

**The changing nature of young people's
transitions in New Zealand**

David Rea and Paul Callister

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AUTHORS	David Rea and Paul Callister
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INSTITUTE OF POLICY STUDIES	School of Government Victoria University of Wellington Level 5 Railway Station Building Bunny Street Wellington NEW ZEALAND PO Box 600 Wellington NEW ZEALAND Email: ips@vuw.ac.nz Phone: + 64 4 463 5307 Fax: + 64 4 463 7413 Website www.ips.ac.nz
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Abstract

Adolescence involves a wide variety of transitions to adult roles and responsibilities. These transitions include leaving home and school, getting a job, forming relationships, and sometimes having children. This paper reports on research that has investigated the changing nature of youth transitions in New Zealand over the last 30 years. Our research aimed to uncover whether birth cohorts of young people have undertaken the transition to adulthood differently, and if so, what caused the differences. We found important changes in the nature of youth transitions. We also found that for cohorts who were born in the late 1960s and early 1970s, the transition to adulthood differed from that experienced by both the preceding and later cohorts. The evidence suggests that the state of the labour market at the time was a key driver of these differences. There are a range of important policy implications from this study, particularly in the context of the current economic recession.

1. Introduction

A theme in some recent public comment is that today's generation of young people are unwilling to shoulder adult responsibilities. For example, a 2008 *Dominion Post* article stated that young people today were more interested in living lives devoted to 'pure pleasure' rather than taking on the traditional adult roles of jobs and marriage.

'Lives devoted to pure pleasure: Marriage, house and babies? No thanks. Generation Y "party animals" would rather splurge money on five "lifestyle pillars" in pursuit of the good life and in an attempt to dodge traditional commitments, research shows'. (MacDonald, 2008)

Interestingly, such comments have also been made about many previous generations of young people. For example, the 1954 Report of the Special Committee on Moral Delinquency in Children and Adolescents stated:

'The starting wage for adolescents is often somewhat high, and thrift is not practised by them. A few years hence, these adolescents may be in the ranks of those who complain of their inability to obtain homes. This has prompted people to urge that a compulsory savings scheme should be instituted to guard young people from the evils of misspent leisure and to develop in them that sense of reliability which is so often lacking.' (Mazengarb, 1954:40)

Historically the notion that the current generation of young people are less willing or equipped to take on adult responsibilities has sometimes motivated policy change. For example, in 1944 the Director General of Education, Clarence Edward Beeby announced that the school leaving age was to rise from 14 years to 15 years at the end of 1945. He stated that:

'Fears of juvenile delinquency had not so far been realised but all conditions for it existed. An increasing number of adolescents are missing the discipline of normal home life and it is essential for the school to keep a grip on them in these essential years.' (Williams, 2007)

So how different are today's young people compared to young people of previous decades? Are young people today less willing to make the transition to adult responsibilities and roles? Or is it the case that young people today are similar to previous generations, and that older generations simply forget what it is like to be young? Our paper provides evidence about some aspects of this interesting issue.

The paper reports on a research study that has investigated the changing nature of young people's transition to adult roles and responsibilities. These transitions include leaving home, gaining employment, having children, and going overseas. The research aimed to answer the following two questions:

- how have young people's transition to adult roles and responsibilities changed over the last 30 years?
- if there have been changes, why have they occurred?

To answer our questions, we have used census data from 1976 onwards to analyse how successive cohorts of young people have navigated adolescence.

Our findings have important policy implications. An understanding of how successive cohorts have undertaken the transition to adulthood, and in particular the relative difficulty faced by different generations in making this transition, provides insights for policy in a variety of areas.

The rest of the paper is structured in the following manner. Section 2 reviews our approach to conceptualising the nature of youth and adolescence. Section 3 provides an overview of youth transitions currently. Section 4 introduces our methodology and the cohorts that we study. Section 5 looks at the transition experiences of different cohorts. Section 6 summarises the overall differences between cohorts, and draws out some of the key themes that emerge from the analysis. Section 7 looks at how youth transitions in New Zealand compare to other OECD countries. Section 8 reviews explanations for why changes might have occurred. Section 9 concludes with a discussion of the policy implications of our findings.

2. Conceptualising young people as undertaking transitions

Typically in New Zealand we describe a young person as being somewhere within the range of 12 to 24 years. We use a variety of different labels to describe this time of life including youth, adolescent, teenager, rangatahi, and taiohi.

Youth as a separate stage of life seems to occur in all societies, although it does not always have a label. In a review of 186 studies of young people in pre-industrial societies, it was found that in every society studied where there was some age range between puberty and adult responsibilities. But in only about half of the societies studied was there a separate name for a young person (Schlegel and Barry, 1991). The exact age range and nature of adolescence varied considerably across the societies studied. Many societies had rituals or rites of passage marking the start (often around the time of puberty) and end of adolescence. Ethnographic studies also show that many societies have separately defined roles for young people, and there are many similar youth related activities and rites of passage. Ethnographic studies tend to show that pre-industrial societies have a shorter period of adolescence than post-industrial societies (Schlegel and Barry, 1991).

The nature of adolescence also shows substantial variation across time within societies. Social historians and sociologists have focussed on the nature and variation in adolescence across time in particular cultures (Ben-Amos, 1994; Graff, 1995). These studies have shown the degree of change in the age and roles of young people through time. A key feature of studies of the UK and US is both the increasing diversity of pathways but overall a gradual lengthening of the period of adolescence over the 20th century (Settersten, Furstenberg and Rumbaut, 2005).

An important aspect of being a young person is preparation for, and transition into, adult activities and responsibilities. In a modern New Zealand context these adolescent transitions might involve:

- gaining a drivers licence;
- leaving home;
- leaving formal education;
- the commencement of sexual activity;
- forming long-term partnerships outside the family;
- having and caring for children;
- entering into paid employment;
- moving to a new city or country;
- voting and the exercise of other civic rights and responsibilities.

Transitions do not all occur at the same time, may occur in different sequences, and are not necessarily linear. For example, a young person may leave home, come back again, and then leave again.

So what determines the nature and timing of the choices that young people make in regard to transitions?

We know a certain amount about the factors that influence young peoples' choices from longitudinal research such as the Dunedin and Christchurch studies. From such studies we have a detailed knowledge about the range of factors that influence, for example, a young persons transition to employment (Caspi, Wright, Moffitt and Silva, 1998), or the factors associated with a transition to early parenthood (Woodward, Fergusson and Horwood, 2006). Overall, it would seem that there are common risk and protective factors for a diverse range of outcomes, that these originate in both the individual as well as social environment, and that the influence of risk and protective factors occur over the life course, but seem particularly strong in early childhood (Eccles and Gootman, 2002).

The influence of the wider social environment is of course crucial in constraining many of the choices made by young people. Many aspects of a young person's transitions are constrained by social rules and conventions imposed by families, the community, and government. For example, the various ages at which a person can get married, leave school, or rent a house are all subject to legal provisions (Leather, 2008).

As a practical matter, the transition to adulthood requires learning and the mastery of new skills (Siegel and Shaughnessy, 1995). These might include self-management, maintaining a household, driving a car, being a paid employee, as well as skills for establishing and maintaining romantic relationships. The learning of these new skills is undertaken in a variety of formal settings such as schools, but also through personal trial and error. As with the early stages of any learning experience – consider learning to walk – adolescence is sometimes associated with experimentation, risk-taking, accidents, and mistakes. This phenomenon might explain the prevalence of a number of poor outcomes amongst adolescence including:

- an increase in criminal offending;
- an increase in accidental injury compared to young ages;
- higher mortality rates compared to younger ages;
- a higher prevalence of poor mental health; and
- higher rates of job turnover compared to older age groups as young people sample occupations and employers.

It is also probable that independence and the mastery of new skills bring satisfaction, and that young people are also naturally resilient. A common finding of research on young people is that adolescence is a good experience most of the time. Many studies reveal that young people are quite happy (Gilman, 2008). In New Zealand, approximately 86% of young people who responded to the Youth 2007 survey indicated they were either ‘ok’ or ‘very happy/satisfied’ with their lives (Adolescent Health Research Group, 2008).

The notion of young people undergoing a transition to adulthood is a rather mechanical view of young people, and it is important to note that there are many more aspects to being a young person than assuming adult roles and responsibilities. Our view of young people in transition is also not meant to imply any value judgement about the relative importance of being a young person versus an adult.

3. A cross sectional overview of transitions for young people using the Census 2006

So if transitions to adult roles and responsibilities are a critical feature of adolescence, what do these transitions look like for young people in New Zealand?

New Zealand has a number of excellent data sources from which it is possible to answer this question. The world renowned Dunedin and Christchurch longitudinal studies provide a rich picture of youth transitions. The Youth 2000 and Youth 2007 surveys also provide comprehensive cross-sectional information on young people in secondary school.

The Census also provides information on young people, and in what follows we use 2006 census data to provide a snapshot of young people in transition. We look at how ‘family living arrangements’ and ‘economic status’ differ with the age of a young person.

Transitions in family living arrangements involve young people leaving home to live with peers, partners, and sometimes children. Figure 1 shows the proportion of young people in these different arrangements in 2006. The family living arrangements in Figure 1 can be thought of as four mutually exclusive groups:

- those living with their parents or someone acting in a parental role (but not with partners or children of their own);
- those not living with family (without parents, partners, or children);
- those living with a partner, but without children; and
- those living with a child or children of their own (with or without a partner).¹

The 2006 census shows, as would be expected, that young people are progressively less likely to live with their parents as they get older. At age 12 around 98% of young people are living with one or more

¹Annex 1 provides further details about the underlying data.

of their parents. By age 18 this falls to 65%, and by age 24 only 21% of young people are living with their parents.

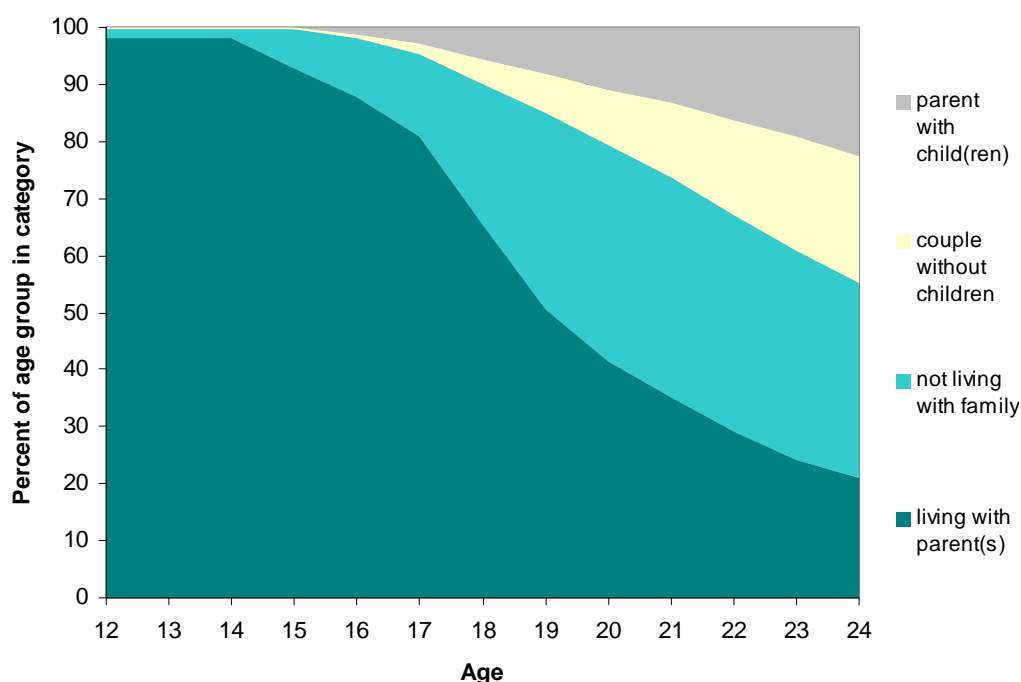
The extent to which young people live with their parents differs by sex and ethnic group. On average, young women tend to leave home earlier than young men. Young Māori, and to a lesser extent European, tend to leave home earlier, while young Asian and Pacific people tend to remain living with their parents for slightly longer.

A frequent transition is to leave home and go flatting with friends or to move to a hostel for tertiary education. These types of living arrangement are approximated by the category of ‘not living with parents, partners or children’. As can be seen, this tends to be the dominant living arrangements after leaving home. By age 24 about 34% of young people are living apart from family, and without partners or children.

Another potential living arrangement is to live with a partner, either as a married couple or in a de facto relationship.

Figure 1 shows that the proportion of young people living as a couple, but without children, steadily rises with age. By age 24 almost 22% of young people live in such an arrangement. Females are slightly more likely than males to be living with a partner without children, while European are slightly more likely than young people of Māori, Pacific and Asian ethnicity to be living as a couple without children.

Figure 1: Family living arrangements of young people by single year of age, 2006



Source: Census 2006 usually resident population. Data derived by Marny Dickson and Amy Russell.
 Note: Individuals are categorised into four mutually exclusive groups based on the young person’s role in family and the household composition. See annex 1 for details.

Another transition is having and raising children. This is represented in Figure 1 by the proportion of young people living with a dependent child. Figure 1 shows that at age 16 roughly 1% of young people are living with their own children, and by age 24 this has risen to roughly 23% of all young people. At all ages females are more likely than males to live with dependent children. There are also systematic differences between different ethnic groups with young people identifying as Māori and Pacific being more likely to live with dependent children.

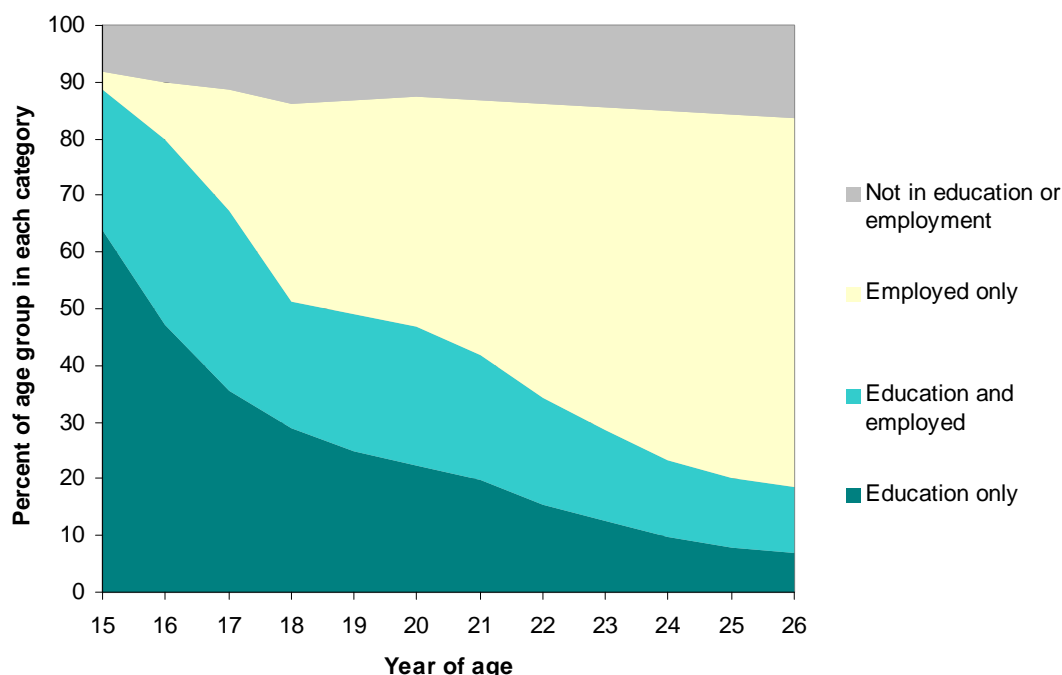
Another set of transitions involves changes in young people’s participation in education, employment, unpaid domestic work, and unemployment. Figure 2 is once again drawn from the 2006 Census, and

shows transitions in economic status. Young people are divided into the following mutually exclusive groups:

- only in education;
- in education and employment;
- only in employment; and
- neither in employment or education.

The 2006 census shows that at age 15 almost 90% of young people are in education. This is a surprisingly figure given that education is compulsory at this age.² As can be seen in Figure 2, the proportion of young people in education progressively declines, so that by age 24 only 23% are still participating. At all ages females tend to have a higher level of participation in education, as do European, Asian and young people in the ‘Other’ ethnic category.

Figure 2: Education and employment status of young people aged 15 to 24 (2006)



Source: Census 2006 usually resident population.

Note: Non responses are excluded from the analysis. See annex 1 for details of variables.

As can be seen from Figure 2, for many young people the transition to employment occurs while they are still in education. At age 16 almost 43% of young people are employed, the vast majority of whom are also attending some form of education. By age 24 approximately 75% of young people are participating in employment, but with the majority having left education. At all ages young men are more likely to be employed than young women. Those who identify as European or the ‘Other’ ethnic group are also more likely than other ethnic groups to be employed. The nature of employment also changes with age. At ages 15 to 19, around half of those employed are part-time. By ages 20 to 24 only around a fifth of employment is part-time.

Figure 2 also shows the proportion of young people who have left education, and who are also not employed. At age 16 roughly 10% of young people are not employed or studying. This group will be undertaking a range of activities including looking after dependent children, looking for work or pursuing leisure interests. At most ages, young women are more likely than young men to be outside

² The Census 2006 education question was ‘are you attending, studying or enrolled at school or anywhere else?’ Approximately 12% of 15 year olds did not answer this question, and they are excluded from the data underlying figure 2. As a result of this non response, the estimate of 89% of 15 year olds in education could be between 78% and 90%.

of education or employment. Māori and Pacific young people have higher rates than European, with Māori rates being almost twice those of European.

The analysis presented above provides a snapshot of youth transitions in 2006. While it provides a detailed picture of all young people, it suffers from the disadvantage that it is a cross-section of different people at different ages. There is the distinct possibility that those currently aged 15 will not, in a decades time, behave in the same manner as those currently aged 24. Ideally we would like to have information on the same individuals through time, to provide a more accurate picture of how different cohorts transitioned into adulthood. Unfortunately, a longitudinal dataset using linked census records is not yet available. It is, however, possible to use the Census to follow cohorts of people born in New Zealand, and the next section explains our methodology for doing this.

4. Our methodology for analysing the changing nature of youth transitions

The key research question of this study is to identify how transitions differ between successive generations of young people.

In order to do this, we have created a dataset using census data from 1976 to 2006. The starting point is 1976 primarily because this is the first census that has data available electronically. The dataset contains information on birth cohorts – who we have defined as groups of individuals born in New Zealand within a five-year window. Successive outcomes for each of these birth cohorts are measured at each census. This pseudo cohort methodology is the same approach as adopted by Callister (2006).

Figure 3 identifies the ten different cohorts that we follow. The Figure shows the census year in which each of these cohorts was aged 15-19 years. As can be seen, individuals in the first birth cohort were born in the years 1942 and 1946, and in 1961 they were aged between 15-19 years. Individuals in the youngest cohort were born between 1987 and 1991 – and were aged 15-19 years in 2006.

