

Labour Market Dynamics and Future Challenges: An Issues Paper for the Welfare Working Group

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Summary of Key Points

- Females and older workers are accounting for an increasing share of employment due to changes in our population's demography and participation rates.
- Over the past 20 years, an increasing proportion of jobs have become higher skilled (managerial, professional and technical roles).
- Future projections by the Department of Labour suggest that employment demand will continue to be concentrated in higher skilled jobs.
- There is likely to be a continuing reduction in demand for low skilled manual work across a wide range of industries.
- Even this lower skilled work will probably require a wider range of capabilities than in the past.
- The long term trend towards work that is less intensive and manual (but more service and customer focussed) may be more favourable to female and older beneficiaries and those with disabilities, but only if they have built up relevant skills.
- People on benefits tend to have lower job related skills when compared to individuals not on a benefit.
- In addition, they are more likely to be older, have disabilities and face caregiving responsibilities.
- A positive labour market feature is that around one in nine recipients of benefits report earnings derived from part-time work. This demonstrates that an existing group of beneficiaries are already partly connected to the job market.
- In terms of beneficiary job prospects, despite a trend towards higher skilled work, considerable opportunities are likely to remain in a few relatively low skilled service-related occupations.
- One example of this is the aged care sector, which the Department has identified as being likely to face increasing demand for lower skilled and part-time employment in future¹.

¹ This does not mean that this work is appropriate for all beneficiaries however, and a variety of barriers for this kind of work may need to be considered.

Introduction

The purpose of this paper is to describe some of the key trends and dynamics in the New Zealand labour market, and to examine the labour market prospects and barriers for individuals currently on a working-age benefit who wish to move into work.

The paper has been commissioned by the Welfare Working Group (WWG) to contribute to the group's understanding about improving the work outcomes for long term beneficiaries. The outline of the paper is as follows:

- Section 1: Historical labour market patterns
 - (what sort of jobs were created and what sort of workers were hired?)
- Section 2: Future labour market patterns
 - (what sort of jobs will be created and what skills will be needed?)
- Section 3: Benefit recipients
 - Who are they (demographics, skills and recent/current work attachment)
 - Some of the key barriers (and enablers) for them moving into work
- Section 4: Matching beneficiaries to available employment - A DPB example
- Section 5: Other information about employment outcomes for beneficiaries.

Section 1: Historical trends and patterns in the New Zealand labour market

Changes in labour force participation

New Zealand already has one of the highest labour force participation rates in the OECD, (the fourth highest in 2008). Labour market participation has increased from 63.5% to 68.1% over the twenty years to 2009, and this rise in participation over recent years has contributed substantially to our labour force growth.

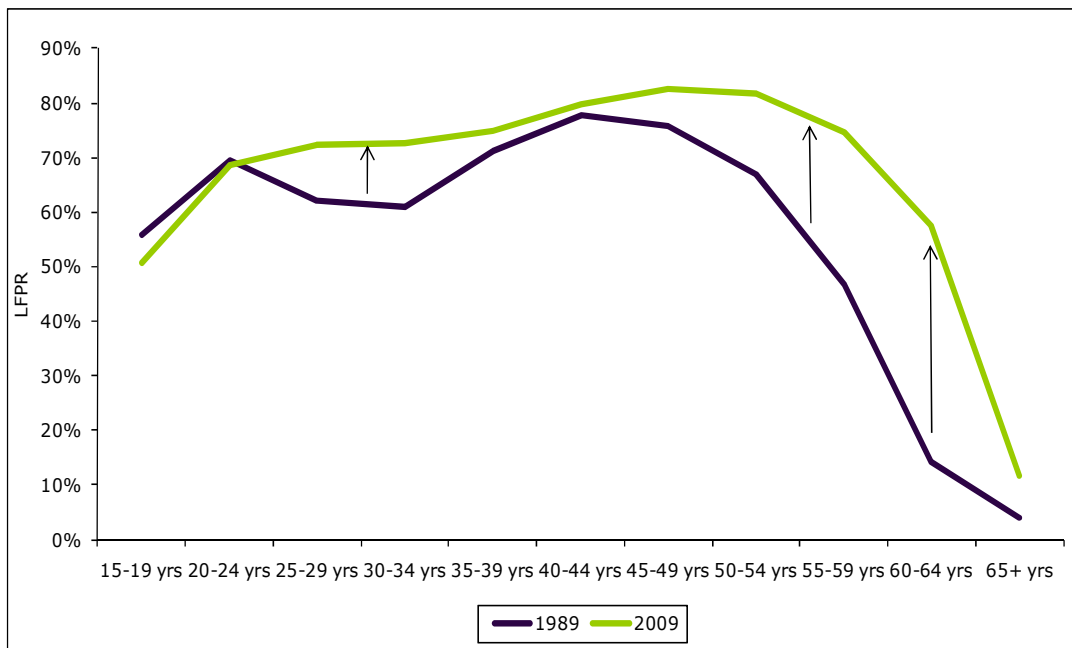
The key drivers of this increase were;

- The strong improvement in the participation rates of older workers since the beginning of the 1990s.
- Steadily greater female participation offsetting slowly abating male participation.

Work that has been undertaken by the Department of Labour highlights the big increase in the participation of older workers (55+ years) while the participation of young people (15–24 years) has declined, partly due to greater time spent in education.

Labour force participation increased over the last twenty years to December 2009 and recently peaked at 69% before the economic downturn in December 2008. Overall, male participation fell slightly from 75.1% to 74.6%. This has been offset by strong increases in participation by females (see Figure 1), for whom participation rose from 53.2% to 62.2% over the period. The most striking changes for men have been the decreased participation of men aged under 25 years, and the increased participation of those aged 55 years and over. For females, participation increased at all ages over 20, again most notably in the 55 years and over age group.

Figure 1, Changes in female participation by age, 1989-2009



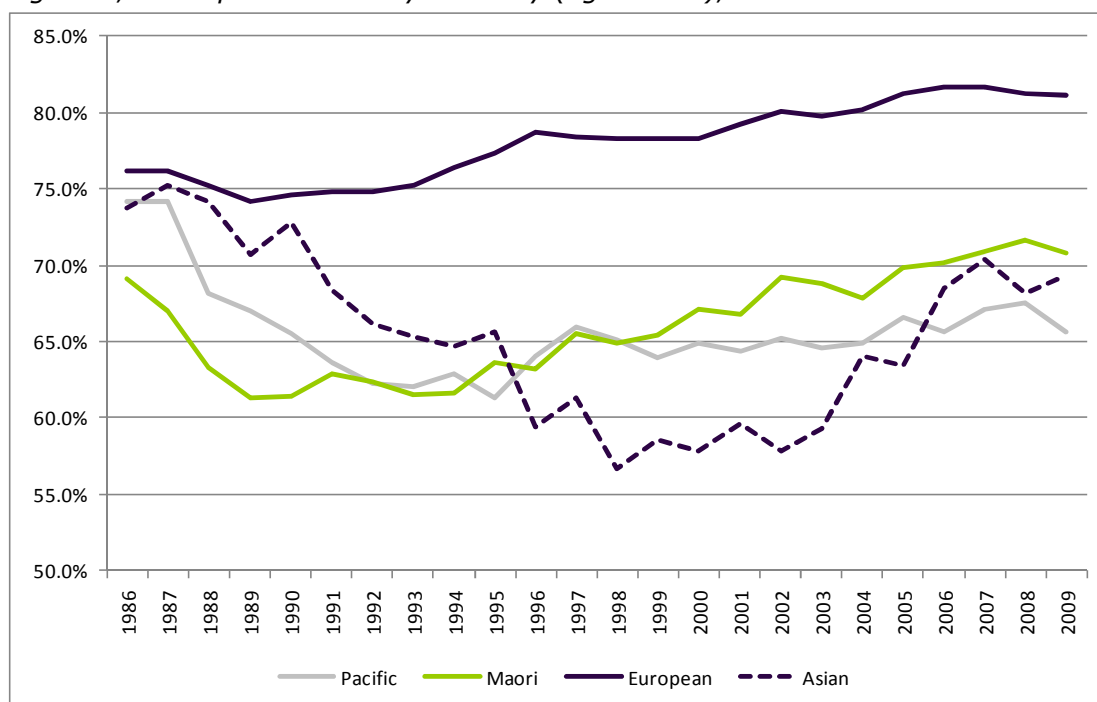
Source: Household Labour Force Survey, Statistics New Zealand

Labour force participation also varies by ethnicity (see figure 2). Over the past 20 years, the participation rate for people aged 15-64 has risen for Europeans (from 75% to 81%) and for Māori (from 62% to 71%) but has fallen for Pacific peoples (from 67% to 65%) and for Asians (from 71% to 69%). The lower participation rates among Māori and Pacific groups relative to NZ European are linked to lower levels of educational attainment, especially for Pacific peoples. Table 4 shows that between 1991 and 2009 Pacific peoples replaced Māori as the group with the lowest share of people with tertiary qualifications (8% in 2009) and the highest share of people with no qualifications (41% in 2009).

