

**AGEING WORKFORCES AND AGEING
OCCUPATIONS:
A DISCUSSION PAPER**

Fiona Alpass and Ruth Mortimer
Massey University
Palmerston North

The authors would like to thank the following people for their contributions in the preparation of this report:

- Carol Beaumont, Secretary, New Zealand Council of Trade Unions
- Dr Herbert Biggs, Senior Research Consultant CARRS-Q, Queensland University of Technology
- Barbara Burton, Legal Adviser, Business New Zealand
- Professor Jenny Carryer, Clinical Chair of Nursing, Massey University and MidCentral District Health Board
- Associate Professor Judith Davey, Director, New Zealand Institute of Research on Ageing
- Associate Professor Annette Huntingdon, Chairperson, Nursing Council of New Zealand and Principal Investigator (NZ team) of the Nurses and Midwives E-cohort Study
- Lyn Harris, Training Manager, Employers' and Manufacturers' Association (Central)
- Associate Professor Claire Massey, Director, New Zealand Centre for SME Research
- Robyn Rendall, Special Advisor, State Services Commission
- Dr Grant Scobie, Treasury

Disclaimer: The Department of Labour has made every effort to ensure that the information contained in this report is reliable, but makes no guarantee of its accuracy or completeness and does not accept any liability for any errors. The Department may change the contents of this report at any time without notice.

© Crown copyright 2007

This material is Crown copyright unless otherwise stated and may be reproduced free of charge without requiring specific permission. This is subject to it being reproduced accurately and not being used in a derogatory manner or in a misleading context. The source and copyright status should be acknowledged. The permission to reproduce Crown copyright protected material does not extend to any material in this report that is identified as being the copyright of a third party.

Department of Labour
PO Box 3705
Wellington
New Zealand

www.dol.govt.nz

For Department of Labour research visit
<http://www.dol.govt.nz/browse-dol.asp>

ISBN 0-478-28087-4

TABLE OF CONTENTS

EXECUTIVE SUMMARY	4
INTRODUCTION.....	5
PART 1: Demographic Changes to the New Zealand Population and Workforce	6
1.1 Introduction.....	6
1.2 Spatial Ageing.....	7
1.3 The Ageing Workforce	9
1.4 Age Dependency Ratio	9
1.5 Ethnic Composition of the Workforce	10
1.6 Gender and the Workforce	11
1.7 International Workforce Trends.....	14
1.8 Summary	15
PART 2: Implications of the Ageing Population for the Labour Market	17
2.1 Introduction.....	17
2.2 International Comparisons	17
2.3 The New Zealand Situation	18
2.4 Ageing Occupations in New Zealand	21
2.5 65+ Workers	26
2.6 Summary	27
PART 3: Older Workers - Emerging Issues.....	29
3.1 Introduction.....	29
3.2 Maximising Human Capital	30
3.3 Discrimination	30
3.4 Myths, Stereotypes and Attitudes.....	32
3.5 Positive Features of Older Workers.....	37
3.6 Factors Affecting Workforce Participation.....	37
3.7 Workforce Withdrawal	38
3.8 Extended Workforce Participation.....	39
3.9 Encouraging Workforce Participation.....	40
3.10 Other Sources of Labour	42
3.11 Summary	42
PART 4: Research Challenges	44
4.1 Introduction.....	44
4.2 The Issues.....	44
CONCLUSIONS.....	50
REFERENCES.....	52

EXECUTIVE SUMMARY

This report identifies knowledge gaps in relation to workforce ageing and ageing occupations by examining emerging issues from relevant research and policy in the area. The identified research opportunities are presented in summary here, and are discussed in more detail under subject headings in part four of this report.

Future research opportunities include:

- exploring the unique work experiences of older women and Māori and Pacific peoples in particular
- systematically surveying a broad range of employing organisations across occupational sectors (including recruitment agencies) in order to:
 - understand the implications of an ageing workforce from the employers' perspective
 - identify current practice and policies for training older workers
 - examine attitudes about the productivity of older workers and mature job seekers and explore how these lead to discriminatory practices.
- investigating the training experiences of older workers through a large scale study with a representative sample of the older New Zealand working population
- examining the retention and recruitment issues in ageing occupations, including the effects of opportunities for training on the retention of older workers through sector specific research
- undertaking longitudinal research to examine:
 - the health status of older workers and its relationship to workforce participation over time
 - the role of cognitive functioning and the potential changes in cognitive status in late mid-life on work performance
 - work-related stress issues facing the growing number of older workers
 - the health and functioning of 65+ aged workers and its relationship to continued workforce participation
 - the factors that influence decisions about workforce participation and retirement by older workers over time.
- exploring the positive performance attributes of older workers
- identifying successful compensatory strategies used by older workers in response to declines in health and functioning
- examining the work experiences of the under-employed and the factors influencing their workforce participation.

INTRODUCTION

Structural ageing (increasing longevity and falling birth rates), together with the ageing cohort of the post World War II baby boomers, are key factors underlying the demographic changes occurring throughout advanced industrialised nations. The global situation of ageing populations is unparalleled. Thus, the picture painted by predictions and projections of the economic implications of this ageing is an uncertain one.

One potential implication of an ageing population is the impact on the workforce and labour market. Without appropriate planning and intervention, there will be both a labour shortage and a shortage of skills. The New Zealand Institute for Research on Ageing warns: "Population ageing, in its widest sense, is one of the most significant issues facing New Zealand" (Davey & Cornwall, 2003, p.5). Accordingly, a major objective of governments is to ascertain the extent and nature of the putative impact of population ageing on the workforce, and to identify those actions that might mitigate that impact for the purposes of future effective workforce planning.

This report has four main objectives. These are:

- outline the changing nature of work and its relationship to demographic changes, both globally and in New Zealand
- identify the extent of workforce ageing in New Zealand and the particular occupations where ageing is a significant phenomenon
- identify emerging issues in research and policy in relation to workforce ageing and ageing occupations
- identify knowledge gaps in relation to workforce ageing and ageing occupations.

The report is presented in four parts. The first part presents the relevant characteristics of demographic trends, both in New Zealand and overseas; the latter exemplified by a brief description of the situation in other key countries. The implications of demographic changes with respect to the nature of work are discussed.

The second part of this report discusses the implications of an ageing population for the labour market and identifies the main issues associated with the ageing trend for workforce planning. Occupations which have identified issues occasioned by an ageing population are discussed. Responses to the challenge of an ageing workforce are canvassed, and the "maximisation of the older worker" as one response is highlighted.

Part three of the report provides an overview of some of the key issues in research and policy in relation to older workers, including a summary of the myths, stereotypes and attitudes toward older workers which may serve to discourage their continued employment, and other factors that may influence workforce participation. Where appropriate, research gaps are identified.

Part four summarises the identified knowledge gaps in relation to workforce ageing and ageing occupations. Recommendations for a series of research and analysis initiatives to address issues raised are presented.

PART 1: Demographic Changes to the New Zealand Population and Workforce

1.1 Introduction

Part one of this report outlines the demographic changes taking place within the New Zealand population and how this will impact on the age-structure of the workforce.

