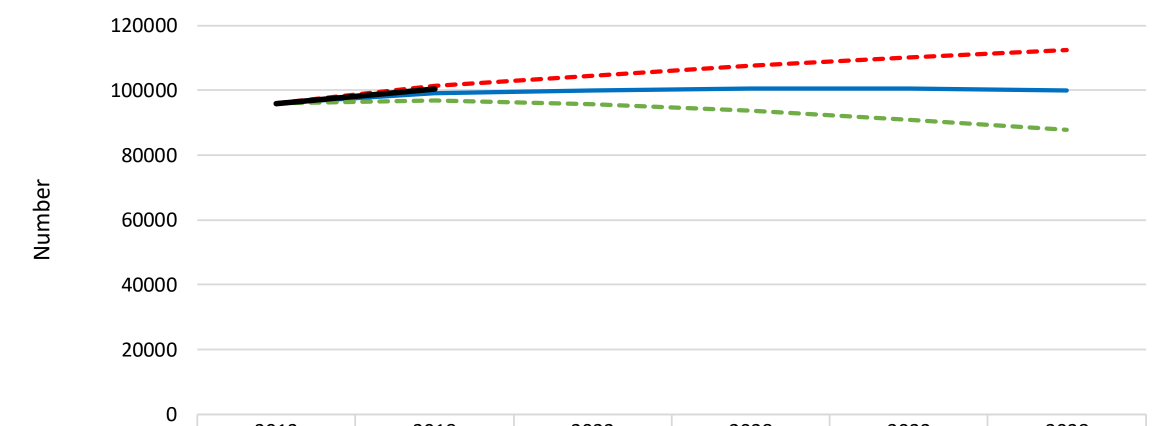
Selected years	Southland REGION N	%	annualised %	New Zealand N	%	annualised %
1986 – 1996	-6,512	*-6.2*	-0.6	+424,916	*+12.8*	1.3
1996 – 2006	-5,800	*-5.9*	-0.6	+452,600	*+12.1*	1.2
2006 – 2016	+4,800	*+5.2*	0.5	+508,100	*+12.1*	1.2
2016 – 2019	+3,200	*+3.3*	1.1	+224,300	*+4.8*	1.6
1986 – 2019 (Total)	**-4,312**	***-4.1***	**-0.1**	**+1,609,916**	***+48.7***	**1.5**
2006-2013	+2,800	*+3.0*	0.4	+257,500	*+6.2*	0.9
2008-2013	+2,700	*+2.9*	0.6	+182,300	*+4.3*	0.9
2013-2018	+4,400	*+4.6*	0.9	+398,900	*+9.0*	1.8

Source: Jackson & Pawar (2020)/Statistics New Zealand various sources

Statistics New Zealand's (2017a) **medium variant population projections** indicate around 3.4 per cent growth between 2013 and 2018, with growth then slowing and becoming negative after 2033.[2] The primary cause of projected negative growth under the medium assumptions is a return to net migration loss from 2023 (see Appendix B).

However, as shown on Figure 1.2, the Southland Region ERP (Estimated Resident Population) is currently tracking closer to the high variant assumptions: the 2018 ERP (100,400) was 0.9 per cent lower than the high variant projection (101,300) and 1.2 per cent higher than the medium variant (99,200). It should be noted that the 2018 ERP is still based on the 2013 Census and may alter when adjusted for the 2018 census by Statistics New Zealand (no date yet available).

Figure 1.2: Projected Population by Projection Series 2013-2043 (Update) and Estimated Resident Population 2013 and 2018, Southland Region



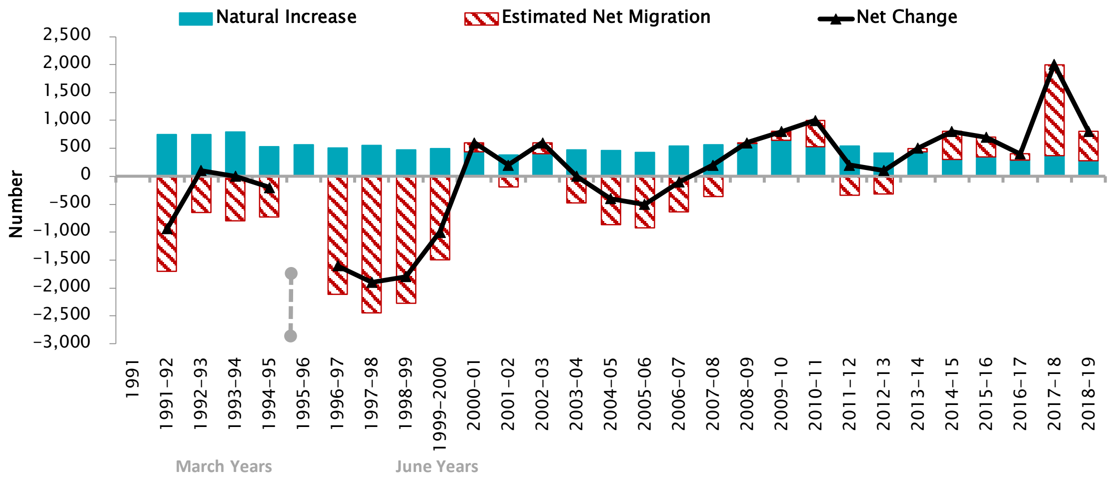
	2013	2018	2023	2028	2033	2038
High	95900	101300	104600	107600	110200	112400
Medium	95900	99200	100100	100600	100600	100000
Low	95900	97000	95600	93600	90900	87700
ERP*	96000	100400				

*Statistics New Zealand 2017a and 2020a (*2018 ERP is still based on the 2013 Census)*

As indicated by the components of population change (Figure 1.3), the Southland Region's recent growth has been driven by a shift from net migration loss to net migration gain. By comparison, natural increase (the difference between births and deaths) has played a smaller and diminishing role. Between 2013 and 2018 net migration accounted for 60 per cent of growth and natural increase for 40 per cent, whereas for much of the period shown on Figure 1.3, natural increase either fully or partially offset net migration loss.

[2] Previous projections (Stats NZ 2015) used in the 2015 Workforce strategy indicated 2.5 per cent growth and a shift to negative growth from 2028.

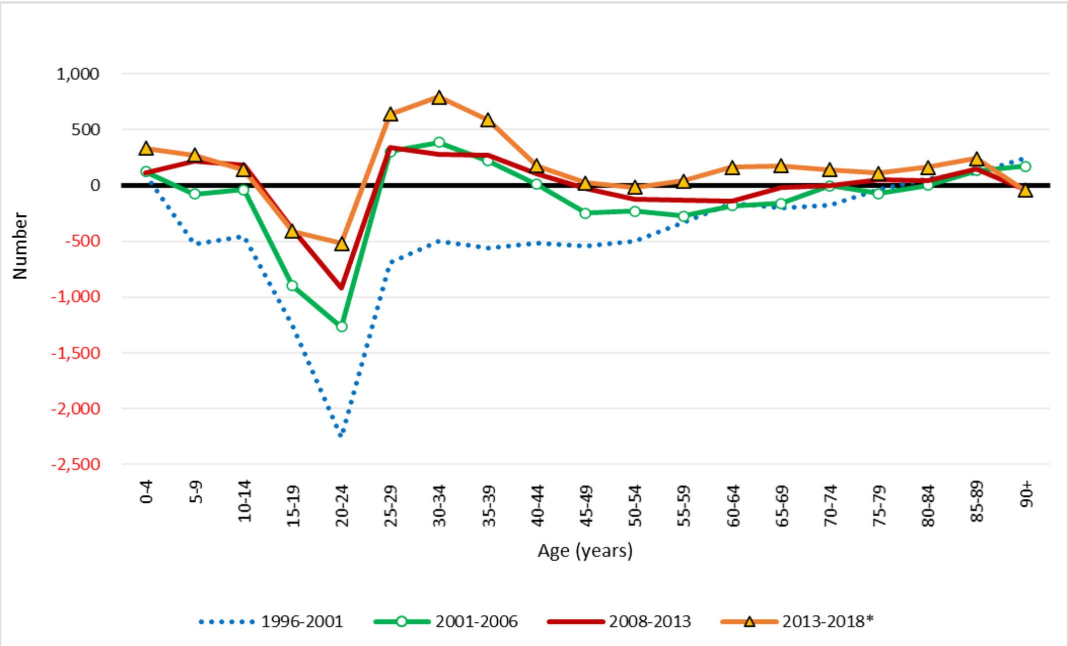
Figure 1.3: Components of Change 1991-2019, Southland Region



**Changes in timing and method of estimating Resident Population between 1995 and 1996 mean that only natural increase can be shown for that year*
Source: Jackson & Pawar 2020/Compiled from Statistics New Zealand Data sets

Figure 1.4 shows this shift to net migration gain by age, showing that the previously consistent net losses at 15-19 and 20-24 years have substantially reduced (although the loss at 15-19 years increased slightly between 2013 and 2018), and previous gains (2008-2013) across the parental/young adult working age population have increased, with attendant gains of young children (see also Table 1.2 below). One other noticeable shift is net gains across the late working age/early retirement age groups between 2013 and 2018, compared with consistent net losses at these ages across the prior census periods.

Figure 1.4: Net Migration by Age (Numbers), 1996-2018, Southland Region

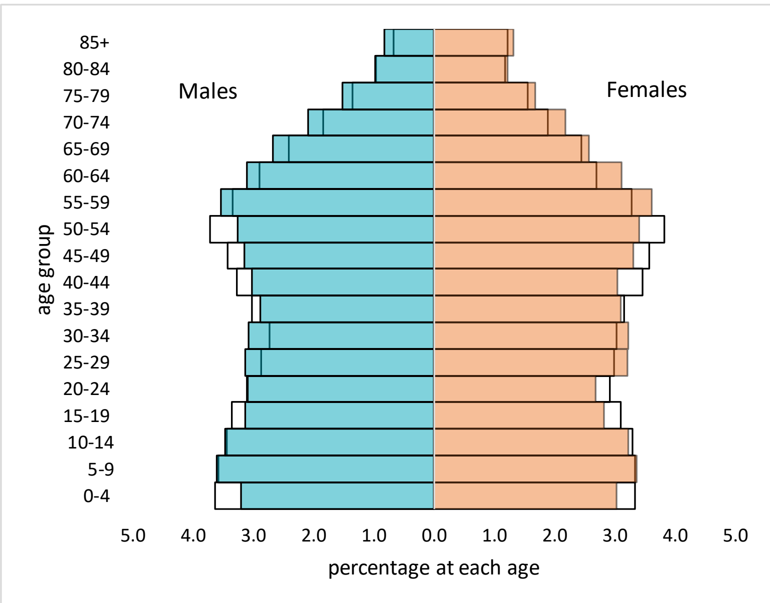


Summary of Population Change by Age

Before moving onto a more detailed analysis of Southland Region's working age population and workforce, Figures 1.5 and 1.6 and Table 1.1 provide an overview of the region's population change by age. Between 2013 and 2018, numbers in all older age groups increased, while numbers in several age groups below 55+ years declined (Figure 1.5). While these changes are consistent with structural population ageing, they also reflect the region's migration age profile (Figure 1.4 above). In particular, Figure 1.5 shows a notable increase at 25-29 and 30-34 years of age, and a stabilising of numbers at 5-9 and 10-14 years, neither of which are common features of structural ageing. While some of the children will be related to migrant parents, some will reflect the movement through the age structure of a small increase in birth numbers that occurred between 2002 and 2010 (see Figure 1.3 above)—a so-called 'baby blip' generated by the children of the baby boomers having the last of their own children.

The progression of these births through the age structure is more visible on Figure 1.6, between 2008 and 2013, when aged 0-14 years (see also Table 1.1). In 2018 these births were aged eight to 16 years, and, on the assumption that many will remain in Southland, will continue to pass through the primary and high school years and into tertiary education over the next 10-15 years, potentially swelling future numbers at 15-24 years.

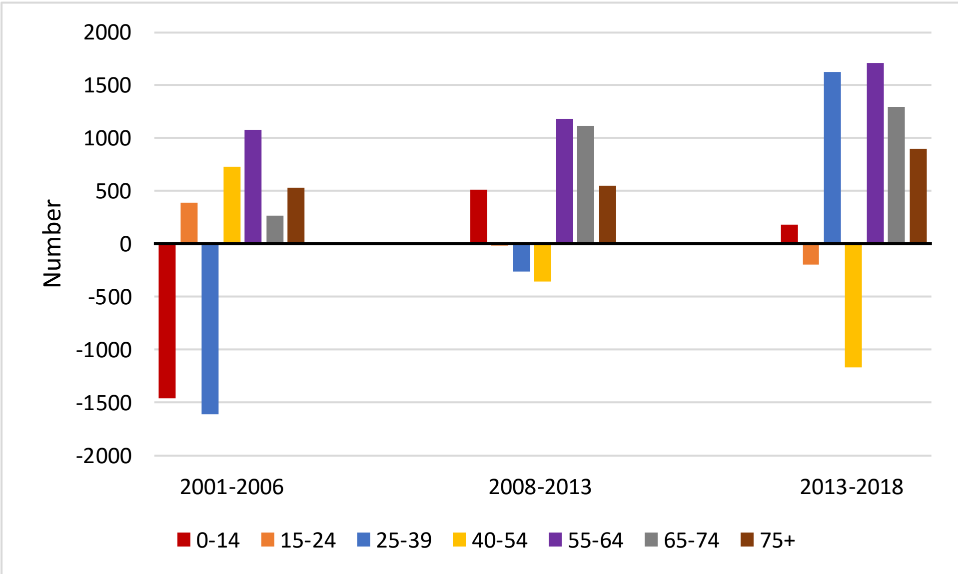
Figure 1.5: Age-Sex Structure (Numbers at each Age), 2013 (Unshaded Bars) and 2018 (Shaded Bars), Southland Region



Source: Jackson/Statistics NZ 2020a

In summarizing the changes by broad age group, Figure 1.6 also draws attention to the region's decline in numbers at 40-54 years. This decline is widespread across New Zealand's regions and for the most part reflects the movement of the largest 'tail end' baby boomer cohorts (born in the mid-1960s) into the older age groups, thereby swelling numbers at those ages and leaving a trough in their wake. This cohort progression is expected to continue, resulting in reduced numbers at mid-workforce ages and increased numbers at older ages for the next few decades.

Figure 1.6: Numerical Change by Broad Age Group, 2001-2006, 2008-2013 and 2013-2018, Southland Region



Source: Jackson/Statistics NZ 2020a

Table 1.1: Numbers and Change in each Broad Age Group, 2001-2018, Southland Region

	Number					Change (Number)		
	2001	2006	2008	2013	2018	2001-2006	2008-2013	2013-2018
0-14	21050	19590	19310	19820	20000	-1460	510	180
15-24	11640	12030	12010	11990	11790	390	-20	-200
25-39	19180	17570	17340	17080	18710	-1610	-260	1630
40-54	20240	20970	20800	20440	19270	730	-360	-1170
55-64	8990	10070	10540	11720	13430	1080	1180	1710
65-74	6740	7010	7140	8260	9560	270	1120	1300
75+	5430	5960	6120	6670	7570	530	550	900
Total	93270	93200	93260	95980	100330	-70	2720	4350

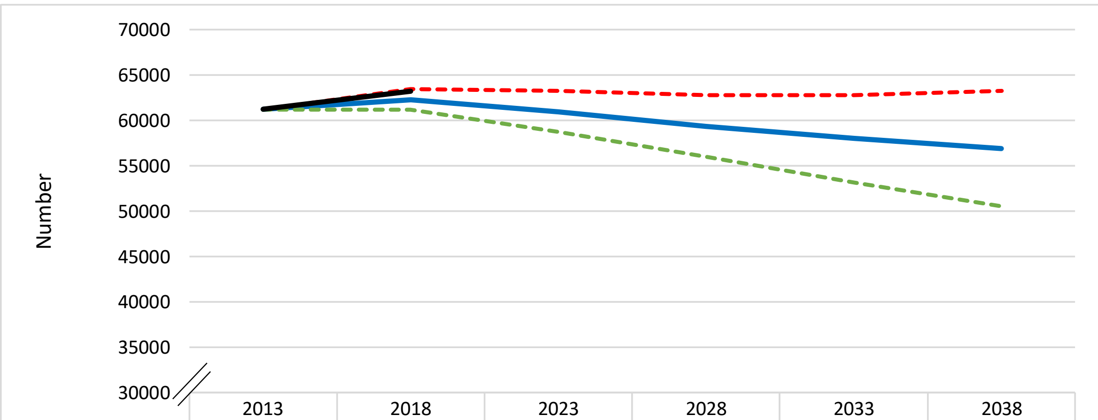
Source: Jackson/Statistics NZ 2020a

Southland Region Working Age Population

The decreased migration losses and increased gains across the young adult age groups have had a substantial impact on the prime working age population (15-64 years), although it did not grow quite as much as the total population because the majority of the latter's growth was at 65+ years. Between 2013 and 2018 the population aged 15-64 years grew by 3.2 per cent (+1,970), up from 1.0 per cent (+590) between 2006 and 2013. As Figure 1.7 shows, this meant that the prime working age population did not decline between 2013 and 2018 as was projected in the 2015 Strategy (a projected loss of around 1,061) and is even more closely tracking the high variant projection than the total population. In 2018, the ERP at 15-64 years was 1.4 per cent (+990) above the medium variant projection, and just 0.4 per cent (-240) below the high variant.

However, even under the high variant, numbers aged 15-64 years are now projected to decline. Between 2018 and 2038 numbers are projected to decline by 200 (-0.3%) under the high variant, 5,420 (-8.7%) under the medium variant, and 10,600 (-17.3%) under the low variant. If the prime working age population is expanded to include those aged 65-69 years, there is minor growth under the high variant (+770, peaking in 2028) and slightly reduced decline under the medium and low variants (respectively -4,910 and -10,540), but the picture does not change appreciably. Such scenarios are considered further below.

Figure 1.7: Projected Population Aged 15-64 Years by Projection Series 2013-2038 (Update) and Estimated Resident Population 2013 and 2018, Southland Region



	2013	2018	2023	2028	2033	2038
High	61240	63440	63250	62810	62810	63240
Medium	61240	62300	60980	59400	57990	56880
Low	61240	61170	58720	56030	53150	50570
ERP*	61230	63200				

*Statistics New Zealand 2017a and 2020a (*2018 ERP is still based on the 2013 Census)*

Evaluation of 2015 Strategy Migration Targets

Taken together, the above trends indicate that actions guided by the 2015 Workforce Strategy have in all likelihood contributed to the population and labour market growth experienced between 2013 and 2018. **The target of 300 additional working age migrants** per year (Scenario 1) was almost met during this period (Table 1.2). Between 1996 and 2001, 2001 and 2006, and 2008 and 2013, the net number of migrants aged 15-64 years was, respectively, -7,314, -2,169, and -727. Between 2013 and 2018, numbers were +1,324, an average net gain of 265 net migrants per year. Moreover, in total, these gains fully offset net migration losses at 15-24 years. If those aged 65-69 years are included, the net gain was 1,451, an average annual increase of 290. While it cannot be denied that the net losses had been successively reducing, the abrupt shift to strongly positive values between 2013 and 2018 is, at minimum, strongly correlated.

Table 1.2: Estimated Net Migration by Age, 1996-2018, Southland Region

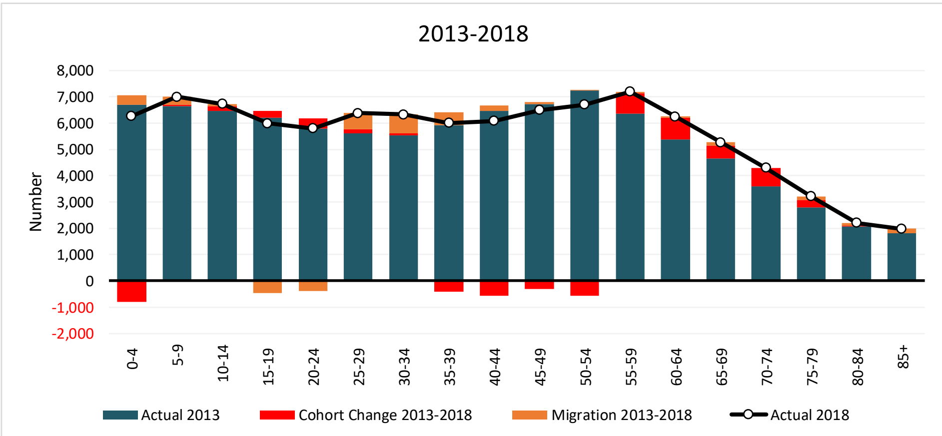
	1996–2001	2001–2006	2008–2013	2013–2018*
0–4	98	124	118	367
5–9	-527	-77	222	303
10–14	-457	-37	183	83
15–19	-1,257	-897	-389	-468
20–24	-2,256	-1,266	-918	-397
25–29	-686	304	342	603
30–34	-494	386	284	725
35–39	-559	222	269	490
40–44	-519	11	107	189
45–49	-545	-245	-29	64
50–54	-502	-231	-119	36
55–59	-335	-274	-133	44
60–64	-160	-179	-143	37
65–69	-200	-158	-19	127
70–74	-174	-1	-3	-8
75–79	-38	-72	57	132
80–84	66	4	47	114
85–89	119	134	149	236
90+	246	174	-37	-44
Total	-8,182	-2,078	-9	2,634
15–64 years	-7,314	-2,169	-727	1,324
15–69 years	-7,514	-2,327	-746	1,451

Source: Jackson & Pawar (2020)/Statistics New Zealand various sources

*Data for 2013–2018 are based on Stats NZ's 2013–based ERP for 2018

Figure 1.8 provides an additional perspective on the impact of migration on each age group across the 2013-2018 period. For those aged 0-4 and 35-54 years, net migration gains offset or partially offset small declines in cohort size, while at 15-24 years, small increases in cohort size offset minor net migration losses. For all other age groups (5-14, 25-34 and 55+ years), numbers grew from the combined effect of net migration gain and increasing cohort size. These nuanced data are an important reminder that migration gains do not always cause a population to grow, while migration losses do not always result in population decline. Tracking projected changes in cohort size will permit more refined targeting of migrants by age. For example, as those aged 50-54 years in 2018 move into the 55-59 year age group by 2023, the latter age group is likely to swell while the former is likely to decline.

Figure 1.8: Contribution of Cohort Change and Net Migration to each Age Group (Numbers), 2013-2018, Southland Region



Source: Jackson & Pawar (2020)/Statistics New Zealand various sources

Census usually resident population data based on address five years ago (modelled to generate an approximation for Overseas Leavers) also provide additional insight, indicating that the novel net migration gain is wholly driven by international migration (Table 1.3); by contrast, the Southland Region typically experiences net internal loss, and continued to do so at an increased rate, between 2013 and 2018. Between 2013 and 2018 a net gain of around 5,106 international migrants was reduced by a net internal loss of 2,452. If the latter loss could be stemmed or slowed, the region's net migration gain could be even greater.

(Note that total numbers in Tables 1.2 and 1.3 differ slightly because they are modelled differently).

Table 1.3: Estimated Net Internal and Net Overseas Migration (Modelled), 1996-2018, Southland Region

	Net Internal	Net Overseas	Total Net Migration
1996 – 2001	-6,052	-2,108	-8,160
2001 – 2006	-2,598	344	-2,254
2008 –2013	-1,409	1,400	-9
2013–2018	-2,452	5,106	2,654

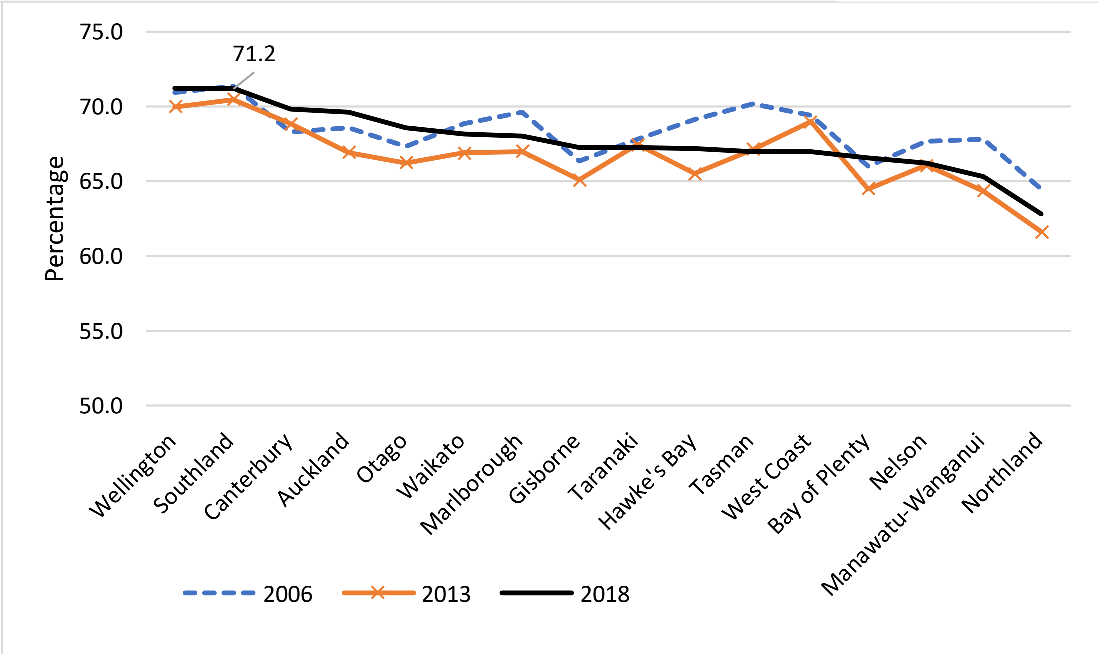
Source: Jackson & Pawar (2020)/Statistics New Zealand various sources

The Southland Region Workforce and Comparison with Other Regions

The projected decline in numbers at prime working age (labour supply) in Figure 1.7 above must also be seen in relation to the fact that the Southland Region already has the second-highest workforce participation rate among New Zealand's regions, falling just fractionally behind Wellington in 2018, but previously above it (Figure 1.9).[3] Southland's employment rates (Figure 1.10) have also almost consistently led the country (in 2018 being equal with Wellington), while its unemployment rates are well below the national average, being equal third-lowest in 2018 (Figure 1.11).

Within that overarching picture, however, it should be noted that Southland's total participation rate in 2018 (71.2%) was only a little above its 2013 level (70.5%), and fractionally below its level in 2006 (71.4%). This point is returned to further below.

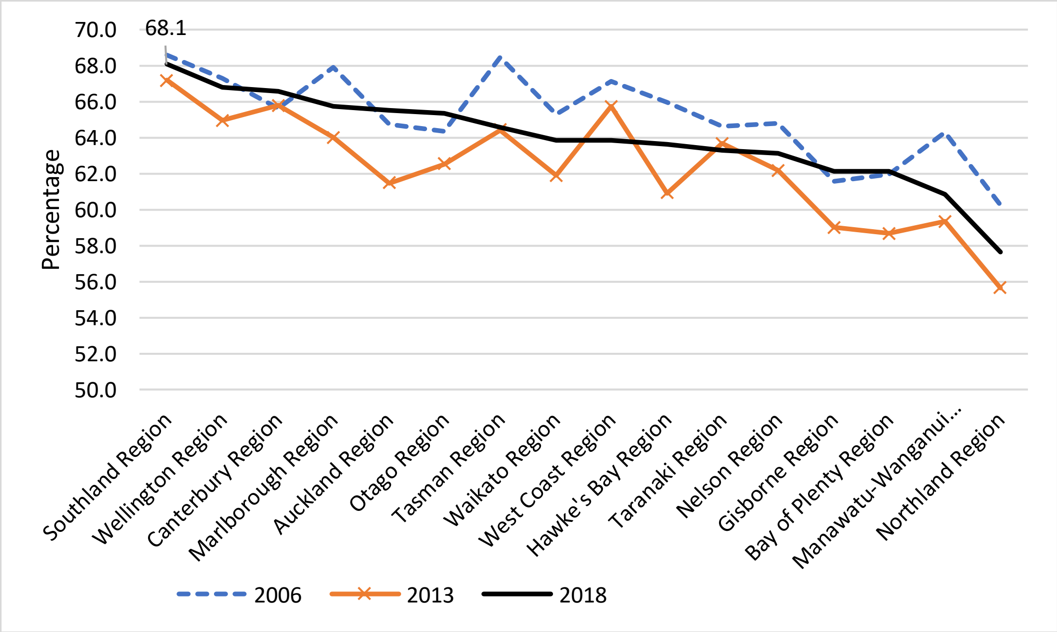
Figure 1.9: Labour Force Participation Rate by Region for the Census Usually Resident Population Aged 15+ years, 2006, 2013 and 2018 (ranked highest to lowest in 2018).



Source: Author/Statistics New Zealand 2020b

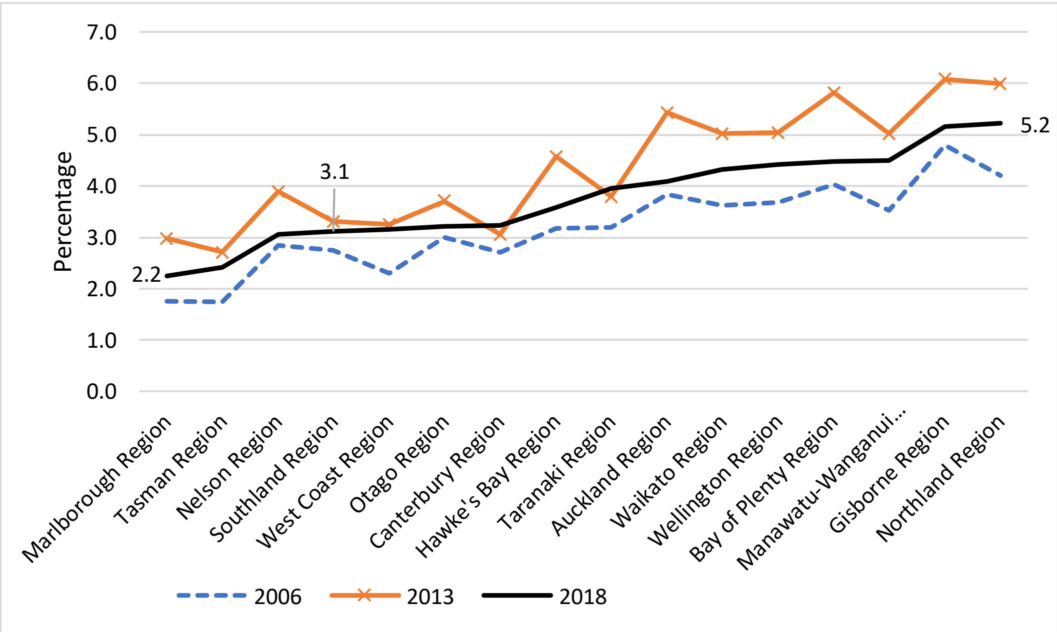
[3] Note that these data are based on the Census Usually Resident Population. For Southland Region the Household Labour Force Survey for June 2018 indicates a slightly higher Labour Force Participation Rate (72.6%) and places it third highest, behind Waikato (72.8%) and Wellington (73.7%).

Figure 1.10: Labour Force Employment Rate by Region for the Census Usually Resident Population Aged 15+ Years, 2006, 2013 and 2018 (ranked highest to lowest in 2018).



Source: Author/Statistics New Zealand 2020b

Figure 1.11: Labour Force Unemployment Rate by Region for the Census Usually Resident Population Aged 15+ Years, 2006, 2013 and 2018 (ranked lowest to highest in 2018).



Source: Author/Statistics New Zealand 2020b

The Southland Region Workforce by Region, Sex and Age

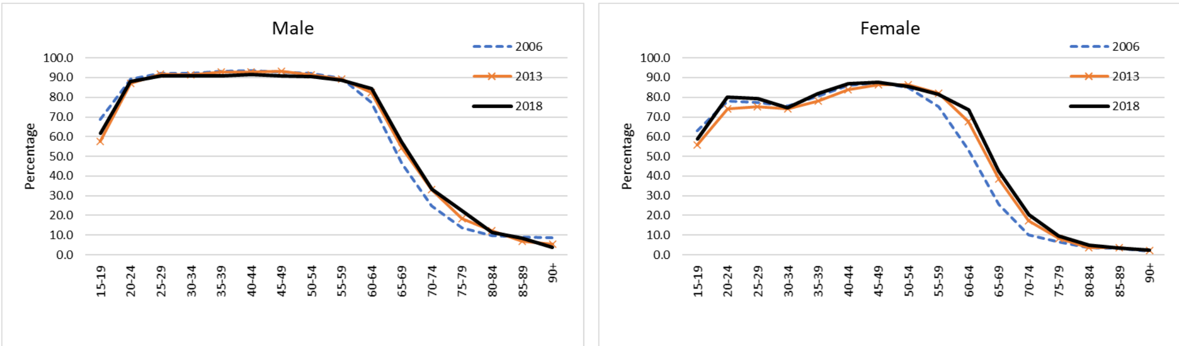
The labour force picture is very similar by sex, with Southland Region's **male** participation rate (76.3%) in 2018 a full percentage point above that of its nearest contender (Wellington); the male employment rate (73.4%) nearly two points above that of Canterbury (and 2.5 points above Wellington); and the male unemployment rate, third-lowest at 2.9% (see Appendix D). The Southland Region's male workforce in 2018 also leads the full-time employment (65.0%) ranks by some 2.2 per centage points (ahead of Canterbury); correspondingly, the region's male part-time rates are the lowest nationally (8.5%) (see Appendix E). Importantly, Southland Region males also have the lowest proportion nationally that is not in the labour force (in 2018, 23.7%), despite being in the middle of the regional distribution in terms of structural ageing.

