

Mostly-NEET through 2015

Integrated data insights by motherhood status

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Ministry for Women

Integrated data disclaimer

The results in this report have been created for research purposes to inform policy and services, the results are not official statistics. The data was sourced from the Integrated Data Infrastructure (IDI) which is managed by Stats NZ. The opinions, findings, recommendations, and conclusions expressed in this report are those of the author(s), not Stats NZ.

Access to the anonymised data used in this study was provided by Stats NZ in accordance with security and confidentiality provisions of the Statistics Act 1975. Only people authorised by the Statistics Act 1975 are allowed to see data about a particular person, household, business, or organisation, and the results in this report have been confidentialised to protect these groups from identification. Careful consideration has been given to the privacy, security, and confidentiality issues associated with using administrative and survey data in the IDI. Further detail can be found in the privacy impact assessment for the Integrated Data Infrastructure available from www.stats.govt.nz.

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994. This tax data must be used only for statistical purposes, and no individual information may be published or disclosed in any other form, or provided to Inland Revenue for administrative or regulatory purposes. Any person who has had access to the unit record data has certified that they have been shown, have read, and have understood section 81 of the Tax Administration Act 1994, which relates to secrecy. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

Executive Summary

This report uses integrated data to provide details about the circumstances of young mothers in New Zealand. It is intended to inform those working to improve living standards and well-being, particularly with a community focus.

NEET (not in employment education or training aged 15-24) is a common grouping in labour market reporting. In this paper, we build on the NEET concept with the addition of 'mostly-NEET'. Mostly-NEET is our term for individuals we identify as NEET for six months or more throughout the calendar year (not necessarily in one spell).

In the 15-24 year age range, mostly-NEET rates increase sharply between the ages of 17 and 19, then level out. This reflects that those aged 15-17 are much more likely to be in the secondary schooling system and, therefore, less likely to be mostly-NEET.

A quarter of mostly-NEETs live in an area with a deprivation score of 10 (ie the most deprived communities).

Within the 20-24 year age group, 11 percent of the young women without children were mostly-NEET, and the rate for young mothers was 62 percent. The rate for young men was 15 percent.

We would not expect young mothers to have as high levels of engagement in work and education as young women without children. Consequently, our focus is to understand whether further education and well-paid and secure work is within their reach.

Education is an insurance against life shocks that diminish life-time earnings. Fifty-one percent of young mothers (20-24 years) had NCEA L2 (or equivalent). This is markedly lower than for young women without children (73 percent) and for men (61 percent). The mostly-NEET rate for young mothers without NCEA L2 (or equivalent) is high at 72 percent. Some of these young mothers may be in a relationship where it is understood that their partner will be the main income earner. We note that three quarters of mostly-NEET mothers are receiving welfare assistance.

The mostly-NEET rate for a young mother with no work experience is very high at 88 percent. This is 30 percentage points higher than the rate for those who have worked (58 percent).

Only 45 percent of young mothers (aged 20-24) had a driver licence (restricted or full), compared to 61 percent for young women without children and 65 percent for young men. The mostly-NEET rate for young mothers with licences is 49 percent compared to 72 percent for those without licences.

Based on this research we suggest that system reviews consider solutions that ensure further education and sustainable paid work are within mothers' reach. This is likely to include addressing issues that are connected to being NEET, such as:

- having a basic level of education
- affordable and reliable childcare
- gaining work experience and
- acquiring a driver licence and/or access to transport.

We encourage future integrated data studies to include parent indicators in analysis, to improve our understanding of mothers and toward improved social policy and community responses.

Introduction

This report uses integrated data to provide detail about the circumstances of young mothers in New Zealand, particularly those who are not involved in education, training or employment. It is intended to inform those working to improve living standards, particularly with a community and well-being focus. The data provides some insights into the labour life-course of New Zealand women, particularly those who have a first child before the age of 25. Regional information is included as an appendix to this report to better enable service provision.

Generally, parents require more financial resources than non-parents, to support dependent children. Social change and expectations have seen the New Zealand fertility rate decline over the last 30 years, as well as changes in the type and duration of relationships (eg see Law Commission 2017) In part, potential parents delay fertility while acquiring human capital. This may mean acquiring an educational qualification and/or work experience towards securing higher income, and resilience and agency in the labour market. Mothers with educational qualifications or work experience are likely to have more negotiating power to acquire good working conditions in the labour market and at home. This may place them in a better position to balance work and caring responsibilities, and is associated with higher employment rates (eg Sin et al 2018).

If, after the birth of her child, a mother wishes (or needs) to join the labour force, she may need to find a job with the flexibility to manage her parenting responsibilities. While young people are generally more vulnerable in the labour market, young mothers, with the extra need for flexibility, are likely to be particularly vulnerable. This is particularly so for single parents where the need for flexibility is very important (eg see Molloy and Potter 2015).

In addition to qualifications and work experience there are other factors that can make it easier for a young mother in the labour market. Such things include support from others (eg partner and wider family and whanau) and practical factors such as a driver licence and access to transport. These factors might enable her to travel more easily between home, childcare, and work, and may allow her to participate more flexibly in all roles.

This paper describes an initial examination of the potential of linked administrative data to understand the circumstances of young mothers and some of the factors that may make it easier to manage labour market or educational participation.

This project has gained much from direct collaboration with Stats NZ and Methodist Mission Southern (the Mission). In particular, the Mission provided questions, based on their practical experience, which we answer here and in an associated paper, and atlas, published by Stats NZ (2017). The Mission enquiry concerned interest in where young people not engaged in earning or learning were located, levels of qualifications and driver licence, work experience, and 'bright spots' or indications of resilience. The Mission shared an interest with the Ministry for Women in the well-being of young mothers which led to this paper. While our analysis is at the national level, regional breakdowns are appended.

Investigations using integrated data from the Integrated Data Infrastructure (IDI) require substantial investment in understanding data sources, coding data, general analysis and consultation with users and fellow researchers. We are grateful for the input and support from other researchers, particularly David Earle from the Ministry of Education for his early inspiration and generous mentoring, the Treasury Analytics and Insights team, the Stats NZ IDI team, and many other IDI users and policy professionals.

Data used

The data in this report comes from the Integrated Data Infrastructure (IDI), managed by Stats NZ. The IDI is a database of linked and de-identified data from a wide range of government agencies. Key data sources used in this project include: taxable income received, educational enrolment and qualifications, overseas spells, custody, driver licence, and births data.