Between 2004 and 2051, New Zealand's population is expected to increase by nearly one million people, going beyond the five million mark by 2041. The largest growth period will occur between 2011 and 2037, when the baby-boomers (born 1946-1966) move into the 65+ age group adding at least 100,000 to this age group every five years.

By 2051, 50% of the population will be 46 years and older and by 2051, the estimated population will be 5.05 million and 1 in 4 New Zealanders (1.33 million) will be 65 years and older. In 2051, the median age is projected to be 45-46 years, compared to 26 years in 1971 and 35 years in 2004 (see Table 1).

Table 1: New Zealand's Projected Population by Age Group

	2004	2006	2011	2016	2021	2026	2031	2036	2041	2046	2051
Age	Percent of Population										
0-14	22	21	20	19	18	17	17	17	16	16	16
15-39	35	35	33	32	32	31	30	29	28	28	27
40-64	31	32	33	33	33	32	31	30	30	31	31
65+	12	12	14	16	17	20	22	24	25	26	26
Median											
Age	35.2	35.9	37.7	39.1	40.3	41.4	42.5	43.6	44.6	45.3	45.9

Source: Statistics New Zealand, (2005a)

By 2021, those aged 65 years and over will constitute 22% of the NZ European population, 9% of the Asian population, 8% of the Māori population and 6% of the Pacific peoples population (Statistics New Zealand, 2005a).

The population growth rate is expected to slow down, owing to the narrowing gap between births and deaths. Further, the age structure of the population will change significantly leading to fewer children, more older people and a further ageing of the population. These figures are based on mid-range series 5, one of nine different projection series used by Statistics New Zealand to estimate the future size and structure of New Zealand's population. Series 5 assumes medium fertility, medium mortality and a long-term annual net migration of 10,000.

Regardless of the specific projection series used, significant changes to the age-structure of the population are projected. The implications of which will be discussed further on in this report.

In sum, the ageing population reflects a combination of sub-replacement fertility, continuing longevity and the ageing of the baby boomers born post World War II (Statistics New Zealand, 2004b). Continued adult immigration will also contribute to this combined impact (Davey, 2003a).

1.2 Spatial Ageing

New Zealand's age structure will differ among regions (Stephenson & Scobie, 2002). Statistics New Zealand (2005a) notes that ageing within territorial authorities from 2001 to 2026 will be a key factor in population change.

For instance, by 2026, nine of the ten youngest territorial authorities (N=74) will be in the North Island (see Figure 1 - median age ranges from 35.3 to 39.2 years), and six of the ten oldest territorial authorities will be in the South Island (see Figure 2 - median age ranges from 51.3 to 56.7 years).

In addition, eight of the ten youngest authorities will experience population growth to 2026, while eight out of the ten oldest authorities will experience population decline to 2026.

Figure 1: Ten Youngest Territorial Authorities 2026

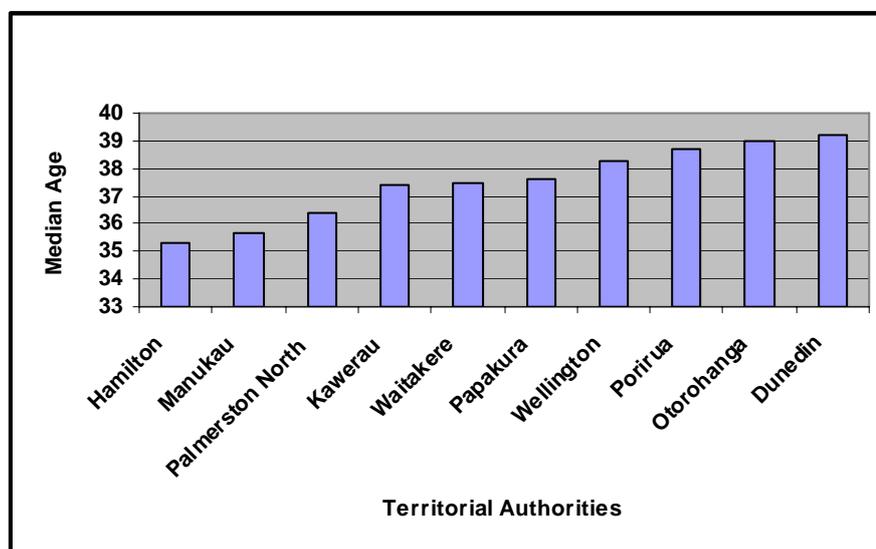
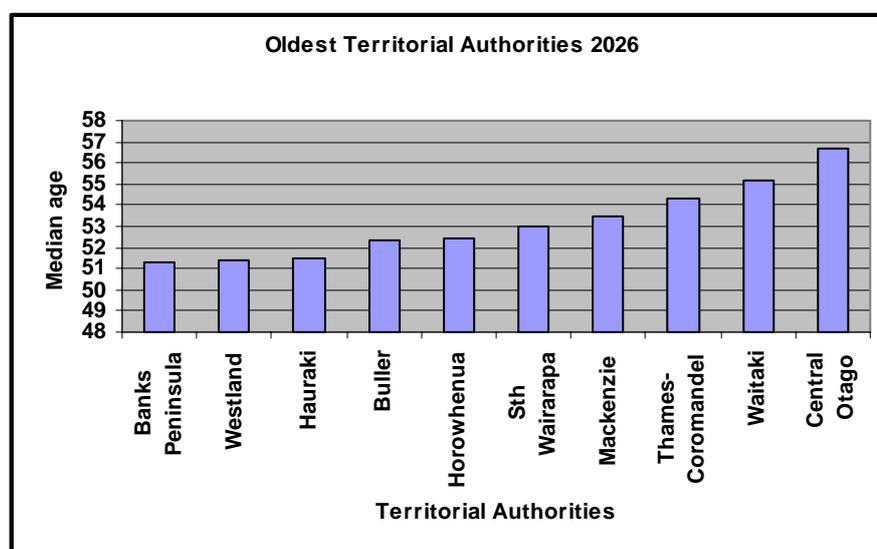


Figure 2: Ten Oldest Territorial Authorities 2026



A key variable that influences age structure is ethnic composition. In particular, Auckland has a large Pacific population and a quarter of all Māori live in Auckland. Both Māori and Pacific populations have younger age-distributions than Pākeha (Koopman-Boyden, 1993). Thus, Auckland is a younger region than Southland, which is mainly Pākeha and is consequently ageing at a faster rate (see Figures 1 and 2). The migration of older people to “retirement zones” also contributes to the shape of regional age distribution (Stephenson & Scobie, 2002).

The overall pattern of the structural changes across regions illustrated above suggests a youthful dominance in northern and metropolitan areas. However, an examination of child and aged dependency ratios indicates a more complex picture (see Table 2). A number of factors can alter the age structure of regions, including opportunities for education and employment.