The low participation rate among Asians is attributed in part to the youthfulness of the Asian population, particularly those likely to be studying full-time at school/university and therefore not actively looking for work. Asian participation has been climbing, however, since hitting a low point of 57% in the recession in 1998. The rise in participation from 2001/02 coincides with the introduction of the skilled migrant category – which placed an emphasis on migrants having a job as part of their entry qualification.

Economic downturns appear to have had a more adverse effect on the participation of Pacific peoples than for Māori or Europeans. Pacific participation fell from 65% to 60% between 1989 and 1992 due to the impact of the 1987-1991 recession on the labour market. European and Māori participation rates have since recovered, but Pacific participation is still lower compared with before the 1987–1991 recession.

Figure 2, Participation rates by ethnicity (age 15-64), 1989–2009



Source: Household Labour Force Survey, Statistics New Zealand

The participation rate only tells part of the story, as intensity of participation (hours worked) is also important. For employed people in New Zealand, average weekly hours fell from 38.8 hours in 1989 to 37.0 hours in 2009. This decline in hours is related to the increased participation of females and older workers, with both groups on average working fewer hours than prime-aged males (25–54 years).

Changes in employment by occupation and industry²

Over time, there has been a shift in New Zealand employment towards higher skilled and away from lower skilled jobs³. While this is beneficial in terms of economic growth and productivity, the implications for benefit recipients are that even entry level jobs are likely to require increasingly sophisticated skills and abilities. This means that those with low educational qualifications will be increasingly disadvantaged and in an era of regular skill upgrades, difficulties will magnify if they are also spending long spells out of the labour force.

The increase in demand for higher skilled occupations is occurring across almost all industries. Even within the Agriculture, Hunting, Forestry and Fishing industry – with a tradition of employing low skilled workers – the number of low skilled jobs has fallen. However, this does not mean that low skilled jobs have disappeared and considerable opportunities remain in some industries.

² Note that time periods used in this section are not entirely consistent because of changes to occupation and industry classification codes. A major change to both occupation and industry classifications in 2009 has made it difficult to match industry groups to historical data - within the timeframes for writing the paper it was not possible to deal with these classification issues. In addition, note that occupation and industry data excludes individuals with missing qualifications, occupation or industry codes.

³ For example, a recent report by the Department of Labour <http://www.dol.govt.nz/publications/lmr/knowledge-economy/index.asp> identified the longer term shift towards a higher skilled knowledge economy.

Occupations

Overall, the number of individuals aged 15–64 in employment grew by 42% between 1991 and 2008. This growth occurred across all main occupations except for agriculture and fishery workers, who experienced an 11.6 percent decline in the number employed.

Table 1 presents the share of employment by occupation group (arranged from highest to lowest skill levels) in 1991 and 2008. The last column contains the percentage change in the employment share between 1991 and 2008.

Table 1, Average occupation shares in 1991 and 2008, 15-64 year olds

Occupation	1991	2008	% change 2008/1991
Legislators, Admin, and Managers	11.2	13.7	22.8
Professionals	13.0	16.8	28.9
Technicians and Associate Professionals	11.0	12.5	13.6
Clerks	14.7	12.1	-18.0
Service and Sale Workers	13.1	15.0	14.1
Agric and Fishery Workers	10.5	6.5	-37.9
Trades Workers	10.2	9.4	-8.5
Plant and Machine Operators	9.6	8.1	-15.9
Elementary Occupations	6.5	5.5	-14.3

Source: Household Labour Force Survey, Statistics New Zealand

It can be seen that over the period 1991–2008, employment growth in New Zealand has been concentrated in higher skilled occupations. Four occupation groups: Legislators, Admin, and Managers; Professionals; Technicians and Associate Professionals and Service and Sale Workers increased their share of employment (ie. growth in employment was greater than the national growth rate of 42% for these occupations). The four high-growth occupations increased their share of all jobs from just under a half (48.3 percent) in 1991 to 58 percent in 2008. The Legislators, Admin, and Managers and Professionals occupation groups increased their share of employment from one in four jobs (24.2 percent) in 1991 to nearly one in three (30.5 percent) in 2009.

Over this period there was a fall in the share of workers employed as clerks, agriculture and fishery workers, trades workers, plant and machine operators and elementary workers. The number of people employed as agriculture and fishery workers fell by 11.6 percent, which resulted in their employment share declining from 10.5 percent in 1991 to 6.5 percent in 2008.

The next section describes employment growth by industry. It examines whether the increased demand for high-skilled and service related occupations is being driven by a few industries, or whether all industries have increased their demand for more skilled workers.

Industries

Table 2 presents the share of employment by industry. The last column contains the percentage change in the employment share between 1991 and 2008.

Table 2, Employment shares of individuals aged 15–64, by industry in 1991 and 2008

Industry	1991	2008	% change 2008/1991
Agriculture/Hunting/Forestry/Fishing	10.5	6.8	-35.6
Mining and Quarrying	0.3	0.3	4.3
Manufacturing	17.5	12.8	-27.0
Electricity, Gas, Water	0.9	0.6	-40.3
Construction	5.3	8.3	56.4
Wholesale and Retail Trade, Restaurants	20.5	22.5	10.0
Transport and Storage	6.7	3.9	-41.3
Financing/Insurance/Real Estate/Business Services	10.4	16.3	56.5
Community, Social, and Personal Services	27.9	28.1	0.7

Source: Household Labour Force Survey, Statistics New Zealand

The agriculture, hunting, forestry and fishing; electricity, gas and water; and transport and storage and manufacturing sectors experienced a declining share of total employment between 1991 and 2008.

For the agriculture, hunting, forestry and fishing; electricity, gas and water; and transport and storage sectors the number of workers employed fell between 1991 and 2008. In the manufacturing sector employment increased, but at a slower rate to overall employment growth, which resulted in a fall in the share of employment in the sector between 1991 and 2008.

The industries that increased their share of total employment between 1991 and 2008, were, in descending order, finance, insurance, real estate and business services (from 10.4 percent to 16.3 percent), construction (from 5.3 percent to 8.3 percent), wholesale and retail trade and restaurants (from 20.5 percent to 22.5 percent) community, social and personal services (27.9 percent to 28.1 percent) and mining and quarrying (0.26 percent to 0.27 percent).

Between 1991 and 2008 employment has shifted further towards the services sector. In 1991 the primary and manufacturing sector employed nearly one in three workers (28.2 percent), compared with one in five workers (19.9 percent) in 2008. Within the services sector the finance, property and business services and construction industries accounted for the majority of the employment growth within the services sector, followed by wholesale and retail trade and restaurants.

Is it the case that the increase in the service sector employment (and fall in the primary and manufacturing sectors) is responsible for the increased demand for high-skilled occupations? Or are all industries employing more workers in high-skilled sectors in 2008 compared with 1991?

To determine this, Table 3 identifies the proportion of workers in high and low skilled occupations in each industry. It also shows how much this proportion has changed over the past 17 years. High skilled occupations include Legislators, Admin, and Managers; Professionals and Technicians and Associate Professionals. Medium skilled occupations (not shown in the table) include Clerks; Service and Sale Workers and Trades Workers. Low skilled occupations include Agriculture and Fishery Workers; Plant and Machine Operators and Elementary occupations.

Overall, employment in high-skilled occupations increased by 73.4%, for medium-skilled occupations employment increased by 35.8% and for low skilled occupations employment increased by 7.7%.

Table 3, Percent Share of high, medium and low skilled occupations by industry

Industry	High		Low	
	2008	% Change 1991-2008	2008	% Change 1991- 2008
Agriculture/Hunting/ Forestry/Fishing	6.6	78.6	89.0	-4.7
Manufacturing	30.9	26.6	36.4	-14.6
Electricity, Gas, Water	55.9	73.5	24.9	-34.3
Construction	18.3	53.4	25.3	46.1
Wholesale and Retail Trade, Restaurants	31.6	-5.1	9.2	6.9
Transport and Storage	32.1	-1.0	45.8	31.2
Financing/Insurance/Real Estate/Business Services	65.2	17.6	9.1	181.9
Community, Social, and Personal Services	62.4	18.0	6.1	-51.7

Source: Household Labour Force Survey, Statistics New Zealand.

Notes: The Mining sector has been removed to protect confidentiality

Table 3 shows that most industries experienced an increase in the share of employment in high-skilled occupations (except for wholesale and retail trade, restaurants and transport and storage where the falls were relatively small).