Southland Region's **female** workforce shares most of these characteristics, in 2018 having New Zealand's second-highest participation rate (66.2%, just behind Wellington at 67.6%), second-highest employment rate (62.9%, again just behind Wellington on 63%), and fifth-lowest unemployment rate (3.3%). Only Wellington and Auckland females have higher full-time employment rates (respectively 44.5% and 43.0% compared with 40.2% for Southland), while only the Tasman and Nelson Regions have higher part-time rates (respectively 24.8% and 22.9% compared with 22.7% for Southland—yet again, only Wellington Region females have a lower proportion not in the labour force (32.4%) than Southland (33.8%).

Taken together the above trends confirm that Southland Region is experiencing a very tight labour market with minimal elasticity for increasing the potential labour pool, as similarly proposed in the 2015 Strategy. Increasing labour force participation at older ages (Figure 1.12) is helping to swell both the region's labour market and labour force (Table 1.3 below), but as indicated in the Strategy, by 2013 the region's labour force already included a relatively high proportion of people aged 55 years or more: 1.2 in every five (24.7%) belonged to this age group, up from less than one in five (19%) in 2006. By 2018 that ratio had risen to 1.4 per five (27.2%); by comparison, the ratio for total New Zealand was 1.1 (23.0%).

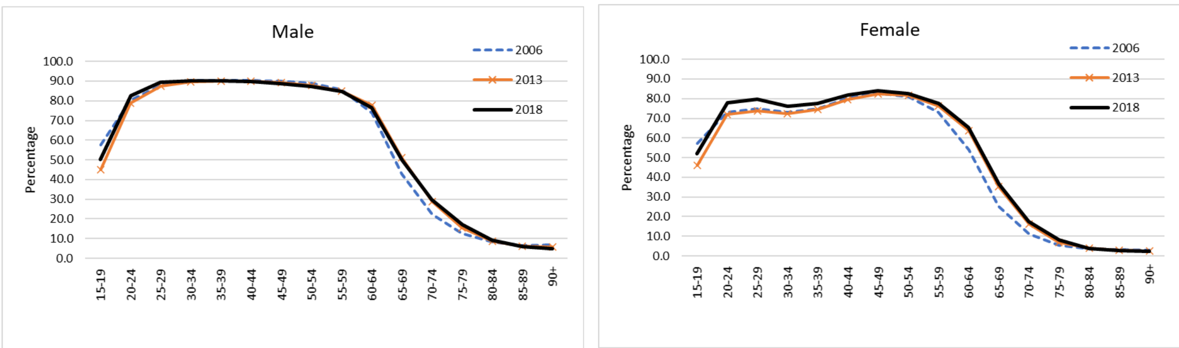
Notably, Figure 1.12 shows that participation rates for Southland males aged 25-59 years and for females aged 50-59 years fell between 2013 and 2018; overall, the participation rate for males fell by 0.4 per cent and that for females rose by 2.2 per cent. Figure 1.12 also indicates that Southland's increased labour force participation at older ages slowed between 2013 and 2018, for both males and females. This also occurred nationally (Figure 1.13), although the increase for the Southland Region remained somewhat ahead of that nationally (Figure 1.14). However, as Figure 1.14 also shows, participation rates at younger ages increased less for the Southland Region than they did nationally.

Figure 1.12: Labour Force Participation Rate by Sex and Age, for the Census Usually Resident Population Aged 15+ Years, 2006, 2013 and 2018, Southland Region.



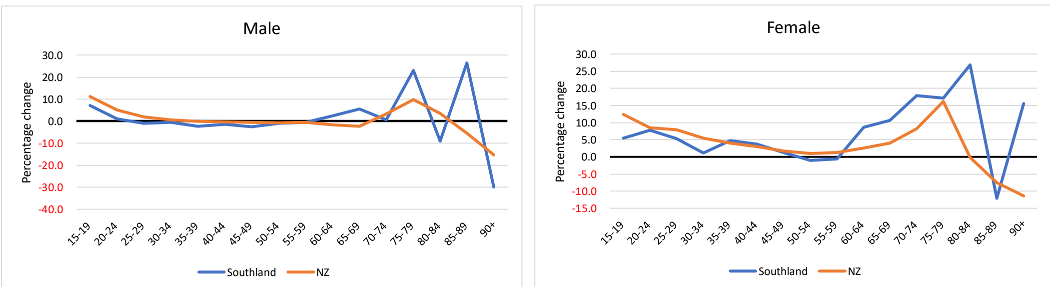
Source: Statistics New Zealand 2020b

Figure 1.13: Labour Force Participation Rate by Sex and Age, for the Census Usually Resident Population Aged 15+ Years, 2006, 2013 and 2018, Total New Zealand.



Source: Statistics New Zealand 2020b

Figure 1.14: Change (%) in Labour Force Participation Rate between 2013 and 2018, by Sex and Age, for the Census Usually Resident Population Aged 15+ Years, Southland Region and Total New Zealand.



Source: Author/Statistics New Zealand 2020b

The Southland Region Workforce by Age

The overall outcome of the trends on the Southland Region's labour force is shown on Table 1.4. Where total numbers grew only modestly between 2006 and 2013 (+309, 0.6%), and six age groups experienced decline, between 2013 and 2018 the labour force swelled by 5,097 (+10.1%). Across the latter period, numbers declined for three age groups (40-44, 45-49 and 50-54 years) but grew substantially for all others.

Reflecting structural population ageing, labour force growth at 15-24 years (+585 people, 7.8%) between 2013 and 2018 was substantially exceeded by growth at 55+ years (+2,625 people, 21.1%), with the latter accounting for just over half of total growth. Nevertheless, the growth at 15-24 years represented an abrupt reversal of the situation occurring between 2006 and 2013, when numbers had declined by 873 (-10.5%).

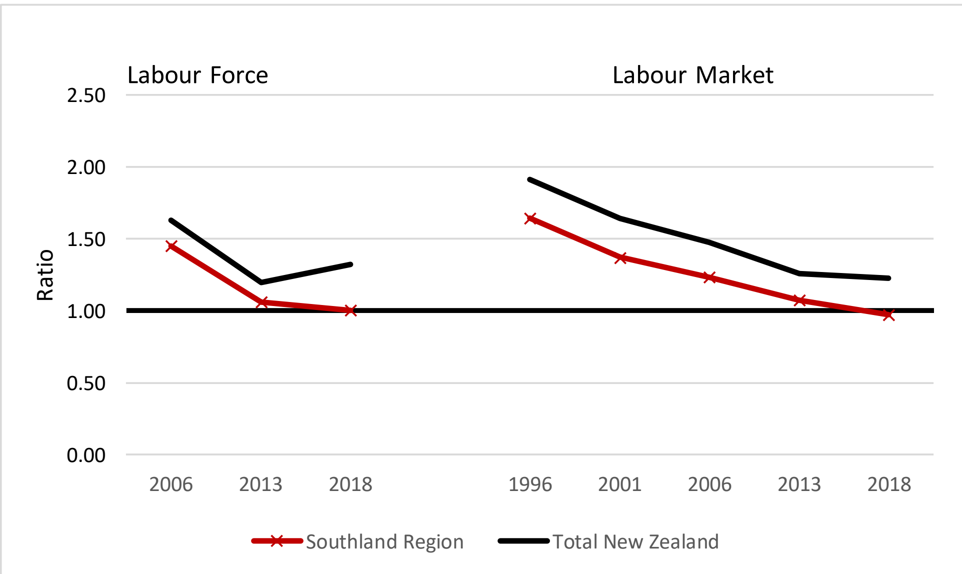
Table 1.4: Number and Change in Total Labour Force Participation by Age, 2006, 2013 and 2018, Southland Region

				Change (Number)			Change (%)		
	2006	2013	2018	2006-2013	2013-2018	Total 2006-2018	2006-2013	2013-2018	Total 2006-2018
15-19	4086	3243	3471	-843	228	-615	-20.6	7.0	-15.1
20-24	4242	4212	4569	-30	357	327	-0.7	8.5	7.7
25-29	4146	4284	5289	138	1005	1143	3.3	23.5	27.6
30-34	4716	4266	5130	-450	864	414	-9.5	20.3	8.8
35-39	5403	4758	5085	-645	327	-318	-11.9	6.9	-5.9
40-44	6450	5406	5376	-1044	-30	-1074	-16.2	-0.6	-16.7
45-49	6255	5748	5715	-507	-33	-540	-8.1	-0.6	-8.6
50-54	5325	6069	5823	744	-246	498	14.0	-4.1	9.4
55-59	4509	5124	5934	615	810	1425	13.6	15.8	31.6
60-64	2763	3885	4761	1122	876	1998	40.6	22.5	72.3
65-69	1320	2019	2562	699	543	1242	53.0	26.9	94.1
70-74	516	870	1089	354	219	573	68.6	25.2	111.0
75-79	243	342	483	99	141	240	40.7	41.2	98.8
80-84	105	153	162	48	9	57	45.7	5.9	54.3
85-89	48	54	75	6	21	27	12.5	38.9	56.3
90+	15	18	24	3	6	9	20.0	33.3	60.0
Total people	50142	50451	55548	309	5097	5406	0.6	10.1	10.8
15-24 years	8328	7455	8040	-873	585	-288	-10.5	7.8	-3.5
55+ years	9519	12465	15090	2946	2625	5571	30.9	21.1	58.5
				Percentage Point Change					
15-24 years (%)	16.6	14.8	14.5	-1.8	-0.3	-2.1	-11.0	-2.0	-12.9
55+ years (%)	19.0	24.7	27.2	5.7	2.5	8.2	30.1	10.0	43.1

Source: Author/Statistics New Zealand 2020b

Labour Market Entry: Exit Ratio. Southland's labour force 'entry: exit' ratio—shown here for those aged 15-29 and 55-69 years—reflects these trends (Figure 1.15, left hand panel).[4] The ratio fell abruptly between 2006 and 2013, then slowed substantially, suggesting that the increase in the number of workers at older ages is partly offsetting the smaller increases at younger ages. Between 2006 and 2013, numbers at 15-29 years fell by 5.9 per cent, while numbers at 55-69 years increased by 28.4 per cent, causing the ratio to fall from 1.45 to 1.06 (-26.7%). Between 2013 and 2018, numbers at 15-29 years increased by 13.5 per cent, while numbers at 55-69 years increased by 20.2 per cent, causing a much smaller decline (-5.5%) in the ratio—indicating a minor slowing of workforce ageing. The trend for total New Zealand followed a similar pattern between 2006 and 2013. However, the ratio then increased slightly, as historically high levels of international migration generated a relatively larger influx at younger ages.

Figure 1.15: Labour Force and Labour Market Entry: Exit Ratios (15-29:55-69 years), for the Population Aged 15+ Years, Southland Region and Total New Zealand.



Source: Author/Statistics New Zealand 2020b, 2020a

By contrast, the region's labour market (general population pool) ratio shows a steadier decline (Figure 1.15, right hand panel). At 15-29 and 55-69 years, numbers increased between 2013 and 2018 by 3.2 and 14.6 per cent respectively, causing the ratio to fall from 1.07 to 0.97 (-9.6%). That for total New Zealand followed a similar trend but levelled off between 2013 and 2018, again reflecting the very high international migration gains.

[4] The choice of age groups is somewhat arbitrary; all show a similar trend but begin and end at higher or lower levels.

Evaluation of 2015 Strategy Labour Force Participation Targets

The extent to which the above trends have contributed to meeting the 2015 Strategy's targets of increasing labour force participation for those aged 55+ years (Scenario 2, projected to generate an additional 2,411 labour force participants by 2018) and for those aged 15-24 years by 12 per cent by 2021 (Scenario 3, projected to generate an additional 367 15-24 year old participants by 2018) is examined on Table 1.5. The effect of changes in participation by sex is examined separately below.

At 55+ years, the participation rate rose from 49.2 to 51.2 per cent between 2013 and 2018, but the rate of increase slowed from 14.1 per cent between 2006 and 2013 to 4.1 per cent. Rates for those aged 55+ years in 2018 failed to match those of each preceding age group (in 2013). Nevertheless, between 2013 and 2018 an additional 2,625 people aged 55+ years were added to the region's labour force, slightly below the number between 2006 and 2013 (2,946), but 214 (8.9%) above the 2,411 underlying the Strategy's 2018 Scenario 2 target.

Table 1.5: Number and Change in Labour Force Participation Rate and Numbers by Age, Southland Region, Total

	Participation Rate (%)*			Total Change (%)		Annual Change (%)		Numerical Change	
	2006	2013	2018	2006-2013	2013-2018	2006-2013	2013-2018	2006-2013	2013-2018
15-19	66.0	56.6	60.4	-14.2	6.6	-2.8	1.3	-843	228
20-24	83.7	80.8	84.2	-3.5	4.3	-0.7	0.9	-30	357
25-29	84.5	83.4	85.0	-1.3	2.0	-0.3	0.4	138	1005
30-34	83.6	82.2	82.7	-1.6	0.6	-0.3	0.1	-450	864
35-39	86.6	85.5	86.3	-1.4	1.0	-0.3	0.2	-645	327
40-44	89.8	88.1	89.2	-1.8	1.2	-0.4	0.2	-1044	-30
45-49	90.2	89.7	89.2	-0.5	-0.6	-0.1	-0.1	-507	-33
50-54	88.8	88.8	88.1	0.1	-0.9	0.0	-0.2	744	-246
55-59	82.7	85.7	85.2	3.6	-0.6	0.7	-0.1	615	810
60-64	65.7	75.5	79.1	14.9	4.8	3.0	1.0	1122	876
65-69	35.9	46.4	50.2	29.3	8.2	5.9	1.6	699	543
70-74	17.2	25.2	26.8	46.4	6.6	9.3	1.3	354	219
75-79	9.6	12.8	15.6	33.3	22.5	6.7	4.5	99	141
80-84	5.9	7.7	7.6	31.2	-1.0	6.2	-0.2	48	9
85-89	5.0	4.7	5.4	-5.9	16.5	-1.2	3.3	6	21
90+	3.2	3.0	3.3	-5.6	8.5	-1.1	1.7	3	6
Total	71.4	70.5	71.2	-1.2	1.0	-0.2	0.2	309	5097
15-24 years (av.)	74.0	68.1	71.9	-7.9	5.6	-1.6	1.1	-873	585
55+ years (av.)	43.1	49.2	51.2	14.1	4.1	2.8	0.8	2946	2625

Source: Author/Statistics New Zealand 2020b
Note: *Analysis is based on those who stated their labour force status only

At 15-24 years, the labour force participation rate increased by 5.6 per cent between 2013 and 2018, after having declined by 7.9 per cent between 2006 and 2013. A continuation of the 1.1 per cent annual increase for the period 2013-2018 to 2021 would see a total nine per cent increase, a little short of the 12 per cent target. However, between 2013 and 2018 the labour force gained an additional 585 participants aged 15-24 years, 218 (59%) above the 367 underlying the Strategy's 2018 Scenario 3 target.

The extent to which the increased labour force numbers at 15-24 and 55+ years (+585 and +2,265 respectively) in 2018 were the result of increased labour force participation, increased migration and/or underlying cohort change is complex to fully disaggregate. However, applying the 2013 labour force participation rates by age to population numbers by age in 2018 indicates there would have been 403 fewer participants at 15-24 years and 541 fewer at 55+ years, had the 2013 rates remained the same (Table 1.6). Restated, the increase in participation rates for these age groups between 2013 and 2018 generated 403 additional participants at 15-24 years (69% of actual change at 15-24 years) and 541 at 55+ years (20.9% of actual change). This means that 182 of the additional participants aged 15-24 years were the result of migration and/or cohort change, as were 2,084 participants at 55+ years. For the latter group, underlying cohort change (where larger cohorts are replacing smaller ones) is undoubtedly the larger contributor.

In total, the overall change in participation rates between 2013 and 2018 generated an additional 1,108 participants, 21.7 per cent of the additional 5,907 (see Tables 1.4 and 1.5 above).

Table 1.6: Labour Force Numbers by Age in 2018 at 2013 and 2018 Participation Rates, Southland Region, Total

	Actual Change 2013-2018 (N)	Labour Force Numbers in 2018 at 2013 Participation Rates*	Actual Labour Force Numbers in 2018	Participation Rate Effect (N)~	Non-Participation Rate Effect (N)	Participation Rate Effect (as % of Actual Change)	Non-Participation Rate Effect (as % of Actual Change)
15-19	228	3255	3471	216	12	94.8	5.2
20-24	357	4382	4569	187	170	52.5	47.5
25-29	1005	5184	5289	105	900	10.4	89.6
30-34	864	5100	5130	30	834	3.5	96.5
35-39	327	5035	5085	50	277	15.3	84.7
40-44	-30	5313	5376	63	-93	208.4	-308.4
45-49	-33	5748	5715	-33	-0	-100.0	-0.0
50-54	-246	5874	5823	-51	-195	-20.9	-79.1
55-59	810	5970	5934	-36	846	-4.4	104.4
60-64	876	4544	4761	217	659	24.7	75.3
65-69	543	2368	2562	194	349	35.7	64.3
70-74	219	1022	1089	67	152	30.7	69.3
75-79	141	394	483	89	52	62.8	37.2
80-84	9	164	162	-2	11	-18.1	118.1
85-89	21	64	75	11	10	50.6	49.4
90+	6	22	24	2	4	...	...
Total	5097	54440	55548	1108	3989	21.7	78.3
15-24 years	585	7637	8040	403	182	69.0	31.0
25-54 years	1887	32255	32418	163	1724	8.6	91.4
55+ years	2625	14549	15090	541	2084	20.6	79.4

Source: Author/Statistics New Zealand 2020b

Note: *Analysis is based on those who stated their labour force status only

~Difference between Labour Force numbers in 2018 minus numbers in 2018 at 2013 rates

The analysis suggests that the overall increase in participation rates at 15-24 years accounted for all of the additional participants over the 367 target at those ages, while the increase in participation rates at 55+ years accounted for only 541 (22.4%) of the targeted 2411 additional participants (see also Appendix A). In total, the Southland Region's labour force in 2018 numbered 55,548, being 834 (1.5%) above the proposed target of 54,714 if all four key targets were met (Roskruge and Pawar 2014 Section 3).

Female Labour Force Participation: The extent to which the 2015 Strategy's Scenario 4 target of increasing labour force participation for women to a) reduce the gap in male and female participation rates by 25 per cent by 2021, and b) generate an additional 736 labour market participants by 2018 is examined via Tables 1.7, 1.8 and 1.9.

In 2006, 2013 and 2018 the gap between male and female participation rates was respectively 13.9, 11.9 and 10.0 percentage points (Table 1.7). Female rates increased by 2.4 per cent between 2013 and 2018, up from 0.2 per cent increase between 2006 and 2013. Between 2006 and 2013, the gap between males and females reduced by 14.3 per cent (2.0 percentage points), and between 2013 and 2018, by a further 15.9 per cent (1.9 percentage points). Of some importance, however, is that male participation rates declined *per se*, meaning that the gain was relative rather than absolute, and thus failed to meet that aspect of the Strategy target. Between 2013 and 2018, participation rates declined for all males aged 25-59 years, but only for females aged 50-59 years (see Appendix F).

Table 1.7: Labour Force Participation Rates by Sex, Southland Region, 2006, 2013 and 2018

				Change (%)	
	2006	2013	2018	2006-2013	2013-2018
Female	64.5	64.7	66.2	0.2	2.4
Males	78.5	76.6	76.3	-2.4	-0.4
Difference (PP)	-13.9	-11.9	-10.0	-14.3	-15.9

Source: Author/Statistics New Zealand 2020b

In absolute terms (Table 1.8), the overall increase in female participation rates generated an additional 957 labour force participants, while the decline for males (but increase at some ages) generated just 96—due solely to those aged 15-24 and 55+ years (Table 1.9). Thus, of the total 1,053[5] additional labour force participants (males and females combined) generated by changing participation rates *per se*, females accounted for almost 91 per cent.

[5] When analysed separately by sex, the numbers sum to 1,053, by comparison with the 1,108 shown on Table 1.5.

Table 1.8: Labour Force Numbers by Age in 2018 at 2013 and 2018 Participation Rates, Southland Region, Females

	Actual Change 2013-2018 (N)	Labour Force Numbers in 2018 at 2013 Participation Rates*	Actual Labour Force Numbers in 2018	Participation Rate Effect (N)~	Non-Participation Rate Effect (N)	Participation Rate Effect (as % of Actual Change)	Non-Participation Rate Effect (as % of Actual Change)
15-19	90	1528	1611	83	7	92.6	7.4
20-24	126	1886	2034	148	-22	117.6	-17.6
25-29	480	2347	2472	125	355	26.1	73.9
30-34	312	2320	2346	26	286	8.2	91.8
35-39	258	2363	2475	112	146	43.6	56.4
40-44	-48	2521	2616	95	-143	198.4	-298.4
45-49	9	2812	2850	38	-29	417.1	-317.1
50-54	-135	2894	2865	-29	-164	-21.3	-121.3
55-59	402	2864	2847	-17	385	-4.2	95.8
60-64	513	2026	2202	176	337	34.2	65.8
65-69	225	959	1062	103	122	45.7	54.3
70-74	114	359	423	64	50	56.2	43.8
75-79	39	133	156	23	16	58.6	41.4
80-84	15	45	57	12	3	80.4	19.6
85-89	0	31	27	-4	-4	...	...
90+	3	10	12	2	1	53.8	46.2
Total	2403	25098	26055	957	1446	39.8	60.2
15-24 years	216	3413	3645	232	-16	107.2	-7.2
25-54 years	876	15257	15624	367	509	41.9	58.1
55+ years	1311	6428	6786	358	953	27.3	72.7

Source: Author/Statistics New Zealand 2020b
Note: *Analysis is based on those who stated their labour force status only
~Difference between Labour Force numbers in 2018 minus numbers in 2018 at 2013 rates

Table 1.9: Labour Force Numbers by Age in 2018 at 2013 and 2018 Participation Rates, Southland Region, Males

	Actual Change 2013-2018 (N)	Labour Force Numbers in 2018 at 2013 Participation Rates*	Actual Labour Force Numbers in 2018	Participation Rate Effect (N)~	Non-Participation Rate Effect (N)	Participation Rate Effect (as % of Actual Change)	Non-Participation Rate Effect (as % of Actual Change)
15-19	132	1732	1857	125	7	94.8	5.2
20-24	237	2510	2538	28	209	11.7	88.3
25-29	528	2845	2817	-28	556	-5.3	105.3
30-34	561	2802	2790	-12	573	-2.1	102.1
35-39	66	2669	2607	-62	128	-94.2	194.2
40-44	21	2803	2763	-40	61	-191.6	291.6
45-49	-39	2938	2865	-73	34	-185.9	85.9
50-54	-114	2981	2955	-26	-88	-23.1	-76.9
55-59	411	3104	3087	-17	428	-4.1	104.1
60-64	366	2500	2559	59	307	16.0	84.0
65-69	318	1420	1500	80	238	25.1	74.9
70-74	108	658	663	5	103	4.4	95.6
75-79	99	266	327	61	38	61.9	38.1
80-84	-3	115	105	-10	7	-347.4	247.4
85-89	18	38	48	10	8	55.8	44.2
90+	0	13	9	-4	4	...	...
Total	2709	29394	29490	96	2613	3.5	96.5
15-24 years	369	4242	4395	153	216	41.4	58.6
25-54 years	1023	17038	16797	-241	1264	-23.6	123.6
55+ years	1317	8114	8298	184	1133	14.0	86.0

Source: Author/Statistics New Zealand 2020b
Note: *Analysis is based on those who stated their labour force status only
~Difference between Labour Force numbers in 2018 minus numbers in 2018 at 2013 rates

on the assumption that efforts to achieve the participation rate targets laid out in the Strategy were pursued, Table 1.10 summarises the approximate impact of the above three elements of the 2015 Strategy on the 2018 labour force (males and females combined)—although it should be noted that the impact of Scenario 4 is not additive. Increased participation rates at 15-24 and 55+ years were achieved and accounted for 88 per cent of the overall increase in labour force participation from these three elements: 51.5 per cent at 55+ years (males 17.5%, females 34.0%) and 36.5 per cent at 15-24 years (males 14.5%, females 22.0%). Change in participation rates (incorporating both increases and decreases) at all other ages accounted for 12 per cent (males -22.9%, females +34.9%). As indicated, the impact was not achieved equally by sex, with males and females accounting for 9.1 and 90.9 per cent respectively of additional labour force numbers, and males at all ages other than 15-24 and 55+ years experiencing a net loss of 241 labour force participants, offset by a gain of 367 by females of these ages.

Table 1.10: Summary Impact of the 2015 Strategy on 2018 Labour Force Numbers, by Sex and Age, 2013-2018, Southland Region

	Numbers			% Share		
	Male	Female	Total	Male	Female	Total
Scenario 2: Increased participation at 55+ years	184	358	542	17.5	34.0	51.5
Scenario 3: Increased participation at 15-24 years	153	232	384	14.5	22.0	36.5
Impact of change in participation all other ages	-241	367	126	-22.9	34.9	12.0
Impact of total change in participation by age	96	957	1053	9.1	90.9	100.0
Scenario 4: Increased participation of women per se	96	957	1053	9.1	90.9	100.0

Source: Author/Statistics New Zealand 2020b

Note: *Analysis is based on those who stated their labour force status only

Industry and Occupation

Industry: Underlying the labour force trends are changes in demand for labour, which can be usefully examined by industry and occupation. Table 1.11 provides information for all Southland industries employing over 1000 people in 2018 (N=18), based on Statistics New Zealand's sublevel list of 86 industries (see Appendix G for all industries).

In 2018 the 18 largest industries accounted for seven in every ten employed Southlanders (71%), up from 68% in 2006, while the 12 largest accounted for just on six in every ten (59%), up from 56 per cent. With just one exception, the top 12 industries were ranked in the top 12 at all three censuses—2006, 2013 and 2018—the exception being Grocery, Liquor and Tobacco Product Wholesaling, which rose from #34 in 2006 to #12 in 2018.[6]

Also notable from Table 1.11 is that all but one of the 18 largest industries increased in size between 2013 and 2018—the exception being Agriculture (-5.4%), possibly resuming a longer-term trend (Roskruge and Pawar 2014), compared with nine declining between 2006 and 2013. Between 2013 and 2018 there was disproportionate growth in Medical and Other Health Care Services (45%), Agriculture, Forestry and Fishing Support Services (43.1%) and Public Administration (46.3%), following decline in the latter two between 2006 and 2013.

[6] Total numbers by industry—and occupation below—differ slightly to numbers by labour force status because the latter include unemployment while the former do not. Industry and Occupation numbers also differ to each other because some people fail to provide all information.

Table 1.11: Industries with 1,000+ Employees in 2018 (2006, 2013, 2018), Southland Region

	Number			Rank			Change			Change (%)		
	2006	2013	2018	2006	2013	2018	2006-2013	2013-2018	2006-2018	2006-2013	2013-2018	2006-2018
Agriculture	7440	7743	7323	1	1	1	303	-420	-117	4.1	-5.4	-1.6
Food Product Manufacturing	3471	3000	3786	2	2	2	-471	786	315	-13.6	26.2	8.3
Preschool and School Education	2175	2265	2748	4	3	3	90	483	573	4.1	21.3	20.9
Professional, Scientific and Technical Services*	1785	1788	2502	5	6	4	3	714	717	0.2	39.9	28.7
Construction Services	1581	1854	2277	7	5	5	273	423	696	17.3	22.8	30.6
Other Store-Based Retailing	2400	2142	2256	3	4	6	-258	114	-144	-10.8	5.3	-6.4
Medical and Other Health Care Services	1188	1413	2049	9	9	7	225	636	861	18.9	45.0	42.0
Food and Beverage Services	1599	1596	2043	6	8	8	-3	447	444	-0.2	28.0	21.7
Food Retailing	1494	1614	1782	8	7	9	120	168	288	8.0	10.4	16.2
Agriculture, Forestry and Fishing Support Services	1134	1113	1593	10	11	10	-21	480	459	-1.9	43.1	28.8
Road Transport	1116	1131	1497	11	10	11	15	366	381	1.3	32.4	25.5
Grocery, Liquor and Tobacco Product Wholesaling	369	342	1446	34	37	12	-27	1104	1077	-7.3	322.8	74.5
Public Administration	801	771	1128	17	19	13	-30	357	327	-3.7	46.3	29.0
Accommodation	930	867	1110	13	16	14	-63	243	180	-6.8	28.0	16.2
Personal and Other Services	936	1032	1101	12	12	15	96	69	165	10.3	6.7	15.0
Repair and Maintenance	912	900	1065	14	15	16	-12	165	153	-1.3	18.3	14.4
Residential Care Services	909	990	1050	15	14	17	81	60	141	8.9	6.1	13.4
Building Construction	897	855	1014	16	17	18	-42	159	117	-4.7	18.6	11.5
Top 12 in 2018	25752	26001	31302	...	...	...	249	5301	5550	1.0	20.4	17.7
% Share of all employed	56.2	56.3	58.9	...	...	...						
All industries employing over 1,000 in 2018	31137	31416	37770	...	...	...	279	6354	6633	0.9	20.2	17.6
% share of all employed	68.0	68.0	71.1	...	...	...						

Source: Author/Statistics New Zealand 2020c

As noted earlier, despite substantial growth, Southland's workforce has continued to age, with those over 55 years of age accounting for 19.6 per cent in 2006, 24.7 per cent in 2013, and 27.2 per cent in 2018. On this index, nine of the 18 largest industries on Table 1.11 had higher than average proportions aged 55+ years in 2018 (see Table 1.12), while three had particularly old workforces: Road Transport (40.1%), Residential Care Services (36.6%), and Medical and Other Health Care Services (35.7%).

Of Southland Region's 79 industries employing people over the age of 55 years in 2018, 40 (50.6%) had higher than average proportions aged 55+ years, up from 33 (of 76) in 2006 (43.4%). However, the influx of younger participants between 2013 and 2018 noted in the previous section caused a slight reduction in the proportion aged 55+ years in 14 industries (17.7%) across that period.

The ratio of people at labour force (and labour market) entry and exit age in each industry provides another perspective on workforce ageing. However here it is necessary to expand the entry age group to 29 years to allow for the fact that some industries (and occupations) like health and education have an older age structure due to time involved in training. Industries with relatively low ratios may not simply be ageing but may also have low recruitment—or retention—at younger working ages that they need to address. In 2018, Southland Region's industries had on average 8.3 people aged 15-29 years per 10 aged 55+ years, down from 12.8 in 2006 and 8.9 in 2013 (Table 1.12).

In 2018, 22 of the Southland Region's industries employed fewer than five people aged 15-29 years for every ten aged 55+ years (27.8% of 76 industries employing people of both age groups), compared with 6/79 in 2006 (7.9%) and 18/79 in 2013 (22.8%). Among Southland's 18 largest industries (Table 1.12), only five employed more aged 15-29 years than 55+ years, while four had very low ratios: Pre-school and School Education (4.1/10), Medical and Other Health Care Services (3.6/10), Road Transport (3.4/10), and Public Administration (3.4/10).

Table 1.12: Ageing Indices for Southland Region Industries with 1,000+ Employees, 2006, 2013 and 2018, in Order of Size in 2018

	% Aged 55+ Years			Rank in 2018 (oldest = 1)	PP Change between 2013 and 2018	Ratio 15-29 Years per 10 Aged 55+ Years			Rank in 2018 (lowest = 1)	PP Change between 2013 and 2018
	2006	2013	2018			2006	2013	2018		
Agriculture	24.8	26.2	27.6	42	1.3	7.9	8.6	8.7	48	0.1
Food Product Manufacturing	16.3	24.8	26.7	49	1.9	14.2	8.6	8.8	49	0.2
Preschool and School Education	18.2	25.4	28.4	38	3.0	9.2	5.2	4.1	20	-1.0
Professional, Scientific and Technical Services*	16.6	21.6	27.2	44	5.6	15.2	10.3	7.8	40	-2.5
Construction Services	13.9	20.9	24.4	58	3.5	18.6	11.9	10.0	57	-1.9
Other Store-Based Retailing	15.1	22.7	30.5	27	7.8	21.6	12.3	7.9	41	-4.3
Medical and Other Health Care Services	22.7	34.0	35.7	15	1.8	5.2	2.8	3.6	12	0.8
Food and Beverage Services	9.2	11.1	11.7	78	0.7	55.3	45.3	43.0	79	-2.3
Food Retailing	12.2	18.2	19.7	75	1.5	34.3	20.9	21.4	76	0.4
Agriculture, Forestry and Fishing Support Services	12.2	15.9	16.0	76	0.1	26.3	20.7	19.6	74	-1.0
Road Transport	26.1	33.4	40.1	5	6.7	5.8	3.9	3.4	10	-0.5
Grocery, Liquor and Tobacco Product Wholesaling	19.5	24.6	31.5	24	7.0	10.0	5.7	6.8	34	1.1
Public Administration	18.4	30.7	33.8	18	3.0	8.6	3.8	3.4	11	-0.4
Accommodation	22.9	28.0	28.9	33	0.9	12.5	9.3	9.7	53	0.5
Personal and Other Services	19.9	24.4	27.8	40	3.4	11.3	9.0	7.7	39	-1.3
Repair and Maintenance	16.1	20.0	26.5	52	6.5	17.8	11.7	8.8	50	-2.8
Residential Care Services	24.1	34.8	36.6	13	1.7	6.0	3.6	5.3	26	1.7
Building Construction	15.1	19.3	21.3	67	2.0	22.4	16.2	15.6	73	-0.6
All Southland Region Industries (average)	**19.4**	**25.4**	**27.7**	**...**	**2.3**	**12.8**	**8.9**	**8.3**	**...**	**-0.6**
Number of Industries with Ratios below 5	...	...	...	...	...	6	18	22	...	...
% of Industries with Ratios below 5	...	...	...	...	...	7.9	22.8	27.8	...	...