As Pool, Baxendine, Cochrane and Lindop (2005) note, ratios can also vary within regions based on ethnic mix. For instance, the Western Bay of Plenty has a high concentration of retired Pakeha, hence the relatively high “aged” dependency ratio. On the other hand, the Eastern Bay of Plenty has a high proportion of Māori, hence a relatively high “child” dependency ratio. Differences in the age structure of regions impacts on the supply of goods and services, as age groups differ in their consumption patterns.

Table 2: Child, Aged and Total Dependency Ratios by Regions (2001 Census data)

	Above		Below
Child	Northland <i>Waikato</i> <i>Bay of Plenty</i> Gisborne <i>Hawke's Bay</i>	<i>Taranaki</i> Manawatu-Wanganui West Coast Southland	Auckland Wellington <i>Canterbury</i> Otago Nelson-Tasman Marlborough*
Aged	<i>Northland*</i> <i>Bay of Plenty</i> Gisborne* <i>Hawke's Bay</i> <i>Taranaki</i> Manawatu-Wanganui	West Coast Canterbury Otago Southland* Nelson-Tasman Marlborough	<i>Auckland</i> Waikato Wellington
Total	Northland <i>Waikato</i> Bay of Plenty Gisborne Hawke's Bay Taranaki	<i>Manawatu-Wanganui</i> West Coast Southland Nelson-Tasman <i>Marlborough</i>	<i>Auckland</i> <i>Wellington</i> Canterbury <i>Otago</i>

Absolute differences of 5 percentage points or more from New Zealand are **bolded**.

Absolute differences of between 3 and 5 percentage points from New Zealand have been *italicised*.

*At the 1986 census these regions showed opposite trends in respect to New Zealand.

Source: Pool, Baxendine, Cochrane and Lindop (2005)

1.3 The Ageing Workforce

By 2012, fifty percent of the New Zealand labour force will be older than 42 years of age, compared to 36 years in 1991 and 39 years in 2001. Even taking into consideration current and projected levels of net migration, overall an older labour force is inevitable (Statistics NZ, 2005b).

Those aged 65 and over in the workforce will increase in number (see Table 3). This group is projected to increase from an estimated 38,000 in 2001 to 102,000 in 2021, and around 130,000 after 2031 (Statistics New Zealand, 2005a).

While this is encouraging for those who argue for the extension of working lives for both the present and future workforce as a partial solution to the ageing workforce dilemma, it should be noted that the number of people aged 65 years and over not in the labour force at 2001 was 420,000. Current projections suggest this number will increase dramatically to 820,000 in 2026, and to 1.2 million by 2051.

Table 3: New Zealand's Projected Labour Force

Year at 30 June	Total by Age Group (years)					Median Age
	15-24	25-44	45-64	65+	Total	
	Number (000)					
2006	372	941	784	61	2,157	40.8
2011	386	915	887	74	2,262	41.9
2016	386	910	946	90	2,331	42.6
2021	381	921	971	102	2,376	42.6
2026	378	945	952	118	2,392	42.5
2031	365	963	931	128	2,388	42.4
2036	356	955	934	133	2,378	42.8
2041	359	934	954	130	2,377	43.1
2046	363	919	975	126	2,382	43.3
2051	361	906	988	127	2,382	43.6

Source: Statistics New Zealand, Series 5M (2005b)

1.4 Age Dependency Ratio

The age dependency ratio, which provides an indication of how many older people (65 years and over) each working person (15 – 64 years) has to support, is predicted to increase from 18 per 100 in 2004 to 45 per 100 in 2051.

Statistics New Zealand (2000) advises, however, that dependency ratios are “crude measures” as they make no allowance for the fact that not everyone in these age groups are in the workforce, and there are people over 65 years old in the workforce. Davey (2003a) also notes that, nowadays, fifteen is unrealistically young to be in the workforce.

However, the ratio does offer yet another perspective to the ageing population issue, and further highlights the potential resource implications of having a relatively large retired population compared to the working population.

A more disquieting comparison can be made between those not in the labour force¹ compared to those in the labour force². In 2001 there were slightly more people in the labour force (1.97 million) than not (1.92 million). As the baby boomers retire, the non-labour force will grow faster than the labour force, and Statistics New Zealand (2004a) project that there will be “more people not in the labour force than in the labour force by 2029” (p.4).

Caution on Using Demographic Projections

“Demographic projections are, in general, fraught with uncertainties that are important to think about when considering the economic implications of population ageing. The number of elderly in New Zealand’s population over the next fifty years can be projected fairly accurately given that the relevant cohorts have already been born. However, we cannot be sure what the future path of mortality rates will be and so our projections of the number of elderly in population carry some degree of uncertainty. Furthermore, fertility rates are difficult to project because they are disposed towards major structural change – one example being the spike in fertility rates that drove the baby boom. Subsequently projections of the size of the future labour force and hence future dependency ratios carry large degrees of uncertainty and this uncertainty grows with the length of the projection horizon” (Stephenson & Scobie, 2002; p.3).

1.5 Ethnic Composition of the Workforce

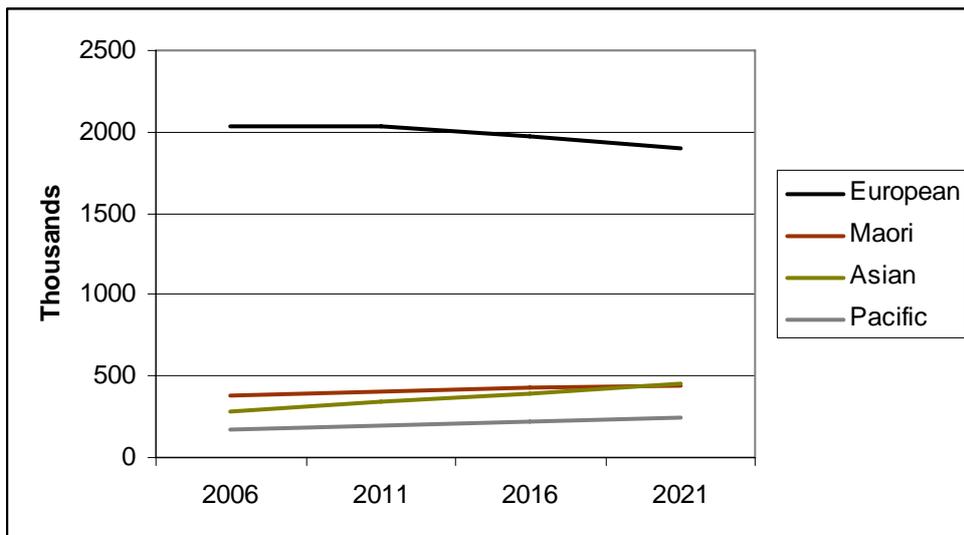
In 2001, the potential workforce, that is people aged 15 to 64 years, comprised 78.5% NZ European/Pākeha, 13.8% Māori, 6% Pacific, and 7.8% Asian people. The 2021 projections indicate a change in this ratio, showing a drop to 67.7% for NZ European/Pākeha (see Figures 3 and 4). It is expected that Māori and Pacific peoples will constitute a growing share of the working-age sector as they are presently more youthful than the rest of the population owing to significantly higher fertility rates (Ministry of Economic Development, 2003). However, it is difficult to make projections about Asian peoples owing to migration influences (Department of Labour, 2003).