Figure 3: Young people 15-19 years of age, 1936 to 2007

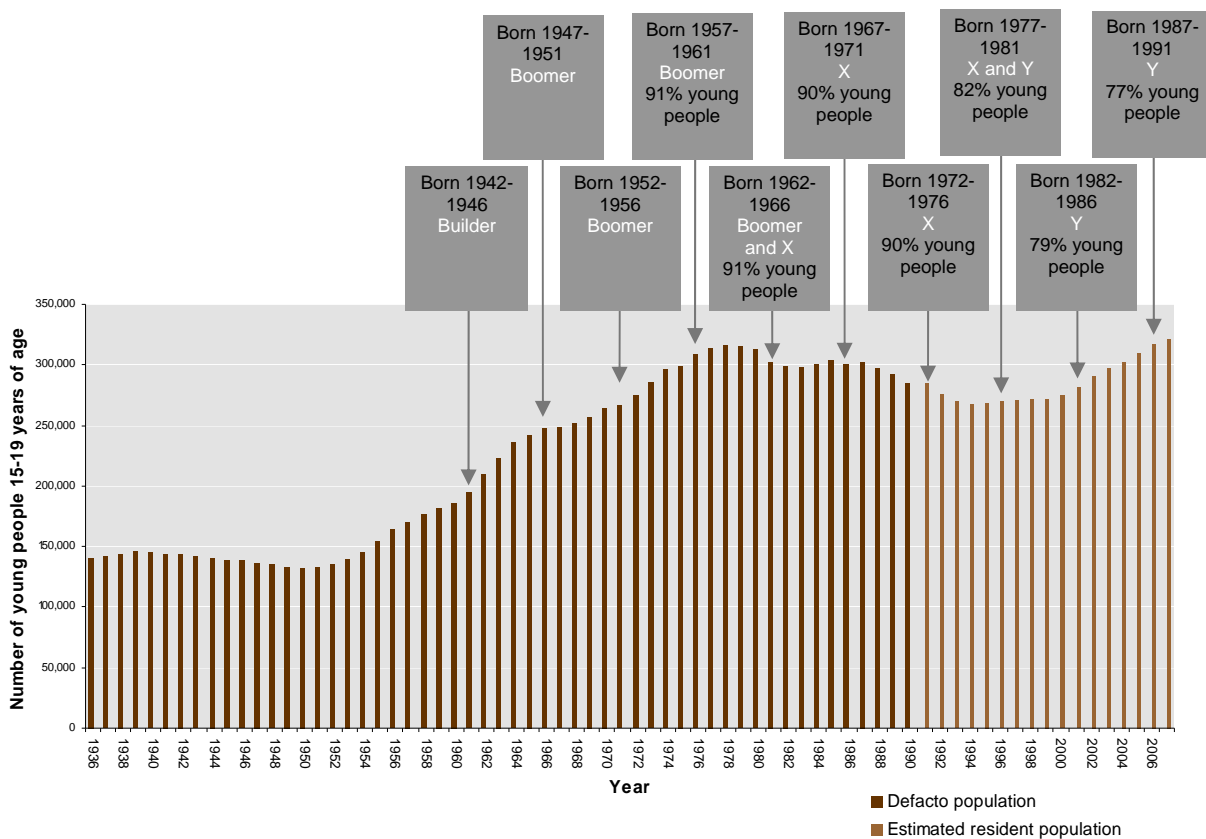


Figure 3 shows the estimated overall size of the total New Zealand population aged 15-19 years. The birth cohorts are smaller than the usually resident population because they contain only young people born in New Zealand. For more recent years, the birth cohorts represent a smaller proportion of the total youth population. For example, of the young people 15-19 years of age in 1976, roughly 91% were born in New Zealand and counted as part of the 1957-1961 cohort. In 2006 only 77% of 15-19 year olds were born in New Zealand.

Our methodology follows only those young people who were born in New Zealand, as we are attempting to measure changing outcomes for the same, or at least similar people, through time. Including young people born in other countries would mean that observed differences might be occurring because of changes in composition rather than behaviour. For example, if young people born in New Zealand and overseas have different propensities to be partnered, then changes in partnership behaviour of young people born in New Zealand might be obscured by a change in the composition of young people. However, given that an increasing proportion of young people are born overseas, our approach does of course carry the limitation that we are analysing outcomes for only a subset of young people in New Zealand.

Figure 3 also identifies how the ten different cohorts fit within the more traditional classification of Builder, Baby Boomer, X and Y generations (McCrimdell, 2007).³ One of the by-products of our analysis in subsequent sections is that we are able to test the hypothesis that there are systematic differences in how members of the ‘Baby Boom’ ‘X’ and ‘Y’ generations have navigated adolescence.

The usual window in which we observe the cohorts is from 1976 to 2006, so for much of the analysis we only track cohorts born from 1952 onwards. However, in some areas we have a smaller window because earlier data is not available from the census. In other areas we have a longer window as we are able to use administrative data, and this enables us to follow earlier cohorts.

For most of our analysis we measure outcomes for males and females in each birth cohort separately. From 1991 we are able to also measure outcomes for individuals identifying as European, Māori, Pacific Island, Asian and the Other ethnic group within each birth cohort.⁴

Using our approach we are able to measure outcomes for each cohort at ages 15-19, 20-24 and 25-29. Consider, as an example, the employment rates of males in two cohorts: those born in the years 1957 to 1961, and 1977 to 1981. Table 1 shows these different trajectories, as well as the census from which the information was collected.

Table 1: Proportion of young men employed at different ages, 1957-1961 and 1977-1981 birth cohorts

	1957-1961 birth cohort	1977-1981 birth cohort
Percent of cohort employed when aged 15-19 years	58% Census 1976	53% Census 1996
Percent of cohort employed when aged 20-24 years	87% Census 1981	75% Census 2001
Percent of cohort employed when aged 25-29 years	91% Census 1986	86% Census 2006

Our analysis consists of simply comparing cohort trajectories. As is well known, underlying these different trajectories are three different processes – an age effect (as young men get older they are more likely to be employed), period effects (labour market conditions were different in 1976 compared to 1996 for young people), and cohort effects (the extent to which young males felt compelled to fulfil traditional gender roles in the labour market were probably different between the cohorts).

It is important to note that our approach of using census cohorts is an approximation to a true longitudinal study. A true longitudinal study follows identifiable individuals, whereas we are following a group who we cannot separately identify. This means that our approach comes with an important caveat. At each census our cohorts have a slightly different composition due to migration

³ There is very little agreement on the exact dates framing the boundaries of these generational categories. McCrimdell (2007) provides the following for Australia: Builders born before 1946; Boomers born from 1946 to 1964; Generation X born 1965-1979; Generation Y born 1980-1994; and Generation Z born 1995-2008.

⁴ This paper measures ethnicity on a total response basis. Further details are provided in annex 1.

flows, attrition through death, changes resulting from a small proportion not having their birthplace recorded, as well as other forms of measurement error. In relation to analysis of differences between ethnic groups, there is also the additional possibility of people changing ethnic categories over time (Statistics New Zealand, 2005). It is also possible that a small number of people may change gender. Changes in ethnicity and gender can occur because of actual changes or simply miscoding errors. As a result, observed differences between cohorts can be the result of measurement and compositional change, as well as differences in cohort behaviour and economic opportunities. For example, it is possible that some of the differences in employment rates set out in table 1 have occurred because of compositional changes due to migration.

Another limitation of our approach is that we are only reporting population averages or the proportion of the population undertaking different activities. Young people are a diverse group undertaking many transitions in a short space of time. Our aggregate statistics disguises the substantial variation within each cohort.

A related limitation of the analysis is that the census only occurs every five years. The observed difference from census to census represents a net change, which will be the product of many different individual transitions. As an example, consider from table 1 the employment rate for the 1957-1961 cohort when aged 20-24. What is being observed is that 87% of the cohort was employed in the week of the census, up from 58% five years before. In the five year period between each census many individuals will have moved in and out of employment.

Lastly, and at a more general level, it is important to note that our analysis is constrained by what has been collected in a consistent manner. There are inevitably choices about what gets surveyed, and in retrospect there are many important areas that have not been measured, or measured differently through time. For example, the transition to adulthood for gay, transgender and bisexual young people has changed considerably (Brickell, 2009). However this group is invisible in our analysis because census data gives no information on sexuality. Disabled young people are another group for whom we do not have cohort data. Statistics are a lot like fossilised remains of a past world. As in palaeontology, what doesn't get fossilised is often more important than what does. Moreover, what does get fossilised often says a lot about the concerns of the time.

5. Cohort differences in youth transitions

So have successive birth cohorts of young people navigated adolescence differently? In what follows we set out information on the transition experiences of the different cohorts. We focus on transitions in living arrangements, economic status, geographic mobility, and other variables. In relation to living arrangements we measure the extent to which young people live with their parents, a partner, or their own dependent children. In regard to economic status we look at participation in education, employment, unemployment, benefit receipt, and average personal income. We also look at religious affiliation, movement between urban and rural areas of New Zealand, migration from New Zealand, and rates of mortality for the different cohorts. Unfortunately because of the manner in which earlier data was collected, we are unable to directly measure home ownership of young people over time.

For each variable analysed we look at the proportion of each cohort experiencing the outcome at ages 15-19, 20-24 and 25-29. Annex 1 provides details on the variables used.

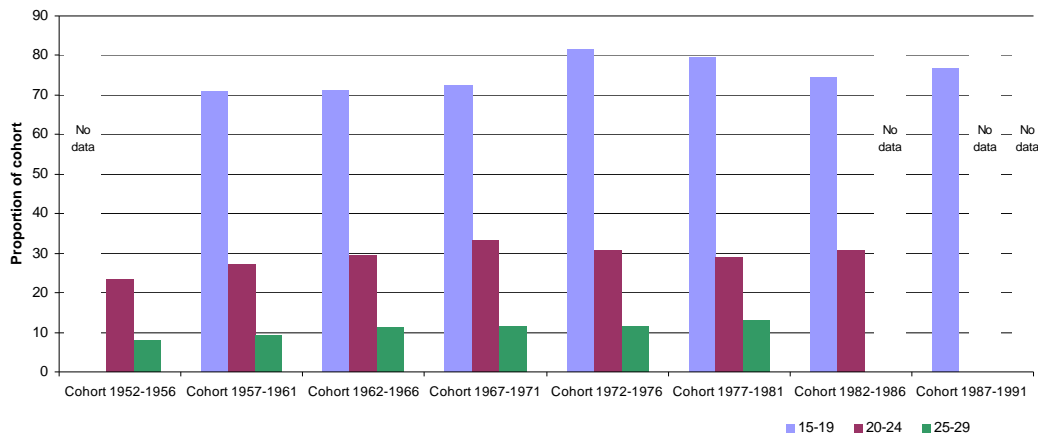
Living with parents

A key transition for young people is leaving home. Figure 4 shows the proportion of young people at ages 15-19, 20-24 and 25-29 years who are recorded as living with their parents on Census night. As can be seen, across all cohorts, as young people get older they are less likely to live with their parents. For the cohort born between 1982 and 1986, almost 75% lived with their parents at ages 15-19. By ages 20-24 this had dropped to just over 30%.

The census cohort data shows young men are slightly more likely than young women to live with their parents. Similarly, young people identifying as Pacific and Asian are also more likely to live with their parents than young people identifying with other ethnic groups.

Figure 4 shows that young people have become slightly more likely to live with their parents. Young people born in the 1980s are slightly more likely to live at home compared to young people born in the 1950s. However, the cohorts that were most likely to live with their parents were those born from 1967 to 1976. The fact that some members of these cohorts delayed leaving home was probably due to the timing of their transition in the early 1990s when youth unemployment was high. We would also expect that for later cohorts, incentives from student loans and allowances may also have had some effects. The changing values of parents about appropriate sexual behaviour of young people may also be a factor.

Figure 4: Proportion living with their parents at selected ages, NZ born birth cohorts



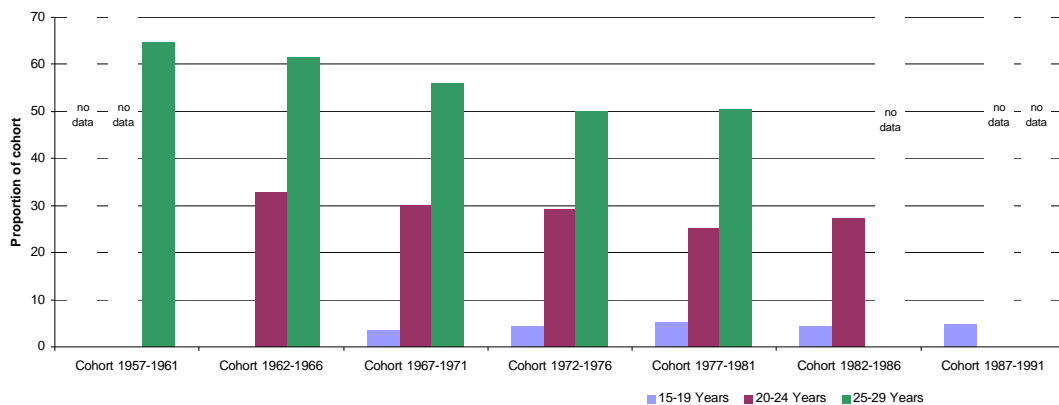
Source: Census 1976 to 2006.
Note: See annex 1 for details of variables.

Living with a partner

Entering into a relationship and living with a partner is another key transition for many young people. Figure 5 shows the proportion of young people living with a partner for different cohorts. As can be seen, as young people get older they are more likely to live independently with a partner. If we focus on the cohort born in the years 1982 to 1986, at ages 15-19 only 4% of young people were living with a partner. By ages 20-24 this was 27%. The census data shows that at young ages, women are more likely than men to live with a partner, and Māori and European are more likely to live with partners than other ethnic groups.

Figure 5 shows a general decline in the prevalence of partnership across the cohorts. The exception to this trend is at ages 15-19 where there were some small changes in the prevalence of partnership. Data from the most recent census also shows that there may have been a small but intriguing increase in partnership amongst young people at all ages.

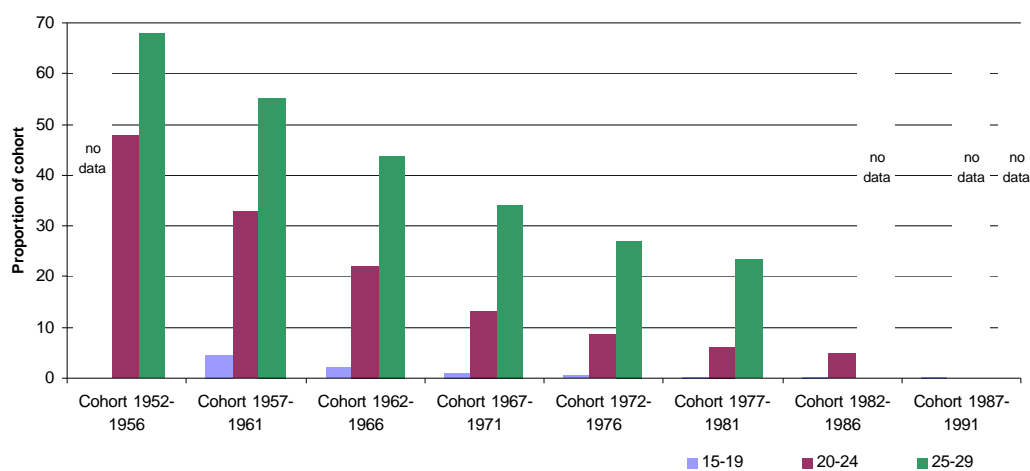
Figure 5: Proportion of young people living with a partner at selected ages, NZ born birth cohorts



Source: Census 1986 to 2006.
Note: See Annex 1 for details of variables.

As well as a decline in the prevalence of partnership, there has been a dramatic change in ‘form’ of partnership arrangements. Legal marriage as a form of partnership has declined in popularity, as an increasing proportion of young people ‘live together’, sometimes prior to marriage.⁵ Figure 6 shows the prevalence of legal marriage across birth cohorts. For the cohort born from 1982 to 1986 – roughly 0.3% lived as a legally married couple at ages 15-19 years, and this increased to 5% by ages 20-24. At each age, young women are more likely than young men to be married. Pacific Island people are also more likely than other ethnic groups to be married.

Figure 6: Proportion of young people in different New Zealand born birth cohorts legally married at selected ages



Source: Census 1976 to 2006.
Note: See Annex 1 for details of variables.

The dramatic reduction in the prevalence of legal marriage amongst recent cohorts partly reflects the general decline in partnering among young people. However it also reflects a dramatic shift away from legal marriage for young people living with a partner (Statistics New Zealand, 2008).

The changes in partnership and marriage among young people recorded by the census are also interesting when put in a longer historical context. The historical data on partnership and marriage tends to suggest that cohorts born between the mid 1940s and mid 1950s had a high prevalence of marriage and partnership compared to both later, as well as earlier cohorts. For the cohorts who were born earlier – for example in the 1900s – partnership occurred at slightly older ages, was formalised as marriage, and tended to last (Boddington, Khawaja and Didham, 2003).

Raising children

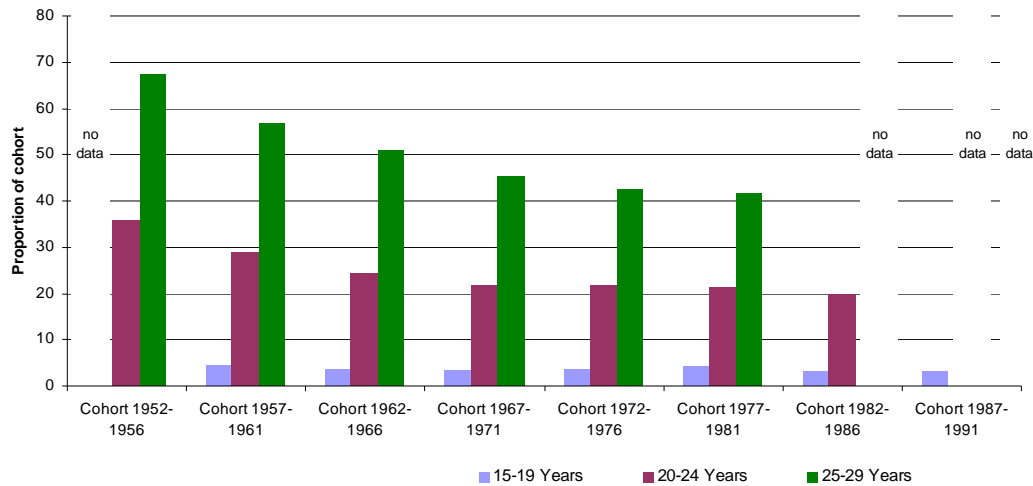
Having and raising children is another potential aspect of the transition to adulthood. One way this can be measured in the census is by the extent to which young people are parents and living with dependent children.

Figure 7 shows the proportion of young women who are parents and living with dependent children at 15-19, 20-24 and 25-29 years. Overall, as young women get older they are progressively more likely to be parents and live with their children. For example, if we focus on women born from 1982 to 1986, at age 15-19, just over 3% were parents and living with a dependent child. By ages 20-24 this had risen to almost 20%. Young people identifying as Māori and Pacific are also more likely than other ethnic groups to be parents and live with dependent children.

Figure 7 shows the decline in the prevalence of parenting and living with children across different cohorts of young women.

⁵For statistical purposes, civil unions are defined as legal ‘marriage’.

Figure 7: Proportion of young women who are parents and living with dependent children at selected ages, NZ born birth cohorts

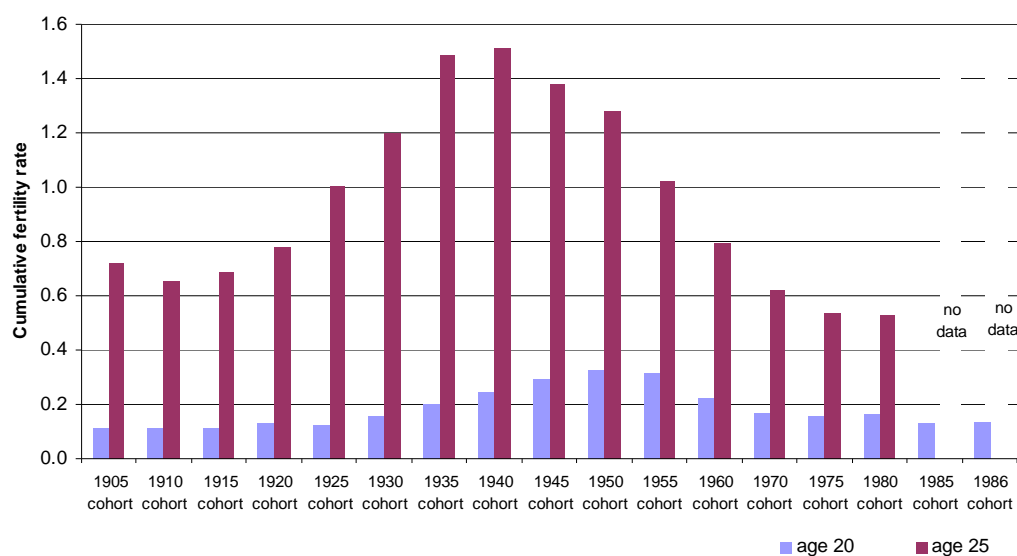


Source: Census 1976 to 2006.
 Note: See Annex 1 for details of variables. The data is not based on consistent definitions.