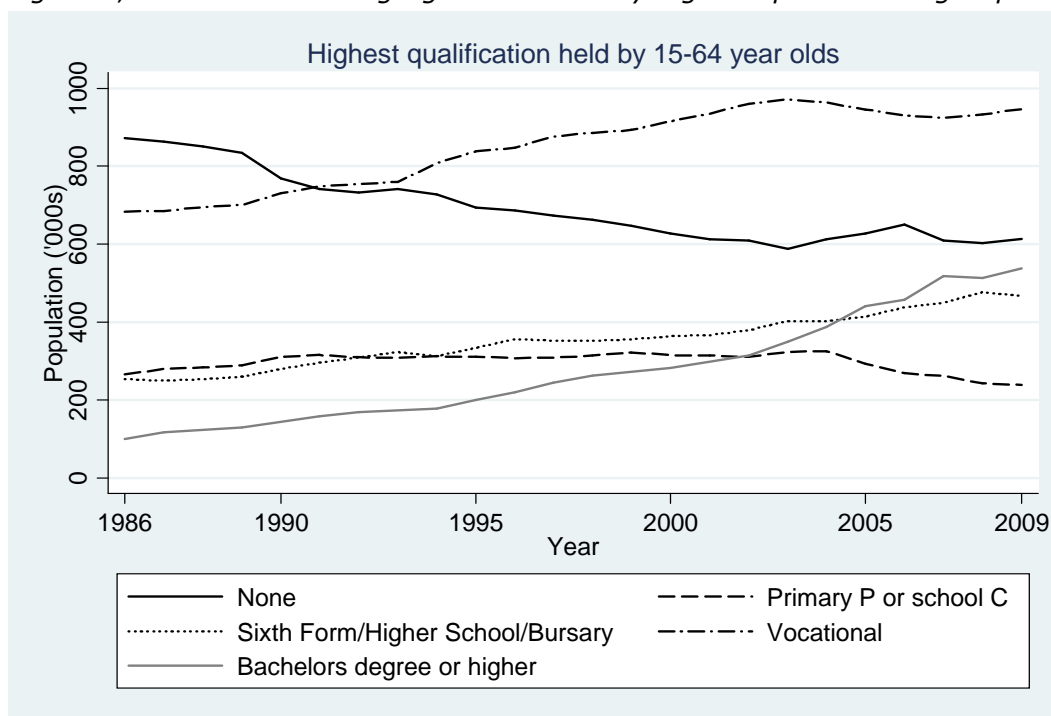
The picture was more mixed for low skilled occupations. The agriculture industry had the highest proportion of low skilled occupations, and their share of low skilled workers fell by 4.7%. Overall the total number of workers in the agriculture, hunting, forestry and fishing industry fell between 1991 and 2008, but only the low skilled occupations groups experienced a net loss of workers, with gains in the number of individuals employed in high and medium skilled occupations. Five other industries, construction; wholesale and retail trade, restaurants and transport and storage; finance, insurance, real estate and Business services, experienced an increase in the share of employment in low skilled occupations. The hybrid services industry finance/insurance/real estate/business services had a large increase in share, but this was off a small base. In construction, however, one quarter of the workforce were in low skilled jobs and there was a substantial increase in the share.

Overall, therefore, HLFS data suggests that opportunities for lower skilled work are shrinking, particularly in manufacturing and agriculture (traditionally large employers of lower skilled labour). However some rebalancing is occurring in some industries with a greater share of lower skilled jobs appearing in the growing industry of construction as well as in the declining industry of transport. An important feature in both these industries is that most of the workforce is male, so opportunities for lower skilled females are likely to be very limited.

Workforce qualifications and skills

The increase in demand for employment within high-skilled occupations has been accompanied by an increase in the qualifications of the workforce. Figure 3 plots the number of working-age individuals aged 15–64 years by highest qualification attainment from 1986 to 2009.

Figure 3, Number of working-age individuals by highest qualification group



Source: Household Labour Force Survey, Statistics New Zealand

The number of working-age individuals grew by 22.7% between 1986 and 2009, which was accompanied by a shift in level of qualification attainment. The number of individuals with no qualifications or only a compulsory school level qualification (primary p or school c) fell by 29.6% and 10.1% respectively. Higher school and degree qualifications increased at a faster rate (84.1% and 437.3% respectively), compared with overall growth in the working-age population. Vocational qualifications also increased, but at a similar rate to the growth in population (38.4%), which resulted in the share of individuals with a vocational qualification remaining at around one in three individuals in 2009.

The overall pattern of upskilling presented in Figure 3 – a fall in the share of working-age individuals with no qualifications and a rise in the number with a degree – is observed across different population groups.⁴ Table 4 contains the proportion of individuals by highest qualification. The first panel reports statistics for 1986, the second panel is for 2009 and the last panel calculates the percentage change in the proportion of individuals by highest qualification type between 1986 and 2009.⁵

⁴ A similar pattern of upskilling is observed in New Zealand across industries and occupation groups by Dean Hyslop & Dave Maré, 2009. "Skill Upgrading in New Zealand, 1986-2001," Australian Economic Review, The University of Melbourne, Melbourne Institute of Applied Economic and Social Research, vol. 42(4), pages 422-434.

⁵ The table restricts the population to those aged from 25 to 64 years to focus upon individuals who have finished formal education and have transitioned into the labour market, and to control for the some population groups have a higher share of young people with lower education achievement (because they are still in education and training).

Table 4, Highest qualification shares by population sub-group, 25–64 year olds

	None	School	H.Sch	Vocational	Degree
<i>Qualification shares: 1986</i>					
Male	35.5	7.2	7.7	42.3	7.4
Female	45.8	11.6	9.0	29.9	3.8
European	36.5	9.7	8.9	38.8	6.2
Māori	69.2	7.9	3.8	18.6	0.6
Pacific peoples	66.0	8.2	6.1	17.3	2.4
Employed	36.3	9.5	7.8	39.9	6.6
Unemployed	56.4	10.2	6.3	24.1	3.1
NILF	52.6	9.2	10.3	25.3	2.6
Total	40.7	9.4	8.3	36.0	5.6
<i>Qualification shares: 2009</i>					
Male	20.0	5.9	11.1	41.3	21.8
Female	20.6	8.0	12.7	35.7	23.1
European	17.3	7.8	11.7	40.7	22.6
Māori	33.2	8.0	8.4	40.1	10.4
Pacific peoples	41.2	6.0	15.0	29.9	8.1
Employed	16.9	7.0	11.9	39.9	24.3
Unemployed	27.8	6.5	10.3	38.3	17.1
NILF	34.1	6.8	12.6	31.4	15.1
Total	20.3	6.9	11.9	38.4	22.5
<i>% change in qualification shares (2009/1986)</i>					
Male	-43.7	-18.4	44.9	-2.4	194.4
Female	-55.0	-31.3	41.0	19.3	514.4
European	-52.7	-20.0	32.0	4.8	267.8
Māori	-52.0	1.2	119.7	116.0	1686.0
Pacific peoples	-37.7	-26.8	144.7	72.3	235.6
Employed	-53.5	-26.0	52.8	0.1	268.2
Unemployed	-50.7	-35.8	64.8	58.7	457.7
NILF	-35.2	-26.3	22.3	24.1	484.5
Total	-50.1	-26.2	43.0	6.5	303.7

Source: Household Labour Force Survey, Statistics New Zealand

In 1986 a greater proportion of females than males were without qualifications and a lower share held a degree qualification, but by 2009 the share without qualifications was similar to males, and a higher share were degree qualified.

The share of individuals with no qualifications roughly halved among European and Māori ethnic groups and by a third for Pacific peoples. Māori and Pacific peoples experienced a doubling of individuals with higher school and vocational qualifications. The growth in the share of individuals with a degree qualification was similar for European and Pacific peoples (roughly triple), but for Māori the share of people with degrees increased from less than 1% in 1986 to over 10% in 2009 – a ten-fold increase. The large increase in Māori degree holders, compared with Pacific peoples is due to very few Māori having degree qualifications in 1986. The increase in degree holders among Pacific peoples was more modest (due to a larger share of degree holders in 1986), and those with degrees accounted for 1 in 13 among the Pacific ethnic group, compared with 1 in 10 for Māori.

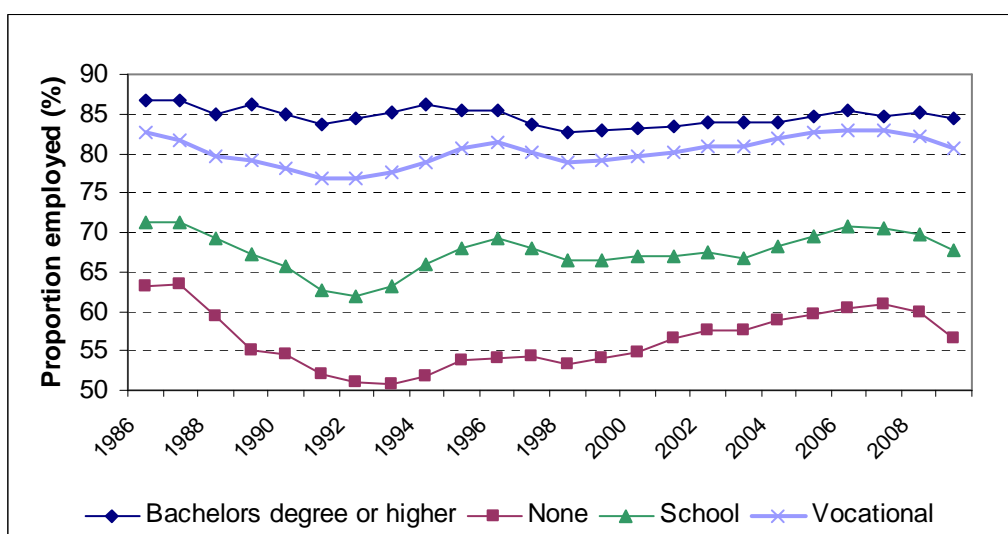
Among individuals in employment, the biggest change was a four-fold increase in the share of degrees from 6.6% in 1986 to 24.3% in 2009. Among the unemployed,

however, there was also a strong increase in the proportion who had a degree over this period, from 3.1% to 17.1%.