Māori and Pacific peoples are under-represented in tertiary education, therefore there is the potential for a shortage of advanced skills in the future. This population is also disproportionately represented in the statistics on unemployment. Older Māori people have a much lower representation in the workforce. Some of the reasons for their earlier withdrawal from work are due to fewer jobs in the manufacturing sector, family responsibilities (particularly for women and caregivers), and that Māori being more likely to experience poor health or disabilities (Ministry of Social Development, 2001).

1 Statistics New Zealand include in this group those under 15 years, students who do not work for pay, the unemployed not currently seeking work, those with child caring responsibilities, people who work without pay and retirees.

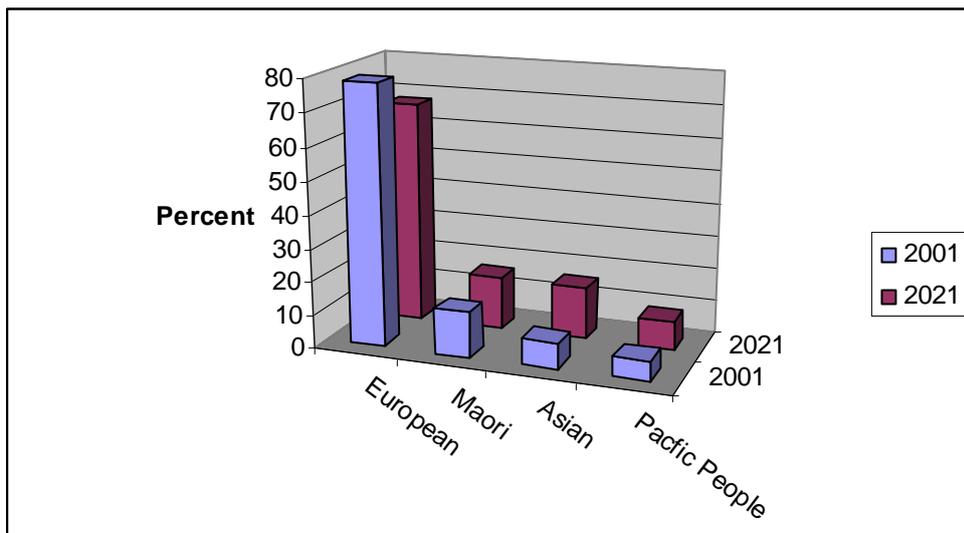
2 Statistics New Zealand include in this group those aged 15 years and over who regularly work for one or more hours per week for financial gain, or work without pay in a family business, or are unemployed and actively seeking part-time or full-time work.

Figure 3: Projected Ethnic Population Aged 15-64 – Total Counts (Series 5)



Source: Statistics New Zealand (2005c)

Figure 4: Projected Ethnic Composition of Working-age Population (%)



Source: <http://www.dol.govt.nz>

1.6 Gender and the Workforce

Currently, in the March 2006 quarter, although skill shortages are above average levels, the overall labour participation rate is at an all-time high of 68.8% (Statistics New Zealand, 2006b). This is largely a function of female participation, with women's employment patterns increasingly assuming those of men (see Table 4). The growing female participation is accounted for by women having more skills, more work experience, and being better educated than women of former years. They are also delaying childbearing, having smaller families, and returning to the workforce more quickly following childbirth (Department of Labour, 2003).

With respect to the older female workers, in 1990, the 55-59 year old group made up 46.2% of the workforce, compared to 60.1% in 2000. Those in the 60-64 year old group constituted 15% and 31.9% in those years respectively (Ministry of Social Development, 2001).

Seven percent of women 65 years and over are in the labour force, compared with 17% of men (Davey & Cornwall, 2003). Further, 30-40% of women aged 30-50 are working part-time, compared to 6-7% of men. However, women are more likely to retire at a younger age than men.

Table 4: Projected Labour Force for Older Workers by Age Group and Sex

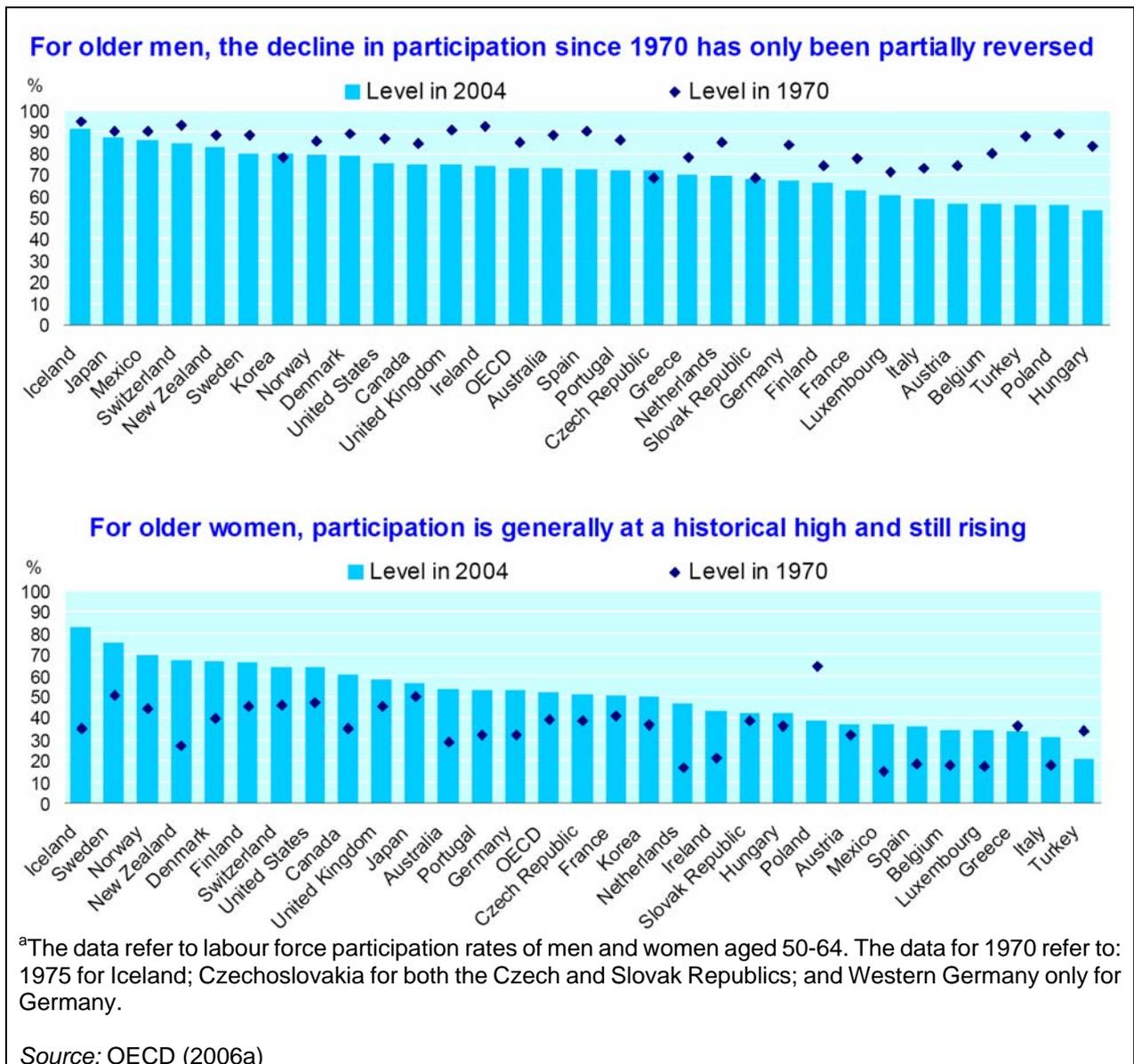
Year at 30 June	Age Group (years)			
	45-64		65+	
	Number (000)			
	Males	Females	Males	Females
2006	418	366	38	23
2011	469	418	46	28
2016	497	449	56	34
2021	509	462	64	38
2026	500	452	73	45
2031	493	438	80	48
2036	498	435	83	50
2041	514	440	81	49
2046	528	447	79	47
2051	537	451	80	46