Source: Author/Statistics New Zealand 2020d

Occupation: Table 1.13 provides similar information for all Southland occupations employing over 1000 people in 2018 (N=20), based on Statistics New Zealand's sublevel list of 43 occupations (see Appendix H for all Occupations). In 2018 these 20 occupations accounted for 7.5 in every ten employed in the region (75.3%), up from 72.5 per cent in 2006, while the 12 largest accounted for almost six in every ten (56.1%), up from 54.5 per cent in 2006.

With just two exceptions, the 12 largest occupations were ranked in the top 12 at all three censuses—2006, 2013 and 2018—the exceptions being Office Managers and Program Administrators, which rose from #24 in 2006 to #8 in 2018, and Health Professionals, which rose from #13 to #11. For both occupations, the relative rise reflected significant growth in numbers across both 2006-2013 and 2013-2018, although it should be noted that all occupations on Table 1.13 grew across the latter period, whereas eight had declined in size between 2006 and 2013.

Table 1.13: Occupations with 1,000+ Employees in 2018 (2006, 2013, 2018), Southland Region

	Number			Rank			Change in Size (N)			Change in Size (%)		
	2006	2013	2018	2006	2013	2018	2006-2013	2013-2018	Total 2006-2018	2006-2013	2013-2018	Total 2006-2018
Farmers and Farm Managers	4548	4683	5151	1	1	1	135	468	603	3.0	10.0	13.3
Factory Process Workers	2862	2214	2751	2	5	2	-648	537	-111	-22.6	24.3	-3.9
Specialist Managers	2124	2445	2724	5	4	3	321	279	600	15.1	11.4	28.2
Sales Assistants and Salespersons	2625	2463	2697	3	3	4	-162	234	72	-6.2	9.5	2.7
Other Labourers	1896	2034	2667	6	6	5	138	633	771	7.3	31.1	40.7
Farm, Forestry and Garden Workers	2373	2484	2616	4	2	6	111	132	243	4.7	5.3	10.2
Education Professionals	1788	1968	2229	7	7	7	180	261	441	10.1	13.3	24.7
Office Managers and Program Administrators	708	1188	1863	24	13	8	480	675	1155	67.8	56.8	163.1
Carers and Aides	1587	1572	1860	9	8	9	-15	288	273	-0.9	18.3	17.2
Road and Rail Drivers	1356	1332	1854	12	12	10	-24	522	498	-1.8	39.2	36.7
Health Professionals	1290	1464	1710	13	11	11	174	246	420	13.5	16.8	32.6
Automotive and Engineering Trades Workers	1680	1533	1665	8	9	12	-147	132	-15	-8.8	8.6	-0.9
Design, Engineering, Science and Transport Professionals	990	1077	1572	18	16	13	87	495	582	8.8	46.0	58.8
Hospitality, Retail and Service Managers	1518	1473	1536	10	10	14	-45	63	18	-3.0	4.3	1.2
Cleaners and Laundry Workers	1194	1167	1356	14	14	15	-27	189	162	-2.3	16.2	13.6
Chief Executives, General Managers and Legislators	996	1062	1293	17	17	16	66	231	297	6.6	21.8	29.8
Business, Human Resource and Marketing Professionals	1068	1143	1260	15	15	17	75	117	192	7.0	10.2	18.0
Construction Trades Workers	1023	957	1131	16	18	18	-66	174	108	-6.5	18.2	10.6
Mobile Plant Operators	699	816	1050	25	20	19	117	234	351	16.7	28.7	50.2
Hospitality Workers	744	762	1020	21	23	20	18	258	276	2.4	33.9	37.1
Top 12 in 2018	24837	25380	29787	...	...	...	543	4407	4950	2.2	17.4	19.9
% Share of all employed	54.5	55.5	56.1	...	...	...						
All occupations employing over 1,000 people in 2018	33069	33837	40005	...	...	...	768	6168	6936	2.3	18.2	21.0
% Share of all employed	72.5	74.0	75.3	...	...	...						

Source: Author/Statistics New Zealand 2020d

Reflecting the above trends by industry, all 43 occupational groups experienced structural ageing across the 2006-2018 period, all seeing an increase in the proportion aged 55+ years, and all but three seeing a decline in the ratio of people at labour force entry (15-29 years) to exit age. However, between 2013 and 2018, three occupations experienced a small decline in the proportion aged 55+ years, while 13 occupations (30.2%) saw either no change, or an increase in the entry: exit ratio, both situations driven by a relative increase in the number of younger workers. The overall result was a slight slowing of workforce ageing as indicated by the latter index. In 2006, 3 occupations (7.0%) had fewer than five people at entry age per ten aged 55+ years, while in 2013 that had increased to 10 (23.3%), and in 2018 to 13 (30.2%).

Table 1.14 gives ageing indicators for the region's 20 largest occupations. Among these in 2018 are four of the eight oldest workforces in terms of proportions aged 55+ years: Road and Rail Drivers (43%), Cleaners and Laundry Workers (41.8%), Chief Executives, General Managers and Legislators (39%), and Carers and Aides (34.8%). All also have very low entry: exit ratios, none having more than five people at entry age for every 10 aged 55+ years, with Chief Executives, General Managers and Legislators (#1) and Road and Rail Drivers (#2) and having barely 1/10. On this index they are joined by Office Managers and Program Administrators (3.4/10), Cleaners and Laundry Workers (4.2/10), Specialist Managers (4.5/10), Hospitality, Retail and Service Managers (4.5/10) and Carers and Aides (4.7/10).

Table 1.14: Ageing Indices for Southland Region Occupations with 1,000+ Employees in 2018, in Order of Size in 2018

	% Aged 55+ Years			Rank in 2018 (oldest = 1)	PP Change between 2013 and 2018	Ratio 15-29 Years per 10 Aged 55+ Years			Rank in 2018 (lowest = 1)	PP Change between 2013 and 2018
	2006	2013	2018			2006	2013	2018		
Farmers and Farm Managers	24.4	25.2	29.9	15	4.8	6.0	7.1	5.9	18	-1.2
Factory Process Workers	14.5	23.7	23.8	32	0.1	20.2	10.5	12.2	31	1.7
Specialist Managers	15.0	21.1	26.1	26	5.0	8.4	5.4	4.5	9	-0.9
Sales Assistants and Salespersons	12.3	19.4	22.5	35	3.1	29.6	16.8	15.3	36	-1.5
Other Labourers	18.7	26.1	27.0	22	0.9	16.4	10.6	11.7	30	1.1
Farm, Forestry and Garden Workers	15.0	19.2	19.5	38	0.3	26.2	20.4	20.2	38	-0.3
Education Professionals	18.0	22.6	25.4	27	2.9	11.2	7.9	5.8	16	-2.1
Office Managers and Program Administrators	15.3	27.8	31.9	10	4.1	7.5	2.9	3.4	7	0.5
Carers and Aides	23.8	34.0	34.8	8	0.9	6.7	4.4	4.7	12	0.3
Road and Rail Drivers	29.4	36.9	43.0	1	6.1	5.9	4.2	1.4	2	-2.8
Health Professionals	16.5	24.0	26.8	23	2.9	8.3	5.8	6.8	21	1.0
Automotive and Engineering Trades Workers	15.0	22.3	25.0	29	2.7	20.2	11.4	10.1	27	-1.3
Design, Engineering, Science and Transport Professionals	17.0	21.2	23.3	33	2.1	14.3	9.5	9.8	26	0.3
Hospitality, Retail and Service Managers	21.9	27.3	31.3	12	4.0	6.8	4.8	4.5	10	-0.3
Cleaners and Laundry Workers	27.9	36.0	41.8	2	5.8	7.3	4.8	4.2	8	-0.6
Chief Executives, General Managers and Legislators	26.8	34.7	39.0	7	4.2	1.7	1.4	1.2	1	-0.2
Business, Human Resource and Marketing Professionals	16.3	20.2	25.0	30	4.8	12.8	8.7	6.6	20	-2.1
Construction Trades Workers	15.2	19.7	23.1	34	3.3	19.8	14.9	11.5	28	-3.4
Mobile Plant Operators	23.6	23.5	28.9	18	5.3	9.3	10.3	9.4	25	-0.9
Hospitality Workers	8.1	9.8	10.9	43	1.0	74.0	60.4	53.2	43	-7.2
All Southland Region Occupations (average)	18.3	24.5	27.7	...	3.2	**13.1**	**9.0**	**8.3**	...	-0.7
Number of Occupations with Ratios below 5	...	...	...	...	...	3	10	13	...	...
% of Occupations with Ratios below 5	...	...	...	...	...	7.0	23.3	30.2	...	...

Source: Author/Statistics New Zealand 2020d

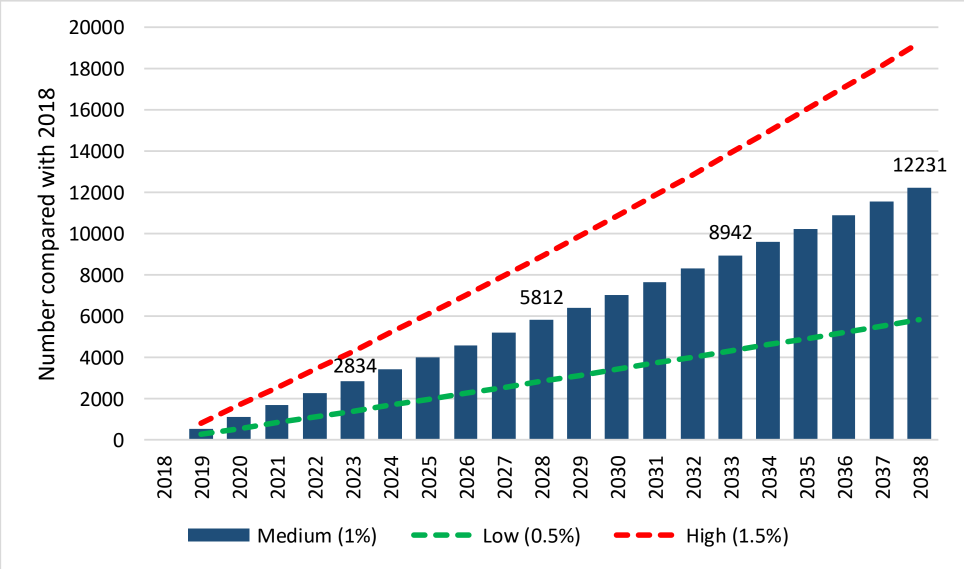
As noted above, it takes time to train for many of these occupations, and it is not surprising that they have older workforces. However, it goes without saying that older workforces are more vulnerable to retirement, and that there is a limited pool of younger people to replace them. in 2018, only seven of the 20 largest occupations had more than ten people at entry age for every 10 aged 55+ years, while all but five saw their entry: exit ratio decline between 2013 and 2018. Given that these 20 occupations account for three-quarters of the employed workforce, there is a need to pay particular attention to recruitment and succession.

The Future – Modelling Labour Demand and Supply

In 2018 the Southland Region labour force numbered 55,548 (29,490 males and 26,055 females). As noted above this was an increase of 10.1 per cent over 2013 (annual average growth 2.0%), compared with 0.6 per cent between 2006 and 2013 (annual average 0.1%). Any further increase in economic growth such as that indicated in the previous section will see demand for labour increase. For example, a 1 per cent per annum increase in overall demand—half of that experienced by the labour force between 2013 and 2018—would generate an additional 2,834 positions in 2023. Alternatively, taking into account trends in each industry between 2006 and 2018 (based on those employed only) and therefore accounting for both growing and declining industries, would add an additional 1,221 positions per year, or 6,104 positions by 2023 (an average annual increase of 2.3%).

Erring on the side of caution and assuming that the growth in demand between 2006 and 2018 (or more specifically, 2013 and 2018) may have been anomalous, Figure 1.16 shows the impact of increasing labour demand by 0.5, 1.0 and 1.5 per cent per annum. The medium variant assumptions (+1% per annum) would see an additional 2,834 positions generated by 2023, 5,812 by 2028, 8,942 by 2033, and 12,231 (+22%) by 2038. As indicated, this scenario would represent about half the increase in demand actually experienced between 2013 and 2018. The low variant scenario would see an additional 5,827 positions by 2038 (+10.5%), while the high variant would see an additional 19,287 positions (+34.7%). The low variant scenario would be substantially below that experienced across the period 2006-2013, while the high variant would be around three-quarters of the 2013-2018 rate. The assumptions are thus conservative when viewed from the actual experience of 2013-2018.

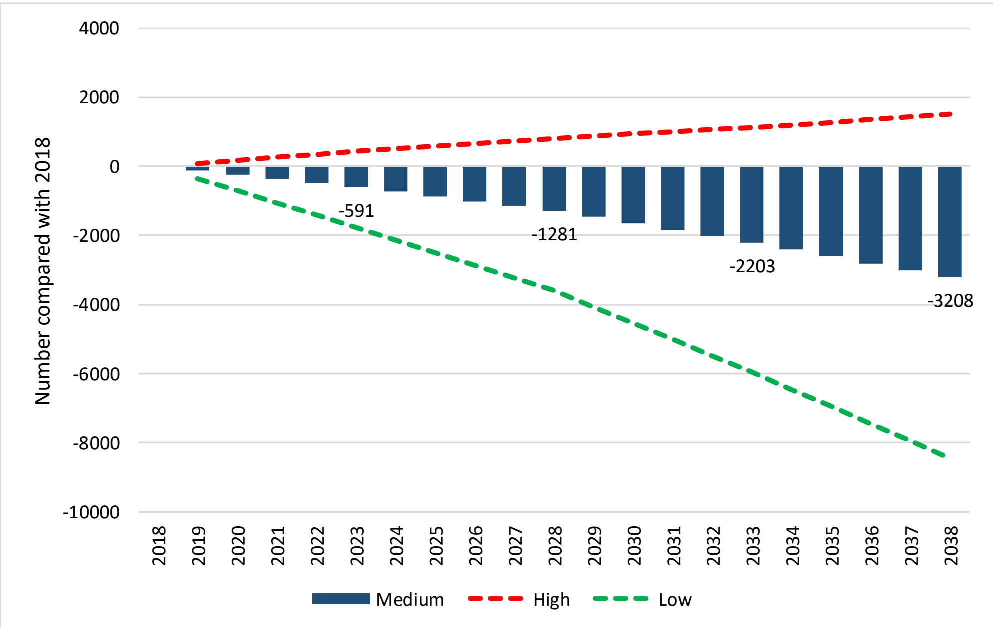
Figure 1.16: Projected Growth in Labour Demand by Projection Scenario, 2018-2038.



Source: Author, based on Labour Force numbers in 2018

Figure 1.17 shows the effect of applying 2018 labour force participation rates by age to the population projections by variant. Under the medium variant, labour force numbers would be around 591 fewer by 2023, -1,281 by 2028, -2,203 by 2033, and -3,208 (-5.7%) by 2038. There is a minor increase in the size of the labour force under the high variant (+2.6% by 2038), but significant reduction under the low variant (-15.5% by 2038).

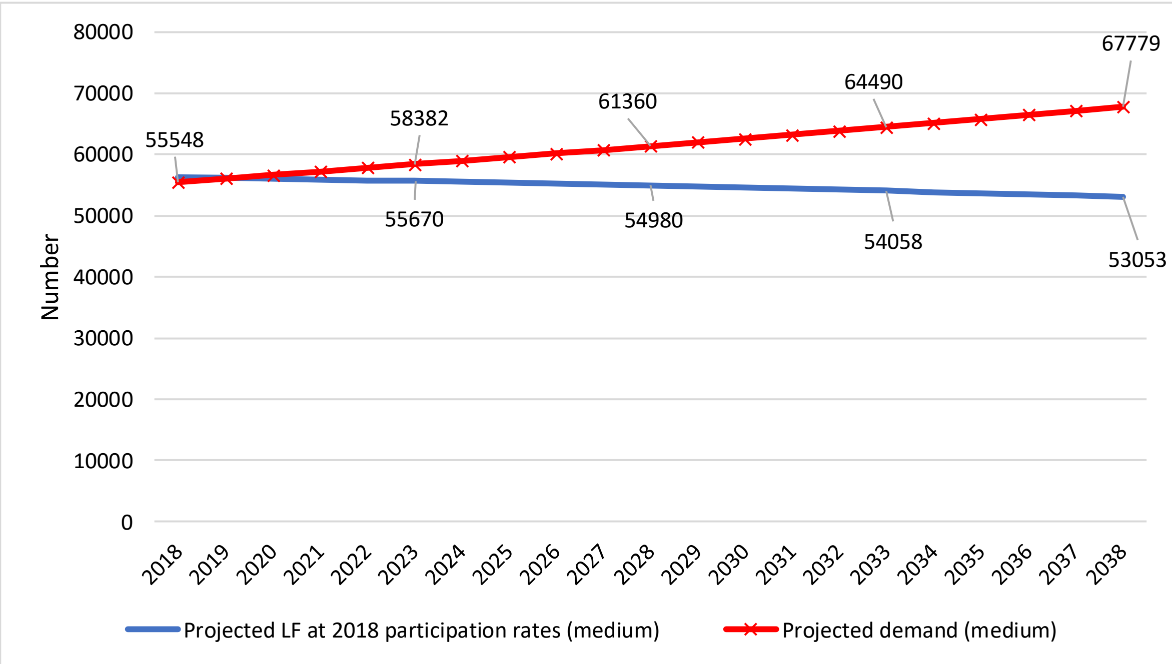
Figure 1.17: Projected Change in Labour Force Numbers (15+ Years) at 2018 Participation Rates, 2018 to 2038 (annual average), by Projection Variant



Source: Author/Statistics New Zealand 2017a, 2020b

Placing the medium projections of labour force numbers at 2018 participation rates (from Figure 1.17) alongside the medium projections of demand (+1% per annum) from Figure 1.16 indicates that Southland Region would not be able to meet that level of demand at those participation rates from approximately 2020 (Figure 1.18). By 2023 the gap between supply and demand would be approximately 2,712, increasing to 14,726 by 2035.

Figure 1.18: Projected Labour Force at 2018 Participation Rates and Projected Labour Demand, Medium Variant, 2018-2038

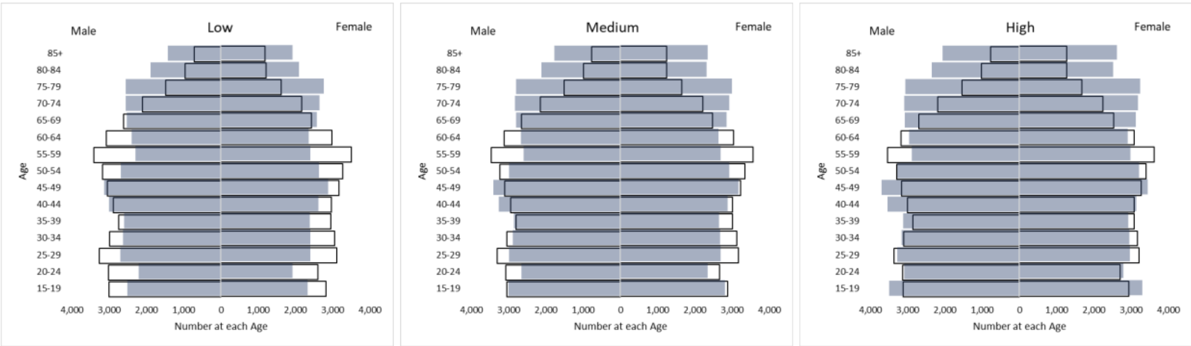


Source: (Demand) Author; (Supply) Author/Statistics New Zealand 2017a and 2020b

The extent to which additional labour supply could potentially ameliorate or eliminate the shortage is examined on Figures 1.19-1.24.

First, as indicated on Figure 1.19, it should be noted that almost all age groups below 65 years are projected to decline in size under the medium and low variants, while under the high variant, numbers either grow slightly or remain very much the same. Under all three variants, there is notable decline at 55-59 years, as the relatively large 'echo' cohorts born to baby boomer parents between 1979 and 1983 turn 60-64 years of age, and at 60-64 years (even under the high variant), as their slightly older siblings (born between 1973 and 1978) pass their 65th birthday. As can be seen from Figure 1.19, the only reliable growth is at 65+ years, as the baby boomers themselves age, indicating the importance of even greater labour force participation at these ages, from these cohorts.

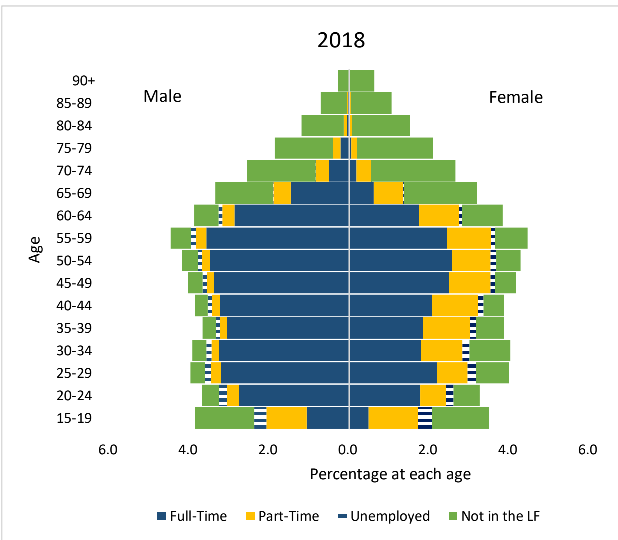
Figure 1.19: Numbers at 15+ years by age and sex in 2018 (unshaded bars) and projected for 2038 (shaded bars), by projection variant



Source: Author/Statistics New Zealand 2017a

Second, those not already in the labour force in Southland Region in 2018 and indicative of the potential to increase future labour supply is shown on as shown on Figure 1.20. Those not in the labour force are similarly concentrated at age 65 and above, as well as among those at key parental ages (disproportionately women), and those at 15-19 years many of whom are presumably engaged in education training. Despite the small decline in the male participation rate between 2013 and 2018 noted above, relatively few Southland Region males of prime working age are not already in the labour force. The potential to expand participation among those not in the labour force is limited, given that for many the status reflects other important considerations.

Figure 1.20: Labour Force Status by Age and Sex (Numbers), 2018

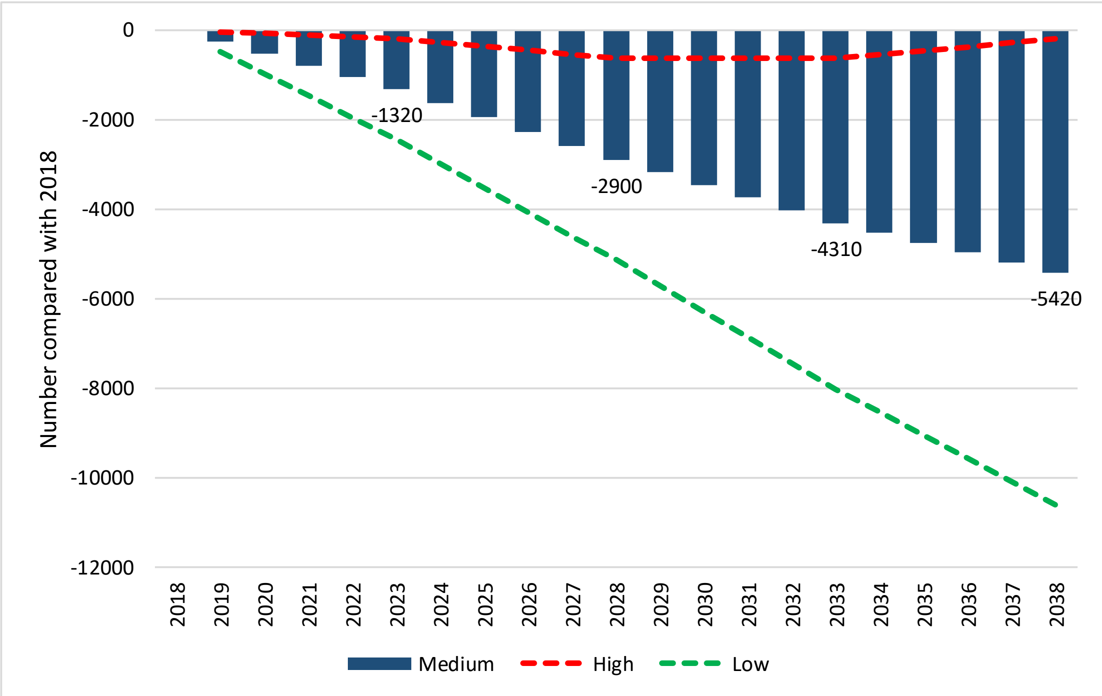


Source: Author/Statistics New Zealand 2020b

Thus it is clear that for Southland Region to accommodate further increase in demand, its future labour supply will need to include many more aged 65 and above. It should be noted, however, that at current labour force participation rates, absolute labour supply needs to exceed demand by approximately 25 per cent, to meet that demand.

Compared with 2018, the absolute (maximum) supply of people in the Southland Region aged 15-64 years is projected to fall under the medium variant by 8.7 per cent by 2038, and under the high and low variants, by -0.3 and -17.3 per cent respectively (Figure 1.21). The medium variant data indicate declines of 1,320 by 2023, 2,900 by 2028, 4,310 by 2033 and 5,420 by 2038.

Figure 1.21: Projected Change in Maximum Labour Supply at 15-64 Years, 2018 to 2038 (Annual Average), by Projection Variant

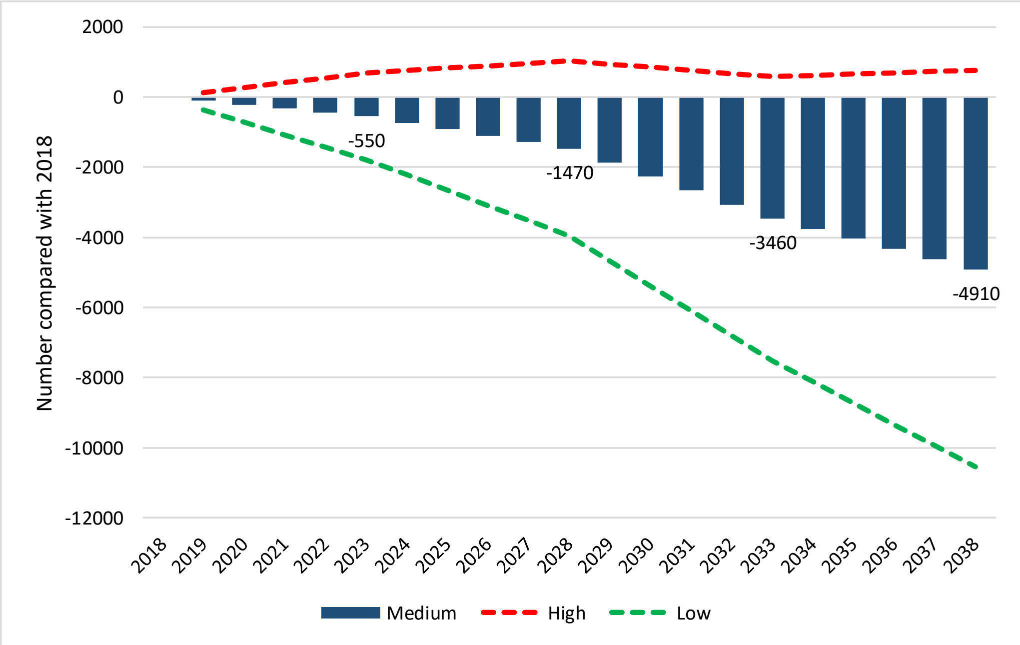


Source: Author/Statistics New Zealand 2017a

Adding in those aged 65-69 years (Figure 1.22), for whom the labour force participation rate in 2018 was 50.2 per cent (31.8% Full-Time, 17.6% Part-Time, 0.7% Unemployed), reduces the decline under the medium and low variants to 7.3 and 15.9 percent respectively, and indicates a minor increase in numbers under the high variant (+1.1%).

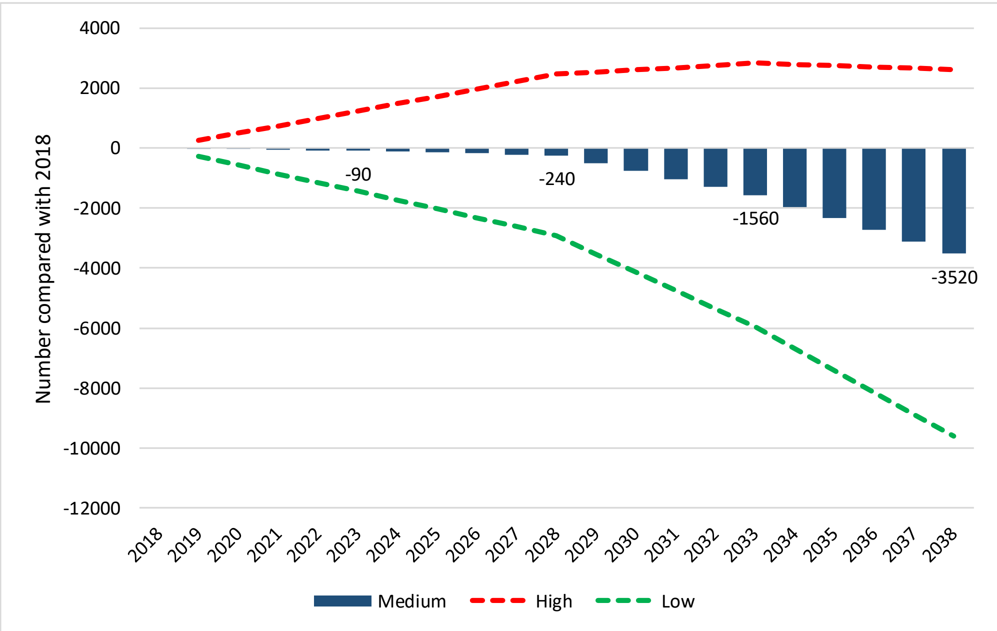
Adding in those aged 70-74 years (Figure 1.23), for whom the participation rate in 2018 was 26.8 per cent (13.2% Full-Time, 13.3% Part-Time, 0.3% Unemployed), further reduces the projected decline in maximum supply under the medium and low variant projections to 4.9 and 13.6 per cent respectively, while raising the potential increase under the high variant to 3.6 per cent.

Figure 1.22: Projected Change in Maximum Labour Supply at 15-69 Years, 2018 to 2038 (Annual Average), by Projection Variant



Source: Author/Statistics New Zealand 2017a

Figure 1.23: Projected Change in Maximum Labour Supply at 15-74 Years, 2018 to 2038 (Annual Average), by Projection Variant

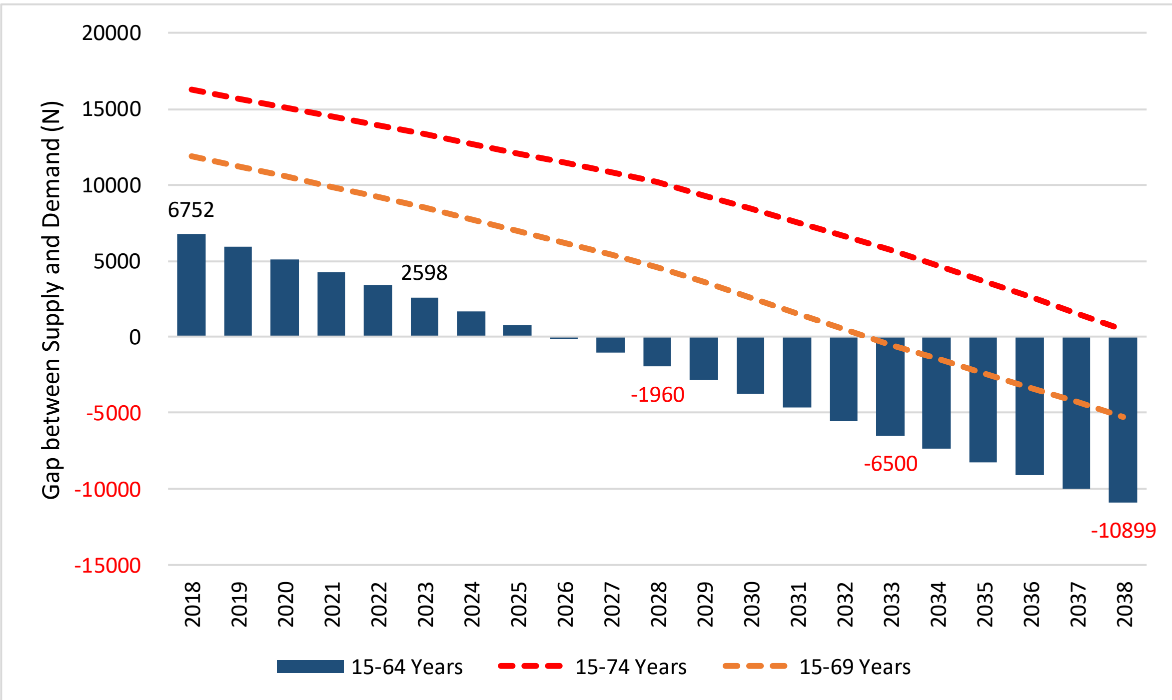


Source: Author/Statistics New Zealand 2017a

Southland Region's maximum labour supply is thus projected to decline under both the medium and low variants, even when the working age population is expanded to include those aged 65-69 and 70-74 years, and to grow only under the high variant with increased supply at these ages.