The paper examines those aged 15-24 (as at 31 December 2015). It examines these individuals circumstances over the 2015 year (ie up to and including 31 December), as well as some historical information related to years prior to 2015 (eg qualifications, births and work experience).

Limitations

- The NEET (not in employment, education and training) indicators used in this paper are calculated, in part, on tertiary enrolments recorded at the beginning of the year. This does not take into account those who drop out of their course. Also, the classification of individuals as NEET may be affected by a failure to match the individual's records in the IDI. For example, if an individual's employment and education records are not correctly matched, the individual will not be recorded as having done any employment or education and may be incorrectly assumed to be NEET.
- This study does not consider the circumstances of partners of young mothers, or the support that young mothers may be receiving from family/whanau.
- This study does not consider the amount of care that a young mother gives her child. There are a range of possible caring situations. For example, the mother may be the primary carer, she may be sharing care with another person (such as a partner or her own parent). It is also feasible that someone else (such as a father or grandparent) may be the primary carer.
- Data on whether a woman has had a child is sourced from birth records. The original birth records for adopted children are not available. Consequently, in this study, a mother who has adopted out her child will not be identified as a mother – unless she had another child that was not adopted. Any measures such as the number of children she has had, and the age of her youngest child, would be calculated on the children she has not had adopted.
- We use the concept 'ever worked' as a proxy for work experience and work skills; however, this only includes wages and salary work which was undertaken in New Zealand and is visible to government sources, eg does not include the shadow economy.
- Geographic location has been determined using the most frequent address recorded across administrative data sources over the reference period (rather than the last known address) in order to correlate more closely with main activity. We would expect the young population to be mobile and acknowledge that location is imprecise. However, location was a key requirement from consultation with potential data users, and the principal informant (Methodist Mission Southern).

Overview of the study population

Although the primary focus of this report is on young mothers, we will start with a breakdown of the wider population that was used for the study, as much of this information is not widely available and the wider group serves as useful context.

Table 1: Age group by sex
 NZ population (2015), aged 15-24

| Age group | Sex | | | | All | |
|-----------|---------|------|---------|------|---------|-------|
| | Female | | Male | | | |
| | N | % | N | % | N | % |
| 15-19 | 150,204 | 48.6 | 159,159 | 51.4 | 309,363 | 100.0 |
| 20-24 | 160,758 | 47.1 | 180,813 | 52.9 | 341,571 | 100.0 |

Percentages are row percentages
 * Figures have been random rounded to base 3

Data in Table 1 shows that the proportion of women aged 15-24 in the research population is 48percent, which agrees with Stats NZ population estimates for 2015. Our total research population contains 4500 fewer individuals than the estimated resident population (ERP). There are uncertainties in both populations including, but not limited to, a difference in assigning age (ERP uses age as at June 30 and we have used 31 December) and criteria for inclusion of overseas-born candidates.

Introducing NEET

NEET (not in employment education or training) is a key concept that is used in this paper. NEET indicators are often used to identify vulnerable youth. Those who spend long or repeated periods being NEET are often considered likely to have poorer labour market outcomes and other outcomes. Marshall, K. (2012) notes that:

The term [NEET] was coined in Britain after reports that an increasing number of older teenagers were leaving school and remaining jobless for long periods (Social Exclusion Unit, 1999).

Concern was raised that NEET youth would become discouraged, disengaged and socially excluded. A British study showed that certain 'at-risk' youth were more likely to enter a NEET state and were subsequently more likely to have a poor labour market experience, depression, early parenthood and poor housing (Bynner and Parsons, 2002).

NEET is usually measured using survey data or census data and is, therefore, point in time - or some relatively short period of time. Here, we include temporal characteristics to identify a group that may be experiencing greater employment risk.

The modified NEET concept that is used in this paper is calculated over a year and draws from integrated administrative data sources. For each month of the year, an individual's income¹, education and training records are examined to determine their main activity for the month². If there was no record of the individual being in either employment or education or training then the individual would be classified as NEET for that month.

¹ For the purposes of the NEET calculation only wages and salary income is used.

² Following an approach used by Treasury where a person's main activity is determined for each month. The main activity is categorised as either: In custody, overseas, in education, in work. If the individual is not categorised into one of these categories they are considered NEET.

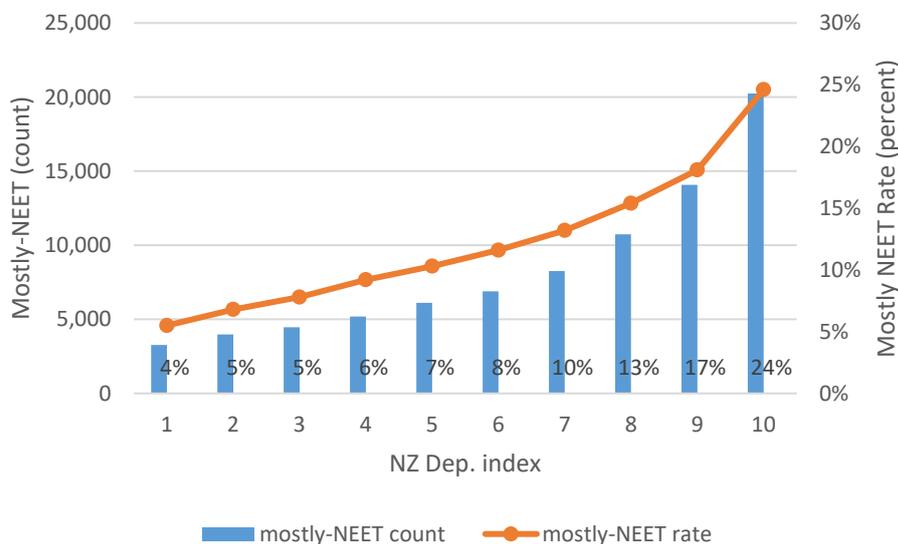
In this paper, we use two concepts of NEET, these are: mostly-NEET and always-NEET. An individual is classified as mostly-NEET if she or he was NEET for at least six of the months throughout the year ended December 2015 (not necessarily in one spell). Being classified as always-NEET means that she or he was NEET for all 12 months of the year ended December 2015.

Across our population aged 15-24, the mostly-NEET rate and always NEET rates for 2015 were 12.9percent, and 5.4 percent respectively³.

Figure 1 shows the mostly-NEET rate, and mostly-NEET numbers, plotted for individuals aged 15-24 against the NZ deprivation index. A score of 10 indicates those living in one of the most socio-economically deprived areas.

The mostly-NEET rate increases with the NZ deprivation scale. While the 15-24 years population is evenly distributed across the index, just over 40 percent of mostly-NEET are living in the most deprived areas.