Source: Statistics New Zealand, Series 5M (2005b)

Davey (2003a) advises that there is a clear trend of declining male and rising female workforce participation in the age groups 40-plus, although female rates are still well below those for men, and this is confirmed by figures that show the participation rates for men aged 50 to 64 have fallen substantially since 1970 in most OECD countries (OECD, 2006a). These differing participation rates are illustrated in Figure 5 overleaf.

According to Stephenson and Scobie (2002), increased female labour force participation rates may well reflect participation rates specific to cohorts, that is, female cohorts with higher lifetime participation rates are displacing female cohorts with lower lifetime participation rates. Therefore, the increasing trend of female labour force participation may stop when the older cohorts reach the age of retirement (see Table 4).

Figure 5: OECD Participation Rate Trends for Older Men and Women^a



1.7 International Workforce Trends

Clearly population ageing and workforce ageing are not confined to New Zealand. In fact, the globalisation of work and population ageing, both in developed and developing nations, will influence how New Zealand addresses the impact of an ageing workforce in the future. The increasing dominance of a global market in goods and services, and its influence on the demand for and flow of labour suggests that it is apposite to briefly review some of the international trends in workforce demographics.

Table 5 shows OECD countries placed according to their participation rates and their projected increased old-age dependency ratios. This simple classification shows that some countries face greater adjustments than others to population ageing. Looking more closely at the issues facing some of these countries illustrates the varying complexities of quantifying workforce ageing.

Table 5: OECD Projected Changes in Dependency Ratios^a

Participation rates of 50 to 64 year olds, 2004	Projected Change in the Old-Age Dependency Ratio 2000-2050		
	Moderate	Large	Very Large
Low	Denmark, Iceland, Norway, Sweden, Switzerland, United States	Canada, New Zealand	Japan
Medium	Netherlands, United Kingdom	Australia, Finland, France, Germany, Mexico, Ireland	Czech Republic, Korea, Portugal
High	Belgium, Luxemburg, Turkey	Austria, Hungary	Greece, Italy, Poland, Slovak Republic, Spain

^a Ratio of the population aged over 65 to the population aged 20-64.

Source: OECD (2006a)

1.7.1 Europe

Germany has one of the highest proportions of senior citizens in the world. The projected effects of their ageing population indicate a significant increase in the age dependency ratio from 38.6% in 1998 to between 76.7% and 88.4% in 2030 (this ratio is based on the number of people over 60 to the number of 20 – 59-year olds). With respect to the age structure of the workforce, the average age is predicted to increase from 29 years of age in 2000 to 42.5 years in 2020 (Borsch-Supan, 2002).

With respect to Europe in general, however, it is noted that there is unused capacity for active work among older people. According to Brugiavini, Croda, and Mariuzzo (2006, p.240), there is “potentially huge unused labour capacity” in Austria, Italy and France where “healthy” people are not in the workforce. They note that where early retirement is possible and/or generous, there is a trend towards early retirement, particularly in the southern countries, Austria and France.

In relation to part-time work for those over 65 years of age, the frequency increases for both genders and, at all ages, women are more likely than men to work part-time. The authors believe these findings suggest that partial or gradual retirement may be a principal aspect of the labour market in some countries. On a general global note, the working-age population of Europe is expected to fall by almost 50 million over the next 25 years (Department of Labour, 2004).

1.7.2 United States of America

In the United States, changing patterns of labour force participation show that the median age of the labour force is slowly increasing. Since World War II, there has been a continuing downward trend in labour force participation of men over 65 years and increasing participation of women between 55 and 64 years (Cavanaugh, 1997; Rix, 2004). It is expected that there will also be increasing rates of labour force participation among minority groups. Overall, projections indicate that workforce participation for people 65 years and older is expected to rise for the next 15-20 years, then decline by 2050 (Rix, 2004).

1.7.3 Canada

Following the second World War, Canada experienced the largest baby boom in the world followed by a baby bust as fertility rates lowered (Marshall, 2001). Thus, the percentage of the population in the 46-64 and 65 plus age groups is steadily rising with 46% of the baby-boomers coming close to their retirement or pre-retirement years.

Similar to the United States, the workforce composition shows an increasing share of women. For example, in 1976, participation rates for women in the 45-54 year bracket comprised 48.2%, rising to 76.3% in 2001. The 55-64 year bracket comprised 31.9% and 41.8% respectively. These percentages contrast with men in the 45-54 year group showing 92.2% participation in 1976 and 89% in 2001. The 55-64 year bracket comprised 75.9% and 61.2% respectively. Further, early retirement is becoming more common in Canada, yet many people continue to work beyond the age of 65 (Human Resources Development Canada, 2002).

1.7.4 Australia

According to Chappell, Hawke, Rhodes, and Solomon (2003), Australian workers are also tending to retire earlier. They advise that, in 2021, 18% of the Australian population will be 65 years and older, rising to 25% in 2051. Older women's labour force participation rates have grown significantly in recent decades, yet according to Encel (2003), they are well below those in other advanced industrialised countries.

Of those in the 45-64 year bracket, one in three are not employed, partially reflecting the difficulties older people can face in gaining and re-gaining employment (Encel, 2003). Encel further notes that there is an early retirement 'culture' in Australia, stating that 75% of males and 95% of females tend to retire from full-time employment before they turn 65.

1.8 Summary

New Zealand's population is increasingly ageing in line with global trends, reflecting a combination of sub-replacement fertility, continuing longevity and ageing baby boomers.

The age structure of the population will differ by region, and will be influenced by ethnic composition.

Based on these expected changes to the population, an older New Zealand labour force is inevitable with 50% of workers older than 42 years of age by 2012. Those aged 65 and over in the workforce will also increase in number. By 2029, the age dependency ratio will be such that there will be fewer people in the labour force than not. In the future, Māori and Pacific peoples will constitute a growing share of the working-age sector which is largely attributed to their higher fertility rates, although currently older Māori have a much lower representation in the workforce. Growing female participation in the workforce is likely to lead to an increasing proportion of older working women relative to men.