Placing the medium projections of maximum labour supply by the age of the working age population (15-64 years, 15-69 years and 15-74 years) alongside the medium projections of demand (at +1% per annum) shows the imperative of those at older ages being in Southland's labour market (Figure 1.24). If labour supply consisted only of those aged 15-64 years and all were participating in the labour force, the region would be unable to meet that demand after 2025. The addition of each successive age group into the labour market pushes out the region's ability to meet that demand; however, given that participation at those ages would be somewhat short of 100 per cent, a substantial increase in participation at those ages, and/or a substantial increase in migration gain, will continue to be required.

Figure 1.24: Projected Maximum Labour Supply less Projected Labour Demand by Age of Working Age Population, Medium Variant, 2018-2038



Source: (Demand) Author; (Supply) Author/Statistics New Zealand 2017a

2. Part B Movers and Stayers

Without a substantial increase in Southland Region's labour supply, future economic growth will be constrained. Understanding the labour force and labour market characteristics of the region's 'movers'—both internal leavers and arrivals, and overseas arrivals[7] —would provide valuable information both for refining migration attraction targets, and better deploying the local labour supply to reduce the number who leave. Similarly, understanding the characteristics of 'stayers', those residing in the region at two successive censuses, can highlight the extent to which movers enhance or deplete specific labour force needs, and/or replace each other. The information can simultaneously provide insights into potential motivations for moving or staying.

Part B begins with an overview of labour force status by mover-stayer category and age, followed by a similar examination of industry and occupation of employment, and highest post-school qualification for the employed population only.

Caveat: All reference to Stayers, Arrivals and Leavers should be understood to mean 'known' Stayers, Arrivals and Leavers. Because data for the category 'unable to match' (to a 2013 address) pertain to large numbers, they are presented for comparison, but it is difficult to draw any conclusions about them. As Figure 2.1 shows, this group (9,333 aged 15+ years in 2018) was larger than either Internal Arrivals (7,002), Overseas Arrivals (3,144), or Internal Leavers (8,682). The group has a somewhat younger age profile than Stayers (Figure 2.2), indicating that it may contain a disproportion of Internal and Overseas Arrivals who are also younger than Stayers; however, it also has similar characteristics to Stayers in some of the following analyses.

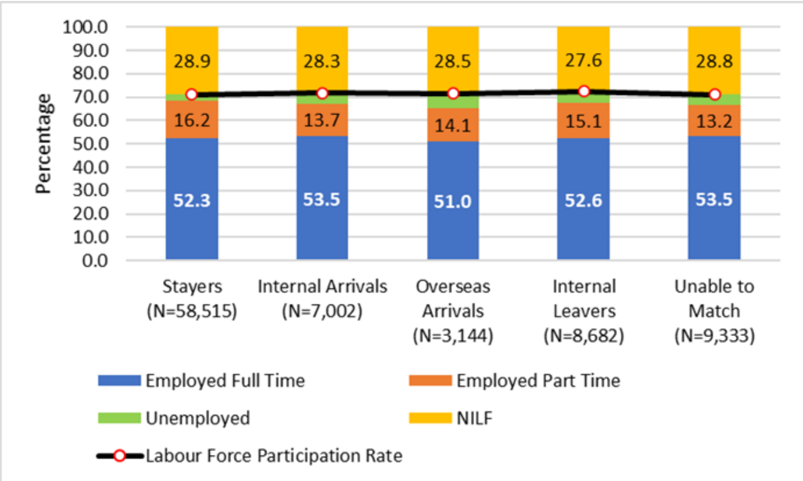
It should also be noted that the number of people in each mover-stayer category in the following sections differ by whether the focus is labour force status, industry and occupation of employment, or highest post-school qualification, because not all people provide all information on their census paper. In some cases the missing 'item record' data have been imputed by Statistics New Zealand, but there remain discrepancies which cannot be resolved for this analysis.

[7] It should be recalled that the census does not enumerate people who are overseas at the time of the census, and thus there are no equivalent data for overseas leavers.

The Labour Force Status of Movers and Stayers

Figure 2.1 shows that there is very little difference in the overall labour force status and labour force participation rates of movers and stayers. The labour force participation rate ranges narrowly from 71.1 to 72.4 per cent (respectively, Stayers and Internal Leavers). The proportion employed full-time ranges between 51.0 and 53.5 per cent (Overseas Arrivals, and both Internal Arrivals and Unable to Match), and part-time, between 13.2 and 16.2 per cent (respectively, Unable to Match and Stayers). Stayers have the lowest proportion unemployed (2.5%) while Overseas Arrivals have the largest (6.4%). Proportions not in the labour force range from 27.6 per cent for Internal Leavers to 28.9 per cent for Stayers. While these values differ only marginally, there is a sense that the relatively advantaged position of Stayers reflects the benefits of stability. By comparison, Overseas Arrivals are the least likely to be employed full-time and the most likely to be unemployed, reflecting a multitude of studies which argue it takes time to settle and integrate. This proposition is partly supported by the fact that both Internal Arrivals and Internal Leavers have unemployment levels falling between those of Stayers and Overseas Arrivals.

Figure 2.1: Labour Force Status and Labour Force Participation Rate for the Census Usually Resident Population Aged 15+ Years by Mover-Stayer Category, Southland Region 2018



Note that the Internal Arrivals and Leavers data imply a net internal migration loss of 1,680 usual residents aged 15+ years, of whom just on half (822) were employed full-time in 2018, 21.1 per cent (354) were employed part-time, 5.4 per cent (90) were unemployed, and 24.6 per cent (414) were not in the labour force. This outcome accords with the net internal loss shown on Table 1.2 above (-2,542 for all age groups 0+ years); however, it does not take account of the large 'unable to match' category residing in the region in 2018, at least some of whom will have been internal and overseas arrivals.

Examining the mover-stayer categories by age introduces a key factor that will largely explain the unemployment differential: all Mover categories are disproportionately younger than Stayers (Figure 2.2).[8] This is particularly so for Overseas Arrivals, of whom over 87 per cent were aged between 15 and 44 years, compared with around two-thirds of Internal Arrivals (63%) and Leavers (67%), and barely 40 per cent of Stayers. With 55 per cent aged 15-44 years, the 'address unmatched' category is also intuitively suggestive of higher mobility levels.

Figure 2.2: Mover-Stayer Category by Age, Census Usually Resident Population Aged 15+ Years, Southland Region 2018

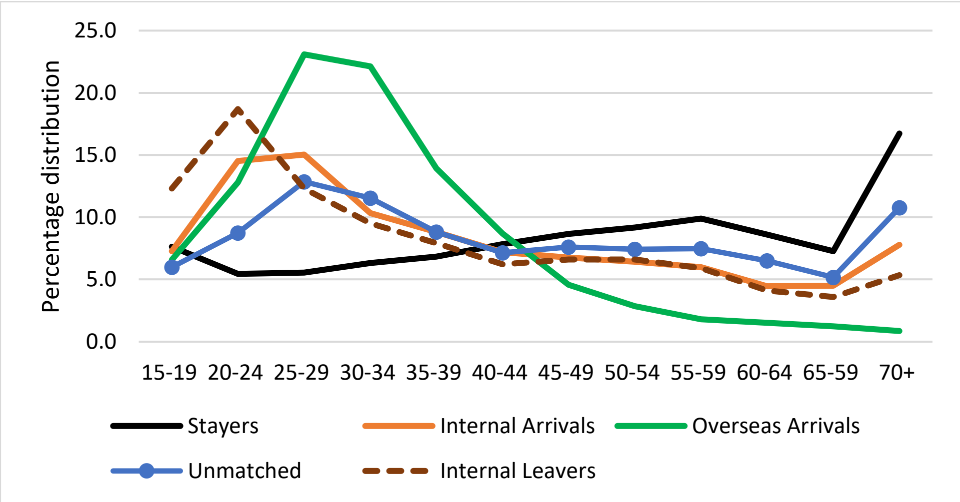


Figure 2.3 brings these data together from the perspective of age group (see Appendix I for data). Seven general observations can be made.

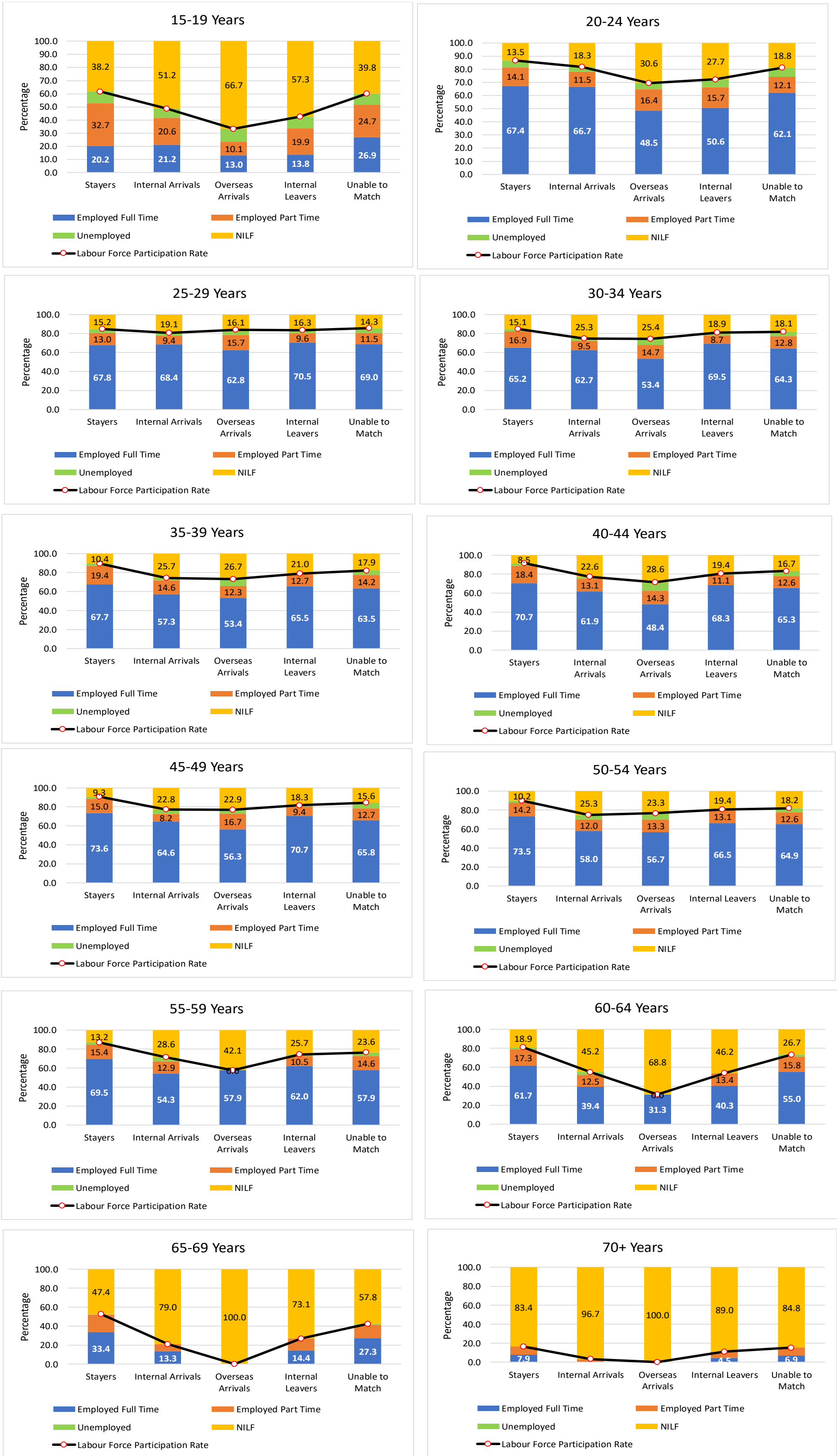
1) With just one exception, Overseas Arrivals have the lowest participation rates. The exception is for those aged 25-29 years, where the participation rate is remarkably similar for all categories, hovering around 80 per cent.
2) With just one exception, full-time employment is the dominant status across all mover-stayer categories for prime working age groups between 20-24 and 55-59 years. The exception is for Overseas Arrivals age 40-44 years.
3) For most age groups and mover-stayer categories, proportions not in the labour force (NILF) are higher than proportions working part-time, particularly for Internal Arrivals and Leavers and Overseas Arrivals.

[8] The seemingly high proportions at 70+ years for all but Overseas Arrivals conceal much lower numbers in each of the contributing age groups.

4) Relatively high proportions of all three Mover categories are not in the labour force at 15-19 years (compared with Stayers aged 15-19 years) and in all likelihood reflect tertiary education and training related movements.
5) For all age groups above 20-24 years, Internal Leavers tend to fare better in terms of full-time employment (in their new TA of residence) than Internal Arrivals to Southland Region. By contrast, at 15-19 and 20-24 years, Internal Arrivals fare somewhat better than Internal Leavers.
6) Below 55-59 years, unemployment is generally greatest for Overseas Arrivals, followed by Internal Leavers and Internal Arrivals. However, at 20-24 years, unemployment is marginally highest for Internal Leavers, and at 45-49 years it is marginally highest for Internal Arrivals.
7) Above 65 years, Overseas Arrivals appear to be wholly retirement-oriented, with 100 per cent not in the labour force, while Internal Arrivals and Leavers at these ages also have very low levels of participation.

These differentials suggest that there may be potential labour market capacity among Overseas Arrivals generally, and Internal Arrivals who are not in the labour force, with the exception of those aged 15-19 years who are likely to be engaged in education. The generally higher rates of full-time employment for Internal Leavers than Internal Arrivals across most working age groups suggests that at least some local Leavers will have left for employment-related reasons. However, the somewhat higher full-time employment rates of Internal Arrivals than Internal Leavers aged 15-19 and 20-24 years—on a par with those of Stayers—could be a useful (local) marketing point. Similarly, recognising that unemployment is typically higher for Overseas Arrivals than both Stayers and Internal Arrivals may assist in targeted strategies to assist new arrivals. Ensuring that all Arrivals are aware of the region's relatively high participation rates *vis-à-vis* other regions, particularly at older ages, may also stimulate latent participation.

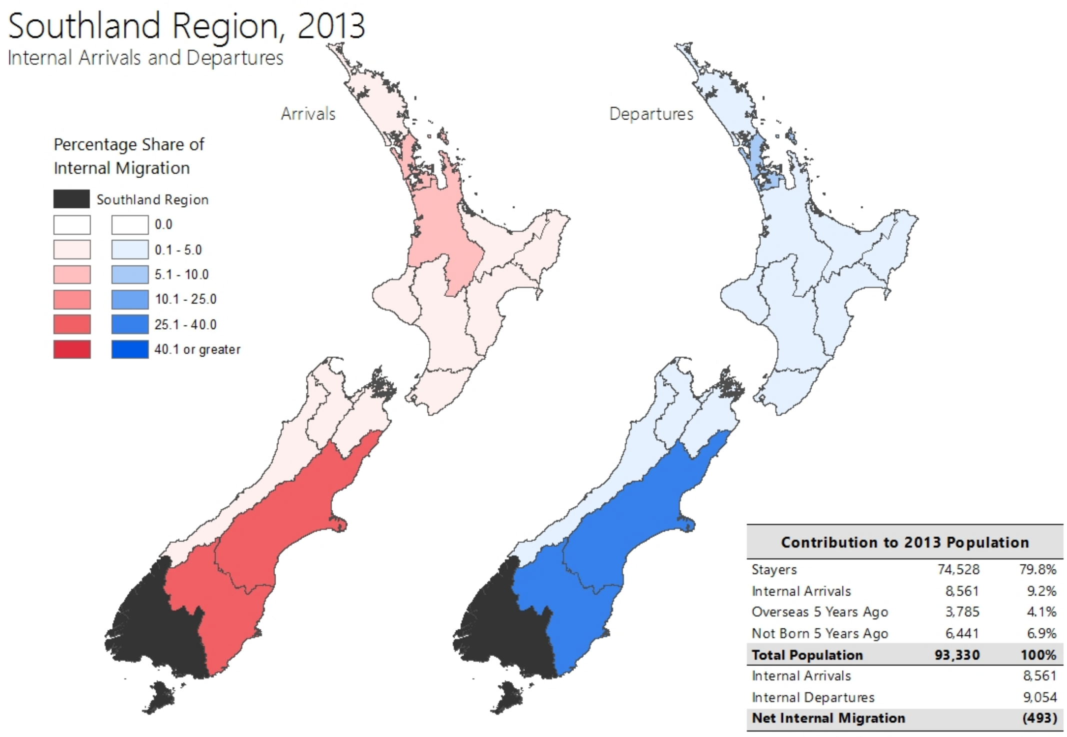
Figure 2.3: Age Groups by Mover-Stayer Category and Labour Force Status (%), Census Usually Resident Population Aged 15+ Years, Southland Region 2018



It is not possible to draw any real conclusions about the 'unable to match' category, except to say that its participation rates and labour force status distributions by age fall somewhere between those of Stayers and Internal Movers. With just a few exceptions, the proportions not in the labour force and thus potentially available for employment are higher than those of Stayers and lower than those of Internal or Overseas Arrivals.

Understanding the main regions that Internal Arrivals to Southland Region come from, and Leavers from Southland Region go to, also provides valuable information. As Figure 2.4 for 2013 shows, the majority of (known) movers (all ages, all employment statuses combined) come from and go to the Otago and Canterbury regions, with smaller but still notable proportions arriving from Auckland and Waikato and going to Auckland. These regions have been highly consistent over time.

Figure 2.4: Internal Movers and Stayers (%), Census Usually Resident Population, Southland Region 2013



Contribution to 2013 Population		
Stayers	74,528	79.8%
Internal Arrivals	8,561	9.2%
Overseas 5 Years Ago	3,785	4.1%
Not Born 5 Years Ago	6,441	6.9%
Total Population	**93,330**	**100%**
Internal Arrivals		8,561
Internal Departures		9,054
Net Internal Migration		**(493)**

These data have been produced by applying statistical modelling to Statistics NZ's raw data.

Table 2.1 shows that this pattern is consistent for all labour force statuses. In 2018, The largest proportions of each status arrived from and went to Otago Region, followed closely by Canterbury. Together, Otago and Canterbury were the source of 59 per cent of Southland Region's Internal Arrivals employed full-time, 55 per cent of Internal Arrivals employed part-time, almost 62 per cent of Internal Arrivals who were unemployed at the

2018 Census, and 57 per cent of those not in the labour force. Of Southland Region's Internal Leavers employed full-time in 2018, 62 per cent were residing in Otago and Canterbury, as were 69 per cent of Leavers employed part-time, almost 66 per cent of unemployed Leavers, and almost 69 per cent Leavers not in the labour force. Adding in Auckland, Waikato and Wellington captures above, or just below, 80 per cent of Southland Region's known Internal Movers in both directions across all labour force statuses.

Table 2.1: Known Internal Arrivals and Leavers by Labour Force Status and Region of Origin and Destination (%), Southland Region 2018

	Full Time		Part Time		Unemployed		Not In the Labour Force		Total Stated	
	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers
Auckland Region	9.5	6.8	11.6	6.2	13.1	8.0	11.6	5.3	10.5	6.3
Bay of Plenty Region	3.4	3.2	4.1	2.5	2.8	2.2	4.3	2.7	3.7	2.9
Canterbury Region	23.3	26.3	24.5	25.4	27.1	29.2	23.1	25.3	23.5	26.0
Gisborne Region	0.5	0.7	0.0	0.7	0.0	0.0	0.8	0.5	0.6	0.6
Hawke's Bay Region	1.8	1.6	1.3	2.3	1.9	0.0	2.0	1.6	1.8	1.7
Manawatu-Wanganui Region	3.8	2.7	2.2	2.3	4.7	3.6	3.7	3.7	3.6	3.0
Marlborough Region	1.5	1.8	1.9	1.6	0.0	0.0	1.4	1.5	1.5	1.6
Nelson Region	1.1	1.8	1.6	1.1	0.0	2.2	1.7	1.4	1.4	1.6
Northland Region	1.9	1.7	2.8	1.8	1.9	2.2	2.8	1.6	2.3	1.8
Otago Region	36.1	37.9	30.7	43.7	34.6	36.5	34.2	43.5	34.6	40.2
Taranaki Region	1.0	1.3	1.3	0.5	0.0	0.0	1.2	1.3	1.2	1.2
Tasman Region	1.5	1.2	2.2	1.4	1.9	1.5	2.3	1.6	1.8	1.5
Waikato Region	7.1	5.5	7.2	4.8	6.5	5.8	6.2	4.0	6.8	5.0
Wellington Region	5.3	5.8	6.6	5.0	5.6	8.8	3.3	5.1	4.9	5.6
West Coast Region	2.2	1.4	2.2	0.7	0.0	0.0	1.4	0.9	2.0	1.1
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (Number)	3744	4566	957	1311	321	411	1938	2373	7002	8682
Net Internal Migration		-822		-354		-90		-435		-1680
Otago and Canterbury	59.4	64.3	55.2	69.1	61.7	65.7	57.3	68.8	58.1	66.2
Auckland, Waikato, WTG	21.9	18.2	25.4	16.0	25.2	22.6	21.1	14.4	22.2	16.9
These Five Regions	**81.3**	**82.5**	**80.6**	**85.1**	**86.9**	**88.3**	**78.3**	**83.2**	**80.3**	**83.1**

The picture varies little by age (Tables 2.2, 2.3 and 2.4). To reduce complexity, here age groups are given in ten- year bands and full- and part-time employment are combined.

For all age groups and all labour force statuses, Otago followed by Canterbury account for the majority of movers in both directions, with Auckland, Wellington and Waikato playing smaller but more prominent roles than other regions. For those *in* the labour force, these five regions account for between 91 and 100 per cent of all movers. However, there is one notable difference for those not in the labour force: virtually all regions are involved, substantially reducing the proportions coming from or going to Canterbury and Otago alone, except at 65+ years.

Table 2.2: Known Internal Arrivals and Leavers by Broad Age Group and Region of Origin and Destination (%), Southland Region, Employed in 2018

	15-24 Years		25-34 Years		35-44 Years		45-54 Years		55-64 Years		65+ Years	
	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers
Auckland Region	9.4	9.0	12.8	11.4	12.6	4.6	19.0	3.1	14.3	...	...	...
Bay of Plenty Region	5.2	0.9	1.9	...	...	3.1	...	...	...	...	...	...
Canterbury Region	24.8	33.2	30.2	32.7	33.5	33.3	32.1	36.8	31.7	30.5	40.9	28.9
Gisborne Region	...	...	...	...	...	...	...	...	...	...	...	...
Hawke's Bay Region	...	...	...	...	...	...	...	...	...	...	...	...
Manawatu-Wanganui Region	...	...	...	2.8	...	...	...	...	...	...	...	...
Marlborough Region	...	...	...	...	...	...	...	...	...	...	...	...
Nelson Region	...	...	...	...	...	...	...	...	...	...	...	...
Northland Region	1.6	...	...	...	...	...	...	...	...	...	...	...
Otago Region	43.3	45.7	47.3	40.7	39.1	48.7	44.0	58.3	46.8	69.5	59.1	71.1
Taranaki Region	...	...	...	...	...	...	...	...	...	...	...	...
Tasman Region	...	...	...	...	...	...	...	1.8	...	...	...	...
Waikato Region	8.5	1.4	...	7.5	6.1	10.3	4.8	...	7.1	...	...	...
Wellington Region	5.5	9.7	7.9	4.9	8.7	...	...	...	...	...	...	...
West Coast Region	1.6	...	...	...	...	...	...	...	...	...	...	...
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (Number)	921	1293	1104	1284	690	783	504	669	378	462	66	135
Net Internal Migration		**-372**		**-180**		**-93**		**-165**		**-84**		**-69**
Otago and Canterbury	68.1	78.9	77.4	73.4	72.6	82.0	76.2	95.1	78.6	100.0	100.0	100.0
Auckland, Waikato, WTG	23.5	20.2	20.7	23.8	27.4	14.9	23.8	3.1	21.4	...	...	...
These Five Regions	**91.5**	**99.1**	**98.1**	**97.2**	**100.0**	**96.9**	**100.0**	**98.2**	**100.0**	**100.0**	**100.0**	**100.0**

Table 2.3: Known Internal Arrivals and Leavers by Broad Age Group and Region of Origin and Destination (%), Southland Region, Unemployed in 2018

	15-24 Years		25-34 Years		35-44 Years		45-54 Years		55-64 Years		65+ Years	
	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers
Auckland Region	8.3	7.8	...	19.0	...	...	21.4	...	...	...	...	...
Bay of Plenty Region	...	...	...	...	...	...	...	...	...	...	...	...
Canterbury Region	29.2	34.4	35.3	38.1	44.4	100.0	35.7	40.0	66.7	...	...	...
Gisborne Region	...	...	...	...	...	...	...	...	...	...	...	...
Hawke's Bay Region	...	...	...	...	...	...	...	...	...	...	...	...
Manawatu-Wanganui Region	8.3	...	...	...	...	...	...	...	...	...	...	...
Marlborough Region	...	...	...	...	...	...	...	...	...	...	...	...
Nelson Region	...	...	...	...	...	...	...	...	...	...	...	...
Northland Region	...	...	...	...	...	...	...	...	...	...	...	...
Otago Region	54.2	45.3	52.9	42.9	55.6	...	42.9	60.0	33.3	100.0	...	...
Taranaki Region	...	...	...	...	...	...	...	...	...	...	...	...
Tasman Region	...	...	...	...	...	...	...	...	...	...	...	...
Waikato Region	...	...	11.8	...	...	...	...	...	...	...	...	...
Wellington Region	...	12.5	...	...	...	...	...	...	...	...	...	...
West Coast Region	...	...	...	...	...	...	...	...	...	...	...	...
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	...	...
Total (Number)	72	192	51	63	27	12	42	15	27	9	0	0
Net Internal Migration		**-120**		**-12**		**15**		**27**		**18**		**0**
Otago and Canterbury	83.3	79.7	88.2	81.0	100.0	100.0	78.6	100.0	100.0	100.0	...	...
Auckland, Waikato, WTG*	8.3	20.3	11.8	19.0	...	...	21.4	...	...	...	...	...
These Five Regions	**91.7**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	...	...

*Mainly Auckland

Table 2.4: Known Internal Arrivals and Leavers by Broad Age Group and Region of Origin and Destination (%), Southland Region, Not in the Labour Force in 2018

	15-24 Years		25-34 Years		35-44 Years		45-54 Years		55-64 Years		65+ Years	
	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers
Auckland Region	10.1	3.7	7.7	4.4	7.4	6.9	7.9	5.2	6.4	9.8	8.3	5.1
Bay of Plenty Region	4.5	2.7	4.8	9.9	7.4	7.6	11.1	9.1	9.2	5.3	3.8	5.6
Canterbury Region	13.5	21.1	11.1	14.3	12.6	12.5	8.7	7.1	17.4	10.5	22.6	24.3
Gisborne Region	2.8	0.7	1.0	1.1	...	...	...	1.3	...	...	...	...
Hawke's Bay Region	5.1	1.7	4.3	4.9	5.2	6.9	4.0	4.5	2.8	4.5	2.3	3.3
Manawatu-Wanganui Region	12.9	5.7	10.6	5.5	9.6	9.7	7.9	6.5	6.4	5.3	2.6	3.7
Marlborough Region	5.1	2.5	3.9	7.1	3.7	4.9	2.4	1.9	4.6	4.5	0.8	3.7
Nelson Region	2.8	2.0	2.4	6.6	5.2	5.6	4.8	5.8	...	3.8	1.9	1.4
Northland Region	6.2	2.2	3.9	6.0	5.9	5.6	4.8	7.8	6.4	4.5	3.0	1.9
Otago Region	19.1	42.3	15.0	15.4	16.3	12.5	12.7	10.4	15.6	27.8	41.5	38.3
Taranaki Region	2.8	1.2	5.3	3.8	...	4.9	1.6	4.5	...	1.5	0.8	0.9
Tasman Region	4.5	1.5	2.9	3.8	6.7	5.6	4.0	3.2	6.4	1.5	3.0	3.3
Waikato Region	3.9	5.2	18.4	3.3	11.9	3.5	11.1	14.3	11.0	12.8	4.9	5.1
Wellington Region	3.9	5.7	3.4	8.8	2.2	12.5	12.7	13.0	7.3	6.8	3.0	3.3
West Coast Region	2.8	1.5	5.3	4.9	5.9	1.4	6.3	5.2	6.4	1.5	1.5	0.0
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (Number)	534	1206	621	546	405	432	378	462	327	399	795	642
Net Internal Migration		-672		75		-27		-84		-72		153
Otago and Canterbury*	32.6	63.4	26.1	29.7	28.9	25.0	21.4	17.5	33.0	38.3	64.2	62.6

** Top Regions (highlighted) differ too much to aggregate the top 5*

For youthful movers who were not in the labour force in 2018, the findings support the earlier suggestion that many are likely moving for education and training. Of potential importance for thinking about skills provision, Arrivals aged 15-24 years from Canterbury and Otago and not in the labour force accounted for somewhat smaller proportions (and numbers) than youthful Leavers to those regions, suggesting compositional differences in education and training supply and demand—and/or in availability of employment. For other age groups not in the labour force in 2018, further disaggregation would undoubtedly reveal life stage issues, such as caring for dependent family members, or retirement, and such people may be less amenable to entering or reentering the labour market. However, in terms of 'retirement age' movements (65+ years), it is notable that relatively few movers in either direction were employed in 2018, while none were unemployed. By contrast, as was shown above (Figure 2.3) just over half of Southland Region's Stayer population aged 65-69 years in 2018 was still employed, as were 17 per cent at 70+ years (compared with 21.0 and 3.0 per cent respectively of Internal Arrivals). It is plausible that older movers may be amenable to similar levels of employment and may respond to targeted campaigns—which could also attempt to reach movers before they moved; as for most other movers, the majority came from, or went to, Otago followed by Canterbury.

These findings have practical implications for Southland Region's labour market and skills marketing strategies, in that established source regions are the most likely to be future source regions; accordingly, marketing may be more effective if concentrated on just those regions, and are directed at the age and likely characteristics of movers. For example, anticipating that the majority of young Internal Arrivals who find themselves unemployed are likely to have come from Otago as opposed to Canterbury may assist in developing strategies to address the issue: is the disparity reflecting differences in employment opportunities, industrial choice, or skill levels? Are older movers to Southland Region aware of the region's labour shortages—and of the relatively high employment rates of their Stayer counterparts?

One other important consideration is that the Southland Region's known net internal migration loss is not randomly distributed by either labour force status or age (Table 2.5). With three-quarters of the net loss accounted for by those in the labour force in 2018, it would seem that the search for employment drives a lot of population churning which may be reduced if local opportunities were widely publicised. Accounting for the remaining quarter, those outside the labour force will have other motivations for moving that may be less amenable to intervention, but it can be noted that for more than half of age groups these movements resulted in minor net gain—as they did for people unemployed in 2018. As above, it must be noted that these net values accord with overall estimated net internal migration but do not take account of the large numbers of 'Unable to Match' who were residing in Southland Region in 2018.

Table 2.5: Known Net Internal Migration by Labour Force Status and Age, 2018

	Employed Full Time	Employed Part Time	Unemployed	Labour Force	Not in the Labour Force	Total Stated
15-19	-39	-108	-60	-207	-351	-558
20-24	-144	-138	-60	-342	-264	-606
25-29	-33	-3	-6	-42	27	-15
30-34	-120	-3	-6	-129	27	-102
35-39	-96	3	9	-84	15	-69
40-44	-57	6	6	-45	9	-36
45-49	-99	-15	12	-102	3	-99
50-54	-120	-21	15	-126	3	-123
55-59	-90	0	9	-81	-12	-93
60-64	-21	-9	9	-21	-24	-45
65-59	-3	-15	0	-18	21	3
70+	-21	-12	0	-33	114	81
Total	-822	-354	-90	-1266	-414	-1680
% share	48.9	21.1	5.4	75.4	24.6	100.0

Industry of Employed Movers and Stayers

Focusing on industry of employment in 2018 by mover-stayer category provides additional insight into the characteristics of Southland Region's labour force. To reduce complexity, industry here pertains to major industry sectors, of which there are 19, as opposed to the sub-level disaggregation used in Part A, and age groups are again in ten-year bands. The section concludes with a brief analysis of the industry and regional source and destination of Internal Arrivals and Leavers.

Figure 2.6 shows that in 2018, all but one Southland Region industry employed people of all mover-stayer categories; the exception was Mining, which did not employ anyone who had been living overseas five years earlier (also of note is that Mining is the region's smallest industry, employing just 246 people in 2018 – see right-hand panel and Table 2.6). As might be expected, Stayers dominate the numbers employed in each industry, while for all but one industry, Internal Arrivals outnumbered Overseas Arrivals. For the exception, Accommodation and Food Services, Overseas Arrivals (12%) outnumbered Internal Arrivals (10.4%). For four additional industries, more than 10 per cent of employees were Internal Arrivals: Information Media and Telecommunications (15.5%), Professional, Scientific and Technical Services (11.1%), Administrative and Support Services (10.1%), and Arts and Recreation (10.1%). Those whose 2018 usual residence could not be matched to 2013 ('Unable to Match') ranged from 7.9 per cent for Education and Training to 22 per cent for Mining.

By way of summarising this diversity, the Index of Dissimilarity (ID) measures the extent to which the mover-stayer distribution of each industry would need to change in order to replicate the average (see Table 2.6, right hand column). The highest IDs are for Mining (10.3 percentage points), Accommodation and Food Services (11.9), and Information Media and Telecommunications (11.1), indicating that the mover-stayer composition of these industries is most different to the average. However, these are not overly large values, while for the majority of industries, the divergence ranges between just two and four percentage points.