While Table 4 shows New Zealand’s participation in tertiary education has risen significantly in recent years, other reports show that a substantial part of the adult population still has low levels of foundation skills (literacy, numeracy, language and general social skills),⁶ and 11 percent of students leave school with few or no formal qualifications. There are significant challenges for the New Zealand workforce if the long tail of educational underachievement persists into the future.

Figure 4 shows that despite the large changes in the mix of qualifications the employment probability for each group remains largely unchanged over the last 20 years.

Figure 4, Employment rate, aged 15-64, by highest qualification attainment



Source: Household Labour Force Survey, Statistics New Zealand

Not surprisingly, there is a smaller fraction of individuals with no qualifications in employment compared with those that hold a degree. The late eighties and early -- nineties recession had a dramatic negative impact on the employment rates of individuals with no qualifications or school level qualifications, which despite rising steadily since then have not recovered to their pre-recession level. If anything the employment rates for individuals with degrees have fallen slightly, which could be partly due to a change in the composition of individuals gaining a degree and a greater range in their employment outcomes. In the last year or two, the employment rate has fallen in all skill levels, but the fall has been more pronounced at below degree level.

It is important to note that the supply of labour appears to have adjusted to demand at the lower skilled as well as at the higher skilled end of the labour market. For people without qualifications, the employment rate has fallen but it has recovered considerably from the early 1990s. The recent recession has therefore not affected the job prospects of the lower skilled as much as in the recession of the early 1990s. This is because in numeric terms, there were actually 49,000 more low skilled jobs

⁶ The 2006 Adult Literacy and Life Skills Survey found that approximately 43% of New Zealanders aged 16 to 65 have literacy skills below those needed to participate effectively in a knowledge society. The survey also showed that 51% of New Zealand adults have low numeracy.

(labourers and plant and machinery operators) in 2008 than in the early 1990s. In contrast, the supply of labour at the totally unskilled end (people with no qualifications at all) has dropped from 872,000 to 613,000 over the same period, (see Appendix Tables A2 and A4). This reflects the inflow of higher skilled youth and the shift into retirement among the lowest skilled people at higher ages. This decline in the supply of low skilled labour explains why employment prospects for people aged 15-64 without qualifications have not fallen as sharply as we might have expected, if we look solely at demand.

Regional labour markets

Regionally, the north of New Zealand is experiencing the highest unemployment rates. For the latest June 2010 quarter, the unemployment rate is 9.1% in Northland, 8.7% in Auckland, 8.5% in Gisborne/Hawke's Bay and 7.8% in Bay of Plenty. In contrast, the unemployment rate is below 5.0% in all regions in the South Island. In numeric terms, one in three unemployed people currently lives in the Auckland region.

Section 2: Future labour market patterns

The Department believes there are some notable forces that will affect the New Zealand labour market in the next 10 years, including:

1. Population and labour force changes
2. Changes in the skills mix required
3. Evolving nature of work, including types of employment arrangements

These forces of change present multiple challenges for New Zealand. If we are well prepared for transition, an appropriately skilled and flexible labour force and changes in employment arrangements need to be developed.

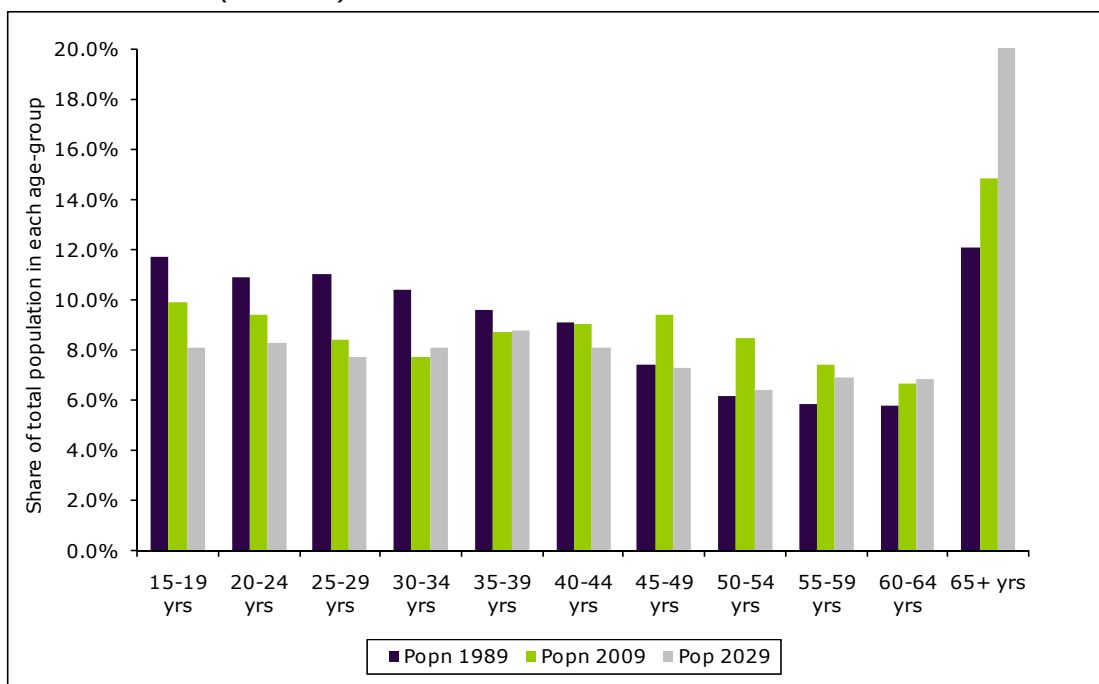
Gender and age changes

Population projections show that there will be increased downward pressure on participation rates over the next 20 years as the population continues to age. Aggregate labour force participation rates in New Zealand are projected to fall to 68 percent by 2020, from the current rate of 69 percent. The trend of rising female participation rates will fall off and start to gradually reverse – remaining at around the current all-time high of 62 percent through to around 2020 and then declining to 57 percent in 2050, driven by an ageing population.

Slower labour force growth or even contraction will exacerbate skill and labour shortages, slow economic growth and lead to greater public social expenditures. Around one in four workers will be aged 55+ by 2020. However, falling participation and an increasingly tight labour supply could lead to employers increasing their levels of capital investment. More machinery will require greater skills, which will continue to limit demand for lower skilled job seekers.

One effect is that more older workers will be required to do work traditionally associated with younger age groups. As older workers (and females) work lower average hours than younger workers, more work in future will probably be part-time. Also, there is likely to be more self employment given older workers are more likely to be self employed. This partly reflects their preferences, as well as them being more likely to have the capital, skills and experience needed for running a business.