Figure 1: Mostly-NEET rate 2015 by NZ Dep index⁴



NEET is not the only way of identifying vulnerable youth. There are many other indicators in the IDI that might indicate vulnerability. These include whether the individual is on a benefit, and whether they have achieved a basic level of education (such as NCEA level 2 or equivalent).

Table 2 shows the proportion of mostly-NEETs aged 15-24 who have received welfare assistance at some time throughout the year. Fifty one percent of mostly-NEETs had been on a welfare benefit, compared to 9 percent in the non-NEET category.

³ Note that NEET rate for the HLFS September quarter 2015 was 11.0 percent.

⁴ The Deprivation Index is not specified for 1.3% of individuals and is not included in this chart.

Table 2: Benefit receipt by mostly-NEET status

NZ population (2015), aged 15-24

| On benefit status | 15 -24 years | | | |
|-------------------|--------------|------|---------|------|
| | mostly-NEET | | other | |
| | N | % | N | % |
| Not on benefit | 41,169 | 48.9 | 514,206 | 90.7 |
| On benefit | 42,981 | 51.1 | 52,581 | 9.3 |

* Percentages are column percentages

* Figures have been random rounded to base 3

Table 2 raises the question of what the circumstances might have been for those who are mostly-NEET but who are not on a welfare benefit. The group may include those who:

- made multiple attempts into education and employment but who did not have long enough periods without employment or education to be eligible for social assistance
- did not realise that they were entitled to social assistance
- were supported by partners or family and/ or were not eligible
- had been disqualified from benefits by not meeting ongoing eligibility criteria (e.g. work tests, valid address, having identification⁵ and bank accounts)
- did not choose to use social assistance despite being eligible.

Importantly, 'receiving benefits' and 'mostly-NEET' do not identify exactly the same groups of people. Almost half of those identified as mostly-NEET are not receiving a benefit. Just over half of those identified as receiving benefit are not mostly-NEET. This tells us that regional beneficiary figures are likely imprecise in identifying potential client numbers for employment and training initiatives.

Table 3 shows information for those who were always-NEET, ie those who were NEET over the whole year. The patterns of always-NEET by benefit status is similar to Table 2. Again, we see that the NEET indicator and the on-benefit indicator identify different but overlapping groups.

Table 3: Benefit receipt in 2015 by always-NEET

NZ population (2015), aged 15-24

| On benefit status | always-NEET | | | |
|-------------------|-------------|------|---------|------|
| | always-NEET | | other | |
| | N | % | N | % |
| Not on benefit | 15,108 | 43.0 | 540,264 | 87.7 |
| On benefit | 20,049 | 57.0 | 75,513 | 12.3 |

* Percentages are column percentages

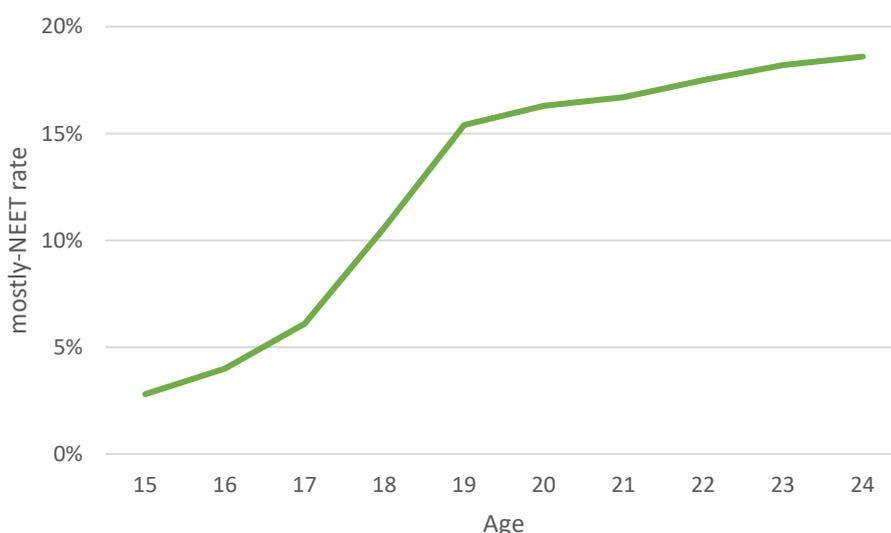
* Figures have been random rounded to base 3

⁵ Recently the Department of Corrections has embarked on work to ensure released prisoners have identification and an address in order to qualify for benefits.

Mostly-NEET rate by age

Figure 2 shows how the mostly-NEET rate varies with age. The mostly-NEET rate increases sharply between the ages of 17 and 19, then levels out. The lower rate for the younger ages reflects differences in their stage of life. Those aged between 15 and 17 are likely to be in the secondary school system and, therefore, much less likely to be mostly-NEET. Later in this report, we will restrict ourselves to the 20-24 year age group as the cohort is less subject to age effects, such as secondary school completion⁶.

Figure 2: Mostly-NEET rate 2015 by age, 15-24 years



Young mothers

There is no official definition of ‘young mother’. For the purposes of this report a young mother is a mother who is 24 years old or younger. Partnering patterns have changed over the last 50 years. In 1970 the median age at first marriage for New Zealand women was 21 (compared to 29 in 2016). Actual marriage rates have declined (NZ Law Commission, 2017) and the average age for a woman having a first child in New Zealand in 2016 was 28 (Stats NZ 2017). Social concepts of a young mother have, therefore, changed with the times and may continue to change.

In a knowledge economy, more time in education is required to achieve a standard of living that enables savings and an income beyond the basics. This has implications for the timing of children.

The teen birth rate has dropped dramatically since the 1960s and early 1970s. There have been drops every year since 2008 (Stats NZ⁷). Teen birth rates are also decreasing for Māori women. The National Institute of Economic and Demographic Research⁸ reported that Māori women’s fertility is

⁶ However, in subsequent work we may decide to use modelling approaches and therefore address possible spurious effects (such as age effect) in a more comprehensive way.

⁷ Births and Deaths: Year ended December

2016 http://www.stats.govt.nz/browse_for_stats/population/births/BirthsAndDeaths_MRYeDec16.aspx

⁸ http://www.superu.govt.nz/sites/default/files/Teen_Births_Report_0.pdf

also in decline, and the difference between (higher) Māori teen fertility and national teen fertility is reducing.

The small number of young mothers in the 15-19 year age group are supported the Ministry of Education’s teen parenting units (TPUs)⁹. Table 4, below, shows that young mothers are however, more heavily concentrated in the older (20-24 year) age group.