Figure 2.5: Industry of Employment for Movers and Stayers (% and Number), Southland Region 2018

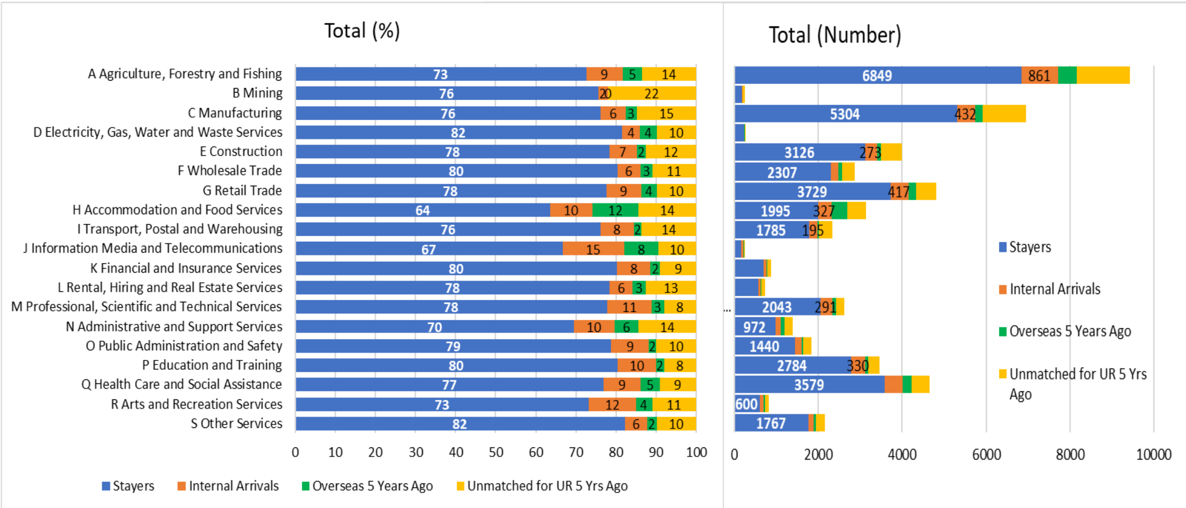


Table 2.6: Industry of Employment for Movers and Stayers (% and Number), Southland Region 2018

	Stayers	Internal Arrivals	Overseas Arrivals	Unable to Match*	Total (%)	Total Number	Index of Dissimilarity~ (Percentage Points)
A Agriculture, Forestry and Fishing	72.6	9.1	4.7	13.5	100.0	9429	2.9
B Mining	75.6	2.4	0.0	22.0	100.0	246	10.3
C Manufacturing	76.2	6.2	2.7	14.9	100.0	6957	3.8
D Electricity, Gas, Water and Waste Services	81.5	4.3	4.3	9.8	100.0	276	6.5
E Construction	78.4	6.8	2.3	12.5	100.0	3987	3.6
F Wholesale Trade	80.4	5.7	3.0	10.9	100.0	2871	4.8
G Retail Trade	77.6	8.7	3.9	9.9	100.0	4806	2.1
H Accommodation and Food Services	63.6	10.4	11.6	14.4	100.0	3135	11.9
I Transport, Postal and Warehousing	76.2	8.3	1.8	13.7	100.0	2343	2.6
J Information Media and Telecommunications	66.7	15.5	8.3	9.5	100.0	252	11.1
K Financial and Insurance Services	80.3	8.3	2.4	9.0	100.0	867	4.7
L Rental, Hiring and Real Estate Services	78.5	5.7	3.3	12.6	100.0	738	3.8
M Professional, Scientific and Technical Services	77.8	11.1	3.1	8.0	100.0	2625	4.5
N Administrative and Support Services	69.5	10.1	6.0	14.4	100.0	1398	6.0
O Public Administration and Safety	78.8	9.4	1.8	10.0	100.0	1827	3.8
P Education and Training	80.5	9.5	2.1	7.9	100.0	3459	5.6
Q Health Care and Social Assistance	76.9	9.3	4.6	9.2	100.0	4653	2.6
R Arts and Recreation Services	73.3	11.7	4.0	11.0	100.0	819	3.0
S Other Services	82.3	5.6	2.4	9.8	100.0	2148	6.7
Total (Summed)	75.6	8.9	3.8	11.7	100.0	52836	0
Total (Summed), Number	40134	4422	2046	6234			

**Unable to be matched to usual residence 5 years ago*

~ Here, the Index of Dissimilarity measures the extent to which the mover-stayer distribution of each industry would need to change to replicate the average

Before examining the data by age, Table 2.7 provides a summary of the extent to which each mover-stayer category contributes to each industry. All four categories make their largest contribution to dominant Agriculture, Forestry and Fishing industry, and that contribution is remarkably similar, ranging from 17.1 per cent for Stayers to 21.7 per cent for Overseas Arrivals. With just two exceptions, the percentage contribution of each mover-stayer category to each other industry also ranges fairly narrowly. The exceptions are Manufacturing, which accounts for a somewhat larger share of Stayers and 'Unable to Match' (suggesting that these two categories are themselves similar), and Accommodation and Food Services, which accounts for somewhat larger proportions of Overseas Arrivals.

The Index of Dissimilarity between the industrial distributions of Stayers and each other mover category confirms that Overseas Arrivals (ID = 21.5 percentage points) have the most different industrial distribution—largely driven by the disproportion employed in Accommodation and Food Services. By comparison, with ID's of 10.0 and 11.1 percentage points respectively, the industrial distributions of Internal Arrivals and Unable to Match are more similar to that of Stayers.

Table 2.7: Summary Industrial Distribution (%) of Movers and Stayers, Southland Region 2018

	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unable to Match
A Agriculture, Forestry and Fishing	17.1	19.5	21.7	20.5
B Mining	0.5	0.1	0.0	0.9
C Manufacturing	13.2	9.8	9.1	16.6
D Electricity, Gas, Water and Waste Services	0.6	0.3	0.6	0.4
E Construction	7.8	6.2	4.4	8.0
F Wholesale Trade	5.7	3.7	4.3	5.0
G Retail Trade	9.3	9.4	9.1	7.6
H Accommodation and Food Services	5.0	7.4	17.7	7.2
I Transport, Postal and Warehousing	4.4	4.4	2.1	5.1
J Information Media and Telecommunications	0.4	0.9	1.0	0.4
K Financial and Insurance Services	1.7	1.6	1.0	1.3
L Rental, Hiring and Real Estate Services	1.4	0.9	1.2	1.5
M Professional, Scientific and Technical Services	5.1	6.6	4.0	3.4
N Administrative and Support Services	2.4	3.2	4.1	3.2
O Public Administration and Safety	3.6	3.9	1.6	2.9
P Education and Training	6.9	7.5	3.5	4.4
Q Health Care and Social Assistance	8.9	9.8	10.6	6.8
R Arts and Recreation Services	1.5	2.2	1.6	1.4
S Other Services	4.4	2.7	2.5	3.4
Total (Summed)	100.0	100.0	100.0	100.0
Total Summed (Number)	40134	4422	2046	6234
Index of Dissimilarity with Stayers~ (Percentage Points)		10.0	21.5	11.2

~ Here, the Index of Dissimilarity measures the extent to which the industrial distribution of each mover category would need to change to replicate the distribution of Stayers

Returning now to the distribution of each mover-stayer category within each industry, Figures 2.6 and 2.7 present data for six broad age groups (see also Appendix J). For those aged 25-34 and 35-44 years (Figure 2.6), the picture is similar to that for the total employed population (Figure 2.5 above), while for those aged 15-24 years (also Figure 2.6) and 45-54 years and older (Figure 2.7) the presence of both Internal and Overseas Arrivals is generally more limited, and in several cases, employees are all Stayers.

Figure 2.6: Industry of Employment for Movers and Stayers (%, Number) by Broad Age Group 15-24, 25-34 and 35-44 Years, Southland Region 2018

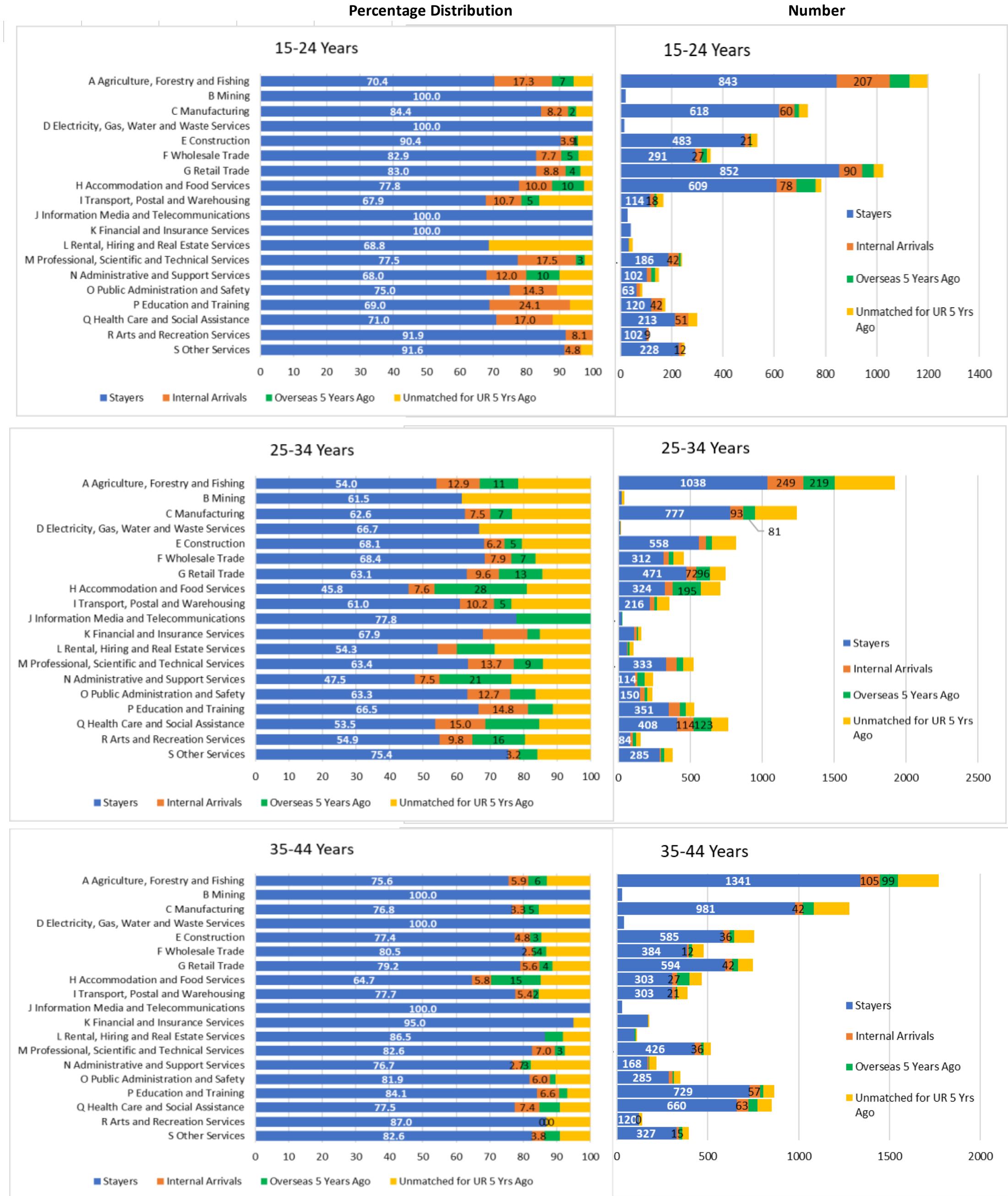
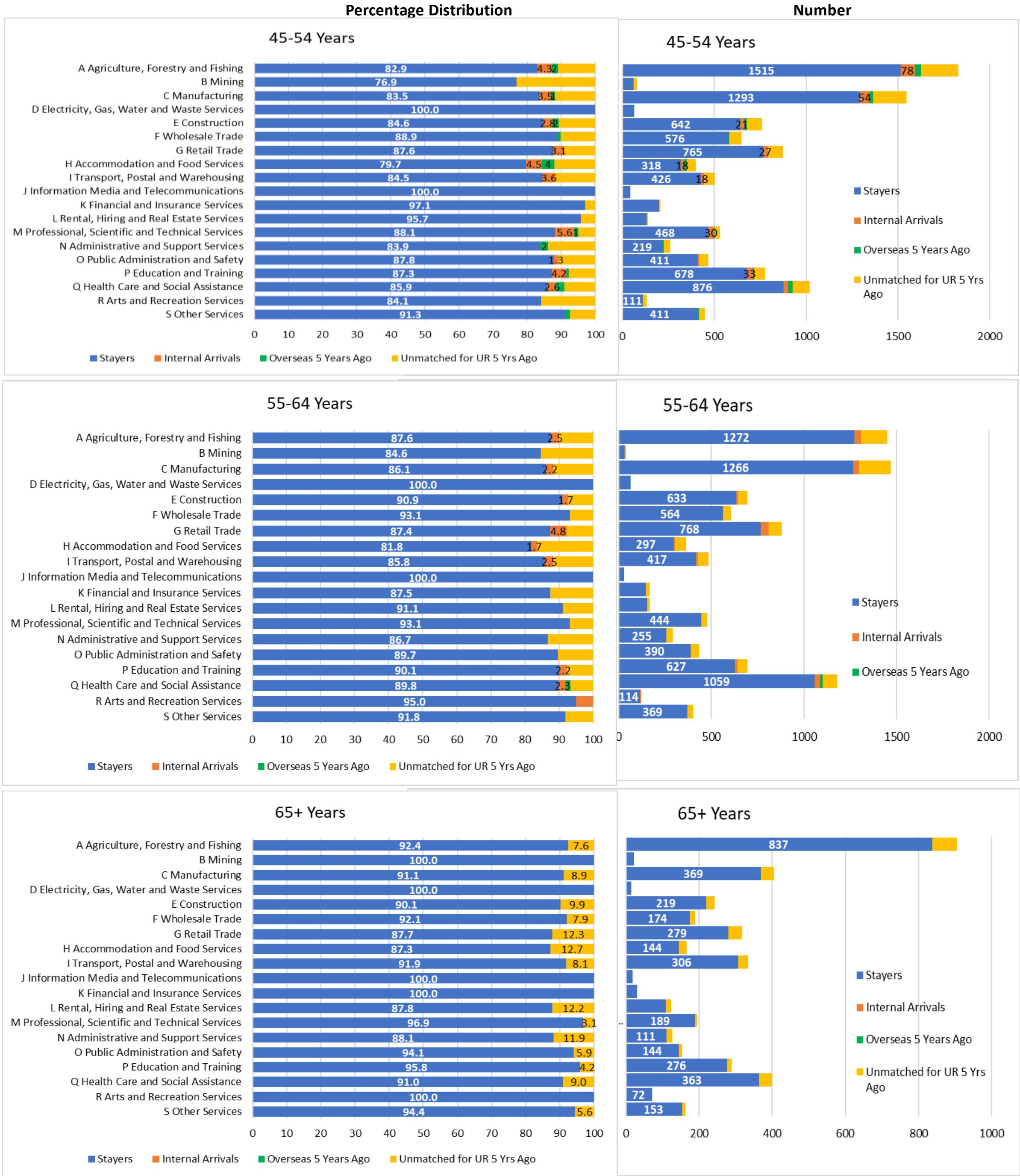


Figure 2.7: Industry of Employment for Movers and Stayers (%, Number) by Broad Age Group 45-54, 55-64 and 65+ Years, Southland Region 2018



For those aged 15-24 years, employees of four industries are all Stayers—however underlying numbers are small (see right-hand panel). Internal Arrivals account for relatively large proportions of employees in eight industries, among them the dominant Agriculture, Forestry and Fishing industry (17.3% Internal Arrivals), which also employs a sizable contingent of Overseas Arrivals (6.5%). The relatively large Accommodation and

Food Services industry, and the somewhat smaller Administrative Support Services industry, also employ disproportions of both Internal and Overseas Arrivals. One-quarter of 15-24 year olds employed in Education and Training are Internal Arrivals, but there are no Overseas Arrivals. The three other large industries of employment for 15-24 year olds, Manufacturing, Construction, and Retail, are each heavily dependent on Stayers who account for respectively 84.4, 90.4 and 83.0 per cent of employees.

For those aged 25-34 years, no industries employed only Stayers, while Internal Arrivals were employed in all but three industries, and Overseas Arrivals in all but two. In general, for this age group compared with other age groups, Stayers comprise the smallest proportion of employees, accounting for little more than half of employees in Agriculture, Forestry and Fishing, and less than half in both Accommodation and Food Services and Administration and Support Services. Proportions unmatched for usual residence 5 years ago are relatively large compared with other age groups, for most industries, and may reflect the higher mobility of this age group.

For those aged 35-44 years, three (small) industries employed only Stayers, while Accommodation and Food Services again stands out in its disproportion of employees from Overseas (14.7%). Internal Arrivals play a more modest role than at 15-24 and 25-34 years, the highest proportions being for Health Care and Social Assistance (7.4%) and Professional, Scientific and Technical Services (7%).

For age groups 45-54 and 55-64 years, Stayers are the dominant employees across all industries, and for both age groups accounted for 100 per cent in two industries. At 45-54 years, Overseas Arrivals are apparent in modest numbers and proportions (10 industries) as are Internal Arrivals (also 10 industries), while at 55-64 years, only one industry employed Overseas Arrivals (Health Care and Social Assistance) and nine employed Internal Arrivals. In general, industries employing people in these age groups are more dependent on the local population. **By 65+ years** the presence of both Internal or Overseas Arrivals has completely disappeared, Stayers accounting for a minimum of 87.3 per cent (Food and Accommodation Services) to 100 per cent of employees for five industries, and notably for over 92 per cent of the large Agriculture, Forestry and Fishing industry—the balance being 'Unable to Match'.

Note that there are too many missing mover-stayer categories by industry and age (see Appendix J) to apply the Index of Dissimilarity.

Key insights from the analysis of industry of employment are:

- the relative similarity of industrial distribution for each mover-stayer category, albeit with some moderate difference for Overseas Arrivals who contribute heavily to the Accommodation and Food Services industry
- the dominance of the Agriculture, Fishing and Forestry industry irrespective of mover-stayer category and age group,
- the extent to which key industries employing 15-24 year olds are reliant on the local (Stayer) population, for example, Manufacturing, Construction, and Retail,
- the relative mobility of the 25-34 year employed population, which sees local industries employing this age group considerably less reliant on the local (Stayer) population and more so on Internal and Overseas Arrivals,,
- with the exception of Accommodation and Food Services, a substantial diminishing in the proportion of employees who are Internal and Overseas Arrivals from age 35-44, and
- the extent to which industries employing those aged 45-54 years and above are heavily reliant on the local population (Stayers)

Table 2.8 turns to the source and destination regions of Southland Region's Internal Arrivals and Leavers across the 14 industries which have sufficient underlying numbers. Reflecting the similar analysis by labour force status above, the Otago Region, followed by the Canterbury Region, account for the majority of both Arrivals and Leavers across all industries. The main additional source and destination regions differ slightly by industry, but for all but two, adding in Auckland, Waikato and Wellington again accounts for around 80+ per cent of movers in both directions (79-100 per cent of Internal Arrivals and 80-100 per cent of Internal Leavers). The two exceptions, Agriculture, Forestry and Fishing, and Manufacturing, also show modest proportions either from/to Manawatu-Wanganui, as well as the Bay of Plenty, which also features as a modest source or destination for nine other industries. Notably Manawatu-Wanganui is also the source region for 8.2 per cent of Southland's Professional, Scientific and Technical Services Arrivals.

One further point of note from Table 2.8 is that only one industry experienced a net internal migration gain from these movements: Manufacturing, which made a net gain of 27 employees. For the dominant Agriculture, Forestry and Fishing industry, the net loss was almost zero (-3), but for the similarly prominent Construction industry, it was a sizeable 255, the largest net loss of any industry.

Adding to the above insights, the analysis identifies that many regions play a very limited—or zero—role as source or destination for Southland Region's internal movers, while at the same time it indicates where industry-specific targeting of potential labour supply might be best directed.

Table 2.8: Known Internal Arrivals and Leavers by Selected Industry of Employment, Southland Region 2018

	Agriculture, Forestry and Fishing		Manufacturing		Construction		Wholesale Trade		Retail Trade		Accommodation and Food Services		Transport, Postal and Warehousing	
	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers
Auckland Region	4.5	…	11.8	6.7	12.1	5.7	12.7	11.9	12.2	7.8	8.3	5.0	12.3	5.3
Bay of Plenty Region	3.1	1.0	5.6	3.7	4.4	2.8	5.5	5.1	3.6	3.9	4.6	3.8	…	…
Canterbury Region	25.1	26.4	24.3	33.3	27.5	27.8	23.6	33.9	25.9	25.6	24.8	22.5	30.8	26.7
Gisborne Region	1.4	1.4	…	…	…	…	…	…	…	…	…	…	…	…
Hawke's Bay Region	1.7	2.4	2.1	3.7	2.2	1.7	…	…	…	1.1	…	…	…	2.7
Manawatu-Wanganui Region	4.2	4.9	4.9	2.2	3.3	…	…	5.1	2.2	2.2	2.8	1.9	4.6	…
Marlborough Region	1.4	2.1	3.5	3.7	2.2	1.1	…	…	1.4	1.1	1.8	2.5	…	…
Nelson Region	0.7	0.7	…	1.5	…	1.1	…	3.4	1.4	1.7	…	3.1	…	…
Northland Region	2.4	2.8	2.1	1.5	2.2	…	…	…	1.4	1.7	1.8	…	…	4.0
Otago Region	35.2	44.1	31.9	31.9	29.7	52.8	38.2	35.6	32.4	43.9	35.8	43.8	36.9	49.3
Taranaki Region	3.1	1.4	…	2.2	…	…	…	…	1.4	…	…	…	…	…
Tasman Region	1.0	1.7	…	…	…	…	5.5	…	2.2	1.7	1.8	1.3	…	…
Waikato Region	10.5	7.3	7.6	8.1	7.7	3.4	9.1	5.1	8.6	3.9	8.3	5.6	4.6	6.7
Wellington Region	3.8	2.1	3.5	…	5.5	3.4	5.5	…	5.8	5.6	7.3	7.5	6.2	5.3
West Coast Region	1.7	1.7	2.8	1.5	3.3	…	…	…	1.4	…	2.8	3.1	4.6	…
Total (Summed)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number	861	864	432	405	273	528	165	177	417	540	327	480	195	225
Net Internal Migration		-3		27		-255		-12		-123		-153		-30
Canterbury and Otago	60.3	70.5	56.3	65.2	57.1	80.7	61.8	69.5	58.3	69.4	60.6	66.3	67.7	76.0
Auckland, Waikato WGT	18.8	9.4	22.9	14.8	25.3	12.5	27.3	16.9	26.6	17.2	23.9	18.1	23.1	17.3
These Five Regions	**79.1**	**79.9**	**79.2**	**80.0**	**82.4**	**93.2**	**89.1**	**86.4**	**84.9**	**86.7**	**84.4**	**84.4**	**90.8**	**93.3**

	Rental, Hiring and Real Estate Services		Professional, Scientific and Technical Services		Administrative and Support Services		Public Administration and Safety		Education and Training		Health Care and Social Assistance		Other Services	
	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers
Auckland Region	14.3	8.8	11.3	13.5	19.1	9.5	10.5	7.9	15.5	6.6	9.7	9.9	12.5	10.2
Bay of Plenty Region	…	…	…	3.8	4.3	…	…	…	2.7	3.6	2.8	3.9	5.0	3.4
Canterbury Region	28.6	29.4	23.7	27.8	25.5	36.5	22.8	22.5	20.0	28.5	20.8	25.4	25.0	35.6
Gisborne Region	…	…	…	…	…	…	…	…	…	…	…	…	…	…
Hawke's Bay Region	…	…	…	2.3	…	…	…	…	…	2.2	2.1	1.1	…	…
Manawatu-Wanganui Region	…	…	8.2	…	…	3.2	5.3	6.7	…	4.4	2.8	2.2	…	…
Marlborough Region	…	…	…	…	…	3.2	…	…	…	…	…	2.2	…	3.4
Nelson Region	…	…	…	2.3	…	…	…	…	1.8	…	1.4	2.8	…	…
Northland Region	…	…	2.1	…	…	…	3.5	…	1.8	2.2	2.8	1.7	…	…
Otago Region	57.1	61.8	41.2	32.3	36.2	39.7	33.3	38.2	45.5	38.7	41.7	34.3	45.0	37.3
Taranaki Region	…	…	…	…	…	…	…	…	…	…	…	2.2	…	…
Tasman Region	…	…	2.1	2.3	…	…	…	…	…	…	…	1.1	…	…
Waikato Region	…	…	4.1	6.8	8.5	3.2	8.8	9.0	4.5	5.1	5.6	5.0	7.5	…
Wellington Region	…	…	7.2	9.0	6.4	4.8	12.3	15.7	6.4	8.8	7.6	6.1	5.0	10.2
West Coast Region	…	…	…	…	…	…	3.5	…	1.8	…	2.8	2.2	…	…
Total (Summed)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number	42	102	291	399	141	189	171	267	330	411	432	543	120	177
Net Internal Migration		-60		-108		-48		-96		-81		-111		-57
Canterbury and Otago	85.7	91.2	64.9	60.2	61.7	76.2	56.1	60.7	65.5	67.2	62.5	59.7	70.0	72.9
Auckland, Waikato WGT	14.3	8.8	22.7	29.3	34.0	17.5	31.6	32.6	26.4	20.4	22.9	21.0	25.0	20.3
These Five Regions	**100.0**	**100.0**	**87.6**	**89.5**	**95.7**	**93.7**	**87.7**	**93.3**	**91.8**	**87.6**	**85.4**	**80.7**	**95.0**	**93.2**

Occupation of Employed Movers and Stayers

The analysis now turns to occupation of employment for Southland Region's labour force in 2018 by mover-stayer category and source region of Internal Arrivals. Here, occupation pertains to eight major occupational sectors (as opposed to the 43 sub-level disaggregation in Part A). Age groups are again in ten-year bands, and the section concludes with a brief analysis of the regional origins and destinations of Internal Movers, for each occupational group.

As indicated on Figure 2.8, all eight occupational groups employed people of all mover-stayer categories. As would be expected, Stayers are again the dominant category, ranging from 72.6 per cent for Labourers to 85.1 per cent for Clerical and Administrative Workers (see also Table 2.9). Professionals are the most reliant on Internal Arrivals (10.5%) and Clerical and Administrative Workers the least (3.7%). Community and Personal Service Workers are the most reliant on Overseas Arrivals (5.9%), and Machinery Operators and Drivers the least (1.1%). Those for whom address in 2018 could not be matched to 2013 are for all occupations larger than each Arrivals category, while in all cases, Internal Arrivals played a larger role than Overseas Arrivals—but only narrowly so for Community and Personal Workers, and Labourers.

Despite these disparities, the Index of Dissimilarity (Table 2.9, right-hand column) suggests that the Southland Region's occupations differ only minimally in terms of mover-stayer composition, at least at regional level. Clerical and Administrative Workers have the highest ID (7.5 percentage points), meaning that 7.5 per cent of such workers would need to change mover-stayer category to replicate the average mover-stayer distribution, but this is an arguably low proportion.

Figure 2.8: Occupation of Employment for Movers and Stayers (% and Number), Southland Region 2018

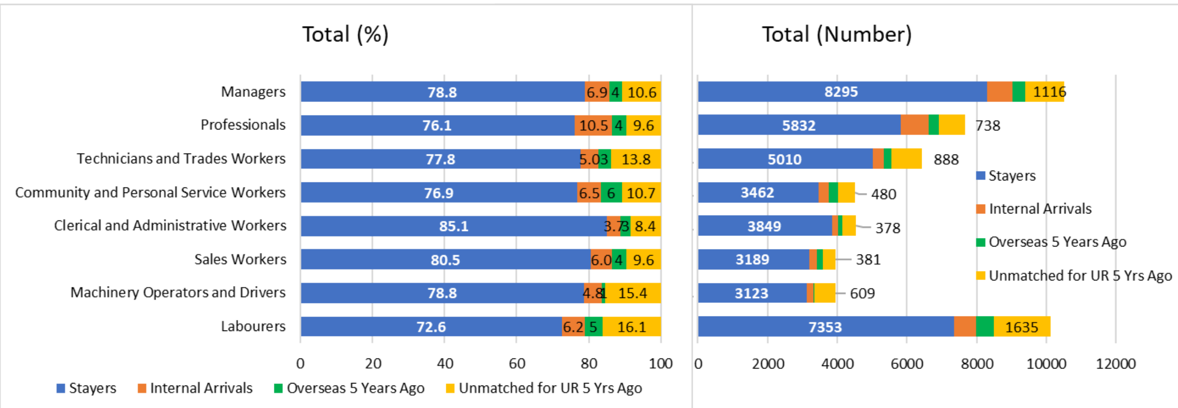


Table 2.9: Occupation of Employment for Movers and Stayers (% and Number), Southland Region 2018

Total (Summed)	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unable to Match*	Total (%)	Total Number	Index of Dissimilarity~ (Percentage Points)
Managers	78.8	6.9	3.6	10.6	100.0	10521	1.6
Professionals	76.1	10.5	3.8	9.6	100.0	7665	3.9
Technicians and Trades Workers	77.8	5.0	3.4	13.8	100.0	6441	1.9
Community and Personal Service Workers	76.9	6.5	5.9	10.7	100.0	4503	2.1
Clerical and Administrative Workers	85.1	3.7	2.9	8.4	100.0	4524	7.5
Sales Workers	80.5	6.0	3.9	9.6	100.0	3963	3.0
Machinery Operators and Drivers	78.8	4.8	1.1	15.4	100.0	3963	4.6
Labourers	72.6	6.2	5.0	16.1	100.0	10125	5.3
Total (Summed)	77.6	6.5	3.9	12.0	100.0	52938	…

**Unable to be matched to usual residence 5 years ago*

~ Here, the Index of Dissimilarity measures the extent to which the mover-stayer distribution of each occupation would need to change to replicate the average

Following the analytical framework used for industry, Table 2.10 summarises the extent to which each mover-stayer category contributes to each occupation overall. Largely reflecting the size of their workforces, the three largest occupations, Managers, Labourers, and Professionals, account for the largest or second-largest share of each category—with just one minor exception (Technicians and Trade Workers account for the third highest proportions Unable to Match). By comparison with Stayers, Internal Arrivals make a disproportionately large contribution to Professionals, while those arriving from Overseas make a disproportionately large contribution to Labourers (25.4%) and a disproportionately small contribution to Machinery Operators and Drivers (2.1%). Those 'Unable to Match' are also disproportionate among Labourers (26.3%).

The Index of Dissimilarity with Stayers is 10.6 percentage points for Internal Arrivals, 12.0 percentage points for Overseas Arrivals, and 11.7 percentage points for 'Unable to match' (Table 2.10). Again, while each mover/unable to match category has a different occupational distribution to Stayers, these are not overly large differences.

Table 2.10: Summary Occupational Distribution (%) of Movers and Stayers, Southland Region 2018

	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unable to Match*
Managers	20.7	21.5	19.2	17.9
Professionals	14.5	23.8	14.7	11.9
Technicians and Trades Workers	12.5	9.6	11.0	14.3
Community and Personal Service Workers	8.6	8.7	13.4	7.7
Clerical and Administrative Workers	9.6	5.0	6.5	6.1
Sales Workers	8.0	7.0	7.8	6.1
Machinery Operators and Drivers	7.8	5.6	2.1	9.8
Labourers	18.3	18.7	25.4	26.3
Total (Summed)	100.0	100.0	100.0	100.0
Total Summed (Number)	40113	3369	1998	6225
Index of Dissimilarity with Stayers~ (Percentage Points)	…	10.6	12.0	11.7

~ Here, the Index of Dissimilarity measures the extent to which the occupational distribution of each mover category would need to change to replicate the distribution of Stayers

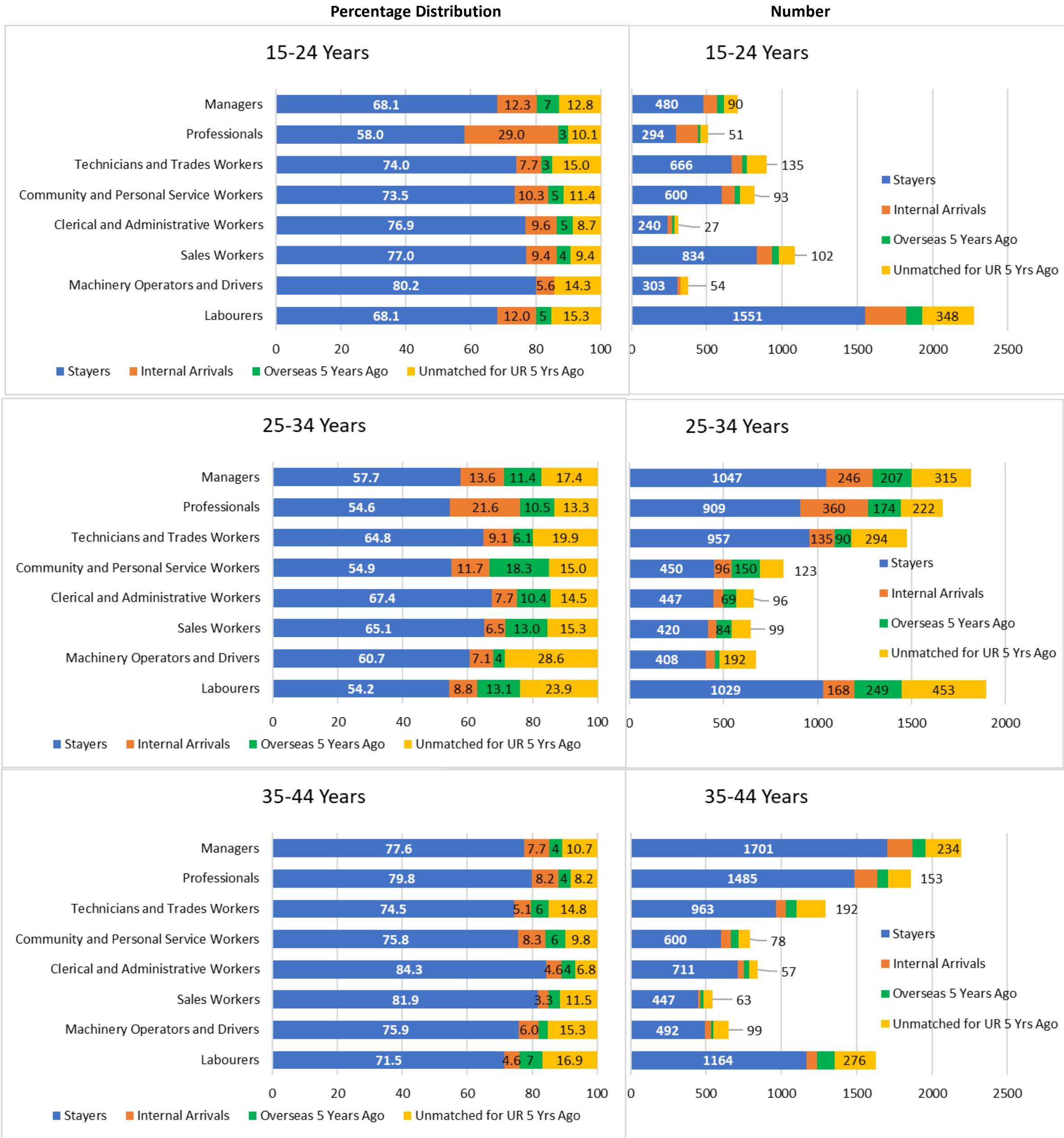
Figures 2.9 and 2.10 present the occupational distribution data by age (see also Appendix K). The picture is similar to that for industrial distribution, with occupations employing those aged 25-34 years (Figure 2.9, middle panel) being somewhat more reliant on Internal and Overseas Arrivals and less reliant on Stayers than both their immediately younger, and all older, counterparts (see Figure 2.10 for those aged 45+ years).