The dramatic changes shown in figure 7 mainly reflect declining fertility, although the diminishing importance of adoption may also have had some reverse effect. In relation to fertility, there has been an overall decline in the life time prevalence of child bearing, as some women choose to forgo parenting altogether. There has also been an increase in the age of childbearing, with women having children at older ages (Statistics New Zealand, 2008).

As an aside, Figure 8 looks at these fertility trends in a longer context. Figure 8 shows the cumulative fertility rate by ages 20 and 25 based on birth registration records. The figure shows the overall decline in fertility in the post 1950's birth cohorts of young women, which we argue translates into a decline in the proportion of women who were parents and living with children shown in the Census data. The data also shows that fertility rates of those born in the mid 1950s were comparatively high compared to earlier cohorts as well. As with marriage, post war cohorts of young people were more likely have children than both earlier and later cohorts.

Figure 8: Cumulative fertility rate by age 20 and 25 of single year of age birth cohorts – all women

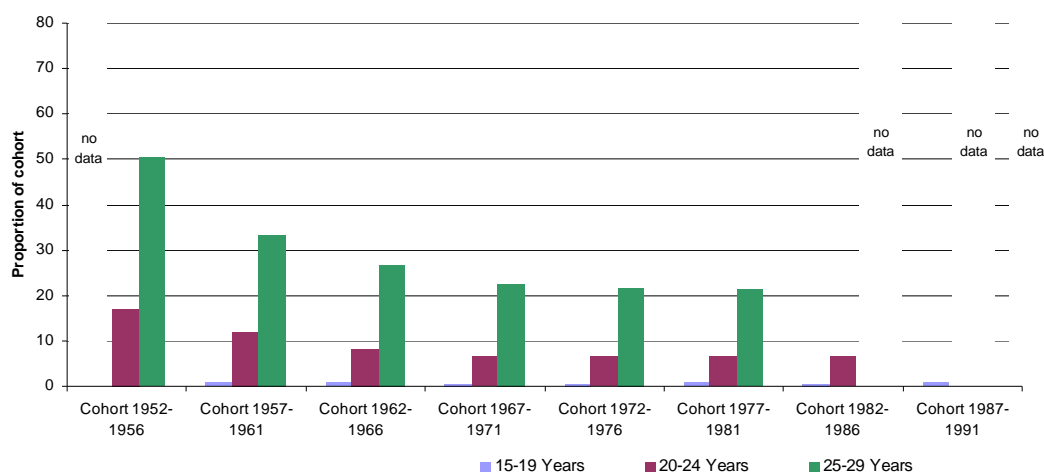


Source: Demographics Trends; 2007 Table 2.17.

Although it is only just shown in Figure 8, the cumulative fertility rate by age 20 of women born in 1986 was marginally higher than those born in 1985. This reflects a more general trend of a slight increase in fertility amongst women at all ages since 2005.

If we return to our cohort data from the census, we can also look at the proportion of young men who are parents and living with dependent children. Figure 9 shows the proportion of males who are parents and living with dependent children at 15-19, 20-24 and 25-29 years.

Figure 9: Proportion of young men who are parents and living with dependent children at selected ages, NZ born birth cohorts



Source: Census 1976 to 2006.

Note: See Annex 1 for details of variables. The data is not based on consistent definitions.

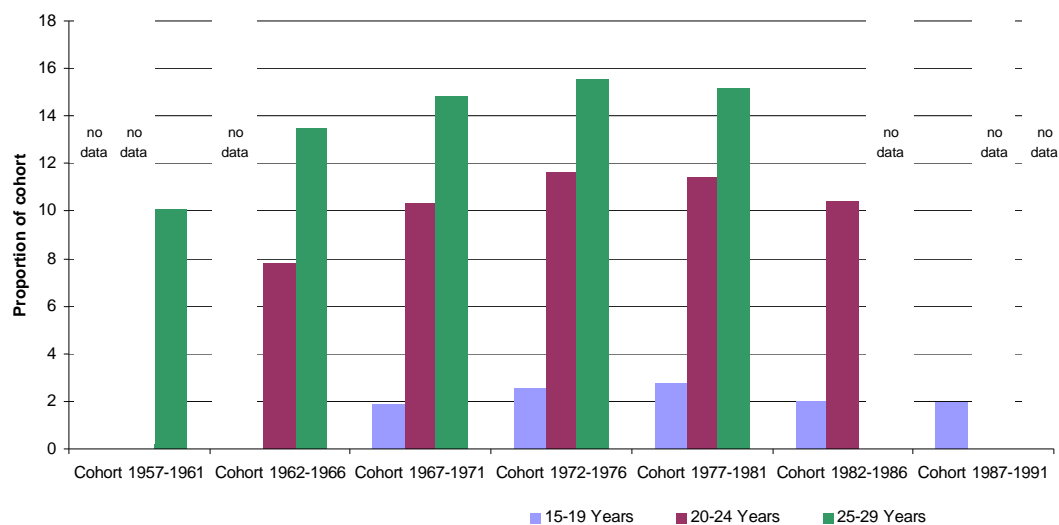
As well as the changes in fertility, there have been changes in the extent to which different cohorts have raised children in sole parent as opposed to two parent families.

Figure 10 shows the proportion of women in cohorts who are living with a dependent child as a sole parent at different ages. If we focus on the cohort born between 1982 and 1986, at ages 15-19 approximately 2% of women were sole parents. Although not shown in the graph, this compares to approximately 1% of women of the same age who were living as a couple with dependent children. By ages 20-24, slightly more than 10% of women in the cohort were sole parents. This compares with slightly less than 10% of women aged 20-24 in the cohort who were living as a couple with dependent children. Young women identifying as Māori and Pacific were more likely than other ethnic groups to be living with a child as a sole parent.

Figure 10 shows how the prevalence of sole parenthood amongst women has changed for different cohorts. As can be seen, the 1972-1976 cohort seems to have experienced the highest rates of sole parenthood, compared to both previous and subsequent cohorts.

Caring for a child as a sole parent is more likely to be undertaken by women rather than men. If we focus on age 20-24, typically less than 1% of young males are sole parents, whereas around 10% of young women in this age group are sole parents. Although the numbers are small, the trend in sole parenthood amongst young men seems to have followed the same pattern as young women.

Figure 10: Proportion of young women living as sole parents at different ages, NZ born birth cohorts



Source: Census 1986 to 2006.

Note: See Annex 1 for details of variables. Data for 1976 and 1981 is not available.

Participation in education

A key feature of the lives of young people is participation in education, and leaving school or a tertiary institution is an important transition.

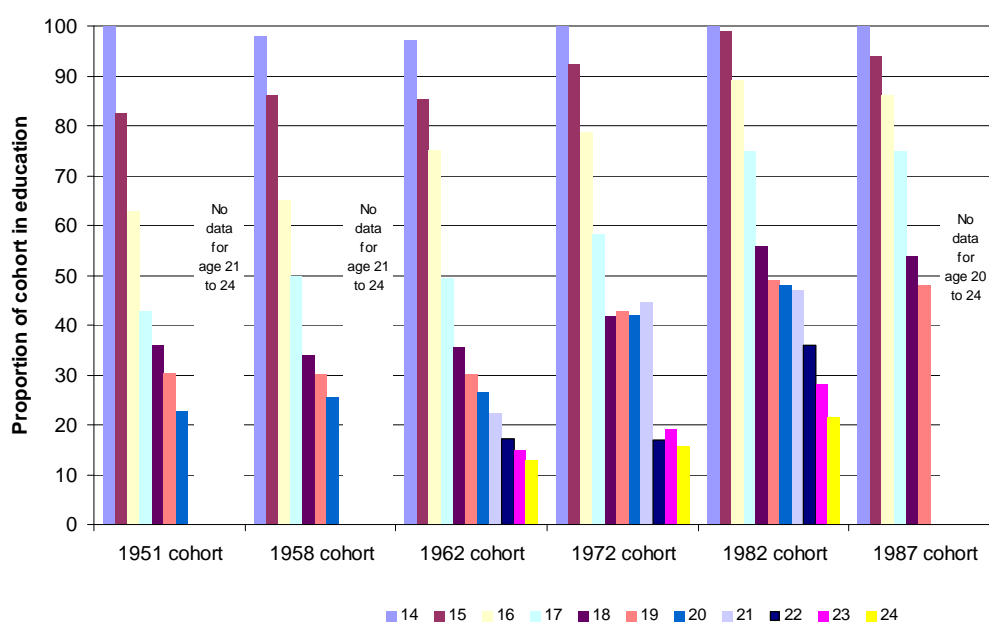
Somewhat surprisingly, given its economic and social importance, consistent information on participation in education was only collected in the 1996 and 2006 census. This means that we have not been able to use the census to analyse how participation in education has changed overtime.

We have instead turned to administrative information to analyse cohort changes. Since 1964 education institutions have reported enrolments, and this information has been published in annual editions of Education Statistics of New Zealand (1964-2006). The publication reports age specific participation rates using the estimated usually resident population as the denominator. The annual nature of the data means that it is possible to create education participation rates for cohorts born in the same year. While not directly comparable with census data, it is to our knowledge the best long-term data on educational participation.⁶

Figure 11 shows the age-specific education participation rates for six different cohorts. The graph shows the dramatic increase in participation for successive generations of young people. These increases have occurred in both secondary and tertiary education. Consider for example the difference between those born in 1951 compared to 1981. For those born in the early 1950s, by age 20 just over 20% were participating in education. For those born in the early 1980s, just under half were still participating in education at age 20. As can be seen, the age at which the average young person finishes education has steadily increased.

⁶It is important to note that the data is based on administrative records of enrolments as of 1 July each year. The data will include some multiple enrolments, even though there is some effort made to remove double counting. There has also been some effort to ensure that what is being measured is broadly comparable over time. A comparison of the administrative figures with both the HLFS as well as the 2006 census shows that they are not exact but reasonably close. Importantly, the data is for the whole population including permanent migrants. This is different to the census cohort data which is restricted to New Zealand born. As of 2007 the series seems to have been discontinued.

Figure 11: Proportion of single year of age cohorts enrolled in any form of education



Source: Education Statistics of New Zealand, 1964 to 2006.

As in other areas, young people who were born in the early 1970s have a somewhat different pattern of transitions. Figure 10 shows participation in education actually increased at ages 19-21 for the cohort born in 1972. This cohort turned 19 in 1991, and an increasing proportion remained at school or in tertiary education because of high rates of youth unemployment.

If we look at participation in education by gender, it is clear from a number of sources that the growth in participation has occurred to a greater extent amongst young women than young men. For example, long term trends can be inferred from the proportion of cohorts who have tertiary qualifications by ages 25-29 years. In the early cohorts, young men were more likely than young women to have tertiary qualifications, while the reverse was true for the most recent cohorts. Interestingly, the cohort born 1972-1976 seems to be the first cohort for which the proportion of young women with tertiary qualifications was higher than men at ages 25-29.

Participation in employment

The transition to employment is another important transition for many young people.

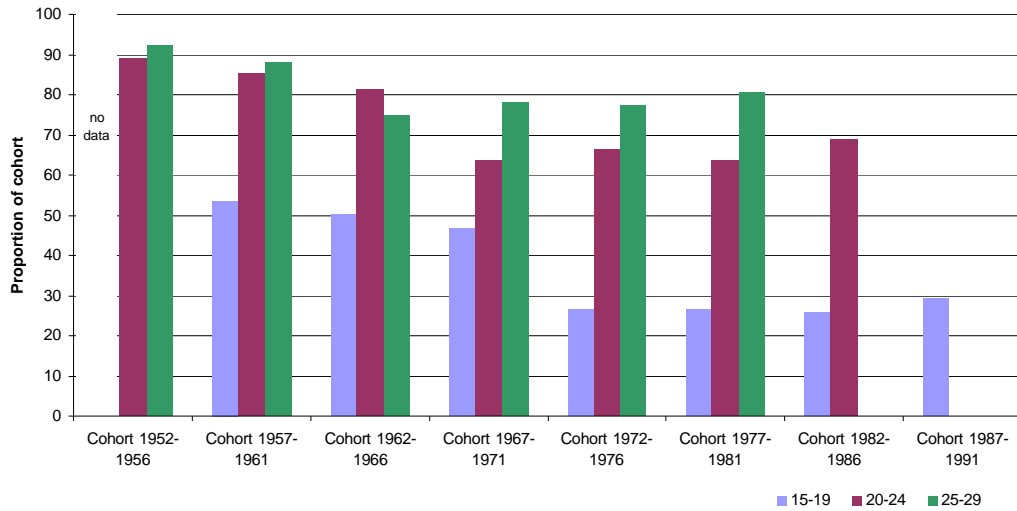
As young people get older they are more likely to be in employment. At ages 15-19 around half of all young people are employed. By ages 20-24 around three quarters are in employment. However the composition of this employment changes, with part-time employment becoming less common at older ages.

Young men are more likely to be employed than young women, and young people identifying as European and Other are more likely to be working than young people identifying as Māori, Pacific, or Asian.

In recent years there have been major changes in the extent to which young people have participated in the labour market. Figure 12 shows the proportion of successive cohorts of young men in full-time employment at different ages.⁷ The long term trend has been a decline in full-time work amongst young men, with the decline being exacerbated during the recession of the late 1980s and early 1990s.

⁷Full-time employment is defined as 30 or more hours per week.

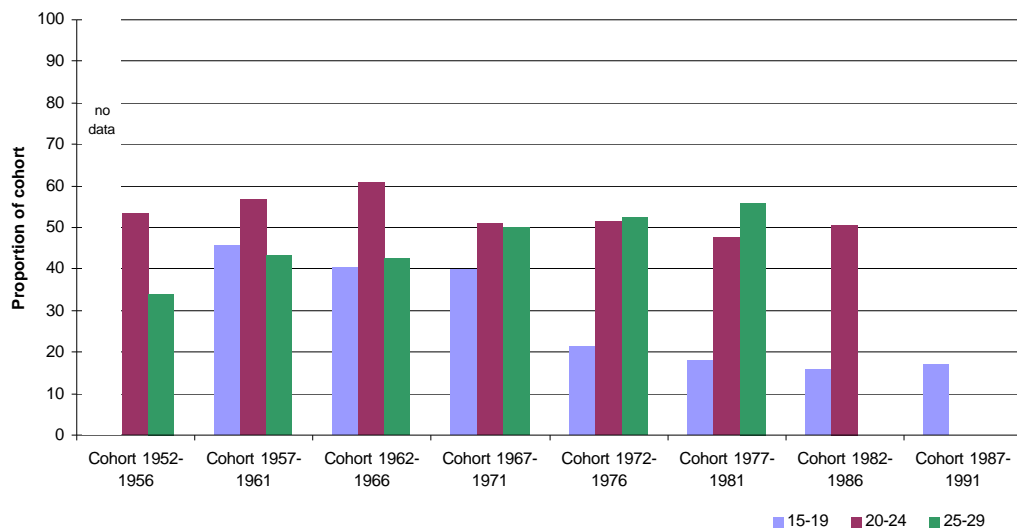
Figure 12: Proportion of men in full-time employment at selected ages, New Zealand born birth cohorts



Source: Census 1976 to 2006.
 Note: See Annex 1 for details of variables.

Figure 13 shows the changing proportion of young women in full-time work. Similar to young men, there has been a significant decline in full-time employment at younger ages. This decline has largely been driven by the trend of increasing participation in education, as well as the differing availability of jobs. The trends in full-time employment at older ages are slightly different, with the age group 25-29 showing a marked growth. As well as other factors, this reflects both the decline in fertility, as well as a growing proportion of working mothers.

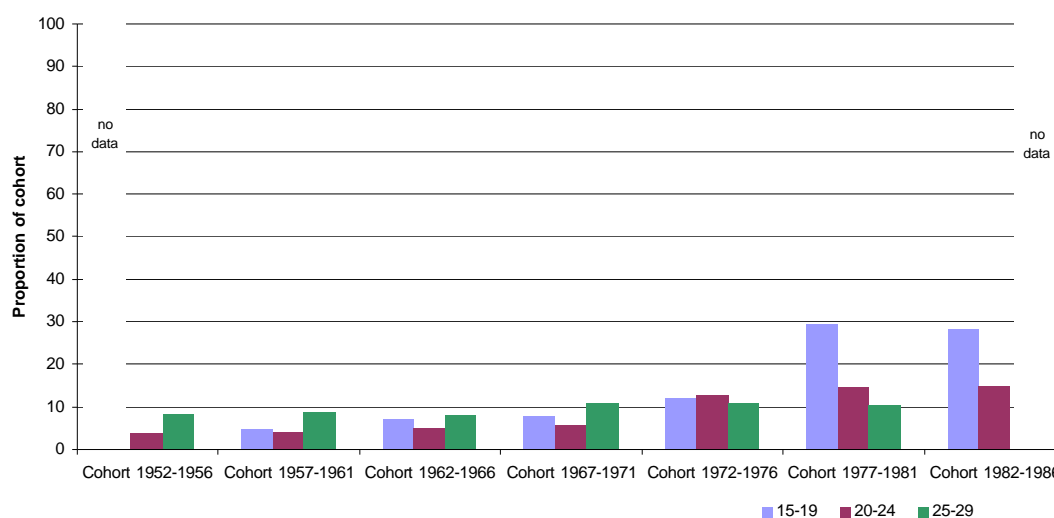
Figure 13: Proportion of women in full-time employment at selected ages, New Zealand born birth cohorts



Source: Census 1976 to 2006.
 Note: See Annex 1 for details of variables.

The picture is somewhat different when looking at part-time work. For both males and females there has been a rapid increase in part-time working. Figure 14 shows the increasing proportion of cohorts – both men and women – engaged in part-time work.

Figure 14: Proportion of young people employed part-time at selected ages, New Zealand born cohorts



Source: Census 1976 to 2006.

Note: See Annex 1 for details of variables.

If we analyse overall levels of youth employment, the cohort born in the mid 1980s did not have a dramatically lower rate of employment than the cohort born in the mid 1950s. However there were important differences in who was working (more women and less men), and the nature of this work (more part-time work). These changes have occurred as a result of the shifting nature of participation in education, child rearing, labour market regulation, and the state of the labour market.

Experience of unemployment

For some young people the transition to employment is associated with a period of job search and unemployment.

Typically young people are more likely to experience unemployment than people of other ages. This higher prevalence of unemployment reflects the fact that young people are more likely to be entering the labour market. It frequently takes time to find a job, and hence young people have a higher level of frictional unemployment. It is also likely that higher levels of unemployment amongst young people reflects both the nature of the jobs occupied by young people, as well as the phenomena of ‘job sampling’ (Topel and Ward, 1992).