Table 4: Age group by sex and motherhood status
NZ population (2015), aged 15-24

| Age group | Sex and motherhood status | | | | | |
|-----------|---------------------------|------|------------------------------|------|---------------|------|
| | Young men | | Young women without children | | Young mothers | |
| | N | % | N | % | N | % |
| 15-19 | 159,159 | 46.8 | 146,571 | 52.5 | 3,633 | 11.4 |
| 20-24 | 180,816 | 53.2 | 132,621 | 47.5 | 28,134 | 88.6 |

* Percentages are column percentages

* Figures have been random rounded to base 3

The ability of a young mother to engage in the labour market is affected by the number of children that she has (Flynn & Harris 2015).

Table 5 shows that approximately two thirds of mothers aged 20-24 have only one child and over 90 percent have one or two children. Given the age of the mother, all the children will be young and there will be a range of childcare needs including Early Childhood Education (ECE), after-school care, and school holiday programmes.

Table 5: Young mothers only: number of children by age group
NZ population (2015), aged 15-24

| Number of children | age group | | | |
|--------------------|-----------|------|--------|------|
| | 15-19 | | 20-24 | |
| | N | % | N | % |
| 1 | 3,234 | 89.0 | 18,195 | 64.7 |
| 2 | 381 | 10.5 | 7,584 | 27.0 |
| 3 | 18 | 0.5 | 1,926 | 6.8 |
| 4 | ..S | ..S | 369 | 1.3 |
| 5 | ..S | ..S | 51 | 0.2 |
| 6 | ..S | ..S | 9 | 0.0 |

* Percentages are column percentages

* Figures have been random rounded to base 3

⁹ TPUs provide “wrap-around support, pastoral care, mentoring and additional lifestyle courses” to teenagers at secondary school who are pregnant or parents. The support includes “childcare (often on site), and links with health and other social services”. A recent evaluation noted that “enrolling at a school with a TPU increased the probability of attaining NCEA Level 1 from 37 to 59 percent” (Vaithianathan, Maloney, Wilson, Staneva, & Jiang, 2017).

..S = suppressed

We now begin to consider the mostly-NEET rate by sex. The mostly-NEET rate is 14 percent for women and 12 percent for men. However, we see in Table 6 that young mothers have a high mostly-NEET rate of 61 percent and the mostly-NEET rate for young women without children is only 9 percent - that is, even lower than it is for young men.

Table 6: Mostly-NEET by sex and motherhood status
NZ population (2015), aged 15-24

| mostly-NEET | Sex and motherhood status | | | | | |
|--------------------|---------------------------|------|------------------------------|------|---------------|------|
| | Young men | | Young women without children | | Young mothers | |
| | N | % | N | % | N | % |
| Mostly-NEET | 40,227 | 11.8 | 24,471 | 8.8 | 19,449 | 61.2 |
| Other | 299,748 | 88.2 | 254,718 | 91.2 | 12,321 | 38.8 |

* Percentages are column percentages

* Figures have been random rounded to base 3

There is sometimes contention as to whether those in a mothering role should be termed NEET. This may be motivated by a view that young mothers have opted out of the labour market and/or training and, therefore, should not be the focus of concern or support.

Molloy and Potter (2013) investigated Household Labour Force Survey (HLFS) data to consider whether mothers should be included in NEET reporting. That study found high levels of unemployment and concluded that NEET-aged mothers faced additional constraints in education and work participation and should be included in NEET counts.

Two recent New Zealand integrated data studies provide insights about young fathers. Earle, D. (2018) finds young fathers less likely to enter tertiary education but more likely to be in paid work. Sin et al (2018) have shown that NEET-aged fathers have greater economic resilience than NEET-aged mothers. Ten years of both employment and wage growth for fathers by age group show some lag from older fathers, but overall an economically positive story. Social and economic policy should ideally provide support to all parents. Readers may conclude that young mothers are currently in greater need of support than young fathers. Krasso Peach et al (2018) find that male single parents of young children experience the same (high) levels of multiple deprivation as female single parents of young children suggesting that social norms about caregiving roles are a major contributor to gendered outcomes we see in employment patterns for NEETs and through the labour force.

New Zealand time use data shows men and women in New Zealand undertake similar amounts of work, but women are more likely to be in unpaid work (StatsNZ 2011¹⁰).

For those who are not mostly-NEET, the main activity undertaken over the course of the year appears to be largely influenced by age. For young mothers aged 15-19 the vast majority were in

¹⁰ Time Use Survey Hot Off The Press 2009/10

http://archive.stats.govt.nz/browse_for_stats/people_and_communities/time_use/TimeUseSurvey_HOTP2009-10.aspx accessed 2 June 2018

education, whereas for young mothers aged 20-24 the majority were in employment (see Table 7¹¹). It is not surprising to see the 15-19 year-old mothers (who were not mostly-NEET) were predominately in education, since many in this age group are still in secondary school.

Table 7: Young mothers only - main activity when not mostly-NEET by age group
NZ population (2015), aged 15-24

| Main activity | Age group | | | |
|------------------|-----------|------|-------|------|
| | 15-19 | | 20-24 | |
| | N | % | N | % |
| Education | 1,308 | 83.0 | 3,579 | 33.3 |
| Employed | 264 | 16.8 | 7,107 | 66.1 |
| Custody | ..S | ..S | ..S | ..S |
| Overseas | ..S | ..S | ..S | ..S |

* Percentages are column percentages

* Figures have been random rounded to base 3

..S = suppressed

Those aged 20-24

In this section, we consider only those aged 20 to 24.

The reasons for considering this group have already been discussed above. In particular:

- The mostly-NEET rate steadily increases over the 15-19 age period, but is much more stable after that. That means that analysis of the 20-24 year age group is less likely to be complicated with age effects.
- The number of young mothers in the 15-19 year age group is relatively small and there is targeted support for young mothers while they are still at school. Consequently, the policy interest in the older age group is more acute (although arguably those aged 18 and 19 are of concern because they are still very young but may not be covered by TPU support).

Another reason for focusing on the 20-24 year age group is that we wish to examine the educational qualifications of young women and young mothers. In order to do this effectively we prefer to consider only those who are of an age that would have allowed them to achieve a level 2 qualification.

Mostly-NEET, aged 20-24

Within the 20-24 year age group, 11% of the young women without children were mostly-NEET, and the rate for young mothers was 62%. The rate for young men was 15%.