At 15-24 years, Stayer proportions generally second lowest, ranging from 58 per cent for Professionals to 80 per cent for Machinery Operators and Drivers—with the largest occupation, Labourers, falling in the middle of the distribution (68% Stayers). As for most age groups and occupations, Internal Arrivals account for a larger share of each occupation than do Overseas Arrivals—the largest share by Overseas Arrivals (6.8%) being for Managers. Internal Arrivals account for a disproportionately large share of 15-24 year old Professionals (29%), over twice that of the next largest proportion (Managers, 13.2%).

The picture differs somewhat for those aged **25-34 years**, where Stayer proportions are lowest and range from 54.2 per cent (Labourers) to 67.4 per cent (Clerical and Administrative Workers)—although it should be noted that 'Unable to Match' is a generally larger category than for other age groups. Overseas Arrivals account for larger proportions than Internal Arrivals in four (50%) of occupations: Community and Personal Service Workers, Clerical and Administrative Workers, Sales Workers, and Labourers. As for those aged 15-24 years, Internal Arrivals account for a disproportion of Professionals aged 25-34 years (21.6%).

At 35-44 years, the picture more closely resembles that at 15-24 years: Internal Arrivals and Overseas Arrivals are present in all occupations, while the former are outnumbered by the latter in all but one occupation (Technicians and Trades Workers). Overall there is greater reliance on the Stayer population, with proportions ranging from 71.5 per cent for Labourers to 84.3 per cent for Clerical and Administrative Workers.

Figure 2.9: Occupation of Employment for Movers and Stayers (%, Number) by Broad Age Group 15-24, 25-34 and 35-44 Years, Southland Region 2018

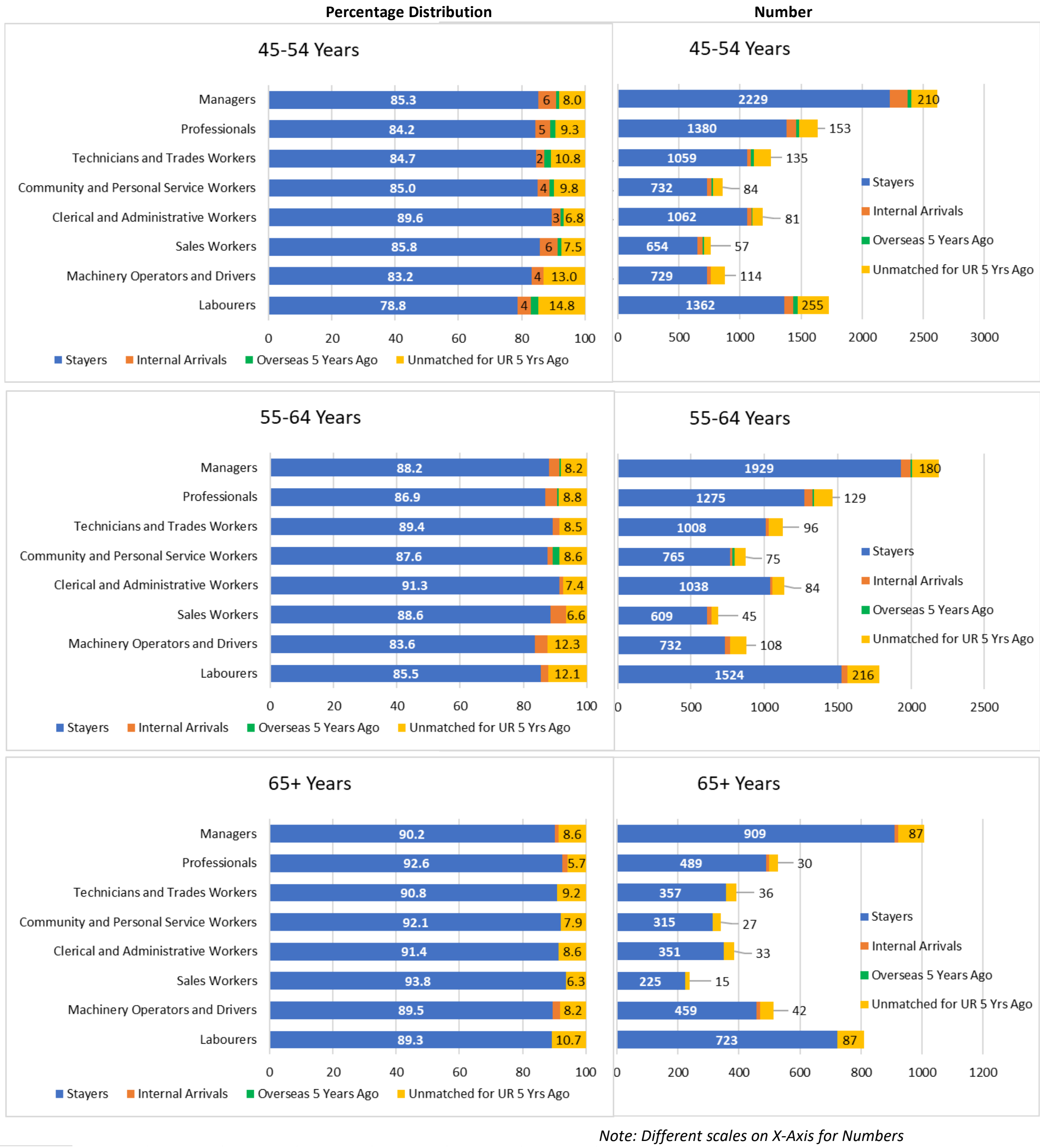


Note: Different scales on X-Axis for Numbers

Reliance on the Stayer population increases for each successive age group above 35-44 years. At **45-54 years**, Stayer proportions range from 78.8 per cent for Labourers to 89.6 per cent for Clerical and Administrative Workers, with Stayers accounting for 85.3 per cent of the relatively large Managerial workforce. Internal Arrivals play a decreasing role, ranging from 2.4 per cent for Technicians and Trades Workers to 5.5 per cent for Managers and Sales Workers, while the highest proportions of Overseas Arrivals are found for Labourers (2.3%) and Technicians and Trades Workers (2.2%).

By **55-64 years**, the presence of Internal Arrivals and Overseas Arrivals is further reduced. Internal Arrivals are present in all occupations but range from just 1.3 to 4.8 per cent, and just three occupations have any Overseas Arrivals. By **65+ years** both mover categories are virtually absent, with Stayers accounting for between 89.3 per cent (Labourers) and 93.8 per cent (Sales Workers).

Figure 2.10: Occupation of Employment for Movers and Stayers (%, Number) by Broad Age Group 45-54, 55-64 and 65+ Years, Southland Region 2018



Note: Different scales on X-Axis for Numbers

Key insights from the analysis of occupation of employment are that:

- by comparison with Stayers, the occupational distribution of Internal and Overseas Arrivals differs slightly more than does their industrial distribution, largely irrespective of age,
- at 15-24 and 25-34 years, Labourers are numerically dominant and reliance on Internal and Overseas Arrivals is substantial, while from 35-44 years, Managers

dominate, and reliance on Internal and Overseas Arrivals is moderate. Between 25 and 64 years of age, Professionals are either second or third-largest occupation, and reliance on Internal and Overseas Arrivals is also moderate.

- those aged 25-34 years are substantially more reliant on Internal and Overseas Arrivals than all other age groups, irrespective of occupation, while above age 45, Stayers account for the vast majority of employees, with only Sales Workers aged 45-54 and 55-64 years drawing notably on Internal Arrivals,
- Professionals aged 15-24 and 25-34 years are substantially more reliant on Internal Arrivals than other occupations,
- Community and Service Workers aged 25-34 years are substantially more reliant on Overseas Arrivals than other occupations,

Table 2.11 turns to the source and destination regions of Southland Region's Internal Arrivals and Leavers across the eight occupational groups. As was the case by labour force (*per se*) and industry, the majority of Internal Arrivals to and Leavers from each occupation come from/go to the Otago Region, followed by Canterbury. The highest proportions moving in each direction to/from these two regions are for Machinery Operators and Drivers (67.4% of Arrivals and 73.0% of Leavers), and the lowest (51.8%) for Internal Arrivals employed in 2018 as Technicians and Trades Workers, and Internal Leavers employed as Professionals (58%). When Auckland, Waikato and Wellington are added in, 76-89 per cent of all Internal Arrivals and 82-91 per cent of all Internal Leavers across the eight occupations are accounted for.

By comparison with the analysis by industry, a slightly greater proportion of other regions are involved as source or destination for Internal Movers by occupation. Again, however, only two really stand out; the Bay of Plenty Region, particularly for Internal Arrivals employed as Technicians and Trades Workers (5.5%) and Machinery Operators and Drivers (5.4%), and the Manawatu-Wanganui Region, for Internal Arrivals employed as Technicians and Trades Workers (4.9%) and Labourers (4.7%).

Table 2.11: Known Internal Arrivals and Leavers by Occupation of Employment, Southland Region 2018

	1 Managers		2 Professionals		3 Technicians and Trades Workers		Personal Service Workers		Administrative Workers		6 Sales Workers		7 Machinery Operators and Drivers		8 Labourers		Total stated	
	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers
Auckland Region	8.7	5.3	12.2	10.4	10.4	5.8	13.2	7.0	10.7	8.1	9.9	8.2	6.5	7.2	9.0	2.6	9.9	6.7
Bay of Plenty Region	3.4	2.9	1.8	3.2	5.5	3.1	2.6	3.3	2.9	2.7	4.1	4.4	5.4	3.6	4.3	2.6	3.5	3.1
Canterbury Region	27.5	22.6	20.4	25.8	22.0	27.4	21.2	24.9	27.2	24.8	25.6	27.9	30.4	33.3	23.3	29.6	23.6	26.1
Gisborne Region	…	…	…	0.8	…	0.9	…	…	…	…	…	…	…	…	1.1	1.1	0.4	0.7
Hawke's Bay Region	1.3	1.7	1.8	1.9	2.4	1.8	1.3	1.4	…	2.0	1.7	1.1	…	1.8	2.2	1.8	1.6	1.7
Manawatu-Wanganui Region	2.7	3.2	3.4	2.1	4.9	1.8	2.6	3.8	2.9	1.3	3.3	2.7	3.3	2.7	4.7	2.9	3.4	2.6
Marlborough Region	1.3	1.5	…	1.1	…	1.8	2.0	2.3	…	…	1.7	1.6	…	3.6	3.6	3.3	1.6	1.7
Nelson Region	…	1.5	1.2	2.4	1.2	1.3	2.6	1.4	…	…	2.5	2.2	…	…	…	2.2	1.2	1.7
Northland Region	1.7	1.9	1.8	1.9	1.8	0.9	2.6	1.9	1.9	1.3	1.7	1.1	…	…	3.2	2.6	2.0	1.7
Otago Region	34.2	44.9	42.4	32.2	29.9	39.8	37.1	39.0	37.9	42.3	33.9	39.3	37.0	39.6	31.5	40.1	35.0	39.3
Taranaki Region	2.3	1.2	…	1.6	…	1.8	…	0.9	…	…	…	…	…	…	1.1	0.7	1.1	1.1
Tasman Region	1.0	0.7	1.2	1.3	2.4	1.3	3.3	1.4	…	2.0	…	1.1	…	…	2.2	2.2	1.6	1.3
Waikato Region	9.4	6.3	4.6	5.1	9.8	6.2	4.6	4.7	7.8	6.0	7.4	4.9	6.5	5.4	8.2	4.7	7.1	5.4
Wellington Region	4.4	4.6	7.3	9.0	6.7	5.3	4.0	6.6	5.8	9.4	6.6	5.5	6.5	2.7	3.9	2.2	5.5	5.7
West Coast Region	2.0	1.7	1.8	1.3	3.0	0.9	2.6	1.4	2.9	…	1.7	…	4.3	0.0	1.8	1.5	2.2	1.2
Total (Summed)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	894	1236	984	1128	492	678	453	639	309	447	363	549	276	333	837	822	4704	5874
Net Internal Migration		-342		-144		-186		-186		-138		-186		-57		15		-1170
Canterbury and Otago	61.7	67.5	62.8	58.0	51.8	67.3	58.3	63.8	65.0	67.1	59.5	67.2	67.4	73.0	54.8	69.7	58.6	65.4
Auckland, Waikato, WGT	22.5	16.3	24.1	24.5	26.8	17.3	21.9	18.3	24.3	23.5	24.0	18.6	19.6	15.3	21.1	9.5	22.6	17.8
These Five Regions	84.2	83.7	86.9	82.4	78.7	84.5	80.1	82.2	89.3	90.6	83.5	85.8	87.0	88.3	76.0	79.2	81.2	83.1

Highest Qualification of Employed Movers and Stayers

This final section turns to an analysis of the highest post-school qualification for the employed Census Usually Resident population aged 15+ years in 2018. As in the previous sections, patterns are presented first for Stayers, Internal and Overseas Arrivals, and for those whose 2018 usual residence address could not be matched to 2013. The section concludes with an analysis of the region of origin and destination for Southland Region's Internal Arrivals and Leavers.

Although underlying numbers are very small (2,940 - see Table 2.12), substantially higher proportions of people with a Post Graduate, Masters or PhD qualification are either Internal Arrivals (16.1%) or Overseas Arrivals (13.4%) than is the case for the other qualifications categories (Figure 2.11). However, Stayers account for the majority of each qualification category, ranging from 61.5 per cent for Post Graduate, Masters or PhD to just on 76 per cent for both Diploma and Other. Over two-thirds of those holding a Bachelors Degree are Stayers.

At the other end of the scale, the very large group of people with no Post School qualifications (N = 25,128) has the smallest proportions of Internal and Overseas Arrivals (6.5% and 2.0% respectively).

These data present an intuitively correct picture of people with higher qualifications being more mobile in terms of employment, but also of relatively high levels of qualifications among the Stayer population.

Figure 2.11: Highest Qualification of Employed Movers and Stayers (% and Number), Southland Region 2018

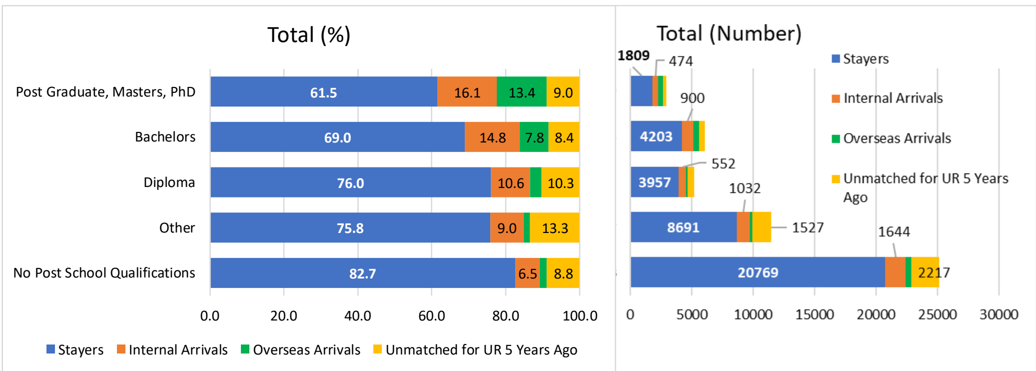


Table 2.12: Highest Qualification of Employed Movers and Stayers (% and Number), Southland Region 2018

	Stayers	Internal Arrivals	Overseas Arrivals	Unmatched for UR 5 Years Ago*	Total (%)	Total Number	Index of Dissimilarity~ (Percentage Points)
No Post School Qualifications	82.7	6.5	2.0	8.8	100.0	25128	5.1
Other	75.8	9.0	1.9	13.3	100.0	11466	3.4
Diploma	76.0	10.6	3.1	10.3	100.0	5205	1.9
Bachelors	69.0	14.8	7.8	8.4	100.0	6087	10.1
Post Graduate, Masters, PhD	61.5	16.1	13.4	9.0	100.0	2940	17.0
Total (Summed)	77.6	9.1	3.4	9.9	100.0	50826	0.0

**Unable to be matched to usual residence 5 years ago*

~ Here, the Index of Dissimilarity measures the extent to which the mover-stayer distribution of each qualification would need to change to replicate the average

Confirming this diversity (Table 2.12), the Index of Dissimilarity is highest for Post Graduate, Masters and PhD qualifications (17 percentage points) and substantially lowest for Diploma qualifications (1.9 per cent), meaning that relatively high proportions of holders of Post Graduate, Masters or PhD qualifications would need to change mover-stayer category for their distribution to replicate the average, while very few holders of a Diploma would need to do so. For those holding a Bachelors Degree, proportions fall in between (10.1 percentage points), but are not enormously different to the average.

Table 2.13 summarises the extent to which each mover-stayer category contributes to each qualification level. Stayers are unequivocally the least likely to hold a Post Graduate/Masters/PhD qualification (4.6%), and Overseas Arrivals, the most likely (22.6%). Consequently, these two groups account for relatively more (52.7%) and relatively fewer (28.6%) of those with no qualifications. Internal Arrivals fall approximately in the middle. Stayers and Internal Arrivals have relatively high—and very similar—proportions with an 'Other' qualification (22.0% and 22.4% respectively) compared with Overseas Arrivals (12.4%), while Overseas Arrivals and Internal Arrivals are somewhat more likely than Stayers to hold a Bachelors degree (19.6% and 27.2% compared with 10.7%). There is relatively little difference in the proportions holding a Diploma, by mover-stayer category.

Applying the Index of Dissimilarity to these data (see Table 2.13) confirms that Overseas Arrivals (ID = 34.6 percentage points) have a substantially different qualifications distribution to Stayers, while those whose address 5 years ago could not be matched (ID

= 9.4 percentage points) have a distribution relatively close to that of Stayers. Internal Arrivals (ID = 17.0 percentage points) fall in between.

Numerically, however, it is the qualifications of Stayers (N = 39,429) which dominate the local employment scene.

Table 2.13: Summary Qualifications Distribution (%) of Employed Movers and Stayers, Southland Region 2018

Total (Summed)	Stayers	Internal Arrivals	Overseas Arrivals	Unmatched for UR 5 Years Ago
No Post School Qualifications	52.7	35.7	28.6	43.9
Other	22.0	22.4	12.4	30.2
Diploma	10.0	12.0	9.1	10.6
Bachelors	10.7	19.6	27.2	10.1
Post Graduate, Masters, PhD	4.6	10.3	22.6	5.2
Total (Summed)	100.0	100.0	100.0	100.0
Total Summed (Number)	39429	4602	1740	5055
Index of Dissimilarity with Stayers~ (Percentage Points)	...	17.0	34.6	9.4

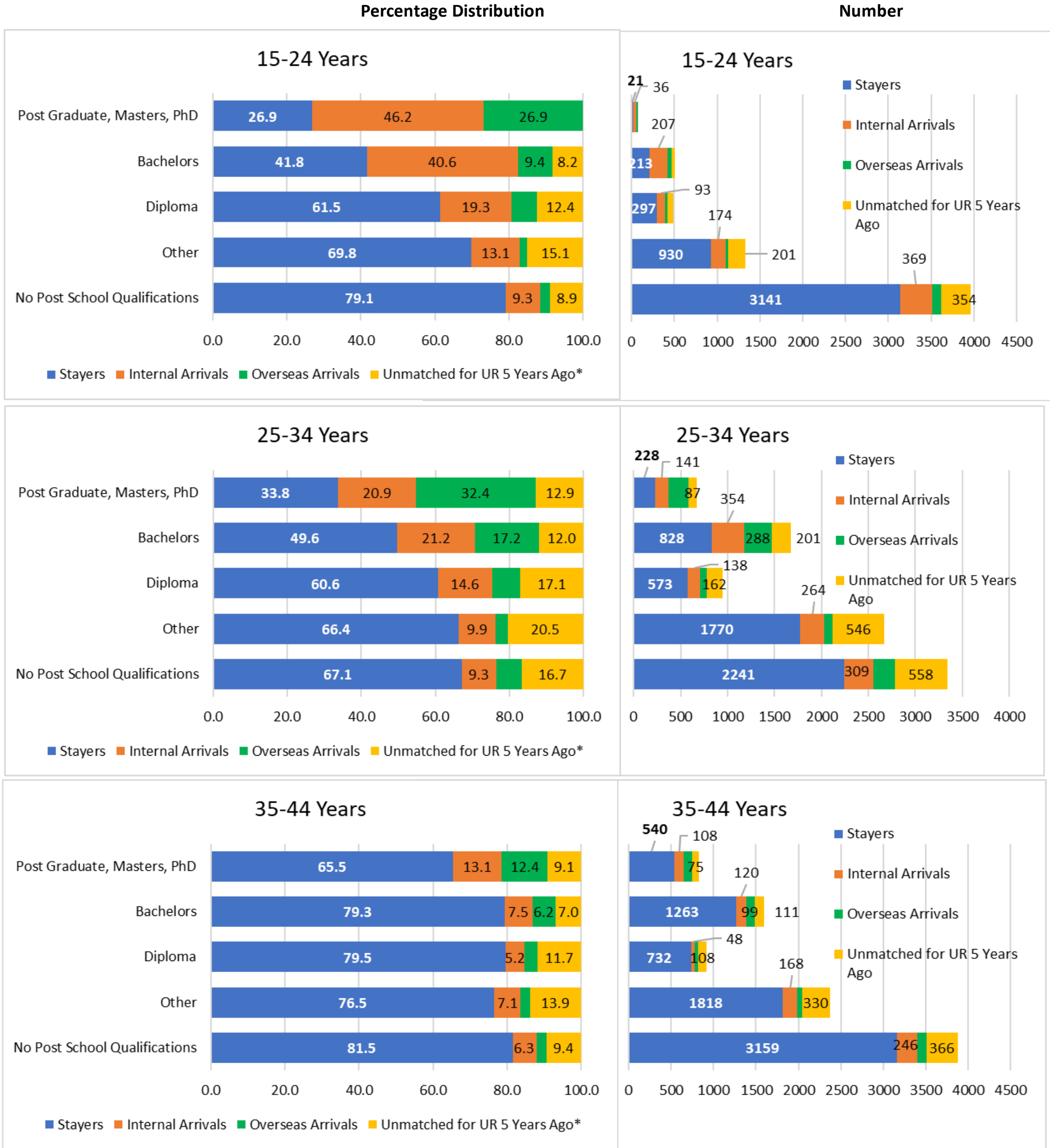
~ Here, the Index of Dissimilarity measures the extent to which the qualifications distribution of each mover category would need to change to replicate the distribution of Stayers

Figures 2.12 and 2.13 present the qualifications data by broad age group. Although underlying numbers holding a Post Graduate, Masters or PhD qualification are relatively small, for those aged 15-24 years, Internal Arrivals dominate (46.2%), followed in equal proportions by Stayers and Overseas Arrivals (26.9% each), while at 25-34 years, Overseas Arrivals and Stayers have the highest proportions (32.4% and 33.8% respectively), followed by Internal Arrivals (20.9%). At 35-44 years and above, that qualification is dominated by Stayers.

For those holding a Bachelors degree at 15-24 and 25-34 years, the highest proportions are held by Stayers followed by Internal Arrivals (almost equally so at 15-24 years), while from 35-44 years on, Bachelors degrees are disproportionately held by Stayers. Stayers dominate all other qualification categories, irrespective of age.

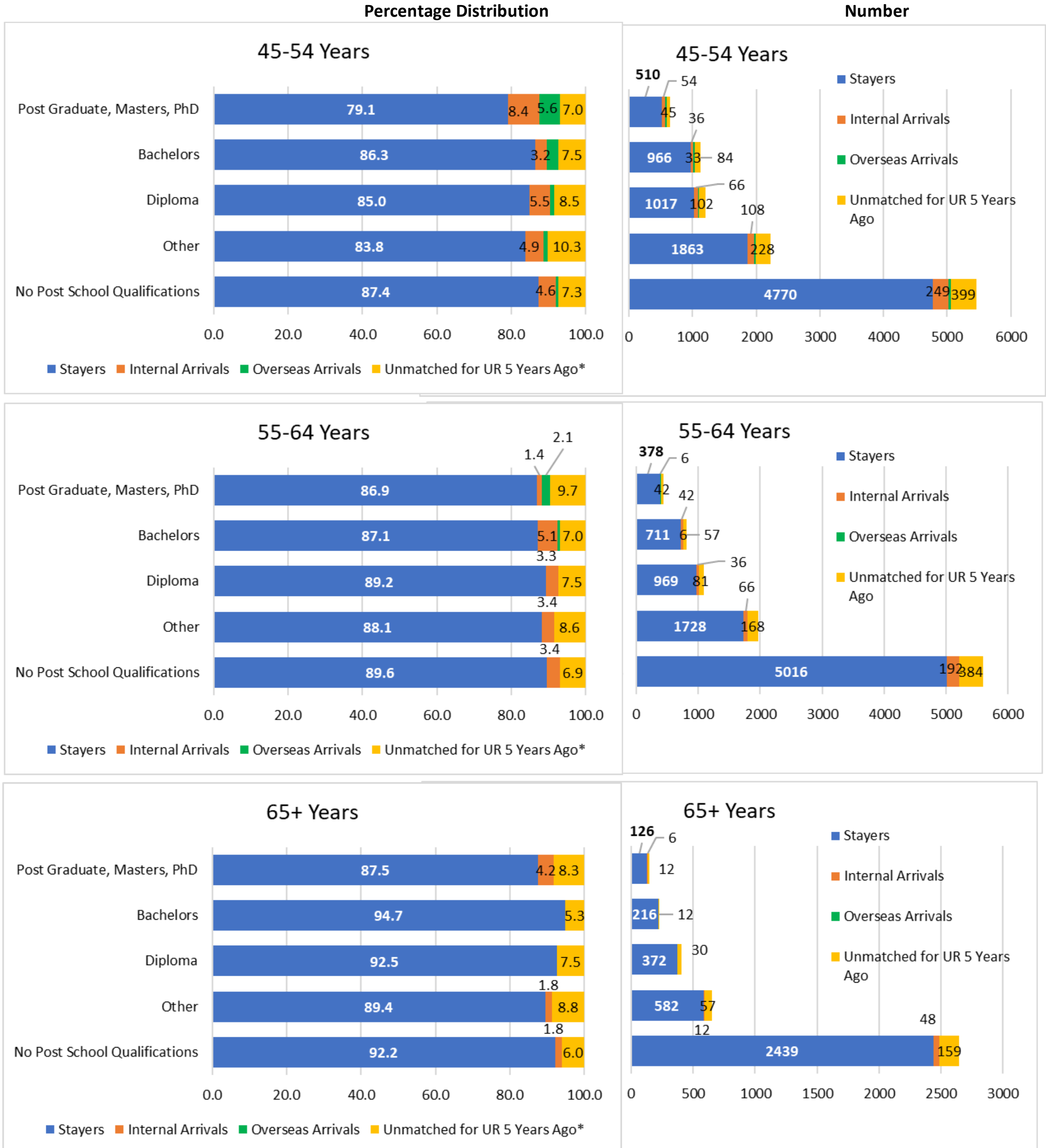
In sum, the two youngest age groups are quite heavily reliant on Internal and Overseas Arrivals for 'higher' qualifications (Bachelors and above), while at older ages, Stayers account for the majority of all other qualifications and 'no qualifications' categories.

Figure 2.12: Highest Post-School Qualification for Employed Movers and Stayers (%, Number) by Broad Age Group 15-24, 25-34 and 35-44 Years, Southland Region 2018



Note: Different scales on X-Axis for Numbers

Figure 2.13: Highest Post-School Qualification for Employed Movers and Stayers (%, Number) by Broad Age Group 45-54, 55-64 and 65+ Years, Southland Region 2018



Note: Different scales on X-Axis for Numbers

Table 2.14 gives the regions of origin and destination of Southland Region's known Internal Arrivals and Leavers (those whose usual residence in 2018 could be matched to 2013) by highest post-school qualification. As was the case for the above analyses of labour force status, industry and occupation, Otago and Canterbury together account for well over half of the Southland Region's skills exchange. Adding in Auckland, Waikato and Wellington increases that to above 77.9 per cent across all qualification categories, and to almost 90 per cent for Internal Arrivals holding a Post-Graduate, Masters or PhD qualification. There are only a few isolated cases where no regions are involved.

Table 2.14: Known Internal Arrivals and Leavers by Highest Post-School Qualification, Employed Population Aged 15+ Years, Southland Region 2018

	No Post-School Qualifications		Diploma		Bachelors		Post Graduate, Masters, PhD		Other		Summed Total	
	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers	Arrivals	Leavers
Auckland Region	8.9	5.0	9.8	7.8	9.7	10.3	13.3	10.3	9.9	5.0	9.8	6.8
Bay of Plenty Region	3.5	2.2	4.9	3.5	2.3	3.2	2.5	4.0	4.1	3.2	3.5	2.9
Canterbury Region	25.5	27.5	23.9	26.4	20.3	26.5	23.4	21.8	23.8	25.3	23.7	26.2
Gisborne Region	0.4	0.8	1.1	…	…	0.9	…	…	0.6	…	0.4	0.5
Hawke's Bay Region	1.3	2.0	2.2	2.2	1.3	0.9	1.9	2.9	2.0	1.5	1.6	1.8
Manawatu-Wanganui Region	3.3	2.6	2.2	3.0	3.7	2.4	3.2	2.3	3.8	3.0	3.3	2.7
Marlborough Region	2.2	2.1	1.6	1.3	1.0	1.2	…	1.7	2.0	1.7	1.6	1.7
Nelson Region	1.1	1.2	1.6	2.2	1.3	2.1	…	2.3	1.5	1.5	1.2	1.6
Northland Region	2.7	1.7	1.6	1.3	1.0	1.5	1.9	1.7	2.9	2.2	2.2	1.7
Otago Region	33.8	42.2	31.0	37.7	44.0	33.0	35.4	32.8	31.4	43.2	35.1	39.4
Taranaki Region	1.1	0.5	…	1.7	1.0	1.5	…	1.7	1.5	1.5	0.9	1.2
Tasman Region	2.0	1.2	2.7	1.3	0.7	1.2	…	1.7	1.5	1.5	1.5	1.3
Waikato Region	7.3	5.2	7.6	5.6	5.7	5.6	7.0	5.2	7.8	5.2	7.1	5.3
Wellington Region	4.2	4.2	6.5	4.8	7.0	8.6	8.9	11.5	4.9	4.2	5.7	5.7
West Coast Region	2.7	1.6	3.3	1.3	1.0	1.2	2.5	…	2.3	1.0	2.3	1.2
Total (Summed)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	1644	2289	552	693	900	1017	474	522	1032	1209	4602	5730
Net Internal Migration (Known)		-645		-141		-117		-48		-177		-1128
Canterbury and Otago	59.3	69.7	54.9	64.1	64.3	59.6	58.9	54.6	55.2	68.5	58.8	65.6
Auckland, Waikato, WTG	20.4	14.4	23.9	18.2	22.3	24.5	29.1	27.0	22.7	14.4	22.6	17.8
These Five Regions	79.7	84.1	78.8	82.3	86.7	84.1	88.0	81.6	77.9	82.9	81.4	83.4

Key insights from the analysis of highest post-school qualification are that:

- Stayers with no post-school qualifications dominate Southland Region's employed labour force; however, Stayers also account for the single largest share of each qualification category, ranging from 61.5 per cent for Post Graduate, Masters or PhD and two-thirds of those holding a Bachelors degree, to just over three-quarters of those holding either a Diploma or 'Other' qualification.
- the picture differs somewhat by age, with the employed population aged 15-24 and 25-34 years heavily reliant on Internal and Overseas Arrivals for 'higher' qualifications (Bachelors and above), while at older ages, Stayers consistently account for the majority of all qualifications (and 'no qualifications') categories.
- almost all regions play a role in exchanging skills with Southland Region, but as for all other analyses in this Report, Otago followed by Canterbury account for the majority of Internal Arrivals and Leavers irrespective of qualification, and when Auckland, Waikato and Wellington are included, that increases to between 78-88 per cent for Internal Arrivals and 82-84 per cent for Internal Leavers.