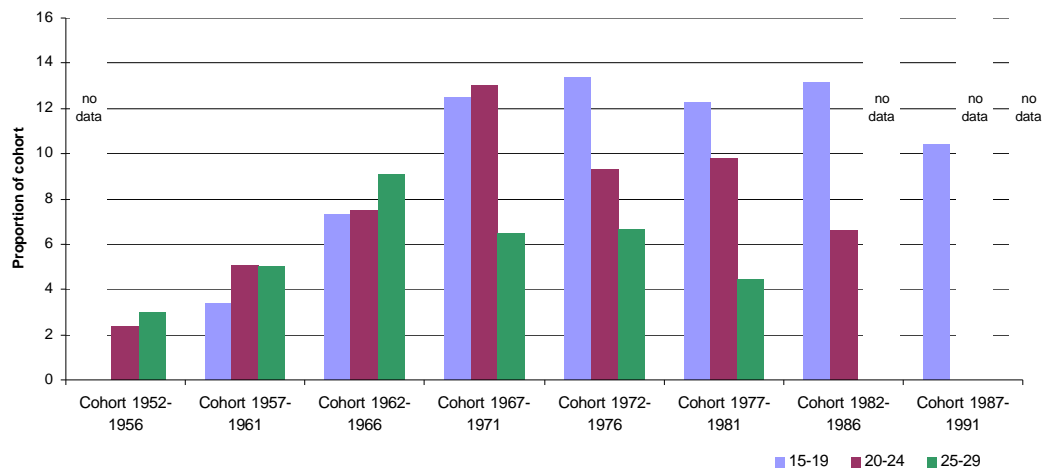
To measure unemployment, we report the proportion of the cohort who are unemployed. This is different to the unemployment rate, which is the proportion of the cohort in the labour force who are unemployed. It is also important to note that the census measure of unemployment is not entirely consistent across time, with the definition becoming more restrictive from 1991. More detail about this is provided in Annex 1.

Notwithstanding these measurement issues, Figure 15 shows how different cohorts have experienced unemployment. Cohorts born in the 1950s and early 1960s faced a rising incidence of unemployment as they aged. Later cohorts faced a declining risk of unemployment as they aged. For example, for the cohort born 1982 to 1986, roughly 13% were unemployed when 15-19 years of age, while this fell to a little over 6% when aged 20-24. Amongst more recent cohorts, young women tend to have slightly higher unemployment rates than young men. Young people who identify as Māori and Pacific are considerably more likely than other ethnic groups to experience unemployment.

Figure 15 shows a sustained increase in the prevalence of unemployment amongst cohorts of young people. Cohorts born in the 1950s tended to experience relatively little unemployment as young people. With the dramatic increase in unemployment in the early 1990s, the cohorts entering the labour market at that time experienced high levels of unemployment. For example, over 13% of the entire 1972 to 1976 birth cohort indicated they were unemployed in the week of the 1991 census.

Figure 15 also shows that the overall prevalence of youth unemployment has only declined marginally for more recent cohorts. Despite falling overall unemployment rates, the incidence of youth unemployment has remained high. The reason for the deterioration in the youth labour market relative to older groups is an interesting question, and may have something to do with an increase in part-time and temporary work amongst young people.

Figure 15: Proportion of young people experiencing unemployment at selected ages, New Zealand born birth cohorts



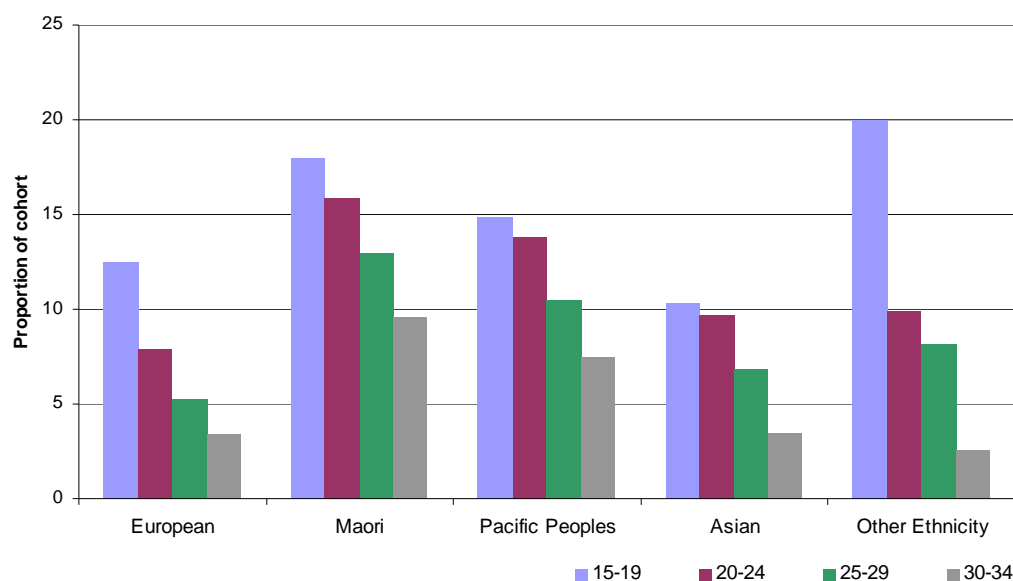
Source: Census 1976 to 2006.

Note: See Annex 1 for details of variables. The definition of unemployment changed in 1991.

As mentioned, Figure 15 shows that just over 13% of the cohort born in 1972 to 1976 were unemployed at the time of the 1991 Census. Five years later just over 9% of the cohort were unemployed at the time of the census. It is important to keep in mind that these are simply ‘snapshots’ of the proportion of the cohort who are unemployed at a particular point in time. Analysis of individual unemployment histories shows that the proportion of the cohort who had *any* experience of unemployment was a great deal higher. For example, almost 55,000 young people born between 1974 and 1978 registered as unemployed in 1993. This represents roughly 20% of the cohort experiencing unemployment in that one year alone. Half of this group spent more than a year over the next four years unemployed, often in multiple spells of unemployment (Gobbi and Rea, 2001).

Risk factors such as qualifications, health status, ethnicity, and location are important determinants of the probability of experiencing unemployment. If we return to the census measurement of the cohort born during 1972 to 1976, we can see how the prevalence of unemployment differed between ethnic groups. As can be seen from Figure 16, for 15 years Māori and Pacific people in this cohort experienced a very high prevalence of unemployment.

Figure 16: Age specific prevalence of unemployment amongst the 1972 to 1976 birth cohort, by total response ethnicity



Source: Census 1991 to 2006.
 Note: See Annex 1 for details of variables.

Benefit receipt

Young people who do not make the transition to employment may instead rely on income tested benefits. This may be because of unemployment, as well as other reasons including child care responsibilities, sickness, and disability.

From the Census it is possible to identify if a person had received any income from income tested benefits over the course of the year. This reveals a high use of benefits by young people. For example, for the most recent cohort for which we have full data (the 1982-1986 birth cohort), roughly 13% indicated some reliance on benefits over the last 12 months when aged 15-19. This rose to 18% when the cohort was aged 20-24. The higher incidence of benefit receipt at ages 20-24 years partly reflects the more restrictive eligibility criteria for benefits for young people aged 15, 16 and 17 years of age. The other important factor in the higher prevalence of benefit receipts at ages 20-24 is the higher levels of sole parenthood at these ages.

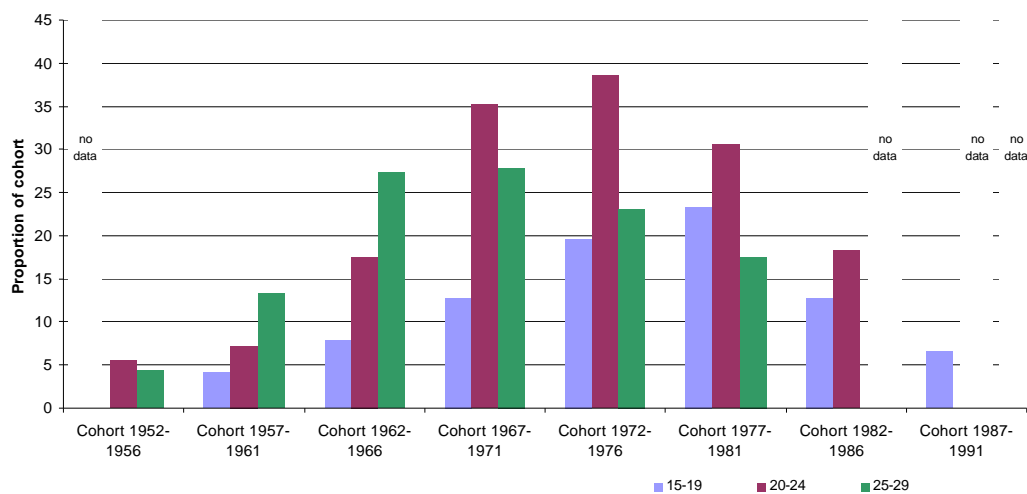
Overall, young women are more likely to be in receipt of benefits than young men. Māori and Pacific are more likely than other ethnic groups to be in receipt of income tested benefits.

Figure 17 shows how benefit receipt amongst cohorts of young people has changed overtime. The graph shows the dramatic emergence and then decline in the use of benefits amongst young people. The 1972-1976 cohort had the highest prevalence of benefit receipt, with nearly 40% indicating income from benefits over the previous 12 months when they were aged 20-24.

The changing prevalence of benefit receipt partly reflects the increase and then subsequent decline in unemployment. However, the prevalence of other benefits has also changed. Administrative benefit data also shows an increase, followed by a decline, in the proportion of young people receiving the DPB. There has also been a smaller increase in the prevalence of sickness and invalids benefit receipt among young people.

While both economic and social factors have driven much of the overall change in the prevalence of benefit receipt, there have also been policy changes. For example, in the early 1990s when the incidence of benefit receipt was highest, the age of eligibility for unemployment and domestic purposes benefits was raised to 18 years.

Figure 17: Birth cohort comparisons: proportion of cohort in receipt of benefit income in the last 12 months at ages 15-19 and 20-24 years



Source: Census 1976 to 2006.
 Note: See Annex 1 for details of variables.

Real mean personal income

An important component of the transition to adulthood is financial independence. As a young person gets older their sources of income tend to move from parents, to government (student allowances and benefit receipt) and the labour market (earnings). Income tends to rise as young people make the transition to full-time employment, and gain higher wages as they accumulate greater experience in the workplace.

Figures 18 and 19 show the real mean personal income for cohorts of males and females. If we look at the cohort born from 1982 to 1986, we can see that for both males and females, real mean personal income rises with age. This reflects a mixture of changing participation in employment, changing levels of earnings available as young people get older, and changes in the composition of who is in employment at different ages.

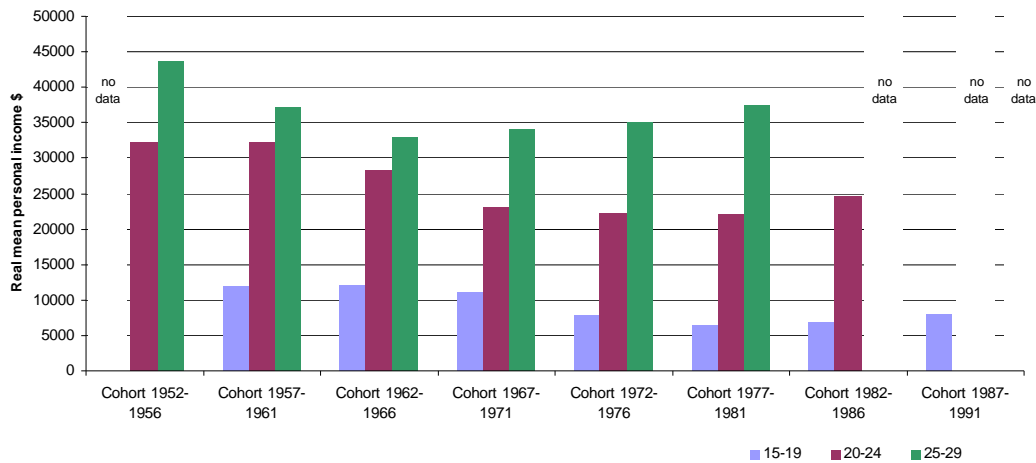
At younger ages, males tend to have higher personal incomes than females, as do young people identifying as European.

There has until very recently been a long-term decline in real average incomes for young men. The incomes of cohorts of young women have been somewhat more divergent, declining amongst the youngest women but increasing amongst women aged 25-29.

There are likely to be many factors influencing the age-income profile of the cohorts. These factors include increasing levels of participation in education, increasing employment while in education, increasing part-time work, declines in fertility, and changing eligibility and levels of income tested benefits.

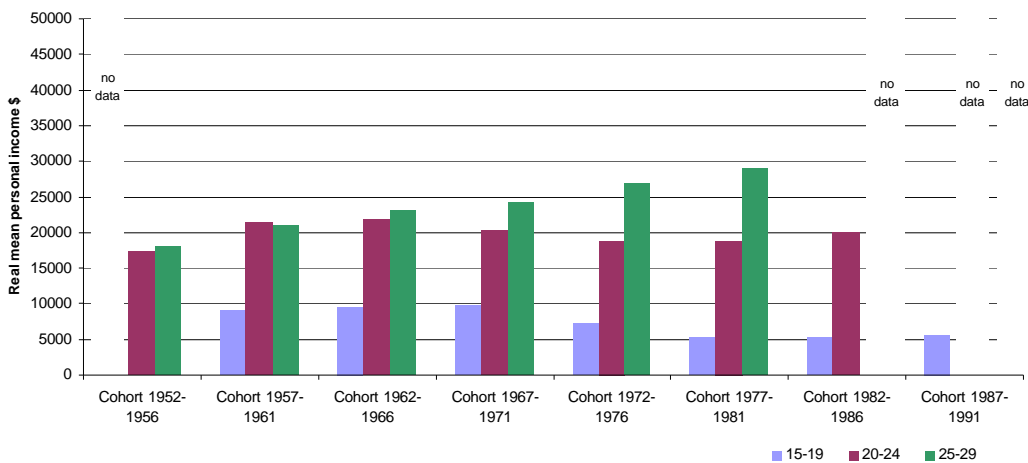
General labour market conditions, in particular unemployment during the 1990s seems to have been important. If we focus on ages 20-24, the cohorts born in the 1970s had the lowest real average personal incomes of the cohorts measured.

Figure 18: Real mean personal income of male cohorts (\$2006)



Source: Census 1976 to 2006.
Note: See Annex 1 for details of variables.

Figure 19: Real mean personal income of female cohorts (\$2006)



Source: Census 1976 to 2006.
Note: See Annex 1 for details of variables.

Religious affiliation

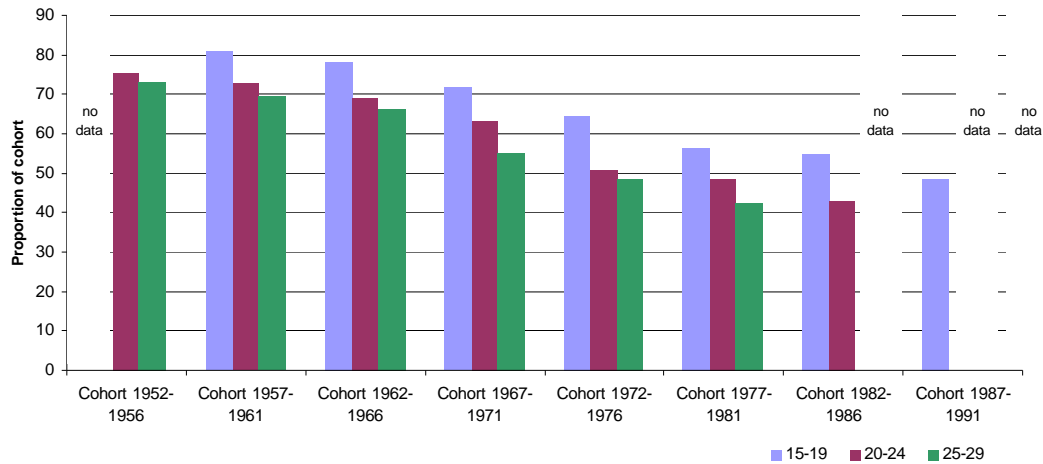
Respondents to the census are asked ‘what is your religion?’ The proportion of different cohorts indicating they have some form of religious affiliation provides some insight into social and attitudinal change.

Figure 20 shows the proportion of young people who indicate they have a religious affiliation. As can be seen, as young people age they become less likely to indicate a religious affiliation. For example, if we focus on the cohort born 1982 to 1986, we see 55% indicated a religious affiliation at age 15-19 years, while this had declined to 43% at ages 20-24 years. This pattern of declining religious affiliation with age seems to occur across the life cycle, but is particularly pronounced amongst young people.

Women are more likely to indicate a religious affiliation than men. Young people indicating a Pacific and Asian ethnicity are also more likely than other groups to have a religious affiliation.

Figure 20 shows the gradual decline in religious affiliation across cohorts. Over the last 30 years there has been a dramatic decline in the extent to which young people indicate they have a religious affiliation.

Figure 20: Proportion of young people indicating a religious affiliation at selected ages, NZ born birth cohorts



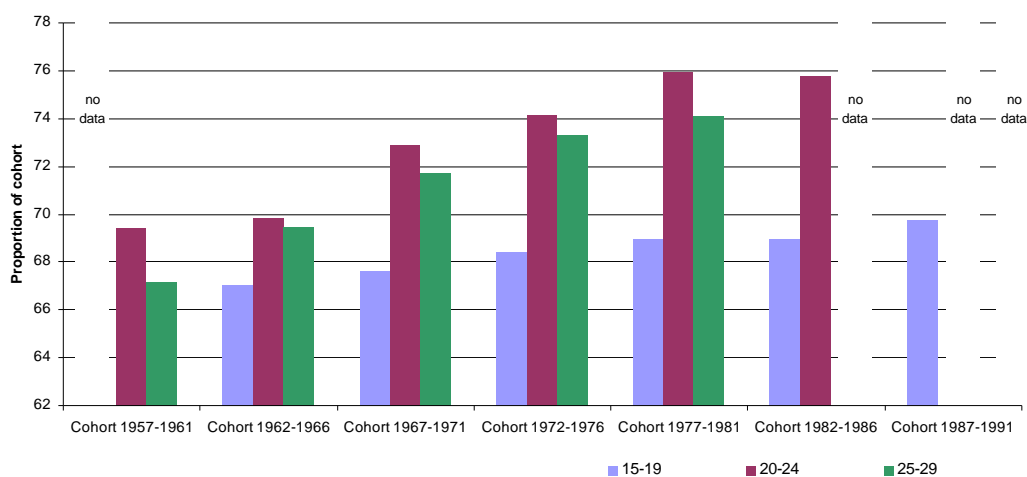
Source: Census 1976 to 2006. See Annex 1 for details of variables.
 Note: Denominator includes people who objected to answering.

Migration within New Zealand

Some young people shift geographic locations within New Zealand. This might occur because a young person shifts place of residence because of tertiary education, employment, or family reasons.

To provide some insight into geographic mobility we have looked at the changing level of 'urbanisation' of each cohort. This is measured by the proportion of each cohort who lives in an urban as opposed to a rural area at the time of each Census. It is important to note that this is a measure of the net changes that have occurred every five years, and it is a rather indirect measure of actual individual geographic mobility.

Figure 21: Proportion of cohort living in urban areas



Source: Census 1976 to 2006.
 Note: See Annex 1 for details of variables.

Figure 21 shows the proportion of each cohorts living in urban areas at different ages. As can be seen, more recent cohorts of young people are more likely to live in urban areas. Figure 21 reveals a distinct pattern of migration to urban areas between the ages of 15-19 and ages 20-24. This is followed by a somewhat smaller drift away from urban areas by ages 25-29.

The forwards then backwards pattern of urban drift is slightly more pronounced in young women than young men. The pattern of urban drift is also more pronounced amongst young people of European, and to a lesser extent Māori ethnicity. This is largely because other ethnic groups are already highly urbanised. In 2006, at ages 15-19 years, approximately 91% of Pacific Island, 90% of Asian, 70% of European, 68% of Other Ethnicity and 66% of Māori 15-19 year olds were living in urban areas.