Figure 5, Age distribution for the male working-age population in the years 1989, 2009 and 2029 (forecast)



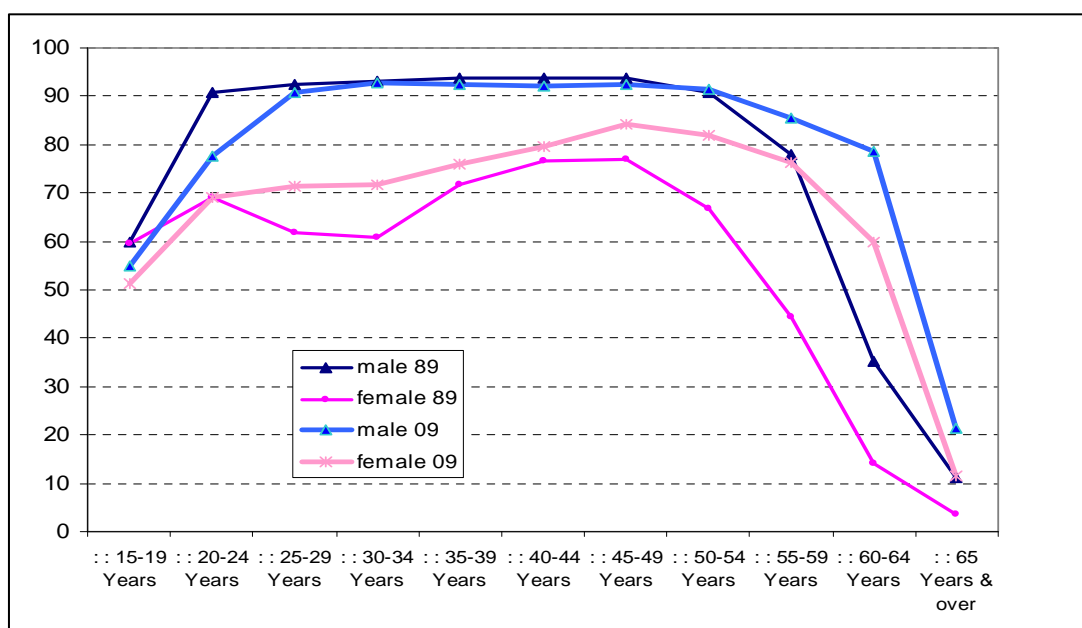
Source: Household Labour Force Survey and Population Forecasts, Stats NZ

Figure 5 shows how the population age distribution is shifting for males, particularly those aged 65+. The other major increases have been in the age groups from 45 through to 64 years, which collectively have increased their share of the working-age population from 25.2% to 32.0% between 1989 and 2009.

The population projection for 2029⁷ shows the share of the working-age population aged 65+ years increasing substantially. This will act to bring down the overall participation rate, due to the relatively low participation of this age group. The share of the population in each of the age groups under 45 years is not projected to increase over this period. The projected trends by age group are similar for females.

⁷ This is Statistics New Zealand's 2009-based population projection using the medium assumptions for fertility and mortality, and long-run annual net migration of 10,000.

Figure 6, Workforce participation by age and gender, 1989 and 2009



Source: Household Labour Force Survey, Statistics New Zealand

Figure 6 shows that participation rates for males have been relatively constant between the age of 25-54, while their participation rates have fallen at younger ages and increased at ages over 55. For females, participation rates have increased in all age groups over 20 years. There is no longer a pronounced dip in participation at prime childbearing ages of 20-39. Like men, the largest increases in participation have occurred at ages 55-64.

Increasing ethnic diversity

The 2006 Census showed that the New Zealand population is becoming more ethnically diverse. Asians comprised the fourth largest major group of ethnicities in New Zealand, at 9.2 percent of our population, and is a fast growing segment. This proportion is expected to increase to approximately 15 percent by 2026. This will have an impact on the labour force, for example, with an increasing share of the population who are likely to speak English as a second language.

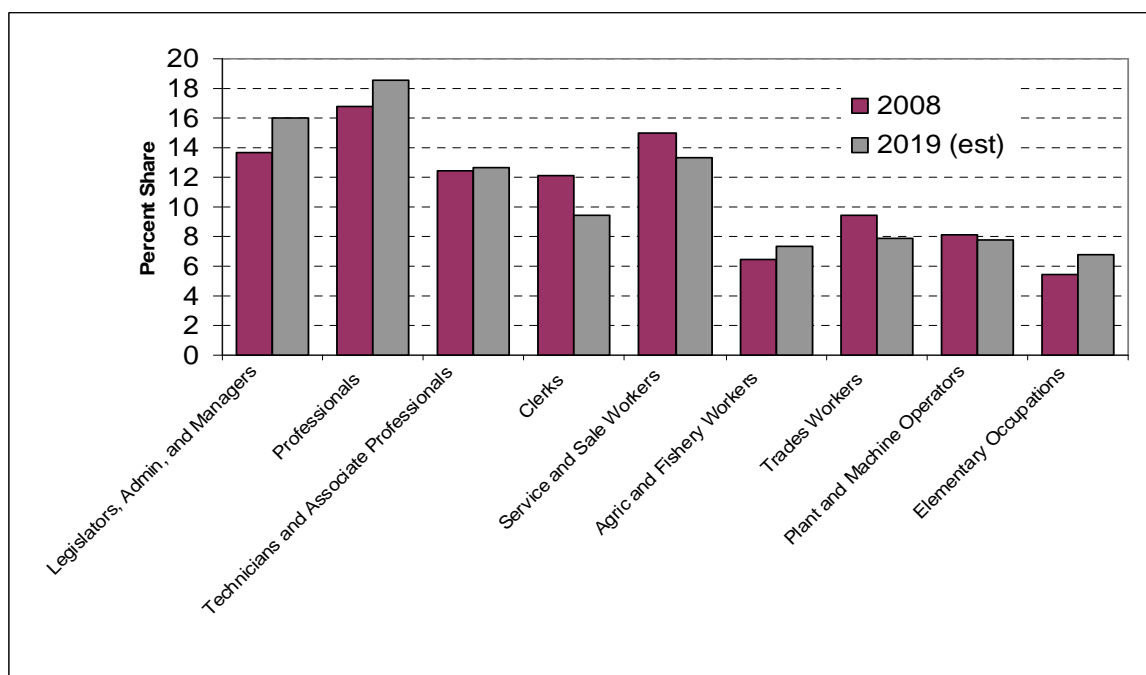
Implications of demographic change

Ways to alleviate and manage the reduction in labour force participation that will occur at older ages need to be developed, and workplaces are likely to become increasingly ethnically diverse. The Department of Labour has estimated that by 2029 the labour force will need an additional 184,000 workers to maintain current participation rates.

Changing Occupations of workers

Projecting the demand for workers in different occupation groups is subject to many uncertainties. Nevertheless, the Department of Labour have made projections based on historical trends and growth and productivity projections. These estimate an uneven future distribution of employment growth across skill levels out to 2019. This is shown in Figure 7 below.

Figure 7, Change in percent share of employment by occupation 2008-19



Source: HLFS and Employment Projections, Department of Labour

These projections show that, while the share of high skilled jobs will continue to increase faster than low skilled jobs, some less skilled jobs in primary and lower skilled areas will also increase their share.

Changing work arrangements

An increased reliance on the supply of labour from older workers and people with caregiving responsibilities (eg. mothers) will create greater demand for less traditional and more flexible working arrangements including part-time work and working from home. Increasing numbers of employees, both high skilled and low skilled, will have non-standard work arrangements. The flipside of this is that there may be greater insecurity and uncertainty for the workforce, particularly among the lower skilled working in areas where they have less control.

This will put gradual pressure on current policy settings governing work, the workforce and the workplace which assume a traditional employment relationship, characterised as “full-time jobs of indefinite duration at a facility owned or rented by the employer”.

Overseas analysis⁸ also notes an expected increase in demand for more highly skilled occupations (eg managers and professional occupations). There will be greater emphasis on skills associated with “knowledge work” (eg cognitive skills such as abstract reasoning, problem-solving, communication and collaboration with clients and colleagues).

At the lower skilled as well as higher skilled end of the labour market, jobs will become less physically demanding and repetitive but more knowledge-intensive. Personal traits such as communication skills and attitudes are therefore going to be

⁸ Leitch, S. Skills in the UK: The long-term challenge, Interim report, Leitch Review of Skills, December 2005. http://www.hm-treasury.gov.uk/independent_reviews/leitch_review/review_leitch_index.cfm and Karoly, L.A. and Panis, C.W.A. The 21st century at work- Forces Shaping the Future Workforce and Workplace in the United States, Rand Corporation, 2005, retrieved from http://www.rand.org/pubs/monographs/2004/RAND_MG164.pdf

increasingly important. A higher proportion of jobs even at the lower skilled end will require regular upskilling (largely on the job). One implication of this is that people out of the labour force for long periods may find it more difficult to return even to lower skilled jobs. This points to the importance of beneficiaries retaining some contact with the labour market. A more communication oriented workforce in some ways suits an ageing workforce, as older workers are less able to endure physical work but cognitive and communication skills generally improve from middle through to older age groups.

Industries with ongoing demand for lower skilled workers

Some industries will continue to have a considerable demand for a relatively low skilled workforce, into the future. This means that opportunities for lower skilled beneficiaries in some areas will persist in the years ahead. The Department has built up some knowledge about some of these industries, and two are discussed below:

Seasonal fruit and horticulture sector

The Primary sector overall lost almost 7,000 jobs over the 2002-08 period and about half of that during 2008-09⁹. However, it is forecast to bounce back, and create between about 11,000 and 29,000 jobs out to 2014, based on BERL and NZIER estimates. Fruit and horticulture represents a subset of this industry.

The nature of this work tends to be lower skilled and involves long work hours for short spells, say two-three months; high education qualifications are not required; work tends to be full-time only and physical fitness from day one is generally required. This industry is probably less suited to those with extensive caregiving responsibilities and less suitable to those with most forms of disability. However, many people on Unemployment Benefit regularly move into seasonal work.