¹¹ The information in this table should be treated with caution. It is difficult to summarise a range of activities that a person may have been engaged in over the course of the year into one “main” activity. To create this table we have used the Treasury approach of determining a main activity for each month. The main activity for the year is then the activity identified for the greatest number of months. Where there is a ‘tie’, the main activity is decided using the following hierarchy: education, employment, custody, then overseas.

Table 8: Mostly-NEET by sex and motherhood status
 NZ population (2015), aged 20-24

| mostly-NEET | Sex and motherhood status | | | | | |
|-------------|---------------------------|------|------------------------------|------|---------------|------|
| | Young men | | Young women without children | | Young mothers | |
| | N | % | N | % | N | % |
| mostly-NEET | 27,237 | 15.1 | 15,090 | 11.4 | 17,391 | 61.8 |
| other | 153,579 | 84.9 | 117,528 | 88.6 | 10,743 | 38.2 |

* Percentages are column percentages
 * Figures have been random rounded to base 3

We would not expect young mothers to have as high levels of engagement in work and education as young women without children. Consequently, our focus is to understand whether further education and sustainable work is within a young mother’s reach.

Education

As discussed earlier, having an education is often thought to provide women with some insulation against negative labour market outcomes. A Canadian report on those with and without a high school diploma discussed how the lack of a diploma was correlated with negative labour market outcomes.

Recently, the employment rate gap between young men and women without a high school diploma and those in higher categories of educational attainment increased—a result of the decline in the employment rate of the least-educated over the past two and a half decades. Women who did not finish high school were particularly less likely to work than men who were in the same situation. (Uppal, 2016).

Not having a qualification is a concern regardless of whether or not a woman is mostly-NEET. If she is mostly-NEET, the lack of basic qualifications may affect her ability to get work or to enter into a tertiary level qualification that could give her some robustness in the labour market. If she is in work, the lack of a qualification is likely to have an impact on the type and quality of the work she can do, and the level of remuneration she receives now and over her lifetime. It may also make her vulnerable to layoffs or undesirable working conditions (eg casual work or underutilisation).

Given these considerations, it is important to think of young women, and young mothers in particular, in terms of their possible vulnerability. For young mothers, the vulnerability that comes with a lack of education is likely to be exacerbated when coupled with the difficulties of managing children alongside paid work or study. The longitudinal study *Growing Up in New Zealand* found that one in five mothers of two year olds who were not in paid work cited childcare costs as a disincentive to employment (Morton et al, 2014).

The following table shows that 51 percent of young mothers aged 20-24 had NCEA L2 (or equivalent). This is markedly lower than young women without children (73 percent) and for men (61 percent). Some of these young mothers may be in a relationship where it is understood that their partner will be the main income earner. However, in these situations, education is an insurance against a change of circumstances, such as a relationship breakup or health care issues for the main income earner.

Table 9: NCEA L2 (or equiv.) by sex and motherhood status
 NZ population (2015), aged 20-24

| NCEA L2 (or equiv.) | Sex and motherhood status | | | | | |
|---------------------|---------------------------|------|------------------------------|------|---------------|------|
| | Young men | | Young women without children | | Young mothers | |
| | N | % | N | % | N | % |
| no level 2 | 70,389 | 38.9 | 35,286 | 26.6 | 13,869 | 49.3 |
| level 2 | 110,427 | 61.1 | 97,335 | 73.4 | 14,265 | 50.7 |

* Percentages are column percentages

* Figures have been random rounded to base 3

Not surprisingly, the mostly-NEET rate for young mothers without NCEA L2 (or equivalent) is high at 72% (see Table 10). Some young mothers choose not to work or study when they have children to look after, but the fact that those without a level 2 qualification are more likely to be mostly-NEET may be because this is not their choice.

Table 10: Young mothers only: mostly-NEET by NCEA L2 (or equiv.)
 NZ population (2015), aged 20-24

| mostly-NEET | NCEA L2 (or equiv.) | | | |
|-------------|---------------------|------|---------|------|
| | no level 2 | | level 2 | |
| | N | % | N | % |
| mostly-NEET | 9,972 | 71.9 | 7,416 | 52.0 |
| Other | 3,897 | 28.1 | 6,849 | 48.0 |

* Percentages are column percentages

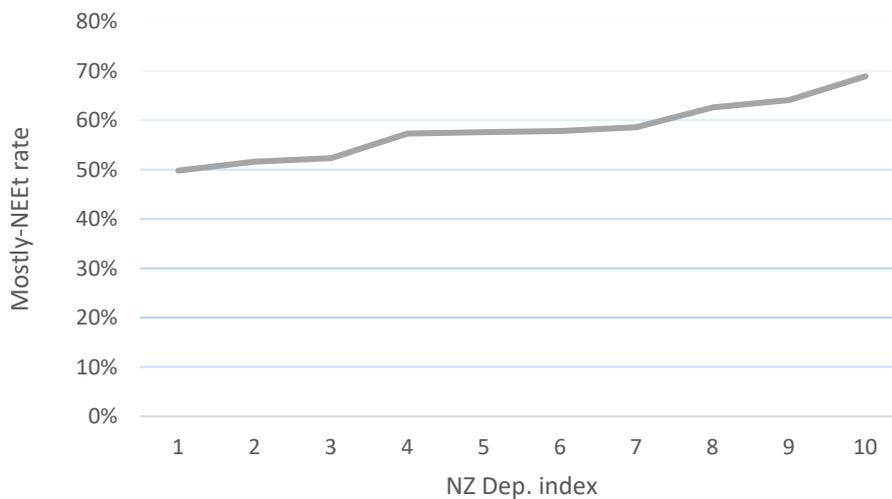
* Figures have been random rounded to base 3

Deprivation index of young mothers

Earlier we saw that the mostly-NEET rate increased in areas of higher deprivation; there was approximately a twenty percentage point difference in the mostly-NEET rate between those living in the least deprived areas and those in the highest.

In Figure 3, we see a similar pattern for young mothers. Again, there is approximately 20 percentage point difference across the index. However, the stand-out feature of Figure 3 is that the mostly-NEET rate is high (over 50 percent) for all Dep index values. Just under half of all Mostly-NEET mothers live in the two most deprived areas.

Figure 3: Young mothers' (20-24) mostly-NEET rate by NZ Dep. index



Employment

Employment experience is a potentially protective factor for young mothers and was explored to understand resilience. Half (51 percent) of the young mothers were not employed for wages and salaries at any point throughout 2015. This compares to 15 percent and 17 percent for young women without children and young men respectively. Despite the marked differences in these figures it is understandable that some young mothers may not be in a position where they are able to work (or wish to work).