Movers and Stayers – what do we know that we didn't before?

The forgoing analysis has examined key aspects of Southland Region's labour market and labour force with a focus on the characteristics of Movers—those who either moved to or left the region between 2013 and 2018 (with the exception of those who moved overseas), and Stayers—those who were living in the region at both the 2013 and 2018 censuses. Because a large number of people could not be matched for their 2013 usual residence, and thus their mover-stayer status cannot be determined, the findings must be viewed as indicative rather than definitive. At the same time, this group is included in the analysis as a discrete category, because its size differs markedly across each variable, while at regional level it is larger than the number of Movers.

At regional level there is very little difference in the overall labour force status and industrial and occupational distributions of Movers, Stayers, and 'Unable to Match'. For example, the labour force participation rate ranges narrowly from 71.1 to 72.4 per cent across all categories. Within the labour force, employment is marginally highest for Stayers and unemployment lowest, while the opposite is true for Overseas Arrivals; Internal Arrivals and Leavers fall in the middle of the distribution—but all within a few percentage points. At the same time, the analysis points to Stayers as having a slightly advantaged labour force attachment.

The region's industrial and occupational distributions show slightly greater variance, but still within the bounds of considerable similarity as indicated by the Index of Dissimilarity. All but one Southland Region industry (of 19) employs all mover-stayer categories; all (8) occupations employ all mover-stayer categories. As a proxy for the proportion that is accounted for by Internal Arrivals, Overseas Arrivals and 'Unable to Match', Stayers range, for industries, from 64 per cent for Accommodation and Food Services to 82.3 per cent for 'Other Services, and for occupations, from 72.6 per cent for Labourers to 85.1 per cent for Clerical and Administrative Services. However, while there is a relatively wide margin between these outliers, the majority of industries and occupations cluster around the average, the former a little more so than the latter.

There is somewhat greater variance in the holding of post-school qualifications, with the qualifications distribution of Overseas Arrivals differing markedly to that of Stayers, that of Internal Arrivals differing by a smaller but still notable margin, and that of 'Unmatched' being quite similar to Stayers. Overseas Arrivals are less likely to have no qualifications and more likely to hold a Bachelors or Post Graduate, Masters or PhD qualification than all other mover-stayer categories. At the same time, Stayers account for the majority of each qualification category, ranging from 61.5 per cent for Post Graduate, Masters or PhD to just on 76 per cent for both Diploma and Other. Over two-thirds of those holding a Bachelors Degree are Stayers.

There is somewhat greater disparity when the data are examined by age. In general, Internal and Overseas Arrivals and Internal Leavers play a somewhat larger role at 25-34 years than they do for any other broad age group, followed by 15-24 years, then 35-44 years. Above aged 45 the presence of both Internal and Overseas Arrivals diminishes substantially—as does the presence of Internal Leavers.

This generalization pertains to labour force status, industry of employment, occupation of employment, and highest post-school qualification. For example, at 25-34 years, Stayers account for somewhat less than half of those (at these ages) employed in Southland Region's Accommodation and Food Services and Administrative Support Services industries, and just 54 per cent of those employed in the dominant Agriculture, Forestry and Fishing industry. The picture is similar by occupation, with Stayers aged 25-34 years accounting for the smallest proportions of those employed as Managers (57.7%), Professionals (54.6%), Community and Personal Services Workers (54.9%), and Labourers (54.2%) by comparison with other age groups—and thus proportions of Internal and Overseas Arrivals are larger for the latter. Overall, Stayers aged 25-34 years account for just 57 per cent of employees of that age, compared to between 74 and 89 per cent for all other age groups. The analysis both confirms the somewhat higher mobility of the 25-34 year age group, and attests to the region's reliance on Internal Arrivals, Overseas Arrivals, and the 'Unmatched' population for those employing this age group.

Analysis of the source and destination regions of Southland Region's Internal Arrivals and Leavers provided one very clear insight: the single-largest majority of internal movers come from and go to the Otago Region, followed by Canterbury, irrespective of labour force status, industry, occupation, or qualification. When Auckland, Waikato and Wellington are added in, between 80 and 100 per cent of internal movers in each direction are typically accounted for, irrespective of age. As a general rule, proportions are highest for those in the labour force, reflecting the smaller number of labour force categories (N = 4), while the greater number of industry categories (N = 19) sees the lowest proportions. This means that fewer regions play a role in the exchange of people by industry than by labour force status, occupation or qualification. The Bay of Plenty and Manawatu-Wanganui Regions also play a small role for some categories, but proportions are seldom as high as for the next largest contributor.

In sum these findings suggest that activities designed to attract internal movers to Southland Region can be focused on a relatively narrow range of regions, while efforts to retain those who might move elsewhere should focus on assessing the opportunities being offered by those regions in terms of the industries, occupations, qualifications of movers—and on the likely interests and motivations of each age group, including the availability of specific types of training and education. Particular efforts might be directed at those aged 25-34 years, who are somewhat more mobile than other age groups, meaning that local employers of this age group are more reliant on Internal and Overseas Arrivals than those employing other age groups. However, this comment is applicable to all age groups below 44 years; above 45 years, the majority of labour force participants are Stayers, irrespective of industry, occupation or qualification.

Given their slightly lower employment and slightly higher unemployment rates, and their higher than average qualification levels, there may be potential labour market capacity among Overseas Arrivals generally, and among Internal Arrivals who are not in the labour force, with the exception of those aged 15-19 years who are likely to be in education and training. Ensuring that all Arrivals, particularly those aged 65 years and above, are aware of the region's relatively high participation rates *vis-à-vis* other regions (particularly at older ages), may also stimulate latent participation.

The generally higher rates of full-time employment for Internal Leavers than Internal Arrivals across most working age groups suggests that at least some local Leavers will have left for employment-related reasons. However, the somewhat higher full-time employment rates of Internal Arrivals than Internal Leavers aged 15-19 and 20-24 years—on a par with those of Stayers—could be a useful (local) marketing point.

Appendices

Appendix A: Projected Increase in Labour Supply by Scenario

Appendix Table A1: Prjected Increase in Labour Supply by Scenario (N)

	Base labour supply	Scenario 1: Increase net migration	Scenario 2: Increase in LFP at 55+ yrs	Scenario 3: increase in LFP 15-24 yrs	Scenario 4: Increase women's LFP	Maximum labour supply
2013	51151					51151
2014	51102	222	482	73	147	52027
2015	51053	445	964	147	294	52903
2016	51004	667	1447	220	441	53779
2017	50547	889	1929	294	589	54247
2018	50089	1111	2411	367	736	54714
2019	49632	1334	2893	440	883	55182
2020	49175	1556	3375	514	1030	55650
2021	48718	1778	3858	587	1177	56118
2022	48277	2000	3913	599	1172	55962
2023	47837	2222	3968	612	1167	55806
2024	47396	2445	4023	624	1162	55650
2025	46956	2667	4078	637	1157	55494
2026	46515	2889	4133	649	1152	55338
2027	46057	3111	4120	637	1143	55069
2028	45599	3333	4108	625	1134	54800
2029	45141	3556	4096	614	1124	54531
2030	44683	3778	4084	602	1115	54262
2031	44225	4000	4072	590	1106	53993

Source: Roskruge and Pawar 2014 Section 3

Appendix B: Population Projection Assumptions, Southland Region

Area Southland region

Row Labels	Period total fertility rate	Period life expectancy at birth - male	Period life expectancy at birth - female	Net migration
High				
2018	2.11	79.3	82.8	3100
2023	2.13	80.6	84.0	900
2028	2.15	81.9	85.1	900
2033	2.16	83.2	86.2	900
2038	2.16	84.4	87.2	900
2043	2.16	85.4	88.1	900
Medium				
2018	2.04	78.9	82.4	1300
2023	2.02	80.1	83.4	-900
2028	2.00	81.1	84.4	-900
2033	1.97	82.2	85.4	-900
2038	1.97	83.2	86.2	-900
2043	1.97	84.0	86.9	-900
Low				
2018	1.96	78.4	81.9	-500
2023	1.91	79.3	82.7	-2700
2028	1.85	80.2	83.5	-2700
2033	1.79	81.0	84.3	-2700
2038	1.77	81.8	85.0	-2700
2043	1.77	82.4	85.5	-2700

Statistics New Zealand 2017b

Appendix C: Components of Population Change

COMPONENTS OF CHANGE, 1992-2019 — Southland REGION

Southland REGION		Births	Deaths	Estimated Resident Population (a)	Natural Increase	Estimated Net Migration	Net Change	Annual Net Change (%)	Net Migration % of Change
March Year	1991			103,442					
	1991–92	1,608	855	102,500	753	–1,695	–942	(0.9)	-179.9
	1992–93	1,554	810	102,600	744	–644	+100	0.1	-644.0
	1993–94	1,566	774	102,600	792	–792	+00	-	
	1994–95	1,404	876	102,400	528	–728	–200	(0.2)	-364.0
June Year	1995–96	1,401	840	99,000	561			-	
	1996–97	1,314	804	97,400	510	–2,110	–1,600	(1.6)	-131.9
	1997–98	1,311	762	95,500	549	–2,449	–1,900	(2.0)	-128.9
	1998–99	1,245	774	93,700	471	–2,271	–1,800	(1.9)	-126.2
	1999–20	1,272	777	92,700	495	–1,495	–1,000	(1.1)	-149.5
	2000–01	1,224	789	93,300	435	+165	+600	0.6	27.5
	2001–02	1,191	804	93,500	387	–187	+200	0.2	-93.5
	2002–03	1,221	816	94,100	405	+195	+600	0.6	32.5
	2003–04	1,257	783	94,100	474	–474	+00	-	
	2004–05	1,269	807	93,700	462	–862	–400	(0.4)	-215.5
	2005–06	1,164	738	93,200	426	–926	–500	(0.5)	-185.2
	2006–07	1,308	768	93,100	540	–640	–100	(0.1)	-640.0
	2007–08	1,320	756	93,300	564	–364	+200	0.2	-182.0
	2008–09	1,350	765	93,900	585	+15	+600	0.6	2.5
	2009–10	1,404	756	94,700	648	+152	+800	0.9	19.0
	2010–11	1,347	819	95,700	528	+472	+1,000	1.1	47.2
	2011–12	1,302	765	95,900	537	–337	+200	0.2	-168.5
	2012–13	1,203	792	96,000	411	–311	+100	0.1	-311.0
	2013–14	1,242	798	96,500	444	+56	+500	0.5	11.2
	2014–15	1,137	840	97,300	297	+503	+800	0.8	62.9
	2015–16	1,185	840	98,000	345	+355	+700	0.7	50.7
	2016–17	1,140	855	98,400	285	+115	+400	0.4	28.8
	2017–18	1,224	849	100,400	375	+1,625	+2,000	2.0	81.3
	2018–19	1,107	828	101,200	279	+521	+800	0.8	65.1
	June Years								
Southland REGION	1992–19	7,533	4,155		3378	–7,820	–4,442	-0.9	-176.0
	1996–20	6,366	3,906		2460	–8,160	–5,700	-1.2	-143.2
	2001–20	6,102	3,948		2154	–2,254	–100	0.0	-2254.0
	2006–20	6,729	3,864		2865	–365	+2,500	0.5	-14.6
	2011–20	6,069	4,035		2034	+266	+2,300	0.5	11.6
	2016–20	3,471	2,532		939	+2,261	+3,200	1.1	70.7
	2006–20	9,234	5,421		3813	–1,013	+2,800	0.4	-36.2
	2008–20	6,606	3,897		2709	–09	+2,700	0.6	-0.3
	2013–20	5,928	4,182		1746	+2,654	+4,400	0.9	60.3

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

Source: Jackson & Pawar 2020/Compiled from Statistics New Zealand Data sets:

Births - Infoshare VSB011AA, VSB016AA Last updated: November 2019

Deaths - Infoshare VSD008AA, VSD018AA; Last updated: November 2019

(a) 1991-1995 Estimated Defacto (March years)

Subnational population estimates (RC, TA, SA2) June 1996, 2001, 2006-2013, 2018-2019 (2019 boundaries)

Appendix D: Labour Force Status for the Census Usually Resident Population Aged 15+ Years, 2006, 2013 and 2018, by Region and Sex

	Male			Female		
	2006	2013	2018	2006	2013	2018
Labour Force Participation Rate (as % of Total Stated)						
Auckland Region	75.1	72.6	74.5	62.6	61.8	65.0
Bay of Plenty Region	72.3	69.9	71.2	60.3	59.7	62.3
Canterbury Region	74.8	74.8	74.7	62.3	63.1	65.0
Gisborne Region	72.9	70.2	71.6	60.4	60.5	63.3
Hawke's Bay Region	75.7	71.2	72.1	63.1	60.4	62.6
Manawatu-Wanganui Region	74.2	69.8	70.0	61.9	59.4	60.9
Marlborough Region	75.7	72.6	72.8	63.6	61.8	63.2
Nelson Region	73.7	71.9	71.0	62.1	60.9	61.7
Northland Region	70.2	66.0	66.2	59.1	57.6	59.6
Otago Region	72.9	70.9	72.7	62.2	62.0	64.6
Southland Region	78.5	76.6	76.3	64.5	64.7	66.2
Taranaki Region	74.7	73.9	72.7	61.4	61.4	62.0
Tasman Region	76.7	72.9	71.8	64.0	61.6	62.4
Waikato Region	75.2	72.3	72.9	62.9	61.9	63.7
Wellington Region	76.6	74.8	75.1	65.8	65.7	67.6
West Coast Region	74.6	74.0	69.9	64.1	64.0	64.1
Total - Regional Council Areas	**74.8**	**72.5**	**73.4**	**62.7**	**62.0**	**64.3**
Employment Rate (as % of Total Stated)						
Auckland Region	71.4	67.3	70.8	58.6	56.1	60.5
Bay of Plenty Region	68.5	64.2	67.2	56.1	53.7	57.5
Canterbury Region	72.2	72.1	71.8	59.5	59.7	61.5
Gisborne Region	68.3	64.5	67.0	55.4	54.1	57.6
Hawke's Bay Region	73.0	66.8	69.0	59.6	55.7	58.6
Manawatu-Wanganui Region	70.9	64.8	65.6	58.2	54.3	56.4
Marlborough Region	74.3	70.0	70.8	61.6	58.4	60.8
Nelson Region	70.8	67.8	67.9	59.4	57.1	58.7
Northland Region	66.0	60.0	61.1	54.9	51.7	54.3
Otago Region	69.9	67.3	69.7	59.1	58.1	61.2
Southland Region	76.0	73.6	73.4	61.5	61.0	62.9
Taranaki Region	71.7	70.4	69.2	58.0	57.4	57.7
Tasman Region	75.0	70.7	69.3	62.1	58.5	59.9
Waikato Region	72.0	67.5	69.0	59.0	56.7	59.0
Wellington Region	72.9	69.7	70.8	62.2	60.7	63.0
West Coast Region	72.0	70.4	66.6	62.1	61.0	61.1
Total - Regional Council Areas	**71.5**	**68.0**	**69.7**	**59.0**	**57.1**	**60.0**
Unemployment Rate (as % of Total Stated)						
Auckland Region	3.7	5.2	3.7	4.0	5.6	4.5
Bay of Plenty Region	3.8	5.7	4.1	4.3	5.9	4.8
Canterbury Region	2.6	2.7	2.9	2.8	3.4	3.5
Gisborne Region	4.6	5.7	4.6	4.9	6.4	5.7
Hawke's Bay Region	2.7	4.4	3.1	3.6	4.7	4.0
Manawatu-Wanganui Region	3.3	5.0	4.4	3.7	5.1	4.5
Marlborough Region	1.5	2.6	2.1	2.0	3.4	2.4
Nelson Region	2.9	4.0	3.1	2.8	3.7	3.0
Northland Region	4.2	6.1	5.1	4.2	5.9	5.3
Otago Region	3.0	3.5	3.0	3.0	3.9	3.4
Southland Region	2.5	3.0	2.9	3.0	3.6	3.3
Taranaki Region	3.0	3.5	3.6	3.4	4.1	4.3
Tasman Region	1.7	2.2	2.4	1.8	3.2	2.4
Waikato Region	3.3	4.8	3.9	4.0	5.3	4.7
Wellington Region	3.7	5.1	4.3	3.6	5.0	4.6
West Coast Region	2.6	3.6	3.3	2.0	2.9	3.0
Total - Regional Council Areas	**3.3**	**4.6**	**3.7**	**3.6**	**4.9**	**4.3**
Not In the Labour Force (as % of Total Stated)						
Auckland Region	24.9	27.4	25.5	37.4	38.2	35.0
Bay of Plenty Region	27.7	30.1	28.8	39.7	40.3	37.7
Canterbury Region	25.2	25.2	25.3	37.7	36.9	35.0
Gisborne Region	27.1	29.8	28.4	39.6	39.5	36.7
Hawke's Bay Region	24.3	28.8	27.9	36.9	39.6	37.4
Manawatu-Wanganui Region	25.8	30.2	30.0	38.1	40.6	39.1
Marlborough Region	24.3	27.4	27.1	36.3	38.2	36.8
Nelson Region	26.3	28.1	29.0	37.8	39.1	38.3
Northland Region	29.8	34.0	33.8	40.9	42.4	40.4
Otago Region	27.1	29.1	27.3	37.8	38.0	35.4
Southland Region	21.5	23.4	23.7	35.5	35.3	33.8
Taranaki Region	25.3	26.1	27.3	38.6	38.6	38.0
Tasman Region	23.3	27.1	28.2	36.0	38.4	37.6
Waikato Region	24.8	27.7	27.1	37.1	38.1	36.3
Wellington Region	23.4	25.2	24.9	34.2	34.3	32.4
West Coast Region	25.4	26.0	30.1	35.8	36.1	35.9
Total - Regional Council Areas	**25.2**	**27.5**	**26.6**	**37.3**	**38.0**	**35.7**

Source: Statistics New Zealand 2020b

Appendix E: Full- and Part-Time Employment, and Labour Force Status Not Stated, for the Census Usually Resident Population Aged 15+ Years, 2006, 2013 and 2018, by Region and Sex

	Male			Female		
	2006	2013	2018	2006	2013	2018
Full-Time Employment (as % of Total Stated)						
Auckland Region	62.5	58.5	61.2	40.5	39.4	43.0
Bay of Plenty Region	59.9	55.1	57.5	35.4	33.9	36.8
Canterbury Region	63.4	63.7	62.8	36.6	37.5	39.7
Gisborne Region	59.6	55.8	57.4	35.1	34.4	37.3
Hawke's Bay Region	64.3	58.3	60.0	37.6	35.2	38.2
Manawatu-Wanganui Region	61.7	56.0	56.8	36.4	34.7	36.2
Marlborough Region	66.5	61.2	61.8	39.0	35.8	38.3
Nelson Region	61.4	57.5	57.2	36.2	34.0	35.8
Northland Region	57.1	50.8	51.5	34.4	32.6	34.2
Otago Region	60.7	57.8	59.7	36.7	36.4	39.2
Southland Region	68.2	65.8	65.0	38.3	38.1	40.2
Taranaki Region	63.7	62.6	60.7	36.0	35.5	36.0
Tasman Region	66.0	60.8	58.8	36.6	34.1	35.1
Waikato Region	63.4	58.8	59.9	37.6	36.5	38.5
Wellington Region	63.7	60.4	61.3	42.6	42.1	44.5
West Coast Region	63.7	62.5	57.3	37.6	37.5	38.8
Total - Regional Council Areas	**62.6**	**59.1**	**60.3**	**38.6**	**37.7**	**40.3**
Part-Time Employment (as % of Total Stated)						
Auckland Region	8.9	8.8	9.6	18.0	16.8	17.5
Bay of Plenty Region	8.6	9.1	9.6	20.7	19.9	20.7
Canterbury Region	8.8	8.4	9.0	22.9	22.2	21.8
Gisborne Region	8.7	8.6	9.5	20.3	19.7	20.3
Hawke's Bay Region	8.7	8.5	9.0	22.0	20.4	20.4
Manawatu-Wanganui Region	9.2	8.9	8.8	21.8	19.7	20.1
Marlborough Region	7.8	8.7	8.9	22.6	22.7	22.5
Nelson Region	9.4	10.4	10.7	23.2	23.1	22.9
Northland Region	8.9	9.2	9.5	20.5	19.1	20.2
Otago Region	9.2	9.5	10.1	22.4	21.7	22.0
Southland Region	7.7	7.9	8.4	23.2	23.0	22.7
Taranaki Region	8.0	7.9	8.5	22.0	21.9	21.7
Tasman Region	9.1	9.9	10.5	25.6	24.4	24.8
Waikato Region	8.6	8.7	9.1	21.4	20.2	20.5
Wellington Region	9.2	9.2	9.6	19.6	18.5	18.6
West Coast Region	8.4	7.9	9.2	24.5	23.5	22.3
Total - Regional Council Areas	**8.8**	**8.8**	**9.4**	**20.5**	**19.4**	**19.7**
Labour Force Status Not Stated (as % of Total)						
Auckland Region	4.5	5.7	...	4.2	5.2	...
Bay of Plenty Region	3.6	5.9	...	3.4	5.4	...
Canterbury Region	2.1	3.9	...	2.0	3.7	...
Gisborne Region	4.6	6.9	...	4.6	6.2	...
Hawke's Bay Region	2.6	5.0	...	2.5	4.6	...
Manawatu-Wanganui Region	2.4	4.5	...	2.3	4.2	...
Marlborough Region	3.4	3.8	...	3.3	4.0	...
Nelson Region	2.2	3.7	...	1.7	3.2	...
Northland Region	6.2	7.6	...	5.8	7.0	...
Otago Region	2.5	4.5	...	2.4	4.0	...
Southland Region	2.0	3.6	...	1.8	3.3	...
Taranaki Region	2.6	4.6	...	2.5	4.3	...
Tasman Region	2.8	3.5	...	2.7	3.1	...
Waikato Region	3.8	4.8	...	3.6	4.5	...
Wellington Region	2.7	4.6	...	2.6	4.2	...
West Coast Region	3.0	5.3	...	2.9	5.9	...
Total - Regional Council Areas	**3.5**	**5.1**	**...**	**3.3**	**4.7**	**...**

Source: Statistics New Zealand 2020b

Appendix F: Labour Force Participation Rates and Change in Numbers by Sex and Age, Southland Region.

Male

	Participation Rate (%)*			Total Change (%)		Annual Change (%)		Numerical Change	
	2006	2013	2018	2006-2013	2013-2018	2006-2013	2013-2018	2006-2013	2013-2018
15-19	68.6	57.4	61.6	-16.3	7.2	-3.3	1.4	-483	132
20-24	89.3	87.2	88.1	-2.4	1.1	-0.5	0.2	42	237
25-29	92.0	91.7	90.8	-0.3	-1.0	-0.1	-0.2	45	528
30-34	92.2	91.4	91.0	-0.9	-0.4	-0.2	-0.1	-291	561
35-39	93.2	92.9	90.7	-0.3	-2.3	-0.1	-0.5	-249	66
40-44	93.5	92.8	91.5	-0.7	-1.4	-0.1	-0.3	-561	21
45-49	92.9	93.1	90.8	0.2	-2.5	0.0	-0.5	-291	-39
50-54	92.2	91.3	90.5	-0.9	-0.9	-0.2	-0.2	201	-114
55-59	89.6	89.1	88.6	-0.6	-0.5	-0.1	-0.1	156	411
60-64	77.3	82.6	84.5	6.8	2.3	1.4	0.5	516	366
65-69	46.6	54.3	57.4	16.6	5.6	3.3	1.1	339	318
70-74	25.0	33.1	33.3	32.4	0.7	6.5	0.1	198	108
75-79	13.6	18.2	22.4	34.5	23.1	6.9	4.6	69	99
80-84	9.9	12.4	11.3	25.4	-9.0	5.1	-1.8	42	-3
85-89	8.9	6.8	8.6	-23.7	26.5	-4.7	5.3	3	18
90+	8.8	5.6	3.9	-37.0	-29.9	-7.4	-6.0	0	0
Total	78.5	76.6	76.3	-2.4	-0.4	-0.5	-0.1	-264	2709
15-24 years (av.)	77.7	71.3	74.6	-8.2	4.5	-1.6	0.9	-441	369
55+ years (av.)	54.1	57.0	58.1	5.5	1.8	1.1	0.4	1323	1317

Source: Author/Statistics New Zealand 2020b

Note: *Analysis is based on those who stated their labour force status only

Female

	Participation Rate (%)*			Total Change (%)		Annual Change (%)		Numerical Change	
	2006	2013	2018	2006-2013	2013-2018	2006-2013	2013-2018	2006-2013	2013-2018
15-19	63.1	55.8	58.8	-11.6	5.5	-2.3	1.1	-354	90
20-24	78.0	74.1	80.0	-5.0	7.9	-1.0	1.6	-75	126
25-29	77.3	75.3	79.3	-2.6	5.3	-0.5	1.1	84	480
30-34	75.5	74.0	74.8	-2.0	1.1	-0.4	0.2	-162	312
35-39	80.5	78.3	82.0	-2.7	4.8	-0.5	1.0	-393	258
40-44	86.1	83.8	86.9	-2.7	3.8	-0.5	0.8	-480	-48
45-49	87.6	86.5	87.6	-1.3	1.3	-0.3	0.3	-222	9
50-54	85.1	86.4	85.6	1.5	-1.0	0.3	-0.2	546	-135
55-59	75.3	82.2	81.7	9.0	-0.6	1.8	-0.1	456	402
60-64	53.3	67.7	73.6	27.1	8.7	5.4	1.7	603	513
65-69	25.5	38.4	42.5	50.6	10.7	10.1	2.1	360	225
70-74	9.9	17.3	20.4	74.4	17.8	14.9	3.6	153	114
75-79	6.4	8.2	9.6	28.3	17.2	5.7	3.4	30	39
80-84	3.5	3.8	4.8	7.7	26.8	1.5	5.4	3	15
85-89	3.2	3.8	3.3	18.9	-12.1	3.8	-2.4	6	0
90+	1.7	2.1	2.4	26.9	15.6	5.4	3.1	3	3
Total	64.5	64.6	66.2	0.2	2.5	0.0	0.5	558	2403
15-24 years (av.)	70.0	64.7	69.0	-7.5	6.7	-1.5	1.3	-429	216
55+ years (av.)	33.2	41.7	44.7	25.6	7.2	5.1	1.4	1614	1311

Source: Author/Statistics New Zealand 2020b

Note: *Analysis is based on those who stated their labour force status only

Appendix G: Industry (sub-level) 2006, 2013, 2018, Southland Region

				Change (Number)		Change (%)		Distribution		
	2006	2013	2018	2006-2013	2013-2018	2006-2013	2013-2018	2006	2013	2018
Accommodation	930	867	1110	-63	243	-6.8	28.0	2.0	1.9	2.1
Administrative Services	543	378	870	-165	492	-30.4	130.2	1.2	0.8	1.6
Adult, Community and Other Education	300	360	267	60	-93	20.0	-25.8	0.7	0.8	0.5
Agriculture	7440	7743	7323	303	-420	4.1	-5.4	16.2	16.8	13.8
Agriculture, Forestry and Fishing Support Services	1134	1113	1593	-21	480	-1.9	43.1	2.5	2.4	3.0
Air and Space Transport	69	51	54	-18	3	-26.1	5.9	0.2	0.1	0.1
Aquaculture	63	48	15	-15	-33	-23.8	-68.8	0.1	0.1	0.0
Artistic Activities	60	60	57	0	-3	0.0	-5.0	0.1	0.1	0.1
Auxiliary Finance and Insurance Services	492	384	195	-108	-189	-22.0	-49.2	1.1	0.8	0.4
Basic Chemical and Chemical Product Manufacturing	84	84	84	0	0	0.0	0.0	0.2	0.2	0.2
Basic Material Wholesaling	411	516	588	105	72	25.5	14.0	0.9	1.1	1.1
Beverage and Tobacco Product Manufacturing	9	15	27	6	12	66.7	80.0	0.0	0.0	0.1
Broadcasting (except Internet)	69	57	21	-12	-36	-17.4	-63.2	0.2	0.1	0.0
Building Cleaning, Pest Control and Other Support Services	414	456	552	42	96	10.1	21.1	0.9	1.0	1.0
Building Construction	897	855	1014	-42	159	-4.7	18.6	2.0	1.9	1.9
Coal Mining	87	102	105	15	3	17.2	2.9	0.2	0.2	0.2
Commission-Based Wholesaling	99	78	96	-21	18	-21.2	23.1	0.2	0.2	0.2
Computer System Design and Related Services	84	120	144	36	24	42.9	20.0	0.2	0.3	0.3
Construction Services	1581	1854	2277	273	423	17.3	22.8	3.5	4.0	4.3
Defence	18	15	18	-3	3	-16.7	20.0	0.0	0.0	0.0
Electricity Supply	54	96	147	42	51	77.8	53.1	0.1	0.2	0.3
Exploration and Other Mining Support Services	0	9	12	9	3	...	33.3	0.0	0.0	0.0
Fabricated Metal Product Manufacturing	591	504	534	-87	30	-14.7	6.0	1.3	1.1	1.0
Finance	612	645	621	33	-24	5.4	-3.7	1.3	1.4	1.2
Fishing, Hunting and Trapping	180	234	291	54	57	30.0	24.4	0.4	0.5	0.5
Food and Beverage Services	1599	1596	2043	-3	447	-0.2	28.0	3.5	3.5	3.8
Food Product Manufacturing	3471	3000	3786	-471	786	-13.6	26.2	7.6	6.5	7.1
Food Retailing	1494	1614	1782	120	168	8.0	10.4	3.3	3.5	3.4
Forestry and Logging	132	156	207	24	51	18.2	32.7	0.3	0.3	0.4
Fuel Retailing	234	213	282	-21	69	-9.0	32.4	0.5	0.5	0.5
Furniture and Other Manufacturing	117	111	126	-6	15	-5.1	13.5	0.3	0.2	0.2
Gambling Activities	18	27	27	9	0	50.0	0.0	0.0	0.1	0.1
Gas Supply	3	3	0	0	-3	0.0	-100.0	0.0	0.0	0.0
Grocery, Liquor and Tobacco Product Wholesaling	369	342	1446	-27	1104	-7.3	322.8	0.8	0.7	2.7
Heavy and Civil Engineering Construction	519	564	699	45	135	8.7	23.9	1.1	1.2	1.3
Heritage Activities	150	231	288	81	57	54.0	24.7	0.3	0.5	0.5
Hospitals	798	1029	765	231	-264	28.9	-25.7	1.7	2.2	1.4
Insurance and Superannuation Funds	78	69	69	-9	0	-11.5	0.0	0.2	0.1	0.1
Internet Publishing and Broadcasting	0	9	6	9	-3	...	-33.3	0.0	0.0	0.0
Internet Service Providers, Web Search Portals and Data Processing Services	12	12	15	0	3	0.0	25.0	0.0	0.0	0.0
Library and Other Information Services	84	72	57	-12	-15	-14.3	-20.8	0.2	0.2	0.1
Machinery and Equipment Manufacturing	351	393	438	42	45	12.0	11.5	0.8	0.9	0.8
Machinery and Equipment Wholesaling	420	471	477	51	6	12.1	1.3	0.9	1.0	0.9