*Aged care sector*¹⁰

Aged care is an industry where strong demand growth for lower skilled workers is forecast (with a significant majority of them being women). Over the next 30 years, the proportion of older people aged 65 years and over in New Zealand is projected to double, with the largest percentage growth occurring in the 85 years and over group. The number of older disabled persons needing high levels of care is projected to treble over this period. Assuming a fixed ratio of caregivers to older persons, the number of paid caregivers therefore needs to almost treble over the next 30 years from the current 17,900 to 48,200 in order to meet the likely future demand for care.

Between the last two Censuses, most growth in the caregiver workforce occurred in older age groups. Relatively few younger people are entering this vocation. The aged care sector therefore faces serious challenges in the longer term. Long term planning around the future of the caregiver workforce could include developing policies to increase participation in this work amongst the benefit population, as well as increasing the attractiveness of this industry through, for example, developing training programmes and establishing better career structures within the aged care sector.

⁹ 2010 DEE estimates, Department of Labour

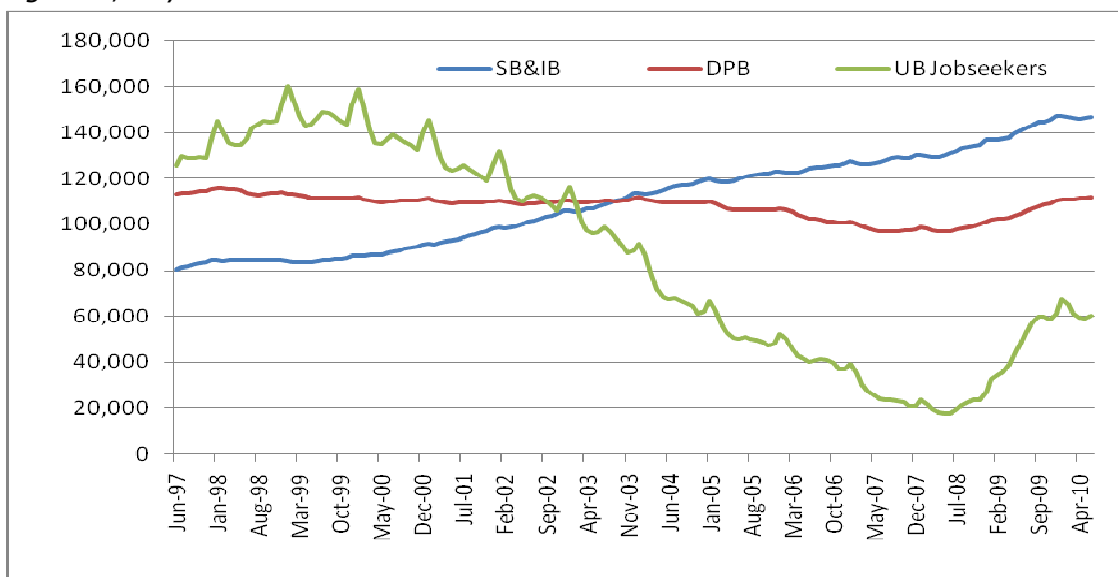
¹⁰ Department of Labour. 2009, http://www.dol.govt.nz/services/LMI/workforce2020/ageing/paid-caregivers/paid-caregivers_02.asp

Section 3: Benefit recipients

In order to assess the job prospects and opportunities for the benefit population to boost total labour supply, we need to know something about their work skills and capabilities as well as some of the possible barriers they face.

Figure 8 shows the number of people receiving the main benefits over the last 13 years. The period covers two recessions – the Asian Financial Crisis in the late 1990s and the Global Financial Crisis that started in 2007. A steady increase in the number of Sickness benefit (SB) and Invalids Benefit (IB) jobseekers is evident over this period. While there has been a sharp recent increase in UB recipients, numbers are still below where they were for the entire period shown before 2004. In comparison, numbers on the DPB have remained relatively stable over the period shown, although the total number of sole parent households in New Zealand has increased between 1996 and 2006¹¹.

Figure 8, Key benefit numbers



Source: Ministry of Social Development

Characteristics of people in the main benefit groups

There is considerable variation in the characteristics of people across all four main MSD benefit groups, as the following brief analysis shows¹². Measures to increase the work attachment of people on benefit will therefore need to consider these differences among the groups being targeted. The key labour market features looked at below include gender, age, and an approximate measure of their 'work readiness'.

¹¹ <http://socialreport.msd.govt.nz/people/families-children.html> . The number of sole parent families rose from 126,585 in 1996 to 145,032 in 2006.

¹² This information for people at all ages was drawn from DoL's remote access to MSD's IAP platform which is updated weekly. Data is at the end of June 2010. Fuller details are in Appendix 1.

Gender

Some key features concerning the gender of beneficiaries are firstly that those on UB and to a lesser extent SB are predominantly male (71% and 59% in 2010). The gender split is more even among people on IB, whilst those on DPB are mainly female although an increasing share are male, (12% in 2010, up from 9% in 2000).

Age

Unemployment benefit recipients have the youngest age profile of all main benefit groups with 31% of UB recipients aged under 25. Only 11% of them are aged 55-64, compared with 16% of the labour force aged 55-64 in June 2010. DPB recipients have a less youthful age profile than UB recipients, and are more concentrated in prime working age groups (25-54).

In comparison, people on SB and IB are far more likely to be older, and the number of people on IB who are aged 55+ has grown by about 10% over the past decade and reached 37% in June 2010. Interestingly, over 2,000 people on IB are aged over 65 (2.5%) and these are presumably people who are not eligible for New Zealand Superannuation.

Work readiness - people working part-time

People in each main benefit group can work part-time but need to declare their earnings. Up to \$80 each week is allowed before benefit abatement begins. Those who are declaring some earnings from work can be considered to be at least partially attached to the labour market. In HLFS terms they would in fact already be 'employed' as they are working more than one hour a week.

Out of 322,000 individuals identified on the four main benefits at the end of June 2010, about one in nine (35,831) were declaring earnings from work. Those who are declaring earnings from work could be considered more attached or 'work ready' than those who are not. In other words, they have demonstrated skills, job preferences and motivation which could potentially increase existing earnings to exit their main benefit without needing to be matched to a new job. However, these part-time working beneficiaries are not necessarily used to or able to work longer hours. In a 2005 survey, most benefit respondents in part-time work had either never been in full-time work or had not been in full-time work for more than five years.¹³

The following results for beneficiaries declaring earnings from work in June 2010 and therefore partly in work are shown in terms of main benefits;

- 9% of UB recipients were partly in work. Females were more likely to be declaring earnings than males, which was the pattern for other benefit groups as well.
- 7% of SB were partly in work. The share of IB recipients partly in work was slightly higher at 9%. This may relate to higher qualifications among this group but is notable, given their greater disability levels and higher average age.
- DPB recipients were the group most likely to be partly in work (16%).

¹³ Barriers to employment research; UMR combined report by MSD and ACC , p30 (2005)

- Among UB and DPB recipients, the proportion partly in work was lower in June 2010 than in June 2000. This is partly because part-time work opportunities are lower now than they were 10 years ago, with the proportion in part-time work in the HLFS falling by 1 percentage point over this period, but there are likely to be other factors. For instance, people who find work today on these benefits may be more likely to leave a benefit completely (and UB recipient numbers have fallen dramatically over this period). The stage in the economic cycle was similar in each of these two periods, given that in June 2000 New Zealand was pulling out of a recession, which is a similar situation today.

The large majority of beneficiaries (89% in June 2010) are not in any paid work, and there is considerable variation across benefit groups in the length of time these people have been out of work. In 2005, the proportions of DPB and UB survey respondents without work who had reported paid work in the last three years were 65% and 72% respectively.¹⁴ Proportions were slightly lower among SB respondents (57%) while only 29% of IB respondents had worked in the past three years. When the proportion working part-time is considered alongside the proportion who have recently worked, the IB benefit group appears less 'work ready' than other main benefit groups. Only 8% are working part-time, and they have the lowest share of non-workers who have obtained any recent work experience.

In order to investigate the measurable skills of beneficiaries, Table 5 uses New Zealand Income Survey data. This information, collected annually, provides a 'snapshot' of people who report receiving a benefit. Note that this data is different to the administrative IAP sourced data above, but it allows a point-in-time (and trend) comparison of their educational qualifications and other features with the wider non-beneficiary population.¹⁵

Table 5, Characteristics and labour market attachment of benefit recipients aged 15-64¹⁶

	Non Benefit	UB	SB	IB	DPB	Other MSD benefits
Female	48.9%	40.1%	47.6%	53.1%	90.3%	71.6%
15-24	22.5%	28.4%	16.9%	9.2%	22.9%	14.4%
25-34	18.6%	19.5%	16.9%	7.9%	32.0%	25.5%
35-44	21.2%	19.4%	20.5%	15.5%	28.1%	27.5%
45-54	21.6%	18.8%	21.3%	26.7%	12.8%	17.6%
55-64	16.2%	13.9%	24.5%	40.6%	4.3%	15.0%
European	69.2%	39.5%	56.7%	63.1%	40.5%	55.3%
Māori	11.8%	31.8%	23.4%	24.9%	42.5%	24.9%
Pacific	5.0%	15.6%	9.1%	5.8%	11.4%	8.1%
Asian	11.4%	10.1%	6.9%	3.9%	2.0%	8.6%
Other	2.4%	2.4%	3.8%	2.3%	2.8%	2.9%

¹⁴ UMR, Barriers to employment research.