Another approach to examining whether women have a work history is to look at whether they have ever received wages or salary. Table 11 shows this information¹². The proportion of young mothers who had never worked for wages or salaries is higher than young women without children or for men.

Table 11: Ever worked by sex and motherhood status
NZ population, aged 20-24

| Ever worked | Sex and motherhood status | | | | | |
|--------------|---------------------------|------|------------------------------|------|---------------|------|
| | Young men | | Young women without children | | Young mothers | |
| | N | % | N | % | N | % |
| Never worked | 14,562 | 8.1 | 11,040 | 8.3 | 3,972 | 14.1 |
| Have worked | 166,254 | 91.9 | 121,581 | 91.7 | 24,162 | 85.9 |

* Percentages are column percentages

* Figures have been random rounded to base 3

Having a previous work history appears to make a difference in terms of whether a young mother is likely to be mostly-NEET. As the following table (Table 12) shows, young mothers with no work experience have a very high mostly-NEET rate of 88%. This is 30 percentage points higher than the rate for those who have worked (58%).

¹² We define Ever-worked as ever worked for wages and salary in New Zealand.

Table 12: Young mothers only: mostly-NEET by Ever worked
 NZ population, aged 20-24

| mostly-NEET | Ever worked | |
|-------------|--------------|------|
| | Never worked | |
| | N | % |
| mostly-NEET | 3,492 | 87.8 |
| other | 483 | 12.2 |

* Percentages are column percentages

* Figures have been random rounded to base 3

Welfare assistance

We find that three quarters of mostly NEET mothers are receiving welfare assistance. Half of those in work or training were on a benefit suggesting that welfare is important in accessing work and education. Sixty-five percent of all young mothers were receiving government support in the form of a primary benefit (excludes accommodation benefits and student allowance).

Ref. 13: Young mothers only: On benefit by mostly-NEET

| On benefit | mostly-NEET | | | |
|------------|-------------|------|-------|------|
| | mostly-NEET | | other | |
| | N | % | N | % |
| No | 4,443 | 25.5 | 5,316 | 49.5 |
| Yes | 12,948 | 74.5 | 5,427 | 50.5 |

* Percentages are column percentages

* Figures have been random rounded to base 3

..S =suppressed

Driver licence

New Zealanders get a driver licence through the graduated licence system where a driver progresses from learner's licence, through to restricted, and then through to a full licence. A driver on a restricted licence is able to drive, without a supervisor, with dependents in the car. Therefore, for the purposes of travelling to and from work or education and childcare, a restricted car licence is arguably as useful as a full car licence to a mother.

The proportion of young mothers with a car driver license that allows them to drive without a supervisor (ie restricted or full) is lower than it is for young women without children and for young men. In particular, 45 percent of young mothers had a restricted or full license, compared to 61 percent for young women without children and 65 percent for young men.

Table 14: Car driver licence by sex and motherhood status
 NZ population (2015), aged 20-24

| Car driver licence | Sex and motherhood status | | | | | |
|----------------------|---------------------------|------|------------------------------|------|---------------|------|
| | Young men | | Young women without children | | Young mothers | |
| | N | % | N | % | N | % |
| no licence/ learners | 63,549 | 35.1 | 52,197 | 39.4 | 15,462 | 55.0 |
| restricted/full | 117,267 | 64.9 | 80,424 | 60.6 | 12,672 | 45.0 |

* Percentages are column percentages
 * Figures have been random rounded to base 3

Not having a driver licence can potentially make young mothers vulnerable in a number of ways. If they want to get a job or undertake study they may find it more difficult to manage if they cannot drive a child to childcare and drive themselves to work. These difficulties may be reflected in the mostly-NEET rates for young mothers without a driver licence. Although it is less common for a young mother to have a driver licence (restricted or full) those that do have a licence are less likely to be mostly-NEET. The mostly-NEET rate for those with licences is 49 percent compared to 72 percent for those without licences.

Table 15: Young mothers only: mostly-NEET status by Driver licence
 NZ population (2015), aged 20-24

| mostly-NEET status | Car driver licence | | | |
|--------------------|----------------------|------|-----------------|------|
| | no licence/ learners | | restricted/full | |
| | N | % | N | % |
| mostly-NEET | 11,166 | 72.2 | 6,225 | 49.1 |
| other | 4,299 | 27.8 | 6,447 | 50.9 |

* Percentages are column percentages
 * Figures have been random rounded to base 3

Conclusion

NEET is a commonly understood indicator of youth 'at risk' of poor labour market outcomes where risk is generally interpreted through population rates rather than individual duration. The IDI presents the opportunity to consider the NEET experience by duration.

High level statistics on NEET sometimes 'explain' higher female NEET rates as a consequence of caregiving responsibilities. This may reduce policy imperatives to provide pathways to further education and training for mothers. As contemporary policy attention moves to address child poverty and well-being, the employment patterns of parents, particularly mothers, are important to understand.

Women have historically experienced higher levels of unemployment than men at all ages. Caregiving arrangements are a strong contributing factor on women's ability to obtain work, the hours undertaken, pay rates and career progression.

A gendered divide on caring starts with the birth of the child and continues as children progress through early childhood education, primary and secondary school (eg Sin et al 2018).

We make no judgement or recommendation about the "best time" to have children but acknowledge that earlier motherhood may create difficulties engaging in the labour market or education. This paper quantifies the size of the group of young mothers who may face that difficulty.

While this report confirmed that young mothers have higher mostly-NEET rates than their peers, our policy focus has been to establish whether further education and sustainable work is *within the mother's reach*. Throughout this investigation we have noted human capital differences between young mothers who are engaged in work and education and those who are not. There are a number of factors associated with high mostly-NEET rates that point to a lack of personal resource and the potential to realise economic independence. Such factors include: no NCEA level 2; no driver licence; no work experience; welfare benefit receipt and a low socio-economic living environment.

The IDI is useful as a tool to investigate the labour market potential of small groups. It has given us the ability to investigate NEET rates without the sample error issues that limit the use of survey data. There are many limitations to this type of administrative data reporting but on balance, the insights outweigh the negatives.

An additional advantage of using the IDI has been our ability to produce sub-sets of tables by geography, and ethnic break downs, which will be useful to service providers targeting specific areas or cultural groups. In the case of young mothers this may lead to regional responses involving local community, iwi and employers.

It is certainly to be expected that a young mother may not wish to work or study immediately after the birth of her child. The Parental Leave and Employment Protection Act 1987 was introduced, in part, to set a minimum level of support for eligible mothers over this period.