Internationally, population ageing has seen similar changes in the age-structure of the workforce in other countries, although there is considerable variability among OECD countries. These changes have implications for how New Zealand will address the impact of an ageing workforce in the future.

PART 2: Implications of the Ageing Population for the Labour Market

2.1 Introduction

In this second part of the report, the implications of an ageing population for the labour market are highlighted and the main issues associated with the ageing trend for workforce planning are identified. A number of occupations and workforce sectors are introduced where issues occasioned by an ageing population have been identified.

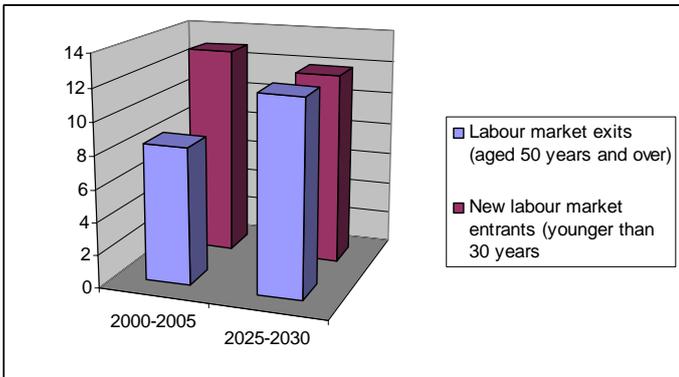
The ageing population of New Zealand will lead to “profound effects on the size and composition of the labour force” (Stephenson & Scobie, 2002, p.5). As the baby-boomers age, the working-age population will be significantly affected. The workforce will become older and, as these people retire, the labour supply will decline. Projections indicate an increase from 2.69 million in 2004 to 2.98 million in 2024, then a gradual decline to 2.93 million in 2051. Smaller cohorts will follow the large baby-boomer cohort and, accordingly, we will continue to experience labour shortages.

2.2 International Comparisons

The issue of an ageing population is of international concern and considered one of the foremost challenges for OECD countries. As shown earlier, all OECD countries will see a sharp increase in the percentage of elderly population together with a drop in the share of the population of the prime working-age (see also Figure 6). Ultimately, it is expected that in most countries the new labour market entrants will be exceeded by those people retiring (OECD, 2006b). The small entry cohorts will not provide sufficient labour to fill the gap.

Over the past 25 years, 45 million workers retired in OECD countries and were replaced by 120 million baby-boomers. In the next 25 years, 70 million workers are predicted to retire (for a range of OECD countries), to be replaced by only 5 million labour market entrants (OECD, 1998). Accordingly, there has been a consistent call, both in New Zealand and overseas, for policy makers to develop and implement measures to retain older workers to meet the expected increased demand for labour.

Figure 6: OECD Labour Force Flows



Source: OECD (2006a)

A broader perspective is called for where consideration can be given to other sources and other means in order to meet not only the demand for labour, but also to provide the appropriate skills required. People with family-care responsibilities, particularly women, could be enabled to have greater work-force participation with flexible work practices.

Further, all workers need to be consistently upgrading their work skills to meet the challenge of new technologies, and to ensure that they have good labour market prospects as they age. Ensuring occupational health and safety for all workers will also contribute to older workers staying in the labour force longer (OECD, 2006). As noted by OECD, "age should be preferably one factor only, and not the defining factor in deciding who should be targeted by a specific labour market policy" (2006a, p.135).

Denmark has a scheme that caters for those workers who have some type of incapacity, where they can work part-time and be paid full-time. The employer receives a subsidy for the time not worked. However, as noted (OECD, 2006a), there is no strong incentive for employers to employ people with disabilities over someone who is not disabled. Norway's government and social partners have a signed agreement to provide an "inclusive workplace", with the aim of lowering absence due to sickness, preventing potential disability, and assisting older workers and other workers with reduced functional capacity to find and stay in work (OECD, 2006a).

2.3 The New Zealand Situation

The main challenge to New Zealand is dealing with the change in demographic trend from a rapidly growing population to a slower growing and rapidly ageing population (Department of Labour, 2004). As noted, the main working-age population (15-64 year old group) will probably contract after 2020. At this stage, projections on how this trend will affect the workforce depends partly upon whether people decide to continue working into old age or whether they choose to retire from the workforce to pursue other lifestyles and activities, such as voluntary work and caring for elderly relatives.

How can we respond to these changes? As noted above, there are a number of initiatives that can be employed, such as making the workplace more flexible for all those with caring responsibilities to increase labour participation. The use of technology is often cited as a means of addressing workforce shortages, although such technologies also create skill demands. While outsourcing may be utilised to fill skill shortage vacancies or skill gaps at an organisational level, this is not a long-term solution at the broader workforce level. It is considered critical that older workers are retained as labour productivity growth (growth in output per worker) may be insufficient to offset the decrease in workforce numbers. Similar to overseas experiences, several occupations in New Zealand are ageing, a trend which is expected to continue as the baby boomers age. These so-called "greying" occupations are highlighted below.

Along with a labour shortage, the shortage of skilled workers will also become more evident. One response to this situation is to import such skills. Davey (2003b, p.158) highlights the issue of increasing immigration, noting it may be "neither feasible nor helpful". In illustration, she draws attention to the concern that adult immigrants will also contribute to population ageing. As a result of the developing global market place, skilled New Zealander workers will be in international demand (Davey & Cornwall, 2003) and New Zealand will be competing with overseas countries for skilled workers. If New Zealand opportunities are not appealing, we will witness a shift of these skilled people to more attractive positions overseas. This situation certainly reinforces "the conclusion that

maximizing the potential of older workers is a macro-economic priority" (Davey & Cornwall, 2003, p.15).

As discussed in the previous section, future projections indicate a changing face to the workforce which will consist of an older group of culturally diverse people. The prospective older workforce will be more experienced and enjoy better health and well-being than earlier generations. However, their qualifications will tend to be specific to particular occupations, and many will lack the appropriate qualifications to meet job requirements. As mentioned earlier, while female participation rates may continue to grow, Stephenson and Scobie (2002) believe they may eventually plateau and, therefore, no longer be a fount of labour to expand the workforce. They advise that there is a significant reduction in female labour force participation over the age of 50 which may reflect a cohort effect. Labour force participation of women in 1986 was evident at the 40-44 age band, compared to 1992 when it started between 45-59 years. If the increases are a result of cohorts of women with higher lifetime participation rates displacing those with lower lifetime participation rates, the tendency for growing labour force participation amongst women will stop when the older cohorts reach the age of retirement (Stephenson & Scobie, 2002).

There are further issues associated with the retirement of the baby-boomer cohort. There will be pressure on pensions, health budgets, and other expenditure related to older adults. Potentially, the burgeoning number of retired people will place a growing demand on resources funded largely by the working population (measured by the dependency ratio)

The younger cohort following on from the baby boomers will have insufficient numbers of skilled workers which, in turn, will create a need for a more flexible workforce. In this respect, older workers will comprise a valuable source of labour for organisations (Cavanaugh, 1997). Overall, there will be strong competition for skilled labour and this will be evidenced in global immigration (Department of Labour, 2004).