¹⁵ In HLFS terms there are several definitions for not being in work, for instance in table 5 they are shown as either unemployed, jobless or not in the labour force (NILF).

¹⁶ NZIS asks individuals to identify a range of benefit payments they may have from WINZ in the last two weeks, including all main benefits.

No quals	19.5%	39.4%	48.2%	51.9%	38.8%	33.1%
School	9.0%	7.5%	8.1%	6.5%	7.6%	8.8%
Higher school	16.6%	17.3%	8.2%	8.5%	8.4%	11.8%
Vocational	33.5%	30.8%	28.1%	27.4%	37.6%	34.5%
Degree	20.2%	3.8%	6.1%	4.4%	7.0%	11.2%
Employed	78.9%	13.8%	15.0%	13.4%	21.6%	39.9%
Unemployed	3.5%	47.8%	12.7%	3.9%	14.9%	9.8%
Jobless	2.9%	11.3%	9.0%	7.3%	11.4%	7.3%
NILF	14.7%	27.1%	63.4%	75.4%	52.1%	43.0%
Total Pop	2,495,300	42,500	50,000	60,900	76,700	244,400

Source: 2009 New Zealand Income Survey, Statistics New Zealand

Table 5 groups individuals into those reporting that they received the unemployment, sickness, invalids, DPB or other Work and Income New Zealand (WINZ) benefit payment in the last two week. The non-benefit group includes everyone who did not report any benefit payments during the last two weeks. The counts of beneficiaries only broadly tally with IAP administrative records, so this information should be regarded as indicative, rather than exact.

Key points looking at this table include:

- Confirmation that individuals who receive a benefit are much more likely to have no qualifications and less likely to have a degree qualification compared with non-beneficiaries.
- UB recipients are the least well qualified of all beneficiary groups, (in terms of the percentage without any post-school qualification), and therefore able to apply for a narrower range of work.
- DPB recipients have a wider spread of qualifications than other benefit groups, with a large cluster reporting no qualifications but also with the largest cluster holding tertiary level qualifications.
- The data again highlights variations between benefit groups in the share of recipients who are working part-time. While the timings and definitions are different to administrative data source referred to earlier, the results again identify that the IB recipients have a lower attachment to the labour market than other benefit groups, while UB recipients not surprisingly have the highest attachment.

Implications of benefit profile in relation to labour market trends

An examination of the different features of the four main benefit groups from administrative and statistical sources confirms that they are not very homogenous. Different approaches are probably needed if a higher proportion of them are to be engaged in work. For example, jobs that are suitable to low skilled youth such as labouring are most appropriate for UB clients and less appropriate for the older SB and IB who have a higher incidence of disability. People on DPB are likely to be more responsive to part-time rather than full-time work, given their caregiving responsibilities.

The demographic features of the benefit population also indicate that available work options are likely to be a little narrower than for the average unemployed person. For SB and IB clients less able to do manual work, a slightly higher qualification profile suggests that they may be able to do more knowledge intensive jobs assuming their

qualifications aren't outdated, and their skills are recent. However, this is an issue as administrative data shows they are unlikely to have been in employment over the last few years.

For those beneficiaries already working, there may be options to explore increasing hours in their existing work rather than trying to find brand new full-time jobs. Having an existing connection to the workforce is likely to be beneficial in terms of signalling knowledge, experience, confidence and employment networks.

What do we know about the skills that employers of lower skilled workers require?

Evidence from a cross-sectional survey of firms in four large metropolitan areas in the USA suggests there is a substantial skills requirement among employers even in lower skilled jobs. Among jobs that did not require a college education, 70 percent required that workers deal with customers, 61 percent required that workers read or write paragraphs, 65 percent required arithmetic, and 51 percent required the use of computers. In addition, 61 percent required specific job experience.¹⁷

New Zealand employers in urban areas are likely to have similar requirements when recruiting workers with lower educational qualifications. Specific experience is seen as very important. Most employers seeking people in lower skilled jobs, in a survey of over 500 job vacancies in Christchurch in 2001, wanted firm or job-specific work experience rather than generic skills or qualifications.¹⁸ An important implication of this is that employers are likely to value recent work experience of beneficiaries more than the generic training they have acquired.

Barriers faced by people on benefit when moving into work

Extensive MSD qualitative and quantitative research into barriers has identified a wide range of barriers faced by people on benefits. The research has found that many barriers are interrelated, and that the existence of one barrier can predict the existence of another, even where there is no obvious relationship. For each main MSD benefit type, Table 6 shows the top two (out of five listed) barriers seen by beneficiaries as the most prevalent and difficult to overcome.

For the two illness related benefits, not surprisingly, having a disability is seen as a key barrier. But it was notable that 'money worries if job does not last' was in the top two barriers across all four non-UB groups. It also ranked highly among the UB benefit groups, and was the only barrier that featured in the top five in all five benefit groups (though for brevity, only the top two are shown below). It appears less likely to be related to labour demand or labour supply issues, but suggests a perception of earnings insecurity when moving between different benefit/tax/wage jurisdictions while in transition between benefit and work. It is possible that this barrier may be related to beneficiary perceptions and lack of confidence in their ability to hold down a job, as well as the temporary nature of many jobs they apply for. But it also suggests

¹⁷ The Urban Institute
<http://www.dol.gov/oasam/programs/history/herman/reports/futurework/conference/trends/trendsVII.htm>

¹⁸ Dalziell and Higgins (2001) www.dol.govt.nz/PDFs/lb2000g.pdf

that more understanding is needed about administrative or other issues for beneficiaries in transition to/from work.

Table 6, Most prevalent barriers identified for beneficiaries by main benefit type

ACC (< 12 Months)	DPB	Invalids Benefit	Sickness benefit	UB
Permanent injury/disability/illness	Money worries if job doesn't last	Permanent injury/illness/disability	Permanent injury/illness/disability	Not enough jobs in area
Money worries if job doesn't last	Getting work that pays more than benefit	Money worries if job doesn't last	Money worries if job doesn't last	Age

Source: UMR Research

Past research into barriers to employment has uncovered other factors, such as:¹⁹

- difficulty with childcare and other caring arrangements.
- perceptions of lack of suitable jobs.
- lack of suitable (or recent) work experience.
- limited mobility in terms of transport, drivers licences.
- transition to work costs (such as transport, clothing).
- motivation and engagement.

Compared to the employed population, SB, IB and DPB recipients are also:

- more likely to report a mental or physical disability.
- more likely to be a caregiver (either to children, invalids or older persons).

International research has shown that the sustainability of employment among beneficiaries is an issue, and also that duration on a benefit influences employment probability.²⁰ In New Zealand, it has been found that those who experience a benefit-spell longer than six months are 5–10 percent less likely to be off-benefit, less likely to be in employment and have 10–15 percent lower earnings than those who experience a shorter 3-month spell on benefit.²¹ This research also highlighted that many people who leave benefit do not necessarily move into work. Women, older individuals and those living in Auckland were significantly less likely to be employed after leaving a benefit than other groups.

¹⁹ For a substantial study, see Parker, B. (1997) Very long-term job seekers' barriers to employment: A nationwide survey, Labour Market Bulletin 1: 63–79.

²⁰ Barriers to Employment among Long-term Beneficiaries:

A review of recent international evidence, MSD Working Paper 04/04 Section 3.3

<http://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/working-papers/wp-04-04-barriers-to-employment.doc>.

²¹ Hyslop, D.; Stillman, S. and Crichton, S. (2004). "The impact of employment experiences and benefit spell duration on benefit-to-work transitions." Statistics New Zealand, Wellington. Available at www.dol.govt.nz/publications

In terms of job matches, the study found that people who moved off benefit into work were more likely to be taking up jobs in manufacturing, government administration and health and community services, and in industries in which firms tend to be larger. They were less likely to move into jobs in agriculture, fishing and forestry, or business services.

There appears to be limited research into key enablers, such as the personal and contextual factors that facilitate employment for beneficiaries, even when there are multiple barriers.

Section 4: Matching beneficiaries to available employment –A DPB related example

This section provides an example of considering existing labour demand in areas suitable for beneficiaries, by looking at the actual number of people working in lower skilled areas. In this example the job prospects for DPB recipients in relation to the current labour market are considered by examining the overall employment patterns for females with no qualifications. Table 5 showed us that about 39% of individuals receiving the DPB have no qualifications (a much higher share than for the overall population). Table 7 outlines the five most common occupations for females with no qualification. In 2006, a total of 147,870 females in employment had no qualifications and a third were employed in the five occupational groups shown in this Table. Most of these top five fall within the broad Service and Sales (NZSCO 6) occupation group.