Policies which allow choice and graduated engagement are likely to be most effective. Investment in this group is likely to have positive long-term gains.

Many of the possible policy responses are not new. It has often been said that education will alleviate some of the risks for young people. There have been a number of agencies and not for profit organisations that have suggested, or worked towards, providing pathways for those 'at risk' to get a driver licence. There have also been acknowledgements that for mothers, childcare is part of the solution (eg Ete *forthcoming*).

Ongoing research and monitoring of the factors included here, particularly regional reports, will support regional economic development and the development of community-led responses to support.

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Appendix A: Deprivation Index by NEET

Table A1: Dep 2013 by mostly-NEET

NZ population (2015), aged 15-24

| Dep 2013 | mostly-NEET | | |
|-----------|-------------|-------------|--------------|
| | N | row percent | col. percent |
| 1 | 3,270 | 5.5 | 3.9 |
| 2 | 3,984 | 6.8 | 4.8 |
| 3 | 4,470 | 7.8 | 5.4 |
| 4 | 5,190 | 9.2 | 6.2 |
| 5 | 6,117 | 10.3 | 7.3 |
| 6 | 6,891 | 11.6 | 8.3 |
| 7 | 8,259 | 13.2 | 9.9 |
| 8 | 10,734 | 15.4 | 12.9 |
| 9 | 14,073 | 18.1 | 16.9 |
| 10 | 20,244 | 24.6 | 24.3 |

* Not specified = 912 (1.1%)

* Figures have been random rounded to base 3

Appendix B: Regional Tables

Table B1: Young women without children: Region by mostly-NEET status
 NZ population (2015), aged 20-24

| Region | mostly-NEET status | | | | All | |
|---------------------------------|--------------------|------|--------|------|--------|-------|
| | mostly-NEET | | other | | N | % |
| | N | % | N | % | | |
| Northland Region | 534 | 19.4 | 2,214 | 80.6 | 2,748 | 100.0 |
| Auckland Region | 6,093 | 11.7 | 46,101 | 88.3 | 52,194 | 100.0 |
| Waikato Region | 1,569 | 14.0 | 9,612 | 86.0 | 11,181 | 100.0 |
| Bay of Plenty Region | 978 | 16.9 | 4,818 | 83.1 | 5,796 | 100.0 |
| Gisborne Region | 195 | 21.8 | 699 | 78.2 | 894 | 100.0 |
| Hawkes Bay Region | 462 | 15.4 | 2,538 | 84.6 | 3,000 | 100.0 |
| Taranaki Region | 282 | 12.6 | 1,959 | 87.4 | 2,241 | 100.0 |
| Manawatu-Wanganui Region | 768 | 12.6 | 5,307 | 87.4 | 6,075 | 100.0 |
| Wellington Region | 1,584 | 9.6 | 15,000 | 90.4 | 16,584 | 100.0 |
| West Coast Region | 84 | 15.5 | 459 | 84.5 | 543 | 100.0 |
| Canterbury Region | 1,290 | 8.1 | 14,730 | 91.9 | 16,020 | 100.0 |
| Otago Region | 510 | 5.6 | 8,640 | 94.4 | 9,150 | 100.0 |
| Southland Region | 225 | 11.1 | 1,794 | 88.9 | 2,019 | 100.0 |
| Tasman Region | 72 | 9.7 | 669 | 90.3 | 741 | 100.0 |
| Nelson Region | 138 | 13.0 | 921 | 87.0 | 1,059 | 100.0 |
| Marlborough Region | 102 | 13.4 | 660 | 86.6 | 762 | 100.0 |
| Area Outside Region | ..S | ..S | ..S | ..S | ..S | ..S |
| Not specified | ..S | ..S | ..S | ..S | ..S | ..S |

Percentages are row percentages

* Figures have been random rounded to base 3

..S = suppressed

Table B2: Young mothers: Region by mostly-NEET status
 NZ population (2015), aged 20-24

| Region | mostly-NEET status | | | | All | |
|--------------------------|--------------------|------|-------|------|-------|-------|
| | mostly-NEET | | other | | N | % |
| | N | % | N | % | | |
| Northland Region | 1,020 | 67.9 | 483 | 32.1 | 1,503 | 100.0 |
| Auckland Region | 5,310 | 62.5 | 3,192 | 37.5 | 8,502 | 100.0 |
| Waikato Region | 2,241 | 64.6 | 1,230 | 35.4 | 3,471 | 100.0 |
| Bay of Plenty Region | 1,473 | 63.1 | 861 | 36.9 | 2,334 | 100.0 |
| Gisborne Region | 330 | 62.5 | 198 | 37.5 | 528 | 100.0 |
| Hawkes Bay Region | 846 | 61.4 | 531 | 38.6 | 1,377 | 100.0 |
| Taranaki Region | 549 | 63.5 | 315 | 36.5 | 864 | 100.0 |
| Manawatu-Wanganui Region | 1,164 | 61.3 | 735 | 38.7 | 1,899 | 100.0 |
| Wellington Region | 1,392 | 57.6 | 1,023 | 42.4 | 2,415 | 100.0 |
| West Coast Region | 168 | 68.3 | 78 | 31.7 | 246 | 100.0 |
| Canterbury Region | 1,614 | 58.4 | 1,149 | 41.6 | 2,763 | 100.0 |
| Otago Region | 444 | 55.6 | 354 | 44.4 | 798 | 100.0 |
| Southland Region | 399 | 56.6 | 306 | 43.4 | 705 | 100.0 |
| Tasman Region | 129 | 64.2 | 72 | 35.8 | 201 | 100.0 |
| Nelson Region | 150 | 61.0 | 96 | 39.0 | 246 | 100.0 |
| Marlborough Region | 144 | 55.8 | 114 | 44.2 | 258 | 100.0 |
| Area Outside Region | ..S | ..S | ..S | ..S | ..S | ..S |
| Not specified | ..S | ..S | ..S | ..S | ..S | ..S |