Continued below

Industry (continued)	2006	2013	2018	Change (Number) 2006-2013	Change (Number) 2013-2018	Change (%) 2006-2013	Change (%) 2013-2018	Distribution 2006	Distribution 2013	Distribution 2018
Medical and Other Health Care Services	1188	1413	2049	225	636	18.9	45.0	2.6	3.1	3.9
Metal Ore Mining	9	9	39	0	30	0.0	333.3	0.0	0.0	0.1
Motion Picture and Sound Recording Activities	48	39	42	-9	3	-18.8	7.7	0.1	0.1	0.1
Motor Vehicle and Motor Vehicle Parts Retailing	441	426	477	-15	51	-3.4	12.0	1.0	0.9	0.9
Motor Vehicle and Motor Vehicle Parts Wholesaling	120	117	126	-3	9	-2.5	7.7	0.3	0.3	0.2
Non-Metallic Mineral Mining and Quarrying	42	60	99	18	39	42.9	65.0	0.1	0.1	0.2
Non-Metallic Mineral Product Manufacturing	150	141	162	-9	21	-6.0	14.9	0.3	0.3	0.3
Non-Store Retailing and Retail Commission Based Buying and/or Selling	93	48	21	-45	-27	-48.4	-56.3	0.2	0.1	0.0
Oil and Gas Extraction	0	0	3	0	3	...	...	0.0	0.0	0.0
Other Goods Wholesaling	222	147	150	-75	3	-33.8	2.0	0.5	0.3	0.3
Other Store-Based Retailing	2400	2142	2256	-258	114	-10.8	5.3	5.2	4.6	4.2
Other Transport	255	261	210	6	-51	2.4	-19.5	0.6	0.6	0.4
Personal and Other Services	936	1032	1101	96	69	10.3	6.7	2.0	2.2	2.1
Petroleum and Coal Product Manufacturing	12	21	9	9	-12	75.0	-57.1	0.0	0.0	0.0
Polymer Product and Rubber Product Manufacturing	27	21	33	-6	12	-22.2	57.1	0.1	0.0	0.1
Postal and Courier Pick-up and Delivery Services	285	258	216	-27	-42	-9.5	-16.3	0.6	0.6	0.4
Preschool and School Education	2175	2265	2748	90	483	4.1	21.3	4.7	4.9	5.2
Primary Metal and Metal Product Manufacturing	795	669	561	-126	-108	-15.8	-16.1	1.7	1.4	1.1
Printing	144	96	81	-48	-15	-33.3	-15.6	0.3	0.2	0.2
Private Households Employing Staff	0	0	0	0	0	...	...	0.0	0.0	0.0
Professional, Scientific and Technical Services (except Computer Systems Design and Related Services)	1785	1788	2502	3	714	0.2	39.9	3.9	3.9	4.7
Property Operators and Real Estate Services	711	771	510	60	-261	8.4	-33.9	1.6	1.7	1.0
Public Administration	801	771	1128	-30	357	-3.7	46.3	1.7	1.7	2.1
Public Order, Safety and Regulatory Services	600	651	705	51	54	8.5	8.3	1.3	1.4	1.3
Publishing (except Internet and Music Publishing)	201	171	87	-30	-84	-14.9	-49.1	0.4	0.4	0.2
Pulp, Paper and Converted Paper Product Manufacturing	6	9	9	3	0	50.0	0.0	0.0	0.0	0.0
Rail Transport	33	30	30	-3	0	-9.1	0.0	0.1	0.1	0.1
Rental and Hiring Services (except Real Estate)	222	183	237	-39	54	-17.6	29.5	0.5	0.4	0.4
Repair and Maintenance	912	900	1065	-12	165	-1.3	18.3	2.0	1.9	2.0
Residential Care Services	909	990	1050	81	60	8.9	6.1	2.0	2.1	2.0
Road Transport	1116	1131	1497	15	366	1.3	32.4	2.4	2.4	2.8
Social Assistance Services	684	798	804	114	6	16.7	0.8	1.5	1.7	1.5
Sport and Recreation Activities	378	396	477	18	81	4.8	20.5	0.8	0.9	0.9
Telecommunications Services	33	21	30	-12	9	-36.4	42.9	0.1	0.0	0.1
Tertiary Education	333	453	462	120	9	36.0	2.0	0.7	1.0	0.9
Textile, Leather, Clothing and Footwear Manufacturing	306	147	135	-159	-12	-52.0	-8.2	0.7	0.3	0.3
Transport Equipment Manufacturing	246	282	327	36	45	14.6	16.0	0.5	0.6	0.6
Transport Support Services	213	258	270	45	12	21.1	4.7	0.5	0.6	0.5
Warehousing and Storage Services	51	51	51	0	0	0.0	0.0	0.1	0.1	0.1
Waste Collection, Treatment and Disposal Services	45	75	114	30	39	66.7	52.0	0.1	0.2	0.2
Water Supply, Sewerage and Drainage Services	33	36	27	3	-9	9.1	-25.0	0.1	0.1	0.1
Water Transport	45	21	27	-24	6	-53.3	28.6	0.1	0.0	0.1
Wood Product Manufacturing	741	522	654	-219	132	-29.6	25.3	1.6	1.1	1.2
Total people stated	**45807**	**46173**	**53118**	**366**	**6945**	**0.8**	**15.0**	**100.0**	**100.0**	**100.0**
Industry Not Stated	2406	1911	0							

Appendix H: Occupation (sub-level) 2006, 2013, 2018, Southland Region

				Change (Number)		Change (%)		Distribution		
	2006	2013	2018	2006-2013	2013-2018	2006-2013	2013-2018	2006	2013	2018
Arts and Media Professionals	228	180	153	-48	-27	-21.1	-15.0	0.5	0.4	0.3
Automotive and Engineering Trades Workers	1680	1533	1665	-147	132	-8.8	8.6	3.7	3.4	3.1
Business, Human Resource and Marketing Professionals	1068	1143	1260	75	117	7.0	10.2	2.3	2.5	2.4
Carers and Aides	1587	1572	1860	-15	288	-0.9	18.3	3.5	3.4	3.5
Chief Executives, General Managers and Legislators	996	1062	1293	66	231	6.6	21.8	2.2	2.3	2.4
Cleaners and Laundry Workers	1194	1167	1356	-27	189	-2.3	16.2	2.6	2.6	2.6
Clerical and Office Support Workers	375	363	261	-12	-102	-3.2	-28.1	0.8	0.8	0.5
Construction and Mining Labourers	375	366	435	-9	69	-2.4	18.9	0.8	0.8	0.8
Construction Trades Workers	1023	957	1131	-66	174	-6.5	18.2	2.2	2.1	2.1
Design, Engineering, Science and Transport Professionals	990	1077	1572	87	495	8.8	46.0	2.2	2.4	3.0
Education Professionals	1788	1968	2229	180	261	10.1	13.3	3.9	4.3	4.2
Electrotechnology and Telecommunications Trades Workers	519	594	702	75	108	14.5	18.2	1.1	1.3	1.3
Engineering, ICT and Science Technicians	723	687	837	-36	150	-5.0	21.8	1.6	1.5	1.6
Factory Process Workers	2862	2214	2751	-648	537	-22.6	24.3	6.3	4.8	5.2
Farm, Forestry and Garden Workers	2373	2484	2616	111	132	4.7	5.3	5.2	5.4	4.9
Farmers and Farm Managers	4548	4683	5151	135	468	3.0	10.0	10.0	10.2	9.7
Food Preparation Assistants	354	372	528	18	156	5.1	41.9	0.8	0.8	1.0
Food Trades Workers	723	765	939	42	174	5.8	22.7	1.6	1.7	1.8
General Clerical Workers	1377	921	723	-456	-198	-33.1	-21.5	3.0	2.0	1.4
Health and Welfare Support Workers	351	447	672	96	225	27.4	50.3	0.8	1.0	1.3
Health Professionals	1290	1464	1710	174	246	13.5	16.8	2.8	3.2	3.2
Hospitality Workers	744	762	1020	18	258	2.4	33.9	1.6	1.7	1.9
Hospitality, Retail and Service Managers	1518	1473	1536	-45	63	-3.0	4.3	3.3	3.2	2.9
ICT Professionals	192	231	276	39	45	20.3	19.5	0.4	0.5	0.5
Inquiry Clerks and Receptionists	615	540	432	-75	-108	-12.2	-20.0	1.3	1.2	0.8
Legal, Social and Welfare Professionals	525	603	666	78	63	14.9	10.4	1.2	1.3	1.3
Machine and Stationary Plant Operators	876	702	786	-174	84	-19.9	12.0	1.9	1.5	1.5
Mobile Plant Operators	699	816	1050	117	234	16.7	28.7	1.5	1.8	2.0
Numerical Clerks	603	567	591	-36	24	-6.0	4.2	1.3	1.2	1.1
Office Managers and Program Administrators	708	1188	1863	480	675	67.8	56.8	1.6	2.6	3.5
Other Clerical and Administrative Workers	513	480	555	-33	75	-6.4	15.6	1.1	1.0	1.0
Other Labourers	1896	2034	2667	138	633	7.3	31.1	4.2	4.4	5.0
Other Technicians and Trades Workers	699	621	621	-78	0	-11.2	0.0	1.5	1.4	1.2
Personal Assistants and Secretaries	387	300	267	-87	-33	-22.5	-11.0	0.8	0.7	0.5
Protective Service Workers	441	453	483	12	30	2.7	6.6	1.0	1.0	0.9
Residual Categories (Operational Codes only)	2604	2337	0	-267	-2337	-10.3	-100.0	5.7	5.1	0.0
Road and Rail Drivers	1356	1332	1854	-24	522	-1.8	39.2	3.0	2.9	3.5
Sales Assistants and Salespersons	2625	2463	2697	-162	234	-6.2	9.5	5.8	5.4	5.1
Sales Representatives and Agents	819	804	981	-15	177	-1.8	22.0	1.8	1.8	1.8
Sales Support Workers	492	477	441	-15	-36	-3.0	-7.5	1.1	1.0	0.8
Skilled Animal and Horticultural Workers	684	651	738	-33	87	-4.8	13.4	1.5	1.4	1.4
Specialist Managers	2124	2445	2724	321	279	15.1	11.4	4.7	5.3	5.1
Sports and Personal Service Workers	420	522	648	102	126	24.3	24.1	0.9	1.1	1.2
Storepersons	246	261	393	15	132	6.1	50.6	0.5	0.6	0.7
Total people stated	**45612**	**45747**	**53118**	**135**	**7371**	**0.3**	**16.1**	**100.0**	**100.0**	**100.0**
Occupation Not Stated	2601	2337	0							

Appendix I: Labour Force Status by Mover-Stayer Category and Age, 2018

	Employed Full Time	Employed Part Time	Unemployed	Not in the Labour Force	Labour Force Participation Rate	Total Stated	Number Stated
Stayers							
15-19	20.2	32.7	8.9	38.2	61.8	100.0	4473
20-24	67.4	14.1	5.1	13.5	86.5	100.0	3189
25-29	67.8	13.0	4.0	15.2	84.8	100.0	3249
30-34	65.2	16.9	2.8	15.1	84.9	100.0	3705
35-39	67.7	19.4	2.5	10.4	89.6	100.0	4005
40-44	70.7	18.4	2.4	8.5	91.5	100.0	4581
45-49	73.6	15.0	2.1	9.3	90.7	100.0	5070
50-54	73.5	14.2	2.0	10.2	89.8	100.0	5373
55-59	69.5	15.4	2.0	13.2	86.8	100.0	5784
60-64	61.7	17.3	2.1	18.9	81.1	100.0	5037
65-59	33.4	18.6	0.6	47.4	52.6	100.0	4263
70+	7.9	8.6	0.1	83.4	16.6	100.0	9789
Total	52.3	16.2	2.5	28.9	71.1	100.0	58515
Internal Arrivals							
15-19	21.2	20.6	7.1	51.2	48.8	100.0	510
20-24	66.7	11.5	3.5	18.3	81.7	100.0	1017
25-29	68.4	9.4	3.1	19.1	80.9	100.0	1053
30-34	62.7	9.5	2.5	25.3	74.7	100.0	723
35-39	57.3	14.6	2.4	25.7	74.3	100.0	618
40-44	61.9	13.1	2.4	22.6	77.4	100.0	504
45-49	64.6	8.2	4.4	22.8	77.2	100.0	474
50-54	58.0	12.0	4.7	25.3	74.7	100.0	450
55-59	54.3	12.9	4.3	28.6	71.4	100.0	420
60-64	39.4	12.5	2.9	45.2	54.8	100.0	312
65-59	13.3	7.6	0.0	79.0	21.0	100.0	315
70+	0.0	3.3	0.0	96.7	3.3	100.0	546
Total	53.5	13.7	4.6	28.3	71.7	100.0	7002
Internal Leavers							
15-19	13.8	19.9	9.0	57.3	42.7	100.0	1068
20-24	50.6	15.7	5.9	27.7	72.3	100.0	1623
25-29	70.5	9.6	3.7	16.3	83.7	100.0	1068
30-34	69.5	8.7	2.9	18.9	81.1	100.0	825
35-39	65.5	12.7	0.9	21.0	79.0	100.0	687
40-44	68.3	11.1	1.1	19.4	80.6	100.0	540
45-49	70.7	9.4	1.6	18.3	81.7	100.0	573
50-54	66.5	13.1	1.0	19.4	80.6	100.0	573
55-59	62.0	10.5	1.8	25.7	74.3	100.0	513
60-64	40.3	13.4	0.0	46.2	53.8	100.0	357
65-59	14.4	12.5	0.0	73.1	26.9	100.0	312
70+	4.5	6.5	0.0	89.0	11.0	100.0	465
Total	52.6	15.1	4.7	27.6	72.4	100.0	8682
Overseas Arrivals (Overseas 5 Years Ago)							
15-19	13.0	10.1	10.1	66.7	33.3	100.0	207
20-24	48.5	16.4	4.5	30.6	69.4	100.0	402
25-29	62.8	15.7	5.4	16.1	83.9	100.0	726
30-34	53.4	14.7	6.5	25.4	74.6	100.0	696
35-39	53.4	12.3	7.5	26.7	73.3	100.0	438
40-44	48.4	14.3	8.8	28.6	71.4	100.0	273
45-49	56.3	16.7	4.2	22.9	77.1	100.0	144
50-54	56.7	13.3	6.7	23.3	76.7	100.0	90
55-59	57.9	0.0	0.0	42.1	57.9	100.0	57
60-64	31.3	0.0	0.0	68.8	31.3	100.0	48
65-59	0.0	0.0	0.0	100.0	0.0	100.0	39
70+	0.0	0.0	0.0	100.0	0.0	100.0	27
Total	51.0	14.1	6.4	28.5	71.5	100.0	3144
Unable to match to 2013 address							
15-19	26.9	24.7	8.6	39.8	60.2	100.0	558
20-24	62.1	12.1	7.0	18.8	81.3	100.0	816
25-29	69.0	11.5	5.3	14.3	85.8	100.0	1200
30-34	64.3	12.8	4.7	18.1	81.9	100.0	1077
35-39	63.5	14.2	4.4	17.9	82.1	100.0	822
40-44	65.3	12.6	5.4	16.7	83.3	100.0	666
45-49	65.8	12.7	5.9	15.6	84.4	100.0	711
50-54	64.9	12.6	4.3	18.2	81.8	100.0	693
55-59	57.9	14.6	3.9	23.6	76.4	100.0	699
60-64	55.0	15.8	2.5	26.7	73.3	100.0	606
65-59	27.3	13.7	1.2	57.8	42.2	100.0	483
70+	6.9	8.4	0.0	84.8	15.2	100.0	1005
Total	53.5	13.2	4.4	28.8	71.2	100.0	9333

Appendix J: Industry of Employment for Movers and Stayers (% and Number) by Broad Age Group, Southland Region 2018

15-24 Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unmatched for UR 5 Yrs Ago	Total (%)	Total Number
A Agriculture, Forestry and Fishing	70.4	17.3	6.5	5.8	100.0	1197
B Mining	100.0	…	…	…	100.0	21
C Manufacturing	84.4	8.2	2.5	4.9	100.0	732
D Electricity, Gas, Water and Waste Services	100.0	…	…	…	100.0	15
E Construction	90.4	3.9	1.1	4.5	100.0	534
F Wholesale Trade	82.9	7.7	5.1	4.3	100.0	351
G Retail Trade	83.0	8.8	4.4	3.8	100.0	1026
H Accommodation and Food Services	77.8	10.0	9.6	2.7	100.0	783
I Transport, Postal and Warehousing	67.9	10.7	5.4	16.1	100.0	168
J Information Media and Telecommunications	100.0	…	…	…	100.0	27
K Financial and Insurance Services	100.0	…	…	…	100.0	39
L Rental, Hiring and Real Estate Services	68.8	…	…	31.3	100.0	48
M Professional, Scientific and Technical Services	77.5	17.5	2.5	2.5	100.0	240
N Administrative and Support Services	68.0	12.0	10.0	10.0	100.0	150
O Public Administration and Safety	75.0	14.3	…	10.7	100.0	84
P Education and Training	69.0	24.1	…	6.9	100.0	174
Q Health Care and Social Assistance	71.0	17.0	…	12.0	100.0	300
R Arts and Recreation Services	91.9	8.1	…	…	100.0	111
S Other Services	91.6	4.8	…	3.6	100.0	249
Total Stated	74.5	15.6	4.6	5.3	100.0	6666

25-34 Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unmatched for UR 5 Yrs Ago	Total (%)	Total Number
A Agriculture, Forestry and Fishing	54.0	12.9	11.4	21.7	100.0	1923
B Mining	61.5	…	…	38.5	100.0	39
C Manufacturing	62.6	7.5	6.5	23.4	100.0	1242
D Electricity, Gas, Water and Waste Services	66.7	…	…	33.3	100.0	18
E Construction	68.1	6.2	5.1	20.5	100.0	819
F Wholesale Trade	68.4	7.9	7.2	16.4	100.0	456
G Retail Trade	63.1	9.6	12.9	14.5	100.0	747
H Accommodation and Food Services	45.8	7.6	27.5	19.1	100.0	708
I Transport, Postal and Warehousing	61.0	10.2	5.1	23.7	100.0	354
J Information Media and Telecommunications	77.8	…	22.2	…	100.0	27
K Financial and Insurance Services	67.9	13.2	3.8	15.1	100.0	159
L Rental, Hiring and Real Estate Services	54.3	5.7	11.4	28.6	100.0	105
M Professional, Scientific and Technical Services	63.4	13.7	8.6	14.3	100.0	525
N Administrative and Support Services	47.5	7.5	21.3	23.8	100.0	240
O Public Administration and Safety	63.3	12.7	7.6	16.5	100.0	237
P Education and Training	66.5	14.8	7.4	11.4	100.0	528
Q Health Care and Social Assistance	53.5	15.0	16.1	15.4	100.0	762
R Arts and Recreation Services	54.9	9.8	15.7	19.6	100.0	153
S Other Services	75.4	3.2	5.6	15.9	100.0	378
Total Stated	57.3	14.0	10.5	18.2	100.0	9885

35-44 Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unmatched for UR 5 Yrs Ago	Total (%)	Total Number
A Agriculture, Forestry and Fishing	75.6	5.9	5.6	12.9	100.0	1773
B Mining	100.0	…	…	…	100.0	27
C Manufacturing	76.8	3.3	4.7	15.3	100.0	1278
D Electricity, Gas, Water and Waste Services	100.0	…	…	…	100.0	39
E Construction	77.4	4.8	3.2	14.7	100.0	756
F Wholesale Trade	80.5	2.5	3.8	13.2	100.0	477
G Retail Trade	79.2	5.6	4.0	11.2	100.0	750
H Accommodation and Food Services	64.7	5.8	14.7	14.7	100.0	468
I Transport, Postal and Warehousing	77.7	5.4	1.5	15.4	100.0	390
J Information Media and Telecommunications	100.0	…	…	…	100.0	30
K Financial and Insurance Services	95.0	…	…	5.0	100.0	180
L Rental, Hiring and Real Estate Services	86.5	…	5.4	8.1	100.0	111
M Professional, Scientific and Technical Services	82.6	7.0	2.9	7.6	100.0	516
N Administrative and Support Services	76.7	2.7	2.7	17.8	100.0	219
O Public Administration and Safety	81.9	6.0	1.7	10.3	100.0	348
P Education and Training	84.1	6.6	2.4	6.9	100.0	867
Q Health Care and Social Assistance	77.5	7.4	6.0	9.2	100.0	852
R Arts and Recreation Services	87.0	…	…	13.0	100.0	138
S Other Services	82.6	3.8	4.5	9.1	100.0	396
Total Stated	75.3	8.7	4.6	11.5	100.0	10056

Appendix J (cont.)

45-54 Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unmatched for UR 5 Yrs Ago	Total (%)	Total Number
A Agriculture, Forestry and Fishing	82.9	4.3	1.8	11.0	100.0	1827
B Mining	76.9	...	...	23.1	100.0	78
C Manufacturing	83.5	3.5	1.2	11.8	100.0	1548
D Electricity, Gas, Water and Waste Services	100.0	...	...	0.0	100.0	63
E Construction	84.6	2.8	2.0	10.7	100.0	759
F Wholesale Trade	88.9	...	0.9	10.2	100.0	648
G Retail Trade	87.6	3.1	...	9.3	100.0	873
H Accommodation and Food Services	79.7	4.5	3.8	12.0	100.0	399
I Transport, Postal and Warehousing	84.5	3.6	...	11.9	100.0	504
J Information Media and Telecommunications	100.0	...	...	...	100.0	42
K Financial and Insurance Services	97.1	...	...	2.9	100.0	207
L Rental, Hiring and Real Estate Services	95.7	...	...	4.3	100.0	138
M Professional, Scientific and Technical Services	88.1	5.6	1.1	5.1	100.0	531
N Administrative and Support Services	83.9	...	2.3	13.8	100.0	261
O Public Administration and Safety	87.8	1.3	...	10.9	100.0	468
P Education and Training	87.3	4.2	0.8	7.7	100.0	777
Q Health Care and Social Assistance	85.9	2.6	2.4	9.1	100.0	1020
R Arts and Recreation Services	84.1	...	...	15.9	100.0	132
S Other Services	91.3	...	1.3	7.3	100.0	450
Total Stated	82.6	6.2	1.5	9.8	100.0	11160

55-64 Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unmatched for UR 5 Yrs Ago	Total (%)	Total Number
A Agriculture, Forestry and Fishing	87.6	2.5	...	9.9	100.0	1452
B Mining	84.6	...	...	15.4	100.0	39
C Manufacturing	86.1	2.2	...	11.6	100.0	1470
D Electricity, Gas, Water and Waste Services	100.0	...	...	...	100.0	66
E Construction	90.9	1.7	...	7.3	100.0	696
F Wholesale Trade	93.1	...	...	6.9	100.0	606
G Retail Trade	87.4	4.8	...	7.8	100.0	879
H Accommodation and Food Services	81.8	1.7	...	16.5	100.0	363
I Transport, Postal and Warehousing	85.8	2.5	...	11.7	100.0	486
J Information Media and Telecommunications	100.0	...	...	...	100.0	27
K Financial and Insurance Services	87.5	...	...	12.5	100.0	168
L Rental, Hiring and Real Estate Services	91.1	...	...	8.9	100.0	168
M Professional, Scientific and Technical Services	93.1	...	...	6.9	100.0	477
N Administrative and Support Services	86.7	...	...	13.3	100.0	294
O Public Administration and Safety	89.7	...	...	10.3	100.0	435
P Education and Training	90.1	2.2	...	7.8	100.0	696
Q Health Care and Social Assistance	89.8	2.3	1.3	6.6	100.0	1179
R Arts and Recreation Services	95.0	5.0	...	...	100.0	120
S Other Services	91.8	...	...	8.2	100.0	402
Total Stated	86.0	4.4	0.6	9.1	100.0	10341

65+ Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unmatched for UR 5 Yrs Ago	Total (%)	Total Number
A Agriculture, Forestry and Fishing	92.4	...	...	7.6	100.0	906
B Mining	100.0	...	...	...	100.0	21
C Manufacturing	91.1	...	...	8.9	100.0	405
D Electricity, Gas, Water and Waste Services	100.0	...	...	...	100.0	15
E Construction	90.1	...	...	9.9	100.0	243
F Wholesale Trade	92.1	...	...	7.9	100.0	189
G Retail Trade	87.7	...	...	12.3	100.0	318
H Accommodation and Food Services	87.3	...	...	12.7	100.0	165
I Transport, Postal and Warehousing	91.9	...	...	8.1	100.0	333
J Information Media and Telecommunications	100.0	...	...	...	100.0	18
K Financial and Insurance Services	100.0	...	...	...	100.0	30
L Rental, Hiring and Real Estate Services	87.8	...	...	12.2	100.0	123
M Professional, Scientific and Technical Services	96.9	...	...	3.1	100.0	195
N Administrative and Support Services	88.1	...	...	11.9	100.0	126
O Public Administration and Safety	94.1	...	...	5.9	100.0	153
P Education and Training	95.8	...	...	4.2	100.0	288
Q Health Care and Social Assistance	91.0	...	...	9.0	100.0	399
R Arts and Recreation Services	100.0	...	...	...	100.0	72
S Other Services	94.4	...	...	5.6	100.0	162
Total Stated	89.4	2.3	0.1	8.2	100.0	4287

Appendix K: Occupation of Employment for Movers and Stayers (% and Number) by Broad Age Group, Southland Region 2018

15-24 Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unable to Match*	Total (%)	Total Number	Index of Dissimilarity~ (Percentage Points)
Managers	68.1	12.3	6.8	12.8	100.0	705	3.2
Professionals	58.0	29.0	3.0	10.1	100.0	507	17.3
Technicians and Trades Workers	74.0	7.7	3.3	15.0	100.0	900	4.9
Community and Personal Service Workers	73.5	10.3	4.8	11.4	100.0	816	2.9
Clerical and Administrative Workers	76.9	9.6	4.8	8.7	100.0	312	6.3
Sales Workers	77.0	9.4	4.2	9.4	100.0	1083	5.8
Machinery Operators and Drivers	80.2	5.6	...	14.3	100.0	378	10.4
Labourers	68.1	12.0	4.6	15.3	100.0	2277	3.1
Total (Summed)	71.2	11.7	4.3	12.9	100.0	7209	0.0

25-34 Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unable to Match*	Total (%)	Total Number	Index of Dissimilarity~ (Percentage Points)
Managers	57.7	13.6	11.4	17.4	100.0	1815	2.2
Professionals	54.6	21.6	10.5	13.3	100.0	1665	9.8
Technicians and Trades Workers	64.8	9.1	6.1	19.9	100.0	1476	7.5
Community and Personal Service Workers	54.9	11.7	18.3	15.0	100.0	819	7.5
Clerical and Administrative Workers	67.4	7.7	10.4	14.5	100.0	663	8.7
Sales Workers	65.1	6.5	13.0	15.3	100.0	645	8.6
Machinery Operators and Drivers	60.7	7.1	3.6	28.6	100.0	672	12.0
Labourers	54.2	8.8	13.1	23.9	100.0	1899	7.5
Total (Summed)	58.7	11.9	10.8	18.6	100.0	9885	0.0

35-44 Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unable to Match*	Total (%)	Total Number	Index of Dissimilarity~ (Percentage Points)
Managers	77.6	7.7	4.1	10.7	100.0	2193	1.7
Professionals	79.8	8.2	3.7	8.2	100.0	1860	4.6
Technicians and Trades Workers	74.5	5.1	5.6	14.8	100.0	1293	3.9
Community and Personal Service Workers	75.8	8.3	6.1	9.8	100.0	792	3.3
Clerical and Administrative Workers	84.3	4.6	4.3	6.8	100.0	843	7.2
Sales Workers	81.9	3.3	3.3	11.5	100.0	546	4.7
Machinery Operators and Drivers	75.9	6.0	2.8	15.3	100.0	648	3.5
Labourers	71.5	4.6	7.0	16.9	100.0	1629	7.4
Total (Summed)	77.1	6.4	4.7	11.8	100.0	10056	0.0

45-54 Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unable to Match*	Total (%)	Total Number	Index of Dissimilarity~ (Percentage Points)
Managers	85.3	5.5	1.1	8.0	100.0	2613	2.2
Professionals	84.2	4.8	1.6	9.3	100.0	1638	0.7
Technicians and Trades Workers	84.7	2.4	2.2	10.8	100.0	1251	1.9
Community and Personal Service Workers	85.0	3.8	1.4	9.8	100.0	861	0.7
Clerical and Administrative Workers	89.6	2.8	0.8	6.8	100.0	1185	5.3
Sales Workers	85.8	5.5	1.2	7.5	100.0	762	2.7
Machinery Operators and Drivers	83.2	3.8	0.0	13.0	100.0	876	3.0
Labourers	78.8	4.2	2.3	14.8	100.0	1728	5.6
Total (Summed)	84.4	4.3	1.4	10.0	100.0	11160	0.0

55-64 Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unable to Match*	Total (%)	Total Number	Index of Dissimilarity~ (Percentage Points)
Managers	88.2	3.2	0.4	8.2	100.0	2187	1.0
Professionals	86.9	3.7	0.6	8.8	100.0	1467	1.1
Technicians and Trades Workers	89.4	2.1	0.0	8.5	100.0	1128	1.8
Community and Personal Service Workers	87.6	1.7	2.1	8.6	100.0	873	1.7
Clerical and Administrative Workers	91.3	1.3	0.0	7.4	100.0	1137	3.7
Sales Workers	88.6	4.8	0.0	6.6	100.0	687	3.0
Machinery Operators and Drivers	83.6	4.1	0.0	12.3	100.0	876	4.4
Labourers	85.5	2.4	0.0	12.1	100.0	1782	2.9
Total (Summed)	87.6	2.8	0.4	9.2	100.0	10341	0.0

65+ Years	Stayers	Internal Arrivals	Overseas 5 Years Ago	Unable to Match*	Total (%)	Total Number	Index of Dissimilarity~ (Percentage Points)
Managers	90.2	1.2	0.0	8.6	100.0	1008	0.6
Professionals	92.6	1.7	0.0	5.7	100.0	528	2.8
Technicians and Trades Workers	90.8	0.0	0.0	9.2	100.0	393	0.8
Community and Personal Service Workers	92.1	0.0	0.0	7.9	100.0	342	1.4
Clerical and Administrative Workers	91.4	0.0	0.0	8.6	100.0	384	0.8
Sales Workers	93.8	0.0	0.0	6.3	100.0	240	3.0
Machinery Operators and Drivers	89.5	2.3	0.0	8.2	100.0	513	1.6
Labourers	89.3	0.0	0.0	10.7	100.0	810	2.3
Total (Summed)	90.8	0.8	0.0	8.5	100.0	4287	0.0

**Unable to be matched to usual residence 5 years ago*

~ Here, the Index of Dissimilarity measures the extent to which the mover-stayer distribution of each occupation would need to change to replicate the average

Appendix L: Highest Post-School Qualification for Employed Movers and Stayers (% and Number) by Broad Age Group, Southland Region 2018

15-24 Years	Stayers	Internal Arrivals	Overseas Arrivals	Unmatched for UR 5 Years Ago*	Total (Summed)	Total Number	Dissimilarity~ (Percentage Points)
No Post School Qualifications	79.1	9.3	2.6	8.9	100.0	3969	6.9
Other	69.8	13.1	2.0	15.1	100.0	1332	4.8
Diploma	61.5	19.3	6.8	12.4	100.0	483	10.7
Bachelors	41.8	40.6	9.4	8.2	100.0	510	32.5
Post Graduate, Masters, PhD	26.9	46.2	26.9	0.0	100.0	78	55.6
Total (Summed)	72.2	13.8	3.7	10.3	100.0	6372	0.0

25-34 Years	Stayers	Internal Arrivals	Overseas Arrivals	Unmatched for UR 5 Years Ago*	Total (Summed)	Total Number	Index of Dissimilarity~ (Percentage Points)
No Post School Qualifications	67.1	9.3	6.9	16.7	100.0	3339	6.5
Other	66.4	9.9	3.3	20.5	100.0	2667	9.5
Diploma	60.6	14.6	7.6	17.1	100.0	945	2.1
Bachelors	49.6	21.2	17.2	12.0	100.0	1671	15.8
Post Graduate, Masters, PhD	33.8	20.9	32.4	12.9	100.0	675	30.7
Total (Summed)	60.7	13.0	9.6	16.7	100.0	9297	0.0

35-44 Years	Stayers	Internal Arrivals	Overseas Arrivals	Unmatched for UR 5 Years Ago*	Total (Summed)	Total Number	Index of Dissimilarity~ (Percentage Points)
No Post School Qualifications	81.5	6.3	2.7	9.4	100.0	3876	3.2
Other	76.5	7.1	2.5	13.9	100.0	2376	3.6
Diploma	79.5	5.2	3.6	11.7	100.0	921	2.6
Bachelors	79.3	7.5	6.2	7.0	100.0	1593	3.4
Post Graduate, Masters, PhD	65.5	13.1	12.4	9.1	100.0	825	14.1
Total (Summed)	78.3	7.2	4.2	10.3	100.0	9591	0.0

45-54 Years	Stayers	Internal Arrivals	Overseas Arrivals	Unmatched for UR 5 Years Ago*	Total (Summed)	Total Number	Index of Dissimilarity~ (Percentage
No Post School Qualifications	87.4	4.6	0.8	7.3	100.0	5460	1.6
Other	83.8	4.9	1.1	10.3	100.0	2223	2.2
Diploma	85.0	5.5	1.0	8.5	100.0	1197	1.2
Bachelors	86.3	3.2	2.9	7.5	100.0	1119	2.2
Post Graduate, Masters, PhD	79.1	8.4	5.6	7.0	100.0	645	7.8
Total (Summed)	85.7	4.8	1.4	8.1	100.0	10644	0.0

55-64 Years	Stayers	Internal Arrivals	Overseas Arrivals	Unmatched for UR 5 Years Ago*	Total (Summed)	Total Number	Index of Dissimilarity~ (Percentage Points)
No Post School Qualifications	89.6	3.4	0.2	6.9	100.0	5601	0.6
Other	88.1	3.4	0.0	8.6	100.0	1962	1.2
Diploma	89.2	3.3	0.0	7.5	100.0	1086	0.4
Bachelors	87.1	5.1	0.7	7.0	100.0	816	2.2
Post Graduate, Masters, PhD	86.9	1.4	2.1	9.7	100.0	435	4.1
Total (Summed)	88.9	3.5	0.2	7.4	100.0	9900	0.0

65+ Years	Stayers	Internal Arrivals	Overseas Arrivals	Unmatched for UR 5 Years Ago*	Total (Summed)	Total Number	Index of Dissimilarity~ (Percentage Points)
No Post School Qualifications	92.2	1.8	0.0	6.0	100.0	2646	0.6
Other	89.4	1.8	0.0	8.8	100.0	651	2.3
Diploma	92.5	0.0	0.0	7.5	100.0	402	1.6
Bachelors	94.7	0.0	0.0	5.3	100.0	228	1.6
Post Graduate, Masters, PhD	87.5	4.2	0.0	8.3	100.0	144	4.2
Total (Summed)	91.7	1.6	0.0	6.6	100.0	4071	0.0

~ Here, the Index of Dissimilarity measures the extent to which the mover-stayer distribution of each qualification category would need to change to replicate the average

Appendix M: References

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