Figure 21 shows a distinct pattern of increased geographic mobility of young people, with a greater proportion of more recent cohorts moving to urban areas by age 20-24 years.

International migration

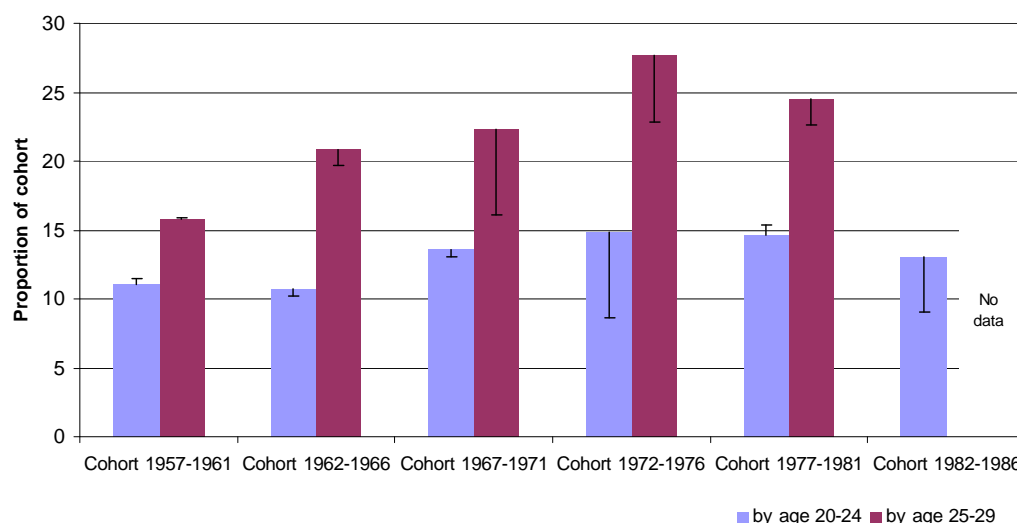
International geographic mobility, sometimes in the form of an ‘OE’, is another important transition for young New Zealanders

We only observe net international migration indirectly in the Census through the recorded reduction of the size of each birth cohort from census to census, after taking accounting of mortality. We are of the view that it is reasonable to attribute much of the reduction in the size of cohorts to net migration, although measurement error complicates things considerably. Measurement error arises both because of an increase in the proportion of respondents not reporting their place of birth, and also the likelihood of increasing non response to the Census overall (Callister, Didham and Bedford, 2006).

As with rural/urban migration, what we observe are net changes every five years. Underlying these measures are a significant volume of departures and arrivals between each census.

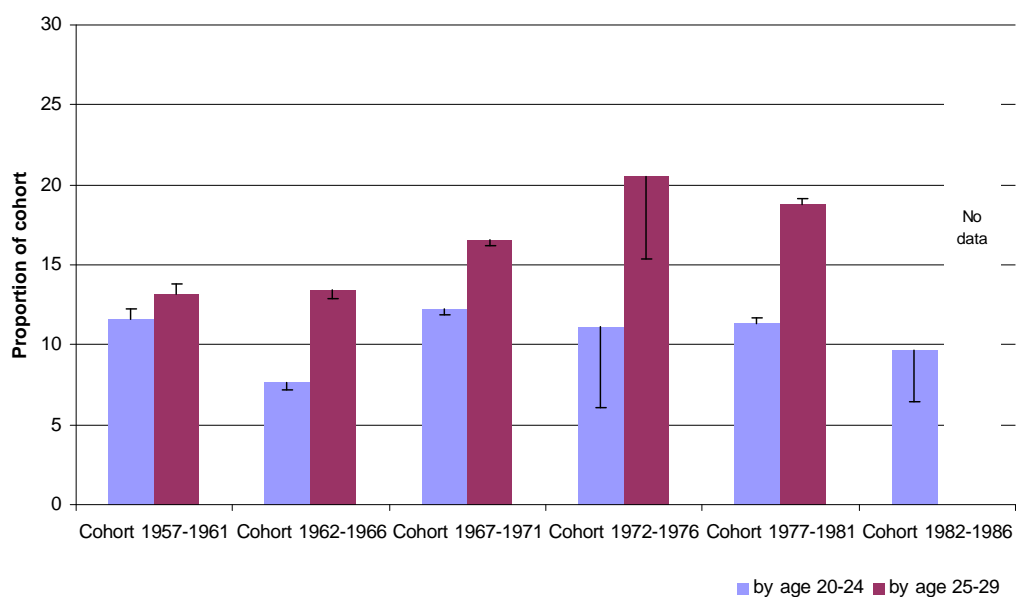
Figures 22 and 23 show our estimated percentage decrease in the size of the male and female cohorts from age 15-19 until ages 20-24 and then ages 25-29. Our estimates take into account mortality and under-reporting of birth place. Our estimates are presented as the range within the error bars on the graph. Details of our underlying methodology are set out in annex 1. Taking the mid points of our estimates, by age 25-29 the net migration loss for males across all cohorts averaged about 20%, and for females about 15%.

Figure 22: Estimated proportion of male cohorts who had left New Zealand after age 15-19 years - at ages 20-24 and 25-29



Source: Census 1976 to 2006.
Note: See Annex 1 for details of variables.

Figure 23: Estimated proportion of female cohorts who had left New Zealand after age 15-19 years - at ages 20-24 and 25-29



Source: Census 1976 to 2006.
 Note: See Annex 1 for details of variables.

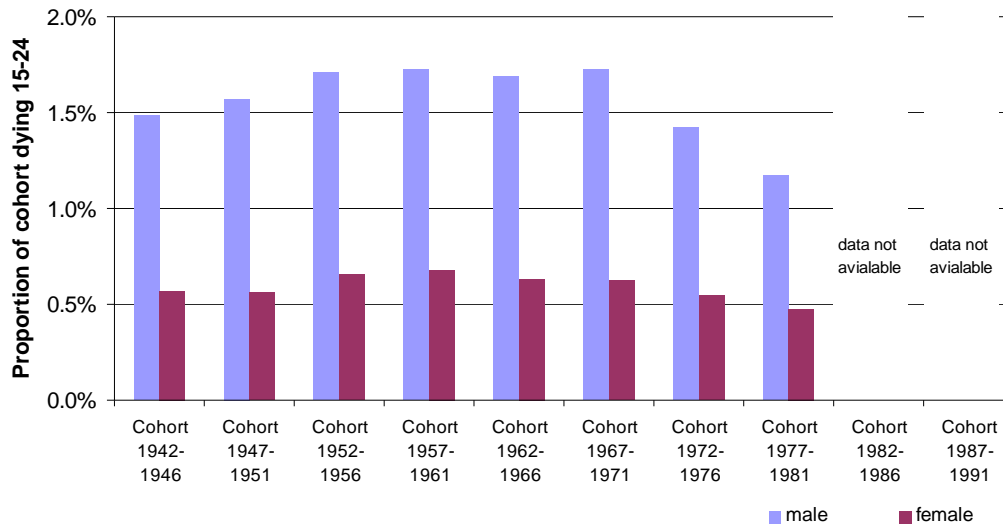
Figures 22 and 23 suggest that the extent of net migration has increased for more recent cohorts. The data also hints at the possibility that net migration was highest amongst the 1972-1976 birth cohort. This is plausible as the large number of non respondents to the place of birth question may have come from the rapidly growing foreign born population at the time. On the other hand, the alternative scenario is that individuals in this cohort remained in New Zealand, but an increasing proportion did not fill out the Census fully.

Mortality

If we focus on the mortality experiences of recent generations of young people, slightly less than 1% of young people in a cohort die between the ages 15-24. This risk of mortality differs between groups, with males being roughly 2.7 more at risk than females, and Māori having about twice the risk of non-Māori (Child and Youth Mortality Review Committee, 2006).

Figure 24 shows differences in mortality risk between the ages of 15 and 24 for the New Zealand born birth cohorts. The estimates are derived from the Statistics New Zealand cohort mortality dataset. As can be seen, the risk of mortality increased, and then decreased for both males and females. Based on the mortality rates at younger ages, it is clear that the dramatic downward trend is also continuing amongst more recent cohorts who have not yet reached 25 years of age.

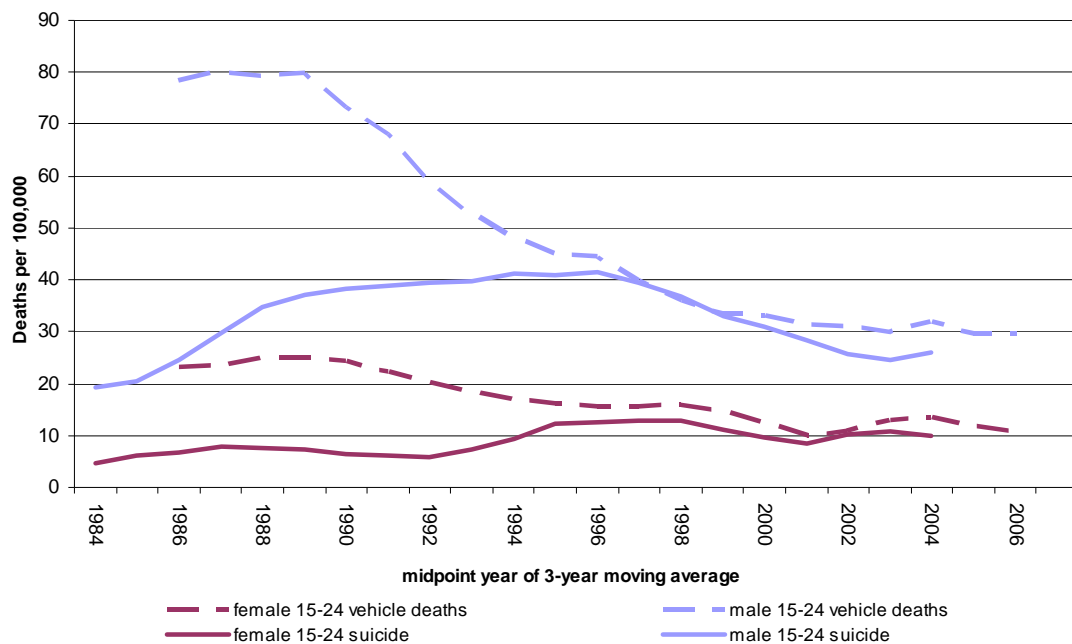
Figure 24: Estimated proportion of cohort dying between the age of 15 and 24



Source: Derived from cohort life tables, Statistics NZ <http://www.stats.govt.nz/datasets/population/cohort-life-tables.htm>.

The two largest contributors to death rates amongst young people are motor vehicle deaths and suicide. The time trend in these mortality rates are shown in the graph below. There has been a long term trend of reducing motor vehicle deaths, which over the late 1980s and early 1990s was offset by an increase in deaths from youth suicide.

Figure 25: Trends in motor vehicle and suicide deaths for young people, aged 15-24 (annual deaths per 100,000)



Source: New Zealand Health Information Service, Ministry of Transport and Kay Goodger, Ministry of Social Development.

6. Summarising our findings

This section summarises the previous analysis of outcomes for different cohorts. However, before doing this, we describe the wider social and economic context that each of the cohorts faced as they made the transition to adulthood. To provide this broader picture, we undertook a non-random survey

(n=31) of colleagues, students, and family. We asked about the important events and experiences when they were young. Table 2 uses this anecdotal information to construct an overview of aspects of life that each cohort experienced when they were aged between 15-19 years. The table provides insights into the different preoccupations and events that different generations of young people experienced.

The overall impression that we take from this broader picture is that all cohorts experienced wide ranging social change, and that there has been significant diversity and many sub cultures within each cohort.

The cohorts who experienced the 1970s as young people grew up in traditional families and entered a relatively regulated and structured labour market. These cohorts also saw significant social change, some of it driven by youth activism. The 1970s saw the second wave of feminism, the Maori sovereignty movement, the emergence of activism amongst Pacific young people, gay rights, and the peace movement. These cohorts also saw the tail end of the hippy movement and glam rock, as well as the emergence of disco.

The cohorts who experienced the 1980s as young people lived in wealthier families, and were also more likely to have been brought up in less traditional family structures. The country was on the cusp of major social and economic changes, with significant youth involvement in Springbok tour protests, homosexual law reform, as well as protests at Waitangi. These cohorts also experienced the fashion trend of neon coloured clothing, break-dancing, the advent of the boom box, and the share market crash of 1987.

The cohorts who, as young people experienced the 1990s saw significant social and economic change. They experienced a prolonged economic recession and widespread unemployment during the early 1990s. These cohorts also saw major changes in social entitlements such as the end of universal student allowances for tertiary students. These cohorts were also the first to become connected to the internet in significant numbers, grunge music was popular, and so was the movie *Once Were Warriors*.

The more recent cohorts have grown up in less traditional families, and have also experienced a growing global consumer culture during a period of sustained prosperity. Recent youth cohorts have had increased access to cheap clothing, faster cars, alcopops and mobile phones. We suspect they also inhabit a community with slightly more tolerance of sexual and ethnic diversity than previous generations. These cohorts have also experienced global coverage of the 'war on terror', and are also experiencing the economic recession that began in 2008.

Birth cohort	1942-1946	1947-1951	1952-1956	1957-1961	1962-1966	1967-1971	1972-1976	1977-1981	1982-1986	1987-1991
Aged 15-19 years	1961	1966	1971	1976	1981	1986	1991	1996	2001	2006
International events	Yuri Gagarin in space, Bay of Pigs invasion	Bombing of Hanoi by US	Third moon landing	Entebbe raid, Jimmy Carter elected US president	Ronald Reagan takes office	Chernobyl disaster, Berlin Wall falls (1989)	Gulf War	Princess Diana dies (1997)	Sept 11	World financial crisis (2008)
Prime Minister	Keith Holyoake	Keith Holyoake	Keith Holyoake	Robert Muldoon	Robert Muldoon	David Lange	Jim Bolger	Jim Bolger	Helen Clark	Helen Clark
New Zealand events	Abolition of capital punishment, First Golden Kiwi	NAFTA begins, Radio Hauraki begins	Womens' Liberation Conference, Broadsheet begins publishing (1972)	Dawn raids, Land march (1975), Bastion Point (1977)	Kohanga reo established, Springbok tour	Homosexual law reform, GST comes into force	Mother of all budgets	First MMP election	NZ sends troops to Afghanistan	KFC, Pizza Hutt and Starbucks phase out youth rates
Sports	Kiwi rugby league beats UK (1962)	Mexico City Olympics (1968)	Lions tour of NZ	John Walker wins gold in Montreal	All Whites qualify for world cup	Cavaliers tour of South Africa	Australia wins rugby world cup	Sri Lanka wins cricket world cup	NZ fourth in Basketball World Championship	Soccer world cup in Germany
New music and dance	Rock and Roll, Surf music	Pop, Beatles	Rock, Reggae, Glam Rock	Disco, Punk	Heavy metal, New wave, Break dancing	Hip hop, Electronica	Trance music, House music, Grunge	Gangsta Rap, Britpop	New metal	Emo rock, Hip Hop
Youth events	TV broadcasting begins	Beatles tour NZ (1964)	Vietnam protests	Nambassa	Sweetwaters	Queen street riots (1984)	AC/DC concert troubles	University fee protests	Big Day Out, Parachute	Big Day Out
Fads, food and clothes	Elephant Jokes	Fondue craze, Duffle coats	Platform shoes, Pet rocks, Frisbee	MacDonalds arrives in NZ	Neon coloured clothing	Rubiks cube	Nintendo gameboy, stone washed jeans	Cargo pants, belly button piercing	Hells Pizza, 80s clothing revival, Chatter rings	Myspace
Films	Don't let it get you	Hard days night	French Connection	Star wars (1977)	Raiders of the Lost Ark	Top Gun	The Naked Gun 2 and 1/2	Once Were Warriors (1994)	Lord of the Rings	Pirates of the Caribbean
Personal transport	Bicycle	Moped	Ford Anglia	Mini, VW Beetle	Holden Kingswood	Datsun 120Y	Mazda 808	Toyota Corolla	Subaru Forester	Mitsubishi Evo
Technology	The pill available	Portable record players	Transistor radio	Cassette tape	VHS video	Early mobile phone	Explosion in use of internet	DVD	Mp3 players	Iphone, Ipod

⁸The table is based on a similar table for Australia produced by McCrindle Research <http://www.mccrindle.com.au>.

With this overview of the experiences of different cohorts of young people in mind, it is possible to summarise our findings from the cohort data. If we look at separate outcomes, the data shows:

- recent cohorts are more likely than earlier cohorts to be living with their parents, although despite this long-term trend, the cohorts born in the late 1960s and early 1970s were the most likely to live with their parents;
- a decline in the proportion of young people living with partners, and amongst those with partners, a dramatic shift towards de facto as opposed to legal marriage;
- a decline in the proportion of young people living as parents with dependent children;
- an increase, followed by a decline, in the proportion of young sole parents;
- a dramatic and ongoing increase in the extent to which young people participate in education;
- a modest decline in the proportion of young people in employment, with an increasing proportion being employed part-time;
- a long term increase in the prevalence of unemployment and benefit receipt, but with cohorts born in the late 1960 and 1970s recording the highest levels;
- a fall, until the most recent cohorts, of the real average personal income of men, but some growth in the real average personal income of women aged 25-29;
- a decline in religious affiliation amongst young people;
- an increase in mobility between urban and rural areas of New Zealand;
- a long term increase in the rate of outward migration of young New Zealanders; and
- a decline in the level of mortality amongst more recent cohorts.

The data shows considerable change in the nature of transitions for cohorts of young women. More recent cohorts of women have higher levels of participation in education, they are less likely to be living with a partner or dependent child, and they are more likely to be employed and have higher incomes in their late 20s.

There have also been changes in the transitions of different cohorts of young men. Amongst more recent cohorts there has been growing participation in education, participation in full-time employment has fallen, and until recently there has been declining real personal incomes.

If we compare the differences between young men and women within cohorts, we also see changes. Over time the difference in employment rates have narrowed. The difference in educational participation, as measured by the achievement of qualifications, has narrowed and then reversed. Amongst the more recent cohorts, young women are more likely to achieve a tertiary qualification than young men – whereas the reverse was true amongst cohorts born in the early 1960s.

Although our data only lends itself to analysis by ethnicity since 1991, it is apparent that the experiences of cohorts have changed over time.

The transitions of more recent cohorts of young Maori and Pacific have improved since 1991. For example, amongst young Maori and Pacific young people, there was a dramatic decline in benefit receipt as the economy has improved. However, compared to other ethnic groups, young Māori and to a lesser extent young Pacific people are less likely to participate in education, have lower levels of employment, have children earlier, and experience higher rates of unemployment and benefit receipt.

Maori and Pacific youth cohorts were particularly affected by the recession in the early 1990s. Some of the reason for this was the fact that young people often enter the same labour markets, occupations and firms in which their parents also work. The urbanisation of the Māori population that began after World War 2, and the migration of Pacific families in the 1960s was associated with a concentration of Maori and Pacific workers in particular occupations and industries that were affected by the economic restructuring of the late 1980s (Anae, 2007; Meredith, 2008). During the late 1980s and early 1990s the parents of many Maori and Pacific young people lost their jobs. At the same time, many young Maori and Pacific people were unsuccessfully attempting to enter these same occupations and industries.

So are the transitions of young people today any different to those experienced by earlier generations. It is possible to summarise our findings to present an overall picture for each cohort.

Compared to more recent cohorts, young people born from the mid 1950s to the late 1960s spent less time in education, moved into full-time employment at younger ages, had higher personal incomes when aged 15-24, were less exposed to unemployment, were less mobile, and were more likely to marry and have children at younger ages.