Percentages are row percentages

* Figures have been random rounded to base 3

..S = suppressed

Table B3: Young women without children: Region by no NCEA L2 (or equiv)
 NZ population (2015), aged 20-24

| Region | no NCEA L2 (or equiv) | | | |
|--------------------------|-----------------------|------|---------|------|
| | no level 2 | | level 2 | |
| | N | % | N | % |
| Northland Region | 768 | 27.9 | 1,983 | 72.1 |
| Auckland Region | 15,723 | 30.1 | 36,471 | 69.9 |
| Waikato Region | 2,526 | 22.6 | 8,655 | 77.4 |
| Bay of Plenty Region | 1,701 | 29.3 | 4,095 | 70.7 |
| Gisborne Region | 255 | 28.5 | 639 | 71.5 |
| Hawkes Bay Region | 783 | 26.1 | 2,217 | 73.9 |
| Taranaki Region | 516 | 23.0 | 1,728 | 77.0 |
| Manawatu-Wanganui Region | 1,308 | 21.5 | 4,767 | 78.5 |
| Wellington Region | 3,186 | 19.2 | 13,398 | 80.8 |
| West Coast Region | 138 | 25.4 | 405 | 74.6 |
| Canterbury Region | 3,693 | 23.1 | 12,327 | 76.9 |
| Otago Region | 2,046 | 22.4 | 7,104 | 77.6 |
| Southland Region | 435 | 21.5 | 1,587 | 78.5 |
| Tasman Region | 189 | 25.4 | 555 | 74.6 |
| Nelson Region | 336 | 31.7 | 723 | 68.3 |
| Marlborough Region | 234 | 30.6 | 531 | 69.4 |
| Area Outside Region | ..S | ..S | ..S | ..S |
| Not specified | ..S | ..S | ..S | ..S |

Percentages are row percentages

* Figures have been random rounded to base 3

..S = suppressed

Table B4: Young mothers: Region by no NCEA L2 (or equiv)
 NZ population (2015), aged 20-24

| Region | no NCEA L2 (or equiv) | | | |
|--------------------------|-----------------------|------|---------|------|
| | no level 2 | | level 2 | |
| | N | % | N | % |
| Northland Region | 816 | 54.3 | 687 | 45.7 |
| Auckland Region | 4,014 | 47.2 | 4,488 | 52.8 |
| Waikato Region | 1,698 | 48.9 | 1,776 | 51.1 |
| Bay of Plenty Region | 1,128 | 48.3 | 1,206 | 51.7 |
| Gisborne Region | 282 | 53.1 | 249 | 46.9 |
| Hawkes Bay Region | 693 | 50.4 | 681 | 49.6 |
| Taranaki Region | 426 | 49.3 | 438 | 50.7 |
| Manawatu-Wanganui Region | 921 | 48.5 | 978 | 51.5 |
| Wellington Region | 1,089 | 45.1 | 1,323 | 54.9 |
| West Coast Region | 126 | 50.6 | 123 | 49.4 |
| Canterbury Region | 1,512 | 54.8 | 1,248 | 45.2 |
| Otago Region | 384 | 48.1 | 414 | 51.9 |
| Southland Region | 384 | 54.5 | 321 | 45.5 |
| Tasman Region | 117 | 57.4 | 87 | 42.6 |
| Nelson Region | 132 | 53.0 | 117 | 47.0 |
| Marlborough Region | 126 | 48.8 | 132 | 51.2 |
| Area Outside Region | ..S | ..S | ..S | ..S |
| Not specified | ..S | ..S | ..S | ..S |

Percentages are row percentages

* Figures have been random rounded to base 3

..S = suppressed

Table B5: Young women without children: Region by Car licence
 NZ population (2015), aged 20-24

| Region | Car licence | | | |
|--------------------------|----------------------|------|-----------------|------|
| | no licence/ learners | | restricted/full | |
| | N | % | N | % |
| Northland Region | 1,056 | 38.4 | 1,692 | 61.6 |
| Auckland Region | 23,211 | 44.5 | 28,983 | 55.5 |
| Waikato Region | 3,420 | 30.6 | 7,761 | 69.4 |
| Bay of Plenty Region | 2,145 | 37.0 | 3,651 | 63.0 |
| Gisborne Region | 408 | 45.5 | 489 | 54.5 |
| Hawkes Bay Region | 1,290 | 43.0 | 1,710 | 57.0 |
| Taranaki Region | 696 | 31.0 | 1,548 | 69.0 |
| Manawatu-Wanganui Region | 1,992 | 32.8 | 4,083 | 67.2 |
| Wellington Region | 7,353 | 44.3 | 9,234 | 55.7 |
| West Coast Region | 186 | 34.3 | 357 | 65.7 |
| Canterbury Region | 4,647 | 29.0 | 11,373 | 71.0 |
| Otago Region | 3,066 | 33.5 | 6,084 | 66.5 |
| Southland Region | 531 | 26.3 | 1,488 | 73.7 |
| Tasman Region | 216 | 29.1 | 525 | 70.9 |
| Nelson Region | 390 | 36.8 | 669 | 63.2 |
| Marlborough Region | 240 | 31.5 | 522 | 68.5 |
| Area Outside Region | ..S | ..S | ..S | ..S |
| Not specified | ..S | ..S | ..S | ..S |

Percentages are row percentages

* Figures have been random rounded to base 3

..S = suppressed

Table B6: Young mothers: Region by Car licence
 NZ population (2015), aged 20-24

| Region | Car licence | | | |
|--------------------------|----------------------|------|-----------------|------|
| | no licence/ learners | | restricted/full | |
| | N | % | N | % |
| Northland Region | 807 | 53.7 | 696 | 46.3 |
| Auckland Region | 5,490 | 64.6 | 3,012 | 35.4 |
| Waikato Region | 1,680 | 48.4 | 1,794 | 51.6 |
| Bay of Plenty Region | 1,194 | 51.2 | 1,140 | 48.8 |
| Gisborne Region | 297 | 56.3 | 231 | 43.8 |
| Hawkes Bay Region | 804 | 58.4 | 573 | 41.6 |
| Taranaki Region | 420 | 48.6 | 444 | 51.4 |
| Manawatu-Wanganui Region | 945 | 49.8 | 951 | 50.2 |
| Wellington Region | 1,410 | 58.5 | 1,002 | 41.5 |
| West Coast Region | 99 | 40.2 | 147 | 59.8 |
| Canterbury Region | 1,320 | 47.8 | 1,443 | 52.2 |
| Otago Region | 381 | 47.7 | 417 | 52.3 |
| Southland Region | 300 | 42.6 | 405 | 57.4 |
| Tasman Region | 84 | 41.2 | 120 | 58.8 |
| Nelson Region | 114 | 45.8 | 135 | 54.2 |
| Marlborough Region | 105 | 40.7 | 153 | 59.3 |
| Area Outside Region | ..S | ..S | ..S | ..S |
| Not specified | ..S | ..S | ..S | ..S |

Percentages are row percentages

* Figures have been random rounded to base 3

..S = suppressed