The nature of work itself is changing, leading to an increased demand for higher skilled and higher educated workers with specific work-place competencies. An increased demand in skilled human capital will, in turn, place greater pressure on education and training resources, particularly where learning is increasingly viewed as a life-long process rather than a discrete period of time allocated at the beginning of one's work-life. Particular focus will be placed on updating the required information technology skills that have become a principal feature of the workplace. The OECD argues that, although such technologies in themselves are needed in the pursuit of life-long learning, there is the possibility that in doing so, we create a "digital divide" – that is a gap between those that can access such technologies and skills and those that cannot (OECD, 2001). It is likely that accessibility will be an important issue for an ageing workforce, particularly given the evidence for discrimination against older workers in access to training.

While there is a strong argument for the broad upskilling of the workforce, it should also be acknowledged that, rather than the vocational, hands-on competencies traditionally thought of as work-based skills, employers are now more likely to seek a complex mix of "attitudinal dispositions and affective traits" (Taylor, 2005), commonly referred to as "soft skills". These include both intra- and inter-personal skills such as communication, problem-solving, teamwork, motivation, maturity, initiative, conscientiousness and adaptability. Joyce (2001, cited in Dawe, 2002, p.19) defines these generic skills as those "that are common to many vocations and not specific to one job or industry". These are the "transferable" skills employees will need to enhance their employability in the future

work environment. There is considerable evidence that suggests the older worker is perceived to possess many of these skills in abundance (eg McGregor & Gray, 2001).

The traditional career model has been superseded by a model that is "boundaryless" (Sullivan, 1999). The older worker was raised in an employment environment where people worked for one, possibly two, organisations across their career, and the responsibility for career management was firmly with the employing organisation. The psychological contract that underpinned the employment relationship was implicitly understood by all to mean that job security was the reward for loyalty to the firm. In contrast, the modern model is characterised by flexibility. Individuals work for a number of firms, and are readily transferable. The individual is ultimately responsible for their own career management (Sullivan, 1999). Thus, there has been a shift in focus on what skills and attributes are desirable in employees. The rapid advances in technology require a technologically skilled work force. Workers need to be proactive and flexible, prepared to continually learn and keep up to date with advancing technology.

Not only will the nature of work change but the ageing population will influence the type of work that is to be undertaken. Borsch-Supan (2002) argues for the effects of "age-specific" expenditure and the impact different consumer spending has on the structure of labour markets. With an ageing population, he argues, "structural changes on the goods market will have a powerful impact on sector labour markets" (Borsch-Supan, 2002, p. 27). For instance, data from Germany shows that, as we age, our expenditure increases on "health and hygiene" goods and services. With an ageing population, this expenditure will grow accordingly, and we will see a decrease in expenditure in other sectors such as "transport and communication" (Borsch-Supan, 2002, p.25).

The diversity of the future generations will additionally change the demand for goods and services. There will be a higher demand for goods and services that are attractive to older age groups (Harding & Robinson, 1999). For example, Mackay (1997, cited in Harding & Robinson, 1999) refers to products that appeal to baby boomers who are trying to stay young. Overall, Borsch-Supan estimates that, in Germany, about a sixth of all workers will need to change their jobs and a large number of jobs will need to be "restructured due to the age-related structural changes in the demand for goods" (Borsch-Supan, 2002, p.28).

Older consumers have tended to be largely ignored and historically "segmented as outside of mainstream consumption" (Szmigin & Carrigan, 2001, p.26). These authors note that where older adults have been targeted as a consumer group, there has been a tendency for marketers to portray them as stupid, debilitated or amusing. The future demand for goods and services will be determined by those with economic power. Baby boomers are expected to further dominate the consumer markets of the future (Ahmad, 2002), and are likely to seek products that are appropriate to their lifestyles. Where younger consumers typically spend on possessions, older consumers already own houses, cars and furniture etc. The providers of goods and services in the future will need to be cognisant of the expectations of a growing segment of older consumers, both in the appropriateness of the products provided, and how and by whom they are delivered.

Currently in New Zealand, the pensioner population has little discretionary spending as the majority of those retirees over 65 years of age are financially dependent on government superannuation as their only source of income. Future older New Zealand generations will comprise a more sophisticated group of consumers than the present older generation. As noted by Davey (2003), a shift from conservative attitudes towards money management will be reflected in practices such as the greater use of

credit among older people. Furthermore, as working women move into the older age groups, we will see a greater proportion of older women with more financial assets. However, as Davey (2003) notes, whether this will mean a higher level of savings will largely depend on the economic climate, labour force participation levels and policy settings.

As noted earlier, the total labour force participation rate is currently at its highest. This factor in itself has implications for the structure of the labour market. With more and more people employed in paid work, large amounts of previously unpaid work requires labour force participation. It has not gone unnoticed that paid home help has become a growth industry.

Along with these broad structural changes to the nature of the labour force occasioned by an ageing population, there are certain sectors that appear to be experiencing occupationally specific effects of this demographic trend – the unbecomingly named “greying occupations”.

2.4 Ageing Occupations in New Zealand

Differing age profiles across occupational sectors provide us with information about potential future labour force shortages. There are a number of processes that influence occupational age structures including the time required for training, training costs (and who bears them), and the amount of physical activity entailed (McMullin & Cooke, 2004). Hierarchical career paths may also determine the age structure within particular occupations (eg the tertiary sector).