The transitions of young people born from the mid 1960s to the mid 1970s reflected many of the long-term social changes seen in the earlier cohorts such as increased participation in education, a decline in fertility and a decline in the popularity of marriage. However, the outcomes for these cohorts were also quite different to others. The cohorts born between 1967-1971 and 1972-1976 were more likely to remain living at home, be sole parents, and be in education at certain ages. They also had the lowest rates of employment, had the highest rates of unemployment and benefit receipt, left NZ in the largest numbers, and had the highest rates of youth suicide.⁹

More recent cohorts – those born from the mid 1970s to the mid 1980s – also showed many of the longer term trends, but also experienced better economic times when they were young. These cohorts spent more time in education, were less likely to move into full-time employment, had lower rates of unemployment and benefit receipt, and were less likely to marry and have children.

Surprisingly for the authors, we find some support for the generational differences ascribed to Baby Boomers, Generation X and Generation Y (Coupland, 1991; Howe and Strauss, 2000; Owram, 1997).

New Zealand's baby boom cohorts were large, affluent and more highly educated than the previous generation. However, despite the protest and counter culture, as young people they were more likely to be married and having children than all other generations in the 20th century.

New Zealand's cohorts that might be classified as Generation X were also more educated than the preceding cohorts, but as young people had lower incomes, and were more likely to be in part-time employment, unemployed, on benefit, and raising children as a sole parent.

Generation Y cohorts were also more educated than previous cohorts, but also more affluent, and were slightly less likely to experience unemployment, sole parenthood and benefit receipt than the Generation X cohorts.

To provide another perspective on the different experience of the cohorts, we have put together a rough index of 'positive' transition outcomes based on the data we have available. The index is based on eight different measures: the rate of sole parenthood; the proportion with no qualifications; the employment rate; real mean personal income; the prevalence of unemployment; the prevalence of benefit receipt; the level of out migration; and mortality. Our analysis is restricted to young men and women in the seven cohorts for which we have consistent data. The results of our exercise are shown

⁹The early to mid 1970s cohort has been the subject of intensive analysis with the Dunedin and Christchurch longitudinal studies. Dunedin study members were born between April 1972 and March 1973, and the Christchurch survey members were born in mid 1977. The fact that the 1972 to 1976 cohort appears slightly different to other cohorts is useful context when interpreting measures of prevalence from the longitudinal surveys. It may also have implications for interpreting the causal impacts shown in the surveys.

in table 3. A score of ‘1’ represents the cohort with the most positive transitions, while ‘7’ represents the most difficult transitions.

Overall, the cohorts that seem to have had the most favourable transitions seem to be the cohorts born in the late 1950s and the early 1980s. The cohorts born between 1967-1971 and 1972-1976 seem to have had the least favourable transitions.

Table 3: Index of positive transition outcomes for selected cohorts, 1=best 7=worst

	Male	Female
Cohort 1952-1956	1	5
Cohort 1957-1961	2	3
Cohort 1962-1966	4	2
Cohort 1967-1971	7	7
Cohort 1972-1976	6	6
Cohort 1977-1981	5	4
Cohort 1982-1986	3	1

Note: The index is based on relative rankings of the cohorts for the following outcomes: rate of sole parenthood (20-24) based on MSD total population series, proportion with no qualifications (20-24), employment rate (20-24), real mean personal income (20-24), prevalence of unemployment (20-24), prevalence of benefit receipt (20-24), the level of out migration (by age 20-24) and mortality (14-20). The overall score represents an average of these rankings.

Interestingly, our index provides some support for the view that outcomes have got relatively better for young women compared to young men. Our index suggests that for young women, the most recent cohorts have had the best outcomes, a finding that accords with the notion that young women now have more opportunities and choices. Our index also shows that the most recent cohort of young men fared relatively well, although not as well as the cohorts that were born in the 1950s.

Looking at the overall changes in the nature of youth transition over the last 30 years, there are a number of important cross-cutting themes that emerge.

First, the age at which many young people are making the transition to specific adult roles and responsibilities is increasing. Compared to the previous cohorts, there are more young people staying longer in education, entering full-time employment at later ages, forming partnerships later, and having children at older ages.¹⁰

Second, the social institutions of adolescence and adulthood are changing and evolving. As evidence of this, consider the increasing popularity of de facto partnership arrangements compared to legal marriage. The labour market also provides an example of this phenomenon, with the increasing prevalence of part-time compared to full-time employment relationships.

Third, transition pathways are becoming less standardised and more individualised. For example, the transition path for young women in the 1970s was more likely to involve leaving school or university, getting a full-time job, getting married, having children, and leaving the labour market to bring up children. While there are many women who still follow this path, there is likely to be considerably more diversity of experiences.

Fourth, geographic mobility seems to be increasing.

Fifth, there has been a long term increase in the prevalence of unemployment and benefit receipt amongst young people. None of the subsequent cohorts experienced the low rates of unemployment and benefit receipt that were experienced by cohorts born in the early 1950s.

¹⁰A number of researchers have also suggested that children are entering adolescent at younger ages (Settersten et. al., 2005).

7. International comparisons of youth transitions

Our study finds substantial change in the nature of youth transitions to adulthood in New Zealand. This raises an interesting question: are these changes unique to New Zealand, or are they also occurring in other comparable countries?

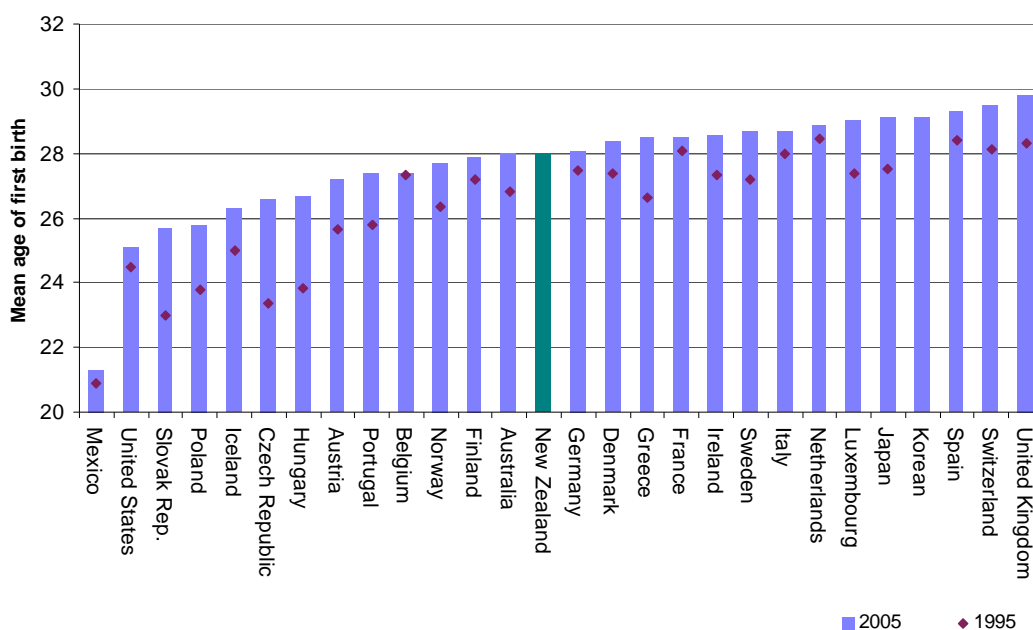
International comparative research seems to show that many of the same trends are also occurring in OECD countries (Bell et al., 2006).

Across many countries there is a trend of young people delaying leaving home. In many OECD countries young people tend to be living with their parents for longer (Fokkema and Liefbroer, 2008; Cobb-Clark, 2008). From the limited evidence available, it appears that on average young people leave home slightly earlier in New Zealand compared to many other OECD countries.

It is likely that there is a similar decline in marriage, as well as partnership, and a trend of more young people living alone (Fokkema and Liefbroer, 2008).

There has also been a marked decline in fertility amongst young women across OECD countries. This is shown in Figure 26, where we show the average age of first birth in 2005 compared to a decade earlier.

Figure 26: Mean age of first birth in selected OECD countries, 1995 and 2005

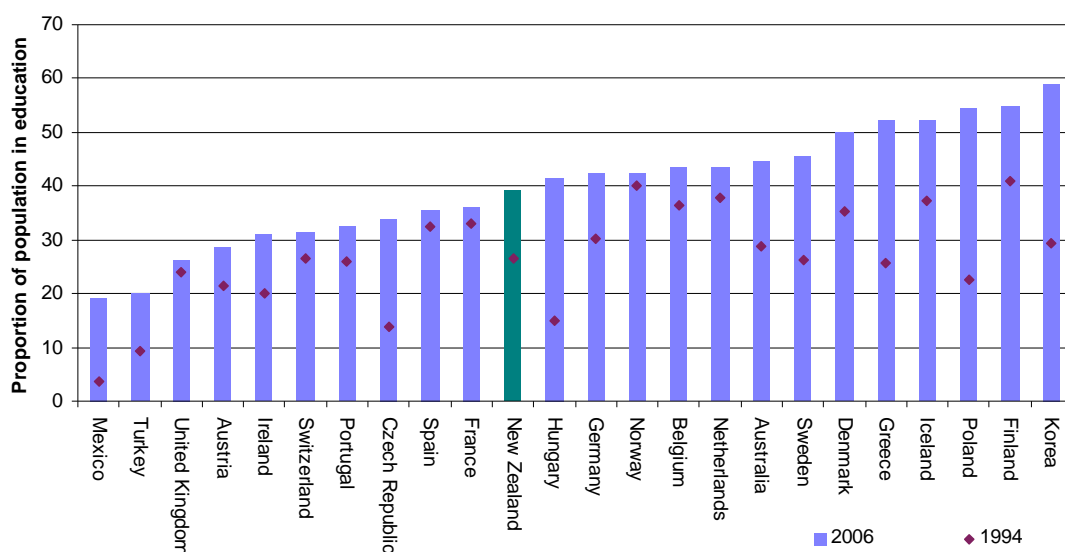


Source: OECD (2009a) *Society at a Glance, 2009*. Note: Data represented as 2005 may be slightly earlier or later for some countries.

New Zealand appears somewhat typical of OECD in relation the mean age of first birth. However, a focus on the average disguises the fact that the age range of births in New Zealand is wider than many other OECD countries (Statistics New Zealand, 2008 table 2.13). Along with the USA and UK, New Zealand has a relatively high rate of births amongst young women compared to other OECD countries.

Across the OECD there has also been an increase in educational participation amongst young people. Figure 27 shows the proportion of 20 to 24 year olds participating in any form of education in selected OECD countries. As can be seen, across every country there has been an increase in participation between 1994 and 2006. In addition, across most of the OECD (including New Zealand) there has been a 'gender transition' with more young women than men completing tertiary education.

Figure 27: Proportion of young people 20-24 enrolled in any form of education in selected OECD countries, 1994 and 2006

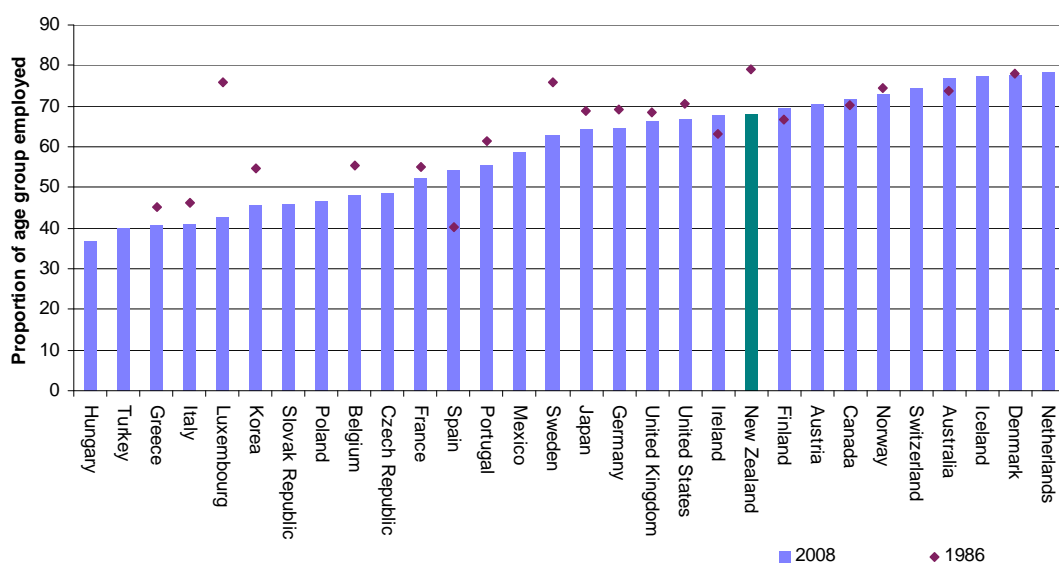


Source: OECD.stat. Note: For New Zealand, the OECD enrolment rates for both the 15-19 and 20-24 year age groups are considerably higher than the participation rates derived from the Census.

While New Zealand has relatively typical rates of participation in education at ages 15-19 and 20-24, there are some indications that New Zealand may have greater variation in education outcomes than many other OECD countries. It is possible that compared to other countries, New Zealand both has a lot of young people who exit education early, as well as a lot of young people who remain in education. One indicator of this ‘tail of under-achievement’ is that New Zealand has a relatively high proportion of young adults who do not have upper secondary qualifications (OECD, 2008).

As in New Zealand, in many OECD countries the long-term trend in youth employment rates is downward. This trend, which is shown in Figure 28, is being driven by both increasing participation in education, but moderated somewhat by the countervailing trend of increasing labour force participation of young women.

Figure 28: Proportion of young people aged 20-24 employed in selected OECD countries, 1986 and 2008



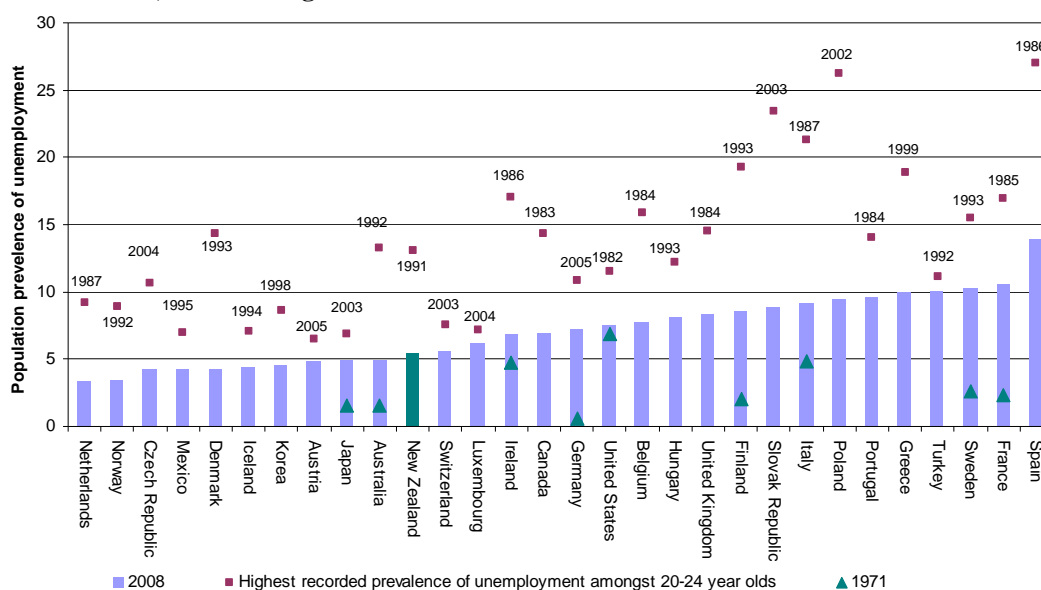
Source: OECD.stat.

The international comparisons of employment show that New Zealand has a relatively high proportion of young people in employment.

In terms of youth unemployment, there have also been important changes across OECD countries. A key finding is that for a number of countries, New Zealand included, the risk of youth unemployment has increased since the early 1970s (Ryan, 2001). Figure 29 shows, for countries with data available, the level of young adult unemployment across OECD countries in 2008 compared to the early 1970s.

Figure 29 also shows the level and year when the prevalence of youth unemployment was highest for each country since the early 1970s. Like New Zealand, most OECD countries have experienced a period of very high youth unemployment. At some point during the last 30 years the majority of OECD countries have had a period where more than 10% of young adults were unemployed.

Figure 29: Prevalence of unemployment amongst young people aged 20-24 across OECD countries - 1971, 2008 and highest recorded

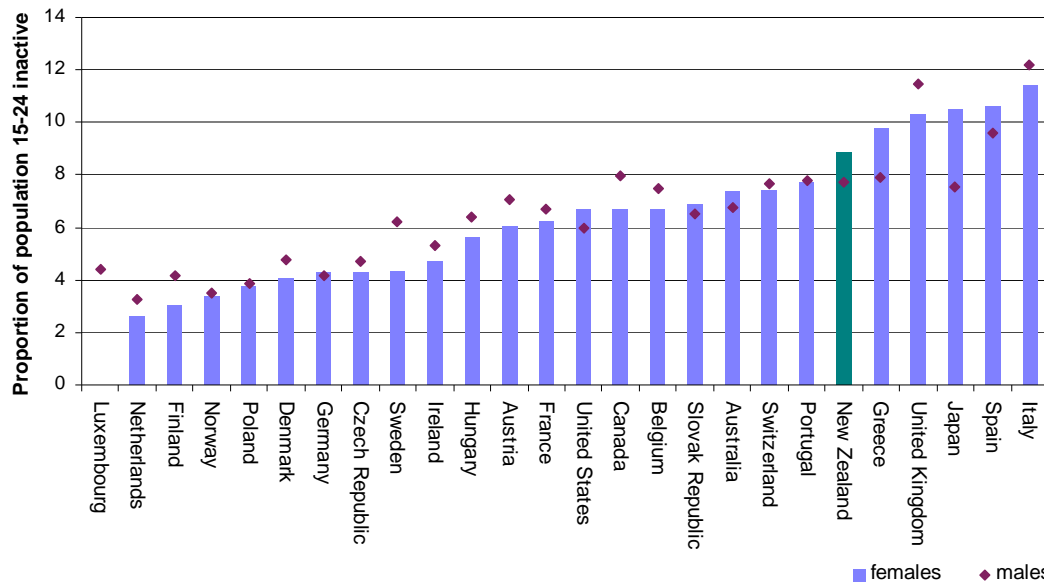


Source: OECD.Stat. Note: The measure is surveyed unemployment as a proportion of the population. The start date of labour force surveys differs across countries. As a result, the data points 'highest recorded prevalence of unemployment amongst 20-24 year olds' cover differing time periods.

Youth unemployment is a measure of the extent to which young people are successfully transitioning to employment, and Figure 29 shows that in 2008, youth unemployment in New Zealand was moderately low by international standards.

Unemployment is however a somewhat restrictive measure of unsuccessful transitions to employment. Many young people who are without a job may only be looking intermittently, or not at all because they are discouraged, and as such are not counted as unemployed. An alternative measure is 'youth inactivity' - the proportion of young people who are neither employed, nor in education. Table 30 shows that youth inactivity is higher in New Zealand than in many OECD countries. However economic inactivity is also a problematic measure, as the standard OECD measure counts young people looking after children as economically inactive. Some of the high level of measured inactivity amongst young women in New Zealand reflects high youth fertility rates.

Figure 30: Prevalence of inactivity amongst young men and women aged 15-24 across OECD countries, 2006



Source: Society at a Glance, 2009. Note: The New Zealand figures appear to be based on the HLFS, but Census data indicates somewhat higher levels of youth inactivity in New Zealand.

Many of the changes in youth transition observed in New Zealand are also occurring in other OECD developed countries. The age at which young people are making the transition to specific adult roles and responsibilities seems to be increasing, rates of educational participation are increasing (particularly among young women), transition paths are becoming more diverse, and the general risk of unemployment has increased since the 1970s (OECD, 2000; Ryan 2001).