Table 7: Most common occupations for females with no qualifications

Occupation	Number employed with no quals	% of the unqualified females workforce
Sales Assistants and Salespersons	13,515	9.1%
Cleaners and Laundry Workers	12,381	8.4%
Personal Carers and Assistants	10,653	7.2%
General Clerks	6,849	4.6%
Hospitality Workers	4,710	3.2%

Source: 2006 Census, Statistics New Zealand

The Table shows that the most common occupation for females without qualifications in 2006 was Sales Assistants and Salespersons, accounting for 9.1 percent of the unqualified female labour force. Data constraints make it difficult to assess the characteristics of these five occupations for just females with no qualifications. Instead, the remainder of this note examines the characteristics of these occupations for ALL people employed in these occupations.

The following Table breaks down the proportion of people employed in this occupation who work 0-15, 16-30, and 0-30 hours per week.

Table 8: Share of ALL employees by hours worked and occupations

Occupation	% employed 0-15 hours	% employed 16-30 hours	% employed 0-30 hours
Sales Assistants and Salespersons	26%	23%	48%
Cleaners and Laundry Workers	40%	27%	67%
Personal Carers and Assistants	25%	32%	57%
General Clerks	19%	25%	44%
Hospitality Workers	31%	28%	59%
All Occupations	12%	15%	28%

Source: 2006 Census, Statistics New Zealand

A far higher than average proportion of people employed in these occupations work 30 hours or less (part-time). For example, two-thirds of Cleaners and Laundry Workers work 0-30 hours compared to 28% of the total population. Furthermore, 40% of Cleaners and Laundry Workers work only 0-15 hours per week. Amongst Personal Carers and Assistants, who provide a range of caregiving tasks, 57% work part-time.

This is supported by studies that have shown that work in lower skilled jobs is more likely to be part-time and intermittent than full-time and permanent. A survey of employees found that among those earning less than \$15 per hour (who tend to be lower skilled), 44% worked less than 30 hours a week. Among females in low paid work the percentage working part-time was higher at 52%.²²

Table 9 shows the proportion of people employed in these occupations who have no qualifications or school qualifications only. The data shows that 54% of the people employed in these occupations have no post-school qualifications. This is a slightly lower qualification profile than for those on DPB.

Table 9: Share of ALL employees by qualifications and occupations

Occupation	No quals	School quals only	No post-school quals
Sales Assistants and Salespersons	22%	53%	75%
Cleaners and Laundry Workers	45%	37%	82%
Personal Carers and Assistants	33%	35%	68%
General Clerks	14%	49%	63%
Hospitality Workers	17%	56%	73%
All Occupations	19%	35%	53%

Source: 2006 Census, Statistics New Zealand

This example therefore suggests that these occupations may be suitable to the skills and preferences of DPB recipients. However, these are occupations where people are more likely to work outside normal '9-5' hours. About 42% of Service and Sales workers in 2008 reported at least some work in the evening in the previous 4 weeks.²³ This is a feature of this work likely to have a negative impact on the DPB benefit group.

These jobs are geographically relatively evenly distributed. This is not too surprising given they are mostly service jobs and so should be relatively similar to the distribution of the population. They are, however, slightly under-represented in the big urban centres of Auckland and to a lesser degree Wellington. In contrast, they are generally over-represented in smaller populated regions including some areas currently with high unemployment such as Northland.

Before concluding that this work is suitable for DPB recipients, it may be useful to conduct a form of 'reality check' on the suitability of this employment profile for this particular beneficiary population. One way of doing this would be to examine DPB recipients who have successfully been placed into work, or those who are currently working part-time, to determine if the types of jobs they are doing conform to this profile.²⁴

²² Survey of Working Life (Statistics New Zealand)

²³ Survey of Working Life , Hot Off the Press December 2008

²⁴ Note that NACEW have published a detail study of employment among low skilled women at <http://www.nacew.govt.nz/publications/quality/employmentoutcomes/index.html>

Other information available about employment outcomes for beneficiaries

There have been a few older studies into transitions among beneficiaries into work conducted in the past, which can be examined for evidence about what helps create positive employment outcomes among beneficiaries. These include:

- Department of Labour and Ministry of Social Development (2001). "Evaluating the February 1999 Domestic Purposes Benefit and Widows Benefit Reforms: Summary of key findings." Department of Labour and Ministry of Social Development, Wellington. Available at www.dol.govt.nz/publications
- Wehipeihana, N. and Pratt, R. (2002). "A focus on employment retention: A meta analysis of three pilot programmes designed to support benefit recipients to take-up and retain employment." Report to the Department of Labour, Wellington. Available at www.dol.govt.nz/publications

Finally, Work and Income's own administrative data on job placements can also provide valuable information. For instance it can show a long term time series showing demand trends by occupation, hours worked, industries, pay rates, region and other features of job placements among different benefit groups. Job Bank job listings could also be examined to indicate demand trends, i.e. the types of employers who tend to advertise with Work and Income, and the 'fill rate' for different jobs.

Appendix Tables

Table A1, Key features of main benefit recipient at all ages as at end of June 2000 and 2010

	Population		Percentage	
	Jun-00	Jun-10	Jun-00	Jun-10
Unemployment Benefit				
Male	98,538	44,442	69%	71%
Female	43,499	17,818	31%	29%
Earnings declared	26,726	8,095	13%	9%
Over 55	18,351	5,702	13%	11%
Under 25	41,774	19,039	29%	31%
<i>Total</i>	<i>142,037</i>	<i>62,260</i>	<i>100%</i>	<i>100%</i>
Sickness Benefit				
Male	18,894	34,837	59%	59%
Female	13,400	24,379	41%	41%
Earnings declared	2,248	4,064	7%	7%
Over 55	5,830	12,807	18%	22%
Under 25	3,920	9,415	12%	16%
<i>Total</i>	<i>32,294</i>	<i>59,216</i>	<i>100%</i>	<i>100%</i>
Invalids Benefit				
Male	31,091	46,879	56%	53%
Female	24,301	41,534	44%	47%
Earnings declared	4,573	8,213	8%	9%
Over 55	15,496	32,536	28%	37%
Under 25	4,899	7,444	9%	8%
<i>Total</i>	<i>55,392</i>	<i>88,413</i>	<i>100%</i>	<i>100%</i>
Domestic Purposes Benefit²⁵				
Male	9,633	13,613	9%	12%
Female	99,306	98,770	91%	88%
Earnings declared	24,440	17,852	22%	16%
Over 55	3,655	6,067	3%	5%
Under 25	19,740	22,808	18%	20%
<i>Total</i>	<i>108,939</i>	<i>112,383</i>	<i>100%</i>	<i>100%</i>

Source: IAP, Ministry of Social Development, as at end of June 2010

²⁵ DPB related includes DPB-Caring for Sick or Infirm, DPB-Sole Parent, DPB-Woman alone and Emergency Maintenance Allowance.

Table A2, Employment by occupation in 1991 and 2008

Occupation	1991	2008	% change 2008/1991
Legislators, Admin, and Managers	166,400	289,500	73.95%
Professionals	193,700	354,800	83.16%
Technicians and Associate Professionals	163,500	263,500	61.14%
Clerks	219,400	255,300	16.35%
Service and Sale Workers	195,000	316,200	62.15%
Agric and Fishery Workers	155,100	137,000	-11.63%
Trades Workers	152,100	197,700	29.97%
Plant and Machine Operators	143,300	171,200	19.42%
Elementary Occupations	96,200	116,900	21.58%

Source: Household Labour Force Survey, Statistics New Zealand

Table A3, Employment by industry in 1991 and 2008

Industry	1991	2008	% change 2008/1991
Agriculture/Hunting/ Forestry/Fishing	155,400	142,400	-8.36%
Mining and Quarrying	3,800	5,600	48.40%
Manufacturing	259,700	269,700	3.85%
Electricity, Gas, Water	14,000	11,900	-15.03%
Construction	78,600	174,800	122.45%
Wholesale and Retail Trade, Restaurants	303,700	475,200	56.49%
Transport and Storage	98,700	82,400	-16.53%
Financing/Insurance/Real Estate/Business Services	154,900	344,900	122.63%
Community, Social, and Personal Services	414,400	593,500	43.23%

Source: Household Labour Force Survey, Statistics New Zealand

Table A4 Population aged 15–64 years by highest qualification in 1991 and 2009

Highest qualification	1991	2008	% change 2008/1991
None	871,700	613,400	-29.63%
Primary P or School C	266,000	239,000	-10.15%
6thForm/Higher School/Bursary	253,600	466,900	84.09%
Vocational	684,200	947,000	38.42%
Bachelors degree +	100,100	537,700	437.33%

Source: Household Labour Force Survey, Statistics New Zealand