Compared to other countries, New Zealand appears to have slightly more rapid youth transitions. While participation in education is about average, young people in New Zealand seem to leave home slightly earlier, there is a high rate of youth fertility, and employment is high at young ages. In terms of the success with which these transitions occur, unemployment is low but there is a relatively high level of young people who are economically inactive.

8. Why have changes in youth transitions occurred in New Zealand?

There have been major changes in how youth cohorts have undertaken the transition to adulthood in New Zealand, and similar changes are also occurring in other OECD countries. In this section we assess some of the possible explanations for why these changes might have occurred, with a particular focus on why the cohorts born in the late 1960s and early 1970s fared worse than others. In what follows we describe and then attempt to assess different explanations. These explanations are grouped into the following categories:

- demographic differences such as the overall size of each cohort;
- differences in family background and early developmental influences of the cohorts;
- new technology;
- the impact of feminism and other changes in social attitudes and values;
- changes in the labour market; and
- the role of government.

These explanations can be thought of as differences in the attributes of either the *cohorts* or the *periods* in which each cohort was young. The different explanations are also not independent of each other.

One important demographic difference between the cohorts is the overall number of young people in each cohort. Recall that the numbers in the different cohorts varied considerably, with the smallest being roughly two thirds the size of the largest cohorts. Easterlin (1987) has suggested that larger cohorts will experience poorer outcomes because of crowding within the family, education and labour market. To assess this hypothesis, we looked at the relationship between our indices of positive transition outcomes and the overall numerical size of the cohort. At a very descriptive level, and without controlling for other factors such as the state of the economy, there does not seem to be any support for the Easterlin hypothesis. Many large cohorts experienced good overall outcomes. A simple regression analysis showed no statistically significant relationship between the size of the cohort and our indices of positive transitions. It is our judgement that crowding may still have occurred, but other factors such as good economic conditions dominated the overall picture.

The growing ethnic diversity of the youth population is another important difference between the cohorts which may explain some of the differences in outcomes. In the years after the Second World War, successive waves of European, Pacific Island and Asian migrants settled and raised children in New Zealand (Philips, 2008). We only have consistent ethnic data from 1991, and this shows systematic differences between ethnic groups. Based on these differences, we would expect that the changing ethnic composition of the youth population would have had some effect. However the ethnic composition of youth cohorts does not explain the relatively poorer outcomes of cohorts born in the late 1960s and early 1970s, because more recent cohorts are more ethnically diverse, and experienced better outcomes. Also, amongst the late 1960s and early 1970s cohorts, poor outcomes were experienced by all ethnic groups.

The cohorts also differ in the family background and early developmental influences, and this may have had some impact on the changing nature of youth transitions across the cohorts. Over time the extent of family poverty and parental unemployment has changed, the numbers of siblings within families has decreased, and the proportion of sole parent families has until recently increased. There is evidence that some of these early childhood influences are important determinants of adolescent outcomes (see for example Caspi et al., 1998 in relation to unemployment). It could be argued that changes in parenting practices, family structure, or the experience of child poverty explains the observed changes across the cohorts. Data in this area is poor, but our guess is that changing family risk factors will have had some effects. However, it seems unlikely that they were the cause of the relatively poor outcomes of the late 1960s early 1970s cohorts. The patchy evidence that exists suggests that these cohorts did not experience the highest incidence of family risk factors. Consider, for example, the probability of being bought up in a sole parent family. The relatively poor outcomes of the late 1960s and early 1970s cohorts has sometimes been linked to the increase in divorce and sole parenthood amongst their parents. However, such an explanation fails to account for the fact that cohorts born in the 1980s had a higher incidence of being bought up in sole parent households, but on our indices had better outcomes (Families Commission, 2008; Dharmalingam et al., 2004).

Another popular view is that new technology has played an important role in the changing nature of youth transitions. New innovations such as the moped, the contraceptive pill, the portable tape deck, hallucinogenic drugs, the internet, and mobile phones - have all been adopted to varying extents by different cohorts of young people. However it is difficult to make a convincing argument that new technology was the key determinant of the changing nature of youth transitions.

Another more plausible view is that changing norms about roles within society have been important. We would argue that changing social views about the role of women have played an important role in increasing participation in education, removing discriminatory barriers to employment in male dominated occupations, and influencing marriage and child rearing patterns. While feminism is not responsible for the entirety of these changes – for example male participation in education has also increased – the fact that the female rate of participation has increased by more indicates the potential for some effects.

A somewhat related argument is that there are cohort-specific differences in attitudes and values that have influenced transitions (Schuman and Scott, 1989). It is common to argue, for example, that the ‘self belief’ of the baby boomers, the ‘anxiety’ of Generation X, and the confidence of Generation Y

were important determinants of outcomes for these cohorts when they were young. Unfortunately, apart from religious affiliation (which shows a steady decline across all the cohorts), we do not have any reliable data on differences in attitudes and values across the cohorts.

Another plausible explanation of the changes in youth transitions is the overall state of the labour market. It is our view that the data clearly suggests that the state of the labour market was a major influence on the transitions of cohorts – in particular those born from the late 1960s to the mid 1970s. These cohorts experienced high rates of unemployment because they entered a labour market with limited opportunities. The data seems also to suggest that high rates of youth unemployment had flow-on-effects across a wide range of other areas.

Table 4: Relationship between unemployment and outcomes for youth people

	Assessment	Test
Living with parents	Increasing unemployment is likely to be associated with an increasing proportion of young people living with their parents	Regressions using total unemployment rate and time trend as explanatory variables to explain proportion of young people living with parents. Coefficients on unemployment were positive and statistically significant for all regressions except 25-29 females.
Living with partner	No statistically significant relationship	Regressions using total unemployment rate and time trend as explanatory variables to explain proportion of young people living with partners. Coefficients on unemployment were negative but not statistically significant.
Living with dependent children	No statistically significant relationship	Regressions using total unemployment rate and time trend as explanatory variables to explain proportion of young people living with children. Coefficients on unemployment were negative but not statistically significant.
Prevalence of sole parenthood	Increasing unemployment is likely to be associated with an increasing rate of sole parenthood among young people	Regressions using total unemployment rate and time trend as explanatory variables to explain proportion of young people who are sole parents. Coefficients on unemployment were positive and statistically significant in all regressions except 15-19 males.
Education enrolments	No statistically significant relationship	Regressions using total unemployment rate and time trend as explanatory variables to explain proportion of young people aged 17, 18, 19, and 20 enrolled in education. Coefficients on unemployment were positive but not statistically significant.
Employment rates	Increasing overall rates of unemployment is associated with a decreasing proportion of young people employed	Regressions using total unemployment rate and time trend as explanatory variables to explain proportion of young people employed. Coefficients on unemployment were negative, and statistically significant for all regressions except 20-24 and 25-29 females.
Unemployment rates	Increasing rates of unemployment within the total population is associated with an increase in youth unemployment	Regressions using total unemployment rate and time trend as explanatory variables to explain proportion of young people unemployed. Coefficients on unemployment were positive and statistically significant.
Benefit receipt	Increasing overall rates of unemployment is associated with an increasing proportion of young people on benefit	Regressions using total unemployment rate and time trend as explanatory variables to explain proportion of young people recording benefit income in last 12 months. Coefficients on unemployment were positive and statistically significant for all regressions except 15-19 females.
Real personal incomes	Increasing unemployment is associated with lower average incomes for young men	Regression using total unemployment rate and time trend as explanatory variables to explain real average personal income. Coefficients on unemployment were negative and statistically significant for 20-24 and 25-29 males.
Youth suicide	Unemployment may have increased suicide among young men	Regressions using total unemployment rate and time trend as explanatory variables to explain male and female age specific youth suicide rates. Coefficients on unemployment were negative and statistically significant for 15-19, 20-24 and 25-29 males. The regression did not control for the introduction of initiatives under the Youth Suicide Prevention Strategy.

Note: Our assessment should be treated as indicative, given the absence of a full set of explanatory variables in the tests and the aggregated nature of our data. Our dependent variables are the prevalence of the outcome in the age/sex group. For example, the proportion 15-19 males unemployed from 1976 to 2006. Our explanatory variables are a linear time trend and the consolidated HLFS consistent unemployment rate from the long-term data series (Statistics New Zealand, 2008, B2.3 series 12). Sole parent regressions use the proportion of the usually resident population who are sole parents as the dependent variable, as data for New Zealand born is not available for 1976 and 1981. The data on suicide is the annual Ministry of Health series, and is for the period 1956-2005. Statistical significance is 5% level for a two tailed test.

To test the notion that labour market opportunities have been important, we looked at the relationship between different transition outcomes for cohorts and the rate of unemployment experienced by the whole population. We also controlled for any linear trends in the outcomes being explained. The

results of these rather rough-and-ready tests are reported in Table 4. Our results suggests that the poor labour market opportunities of the early 1990s were associated with an increase in young people living with their parents, increased sole parenthood, lower levels of employment, increased youth unemployment, increased rates of benefit receipt, reduced incomes among young men, and potentially higher rates of male suicide. While our tests did not show a statistically significant relationship with education enrolments, there is considerable anecdotal evidence from the early 1990s about how unemployment led to an increase in young people staying at school, attending training programmes, and enrolling in tertiary education.

Findings from more sophisticated research tends to support the view that at an individual level, unemployment had both wide ranging, and sometimes long-term effects on young people. Research using the Dunedin and Christchurch longitudinal studies is particularly interesting in this regard as the cohorts were born in the early to mid 1970s, and collectively exposed to a lot of unemployment. Using the Christchurch study, Maloney (2004) found evidence that the experience of economic inactivity may have increased the risk of future periods of inactivity.¹¹ Fergusson et. al., (2001) and Fergusson and Horwood (2007) found that exposure to unemployment from the ages 16 to 21 modestly increased criminal behaviours and court convictions, suicidal ideation, and alcohol and drug abuse amongst the study members. However, there was no statistically significant relationship with suicide attempts, teenage pregnancy, or depression once confounding factors were controlled. Additional evidence of the relationship between unemployment and male suicide is provided by Blakely et al., (2003). Using linked census and mortality data, they found that it was likely that unemployment increased suicide amongst 18 to 24 year old men, even after adjusting for the confounding effects of mental health.¹²

In a longer term sense it is likely that the labour market has also played a major role in the changing nature of youth transitions. The increase in educational participation is perhaps one of the most fundamental changes in youth transitions over many decades. It is likely that it has been the major cause of the postponement of entry to full time employment - and may have also influenced the delay of marriage and child bearing. We think it is reasonable to conclude that the increased demand for skills – and the growth in the variety of occupations - has been the major driver of increased participation in education.

Another explanation for some of the differences in cohorts transitions relate to changes in government policies (Higgins, 2002).

In looking at this question, it is important to consider both youth-specific policies, as well as more general policies.

In terms of youth-specific policies, government plays a major role in the lives of young people through services (eg secondary education), entitlements (eg student allowances and benefits), and laws that regulate conduct (eg driver licensing laws or the regulation of the labour market). If we focus only on what government spends on services and entitlements – based on 1997/98 figures it seems that roughly 20% of total government expenditure concerns young people aged 12 to 24 years of age. This is made up mostly of spending on education, as well as welfare entitlements, and to a lesser extent the justice system.¹³

However, more general government policies such as monetary and fiscal policy also impact on young people, much of it through influencing the availability of youth jobs.

The late 1980s and early 1990s stands out as a time of major change in policy settings that potentially might explain some of the differences in cohort outcomes. The economic reforms of the late 1980s - deregulation of product markets, tariff reductions, changes to the governance and ownership of state owned businesses, restrictive monetary policy – had important consequences for young people. The immediate short run impact of the reforms was increasing levels of youth unemployment.

¹¹ Evidence from UK longitudinal data suggests that exposure to unemployment leads to a higher probability of adult unemployment, as well as lower adult wages (Gregg, 2001; Gregg and Tominey, 2004).

¹² However, see Beaurrais (2003) for an alternative view.

¹³ These estimates are based on unpublished data from the last fiscal incidence study undertaken in New Zealand (Crawford and Johnson, 2004).

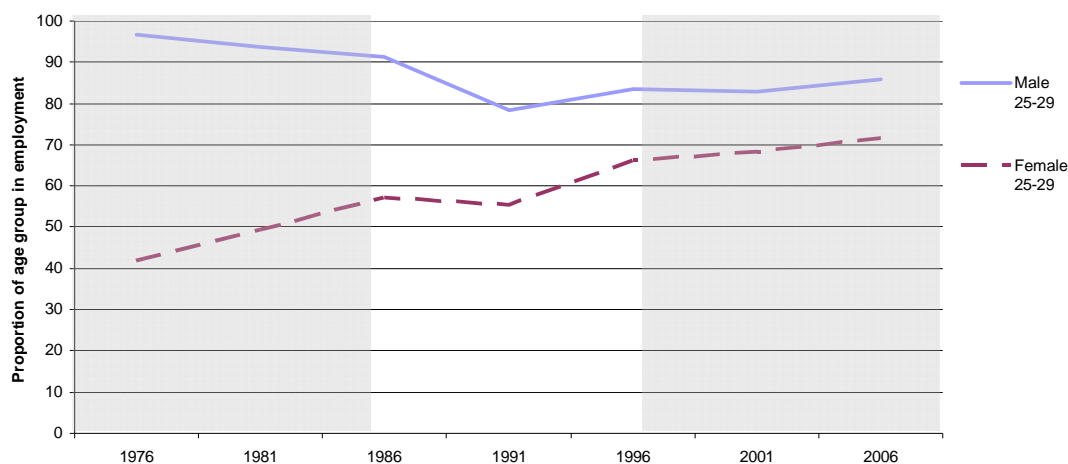
The subsequent reforms – many of which were changes to youth-specific policies – aimed at encouraging employment amongst young people as well as reducing fiscal costs. After a decade or more of decline, the apprenticeship system was abandoned and replaced with industry training. In 1991 the Employment Contracts Act diminished the role of collective bargaining, and probably lessened restrictions on part-time work for young people. In the tertiary education area, the Government moved away from universal student allowances and introduced the student loans scheme in 1992. There were many changes to labour market programmes including a move away from fully subsidised job creation schemes. In the welfare area, the age of eligibility for unemployment benefit and domestic purposes benefit was increased in 1988, and benefit rates were reduced in 1991. A youth minimum wage for workers 16 and 17 years olds was introduced in 1994.

Importantly, at the same time as the policy reforms there were also wider economic forces that were impacting on the labour market. There was an asset boom and bust cycle (the 1987 sharemarket crash), and an international economic recession and recovery (Chapple, 1996; Reddell and Sleeman, 2008). The importance of the international economic cycle should not be underestimated, as employment rates in many OECD countries declined around 1990, and then began increasing around 1992/1993.

So how much was change in government policy responsible for the differences in cohort outcomes. Our assessment is that changes in government policies had important impacts on youth transitions during the late 1980s and early 1990s – mainly through changing labour market opportunities for young people. However, it is important to acknowledge that there were other economic forces also occurring. Government policy reforms in the 1990s reduced employment prospects, and some of the policy reforms of the 1990s may have contributed to the rebound in employment.

The net impact of all these changes is shown in Figure 31. The Figure shows the employment rates of young men and women aged 25-29 between 1976 and 2006. What is surprising is that the long-term trends appear relatively constant, with significant changes during the 1986 to 1996 period. Our conclusion is that while policy reforms undoubtedly had important effects on overall levels of employment of young people during the late 1980s and early 1990s, the reforms do not seem to have radically altered the long-term trends.

Figure 31: Employment rates of males and female aged 25-29, Census 1976 to 2006



Source: Census 1976 to 2006. New Zealand born usually resident population.

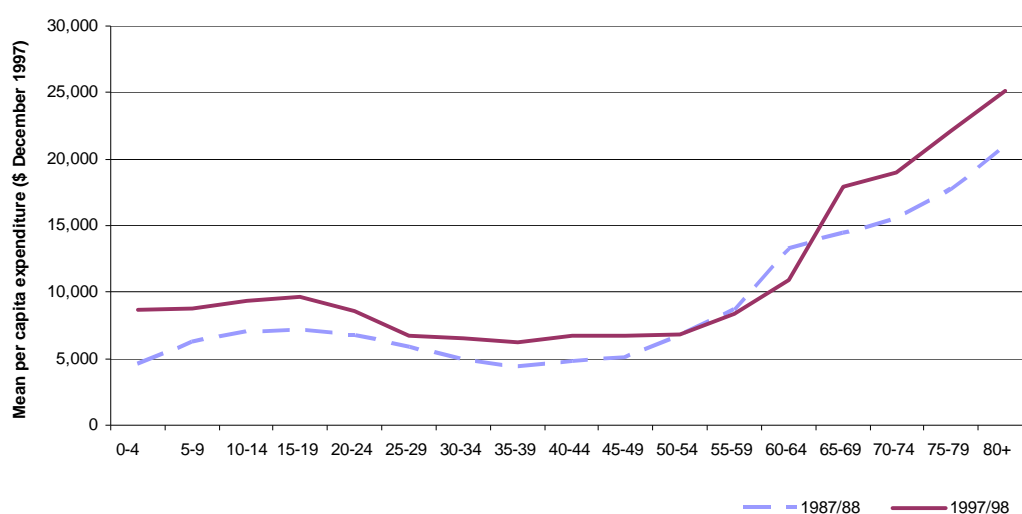
Given the relatively constant nature of the long-term trends, and the fact that other OECD countries also experienced recessions in the early 1990s, we are sceptical of research that attributes very large positive employment effects to particular policy interventions during this period.¹⁴ However,

¹⁴Important research on the impact of some of the reforms has been undertaken by Tim Maloney. The research looked at the impact of changes in labour market regulation, benefit reform and minimum wages using mainly HLFS data from 1986 to the mid 1990s (Maloney, 1997a; 1997b; 1998). A broad summary of the findings would be that, for young people older than 18 years, increases in the adult minimum wage reduced employment, while the Employment Contracts Act and benefit reforms increased employment. Looking at the labour market and benefit reforms together, Maloney argued that the policy change explained one third to a half of the total growth in

disentangling the impact of wider government policies from changing economic conditions is rather difficult. It is also difficult to predict what would have been the outcome if the policy reforms had not occurred.

Interestingly, while the early 1990s reforms reduced spending on young people in many areas, there is evidence that overall government expenditure on young people was actually higher in the post-reform period. Figure 32 is based on unpublished data from the Ron Crawford fiscal incidence study, and shows real average per capita government expenditure by age. As can be seen, in the year 1997/98 real average per capita expenditure was higher than in 1987/88 for those aged 10-24. While universal student allowances were abolished, and benefit rates and entitlements reduced, there were larger increases in government spending in other areas. Between 1987/88 and 1997/98, per capita spending on young people increased due to increased education spending (schools and EFTS) as well as increased spending on benefits (there were more young people receiving benefits in 1997/98).

Figure 32: Real average per capita government spending by age, 1987/88 and 1997/98



Source: Unpublished data from the Crawford fiscal incidence study. Note: The study used Taxmod, and in this instance allocated all government expenditure, using estimates of actual payments in relation to benefits, weights derived from administrative data for education and health, and a pro rata basis where there was no clear ability to allocate. See Crawford (2003) and Crawford and Johnson (2004) for a discussion of the assumptions underlying the study.

So returning to the original question: how much has government been responsible for changes in cohort outcomes? Our assessment is that government plays an important role in shaping outcomes for young people in many areas. In terms of long-term trends, government policy such as increased funding of education has undoubtedly had important effects. We are also of the view that changing government policy is culpable for some of the poor outcomes of the late 1960s early 1970s birth cohorts. While the state of the labour market seems to have been a major driver of differences in cohort outcomes, Government has influenced these outcomes to the extent that it influenced the economic decline and recovery of the late 1980s and early 1990s.

So to summarise, it is our view that the origin of the long-term trends in youth transitions have clearly been influenced by many inter-related factors. Changes in cohort size, family structure, feminism, the influence of 'rock music', new technology, and youth policies of the government have undoubtedly all had some effects. We also think that the evidence points to the important role of labour market in

employment across the whole population between 1991 and 1996 (Maloney, 1998:101). The findings for 16 and 17 year olds were slightly different, and often not what was expected. The increase in the age of eligibility for unemployment and domestic purposes benefits for 16 and 17 year olds in 1988 did not appear to increase employment (in fact these changes seemed to have decreased labour force participation). Increases in the adult minimum wage also did not increase levels of employment of 16 and 17 year olds.

influencing young people's transitions, particularly for the cohorts who were young in the late 1980s and early 1990s

To put this in another way, the cohort data shows many changes that are probably the result of long-term social, economic, policy and technological changes. Examples of this include the declining prevalence of partnership, the precipitous decline in legal marriage, declining religious affiliation, and increasing participation in education. However, the cohort data also shows important 'period effects', related to the economic recession of the late 1980s and early 1990s.

9. Public policy implications

In this last section we briefly review a youth transitions framework for public policy, before looking at the specific policy implications of our findings. Given our conclusions in the previous section, much of this section focuses on policy related to preparation and transitions into the labour market.

When viewing youth policy through the lens of the 'transition to adulthood', an important starting point is that transitions have consequences for young people, as well as the wider community. In addition, many of these consequences are long-term. Education and labour market choices and experiences have long-term impacts on a young person's earnings and career trajectory. The consequences of fertility decisions last for many years. Youth offending impacts on the wider community, and often has long-term consequences for the individual young person involved.

Young people are likely to make successful transitions under certain conditions. It is often argued that a key ingredient for successful transitions is that young people have relationships with caring adults who have high expectations. The research also indicates that healthy youth development requires that young people have opportunities and challenges to develop their skills and abilities (Dryfoos, 1997; Eccles and Gootman, 2002; Learner, 2007).

A range of different social institutions are important in preparing and supporting young people in the transition to adulthood. Most young people indicate that they have warm and caring relationships with their parents – and clearly family provides a critical means of socialising and supporting young people (Adolescent Health Research Group, 2008). Other social institutions such as the wider community, for example sports and leisure groups, are also important. The workplace is also an important social institution in that a lot of work and life skills are gained on-the-job.

However, government also plays an important role in the preparation and support of young people in the transition to adulthood. Key aspects of government intervention in this area include:

- the provision of both compulsory and tertiary education, as well as financial support for young people while studying;
- care and services for young people who are without responsible family;
- healthcare;
- income support for young people who because of unemployment, caring responsibilities or sickness and disability are unable to work;
- employment programmes for young people unable to find employment;
- the justice system; and
- the regulation of specific legal rights and responsibilities.

Many of these different activities can be conceptualised as government supporting and investing in the preparation and transition of young people. This occurs most directly where the state acts in the role of a parent for a young person. Public investment in education and student support is also clearly about preparing young people for participation in the economy and society. The benefit system provides support when a young person is unable to secure employment.

A key focus for government is ensuring successful transitions amongst all young people, but there is of course a major emphasis on young people for whom the transition to adulthood is less easy. Young people differ in the extent to which their family or the wider community have invested in their well-being. Addressing this inequality of investment - ensuring that all young people get more or less the same start when reaching adulthood – is an important focus for government in the youth area. Equity

funding in education, employment support for young people with disabilities, and rehabilitative youth justice programmes, are all interventions partly motivated by the notion of equalising opportunities.

In preparing and supporting young people in the transition to adulthood, government policy requires judgements about the 'age of independence' of young people. In some instances the judgement is about the age at which a young person can access adult entitlements, rather than relying on their parents. Funding for tertiary education, or the age of eligibility for benefits, are examples where this judgement is made.

In other instances the judgement is about the allocation of adult legal rights and responsibilities. The age of legal criminal responsibility, the right to vote, the age at which a young person can legally drive a vehicle, purchase alcohol, marry, or enter into a legally enforceable contract, all involve some balancing of considerations. In many of these instances there is a gradation of child, youth, and adult rights. Graduated rights mean that young people have a chance to learn decision-making skills, but in a manner which reduces the initial risks of mistakes.

An important finding from our study is that adolescence is getting longer. This has had important consequences for government. For example, although it is difficult to clearly separate cause and effect, government spending on education has increased as young people have spent longer in education (OECD 2008).

Another important finding from our study is that there has been a growing individualisation of pathways into adulthood for young people. This has also been associated with changes in government policy. If we compare the current arrangements with the 1970s, it could be argued that there is now less emphasis on predetermined roles for young people (for example young women), and more emphasis on giving young people more choice through the provision of information.

So what are the future public policy implications of our findings about how young people's transitions have changed in recent decades? In what follows we discuss three important policy issues.

Although our study has only focussed on New Zealand born young people for measurement purposes, many of our conclusions are applicable to young New Zealanders who were born overseas. Many of the same trends we have observed are also occurring for young people living in New Zealand who were born overseas. It is important to note that this latter group is also an important focus of policy, because as well as the youth transitions analysed in this study, they also face a number of other transitions related to being a migrant and becoming a New Zealander.

Responding to the economic recession¹⁵

The economy entered a recession in the first quarter of 2008, and the Budget 2009 economic forecasts predict economic output will continue to decline until the first quarter of 2010. Overall unemployment is predicted to reach 7.5 percent of the labour force in the March quarter of 2011.

In previous recessions youth unemployment rose sharply. Already we have seen this occur between 2008 and 2009. The HLFS shows that in June 2008, unemployment of those aged 15-19 was 15%. This had increased to 23% by June 2009. Equally, for those aged 20-24 the rise has been from 7% to 12%. In contrast, for the 40-44 age group unemployment has only grown from 2.4% to 3.0%.

Youth unemployment is sensitive to the economic cycle because, as labour market entrants, young people make up a large fraction of everyone looking for work. For example, the LEED data shows that young people represent around one third of all hires at any point in time. One of the first responses of firms to a downturn is to reduce recruitment, and hence young people are disproportionately affected by a recession. Based on Budget 2009 forecasts, we estimate that the unemployment rate among young people aged 15-24 will reach around 19% in the March quarter of 2011.

¹⁵ On the 2 August 2009 the Government announced a 'youth opportunities package' containing a range of initiatives designed to increase training and labour market opportunities for young people. A further package of initiatives, including 'Fresh Start' for young offenders, was announced on the 26 August 2009. The analysis in this paper was completed prior to these announcements.

There are also a number of risks which indicate that the increase in youth unemployment could be higher.

The first is international migration. The synchronous nature of the recession means that countries that are potential migration destinations for young people are also experiencing a recession. Reduced outflows of young people from New Zealand, combined with increased numbers of older New Zealanders returning from overseas, may increase youth unemployment.

The second risk is that the current generation, commonly referred to as the baby blip, are also a comparatively large ethnically diverse cohort. Even if there had not been a recession, they may have faced difficulties in the labour market because of crowding. On top of this, compared to other cohorts, many in the current cohort were exposed to higher levels of childhood adversity. Being born in the early 1990s meant that a higher proportion was exposed to family poverty, parental unemployment and sole parenthood than other generations.

If current forecasts are accurate, a key implication of our study is that the current generation of young people face difficult prospects. Over the next two years, as well as higher youth unemployment, we are likely to see more young people living at home, possibly increased participation in education, less young people employed, increased sole parenthood, increased benefit receipt, lower incomes and possibly higher rates of mortality amongst young men. Maori and Pacific young people are likely to experience these impacts disproportionately.

Policy to respond to rising youth unemployment covers many different areas of government. These include enabling young people to remain at school for longer, enhancing access to tertiary education, subsidising apprenticeships, direct job creation, active labour market and youth development programmes, addressing income issues for young people and their families, and enabling community organisations to provide activities and support for young people.

There is an extensive literature on the relative effectiveness of many of these interventions, much of it being canvassed in the current reviews of youth transitions (OECD, 2009b).¹⁶

Doing nothing is one option, which would leave large number of young people inactive, unemployed and on benefit. This approach might need to be supplemented with increased expenditure on mechanisms to control the anti social excesses of some unemployed young people.

An alternative approach is to try and occupy young people with activities such as work schemes.

Another approach might be to implement a programme of investment in young people, as well as providing services that address the social distress of unemployment. This would mean increased investment in tertiary education, strengthening of support for workplace training and apprenticeships, more funding of employment and other programmes for unemployed young people, expansion in services designed to address mental health issues, and increased investment in mentoring, youth volunteering, and youth workers. Such an approach aims to make the best of a bad situation and enhance the stock of human capital amongst young people.

A wide ranging programme of interventions to address youth unemployment does come at a considerable fiscal cost. However, in considering the costs and benefits of such a programme, it is important to account for the benefits and costs properly. In an environment of high unemployment, the cost to government of keeping a young person in education or in an apprenticeship is the opportunity cost of a young person on benefit. Investments in human capital also have longer term benefits.

Institutional design

In this paper we have shown that youth transitions are becoming longer, less structured, and more complicated. These changes might provide some of the explanation for the increase in youth unemployment relative to adults that has been observed amongst the most recent cohorts.

¹⁶Useful summaries of evaluation findings can also be found at <http://www.evidencebasedprograms.org/static/> and <http://www.promisingpractices.net/>

At the same time as youth transitions are becoming more complicated, they are also becoming more important. This is occurring because the amount of time young people spend in education has been increasing. From a purely economic perspective, young people are becoming more valuable because an increasing level of resource is being invested in their education.

In the medium term, it is important to consider the institutional arrangements that facilitate effective youth transitions. By institutional arrangements we mean the mechanisms that ensure that young people are acquiring labour market relevant skills in education, and entering into high quality employment when leaving education. These institutional arrangements might include ensuring that young people and their families have timely information about career choices, that there are good links between education providers and employers, and that there are well organised mechanisms (such as apprenticeships) to encourage skill formation.

Addressing disadvantage

If we look at indicators of youth transitions in New Zealand, there are a considerable proportion of young people who are not transitioning successfully. Also, compared to other OECD countries, New Zealand has a below average number of young people 15-19 years of age in education, and an above average proportion of young people who are not in education or employment (OECD, 2008 and 2009a).

Our analysis has only been disaggregated by sex and ethnicity – but a clear finding of our research is that there are continuing and systematic differences in the extent to which different groups transition successfully.

Young people identifying with Maori and Pacific ethnicities have, on average, markedly lower rates of participation in all forms of education, are less likely to be employed, are more likely to be parents, and are more likely to be unemployed and/or receiving benefits. Young Maori also have a significantly higher rate of mortality than non-Maori.

If we look at transitions by gender, young unskilled men, and the group of mostly young women who become sole parents at any early age stand out as groups for whom transitions are difficult. Addressing the underlying causes of this disadvantage is important from both an economic as well as social equity perspective.

Appendix 1: Census data annex

For the most part, this study uses 5 yearly census data from 1976 to 2006. We report outcomes for the usually resident New Zealand born population. This annex provides more detail on measurement issues associated with our methodology and the variables used in our analysis. We draw extensively on the excellent overviews of census data in *Census Questionnaires* (Statistics New Zealand, 2006) and *A Guide to Using Data from the New Zealand Census, 1981-2006* (Errington et al., 2008)

Measurement error from survey non response

Measurement error arising from non response is an issue for our analysis. Non response might occur where a person is usually resident in New Zealand:

- but does not fill out the Census; or
- fills out the census, but does not answer the question about place of birth; or
- fills out the census and the place of birth question, but does not answer other questions.

Overall there is a growing level of non response to the census, and we suspect that it is slightly more prevalent amongst males (Callister et al., 2007).

There is also a growing degree of non-response to the question about place of birth. Table 4 shows the number of individuals for whom place of birth has not been recorded in the census, expressed as a percentage of the numbers in each NZ born birth cohort.

Birth cohort	1952-1956	1957-1961	1962-1966	1967-1971	1972-1976	1977-1981	1982-1986	1987-1991
Aged 15-19		1.0%	0.3%	0.8%	0.9%	5.9%	4.5%	5.9%
Aged 20-24	1.5%	0.4%	0.8%	1.2%	6.5%	5.4%	8.1%	
Aged 25-29	0.5%	0.8%	1.4%	6.4%	5.4%	7.8%		

The worst case scenario is where everyone who fails to record a place of birth was actually born in New Zealand. However this is unduly pessimistic, as a growing proportion of those who have no place of birth recorded will have been born overseas. In 1976 roughly 10% of 15-24 year olds who answered the question about place of birth were born overseas. By 2006 almost 24% of 15-24 year olds who answered the question were born overseas.

The growth in non-response to the place of birth question occurs from the 1996 Census onwards, and seems to occur across both males and females, and involves all age groups. We have also looked at the ethnicity of those not responding to the place of birth question. This gives little guidance, as most people not responding to place of birth did not respond to the ethnicity question either.

There is a varying level of non-response to other Census questions, and more information can be found at <http://www.stats.govt.nz/census/2006-census-information-about-data/information-by-variable/default.htm>.

Definition of key variables used in the analysis

Ethnicity

The ethnicity question in the census has changed overtime, and reliable comparisons can only be reported from 1991. For more details, see <http://www.stats.govt.nz/census/2006-census-information-about-data/information-by-variable/ethnicity.htm>.

We report total response ethnicity in five categories: European, Maori, Pacific Peoples, Asian, and Other Ethnicity.

A “New Zealander” ethnicity is not included as a tick-box option on Census forms, but individuals can choose to tick “other” and manually specify “New Zealander” as their ethnic group. In Census 2006 roughly 11% of all respondents indicated they were a New Zealander, although the proportion was slightly lower for young people. Analysis of data from previous census collections shows that not all those who recorded a ‘New Zealander’ type response were Europeans. However, in this paper, the ethnic group category “European” includes the “New Zealander” response, as in pre 2006 censuses such respondents were automatically placed in the European group.

Caution needs to be exercised with drawing conclusions about trends over time in relation to ethnicity because there is also likely to be some level of mobility between different ethnic groups across time.

Family living arrangements (Figure 1)

Figure 1 is derived from the 2006 Census and sourced from Youth Statistics (<http://www.youthstats.myd.govt.nz/index.html>). It is based on the count of the usually resident population where household composition is known. Absentee parents are excluded, so a small proportion of children are coded as “Not living with family” because their parents were absent on Census night. “Parents” here includes those acting in place of parents, which might include (for example) aunts, uncles, grandparents, step-parents, foster parents, or older siblings. It does not include non-family-members who are not providing care-giving, such as flatmates.

Family living arrangements refers to the combination of role in family and household composition, not to the official variable called ‘living arrangements’. The derivation is as follows:

- if couple only household, or if couple-only plus others household and a member of the family, then living arrangement = 'Couple without children'
- if a member of a family household, and not otherwise excluded from being a parent, then living arrangement = 'Parent with child(ren)'
- if a member of a family household, and not otherwise excluded from being a child, then living arrangement = 'Living with parent(s)'
- otherwise, not living with family

This data does not capture information about young people who live part-time in more than one household (e.g. sharing time between separated parents)

Education and employment status (Figure 2)

Figure 2 is derived from the 2006 Census. It refers to the total usually resident population, and shows the proportion answering the Census questions about study and employment. The Census 2006 education question was ‘are you attending, studying or enrolled at school or anywhere else?’

Living with parents on Census night

An individual is counted as living with their parent (or person who acts as a parent), if they are living in the same household as that person. From 1991 it is calculated based on the young person’s role in the family nucleus.

A family nucleus is a couple, with or without children, or one parent and their children usually resident in the same dwelling. The children do not have partners or children of their own living in the same household. People who usually live in a particular dwelling, and are members of a family nucleus in that dwelling, but who are absent on census night, are included, as long as they are reported as being absent by the reference person on the dwelling form.

Earlier data is based on the young person’s relationship within the family.

Living with a partner

A partner is a person with whom another person is:

- in a registered marriage

- in a civil union, or
- in a consensual union.

Data is not available for 1981 and 1976.

Legal marriage

Marital status is a person's reported status with respect to the marriage laws or customs of the country. Legal marital status is a person's status with respect to registered marriage or civil union.

Parents living with dependent children

For 2006 and 2001 a young person is counted as living with a dependent child where there is a dependent child in the family nucleus, and the young person has a role as a parent in the family nucleus.

A family nucleus is defined as a couple, with or without children, or one parent and their children usually resident in the same dwelling. The children do not have partners or children of their own living in the same household.

A 'child in a family nucleus' lives with a parent, has no partner of their own living in the same household, and can be any age. A 'dependent child' in a family nucleus is under 18 years of age and is not employed full time. A parent is defined as a mother, father (natural, step, adopted, or foster), or 'person in a parent role' of a 'child in a family nucleus'.

For 1986 to 1996 the analysis is based on an analysis of family type and dependent children.

The 1976 and 1981 data should be treated with caution as family data was not coded into the Census database. The family variables have been built up from personal variables.

Living with a dependent child as a sole parent

A sole parent is the parent in a one-parent family. For the purposes of the census, children in joint custody usually reside at the place where they spend more nights, or if they spend equal amounts of time at each residence, they usually reside at the place where they are at the time of the census. Some children classified as being in one-parent families have two active parents in different households.

Employment

A person is counted as employed if during the reference week of the census they worked for at least one hour for pay or profit as either self employed, or in an employee/employer relationship. If they worked without pay for one hour or more in job that contributed directly to the operation of a farm, business or professional practice owned or operated by a relative they are also counted as employed. Individuals who normally work but are not at work due to illness or injury, personal or family responsibilities, bad weather or mechanical breakdown, direct involvement in an industrial dispute, being on leave or holiday – are also counted as employed. A person is counted as in full-time employment if they usually work 30 or more hours per week.

Unemployment

The current census definition of unemployment is a person who was without a paid job during the reference week of the Census, was available for work, and had actively searched for work in the past four weeks. The definition is consistent with ILO guidelines. A major change in the definition of census unemployment occurred with the 1991 census when unemployment became more tightly defined. Prior to 1991 unemployment counts included individuals who were without a job and looking, but were not actually available for work that week. The older definition also included those whose only job search method was looking at a limited number of job advertisements in newspapers.

Benefit receipt

Respondents are asked about their sources of income in the past 12 months. Our definition of benefit receipt includes the following means tested benefits: unemployment, domestic purposes, sickness, and invalids. We have excluded student allowances.

Real mean personal income

Information on total personal income received is collected in the Census as the before-tax income for the respondent in the last 12 months. Individuals are asked to estimate their personal income in an income range. Mean personal income is the mean average of incomes using a representative income from each category. Mean personal incomes are deflated using the RBNZ historical CIP series (<http://www.reservebank.govt.nz/statistics/az/2989609.html>).

Religious affiliation

Religious affiliation is the self-identified association of a person with a religion, denomination, or sub-denominational religious group. The denominator of our estimate of the proportion of the cohort with a religious affiliation includes those who object to answering the religious affiliation question.

Urban/rural area of usual residence

Urban areas are statistically defined areas with no administrative or legal basis. There is a three-part hierarchical subdivision of urban areas into

- main urban areas
- secondary urban areas
- minor urban areas.

Together, the populations in main, secondary, and minor urban areas comprise the statistically defined 'urban' population of New Zealand. The urban area classification is designed to identify concentrated urban or semi-urban settlements without the distortions of administrative boundaries.

Net migration

Non response to the census overall, and to the place of birth question, is a particular issue for our analysis of net migration. We estimate net migration based on the change in the number in each cohort at different ages (after accounting for mortality). However, our estimates are expressed as a range because we need to take into account the fact that it may be non response rather than net migration that is causing the change in number within the cohort.

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