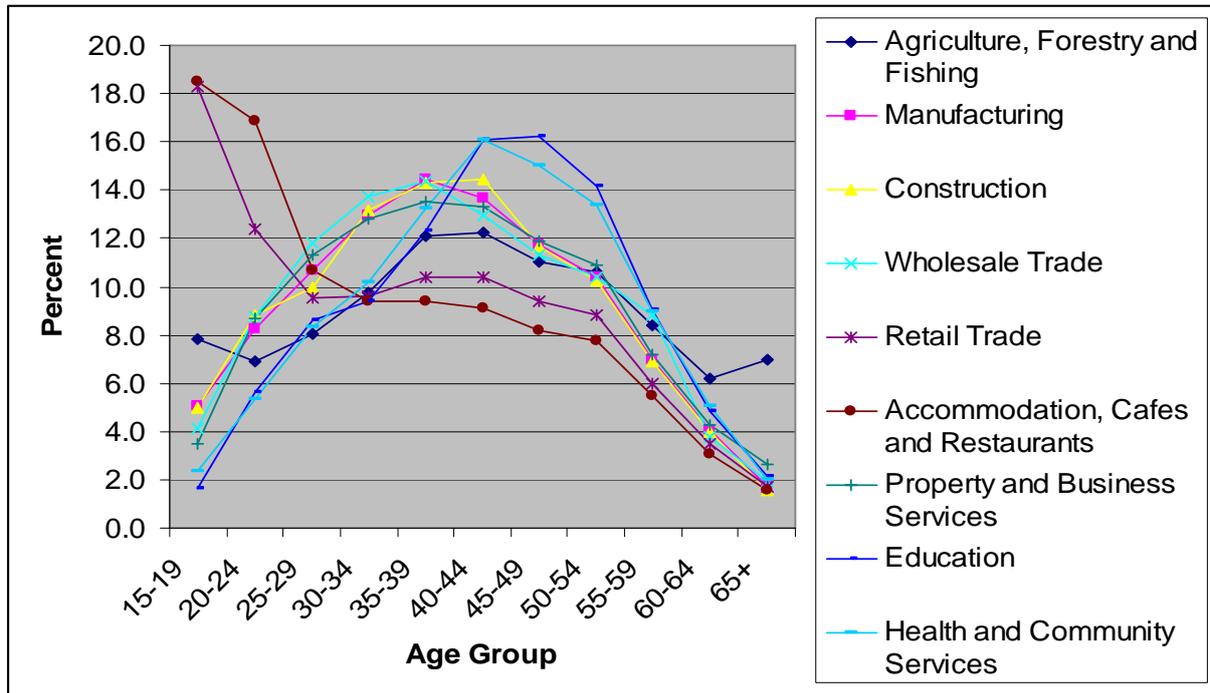
Economic forces can influence the number of new entrants occupational sectors can attract (ie industries in decline are less likely to be able to attract newly trained young workers). In addition, retirement rates may differ across occupations and professions depending on working conditions (eg high flexibility and low stress equals later retirement), and the relative health of particular sectors (ie are they expanding or in decline?)

Population geography also impacts on the availability of labour and skills meaning that, for particular sectors, shortages may be localised (ie in older territorial authorities). For other sectors, the mobility of workers and/or work will mitigate such shortages. While these factors may combine to present an ageing occupational profile, they do not necessarily result in general labour and skill shortages. Rather, this will largely be determined by the demand placed on particular sectors. For instance, given the ageing population and the increased demand for skilled health professionals, skill and labour shortages will continue to be a serious problem in the health sector (see below).

Figure 7 shows the age structure for the nine industries employing the largest number of employees in New Zealand (as at the 2001 census). While most industries show a “bulge” in the young middle age years (25 to 44 years), it is clear that the education and health sectors have a proportionally older age structure. The following section highlights the “greying” issues of three occupational sector categories. This brief overview is used for illustrative purposes only and is not offered as an exhaustive description of the issues facing sectors due to population and workforce ageing.³

3. Median age of New Zealand workforce – 1991, 36yrs; 2001, 39yrs; 2014 projection, 42yrs (Statistics New Zealand, 2006a)

Figure 7: Industry by Age Group for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 2001



Source: Statistics New Zealand 2001 Census

2.4.1 Health Sector

2.4.1.1 Nurses and Midwives

Data from the Primary Healthcare and Community Nursing Workforce Survey show an older overall workforce than the general workforce (New Zealand Health Information Service, 2001). For example, over 56% of those surveyed were over 45 years of age, and 19.6% were over 55 years of age. The relatively few numbers being recruited from the younger age groups was noted.

In 2004, with respect to registered nurses and midwives, 45.7 % were over 45 years, and 15.8% were over 55 years of age. For enrolled nurses, 67.2% were over 45 years, and 15.4% were over 55 years. For direct-entry midwives, 20.4% were over 45 years of age and 7% was over 50 years (New Zealand Health Information Service, 2004).

In 2006, the overall average age for current nurses is 45.3 years; men 44 years and women 45.4 years (B. Ayling, personal communication, 7 July 2006), compared to an average age of registered nurses and midwives in 1998 of 42.6 years (Health Workforce Advisory Committee, 2002).

As the nursing workforce ages, the number who will retire each year will also increase. Problems with retention and recruitment are thought to be the main concern for workforce planning, rather than genuine skill shortages (Department of Labour, 2005c). Annette Huntington (Chairperson, Nursing Council of New Zealand) advises that the average age of student nurses has risen markedly over the past 15 years. What were predominantly school leavers are now people, mostly women, in their late 20s. She notes

that there are variations among training institutions. Further, women who are taking a "second chance at education" and who have had their families are an increasing proportion of those training as nurses (A. Huntington, personal communication, 25 July 2006).

2.4.1.2 General Practitioners

A recent survey of the membership of the Royal New Zealand College of General Practitioners found that 80% of general practitioners were aged 41 years and over (Pande, Fretter, Stenson, Webber & Turner, 2006). The median age in 1998 for GPs was 41 years compared to 48 years in 2005, a dramatic shift in just seven years (Thomas, 2005).

Further, there are marked regional differences as shown in Table 6. The survey asked respondents whether they intended changing their work arrangements in the next five years and, if so, what the proposed change would be. Approximately 27% of GPs surveyed intended to change their work status within the next five years, with 18% indicating they intended to retire (most of these aged 51 years and over). Pande et al. (2006) calculate that 149 GPs (FTE) will be needed to replace 122 retiring GPs based on hours currently worked.

Table 6: Age Distribution of GPs in Urban and Rural New Zealand

Age	Rural North Island		Urban North Island		Rural South Island		Urban South Island	
	No.	%	No.	%	No.	%	No.	%
25-30	1	0.5	14	1.1	0	0.0	3	0.7
31-35	9	4.0	77	6.0	5	4.2	28	7.0
36-40	19	8.6	163	12.7	20	16.8	41	10.3
41-45	49	22.2	274	21.4	27	22.7	79	19.8
46-50	53	24.0	299	23.3	23	19.3	96	24.1
51-55	32	14.5	211	16.4	25	21.0	77	19.3
56-60	33	14.9	122	9.5	10	8.4	41	10.3
61-65	15	6.8	60	4.7	4	3.4	23	5.8
66-70	7	3.2	33	2.6	3	2.5	5	1.3
70+	3	1.3	23	1.8	0	0.0	3	0.7

Source: 2005 RNZCGP Membership Survey (Pande et al., 2006)

2.4.1.3 Dentists

The skill shortage assessment recently conducted with respect to dentists (Department of Labour, 2005a) concluded that in the short-term there would not be a shortage of dentistry skills. However, it was found that there had been a decrease in the percentage of dentists in the 20-24 years age group from 16% in 1991 to 12% in 2001, while those in all age groups over 35 had increased.

Further, based on the 2001 Census data, it has been estimated that approximately 2.4% of the dental workforce retires annually, which is higher than the average retirement rate for all health professionals (1.8%) and much higher than the average retirement rate for all professional occupations (1.3%). It was also noted that the demand for dentists is rising and will continue to rise due to the ageing population (Department of Labour, 2005a).

2.4.2 Tertiary Sector

Universities are facing significant issues that will potentially impact recruitment and retention. There is an increasing demand for a highly-skilled, university-educated workforce which is needed for the "knowledge society". However, there are significant funding and salary issues that impact on the ability of the sector to meet this need. While there is a secondary school student "bulge" which will be entering into tertiary education, the university workforce itself is ageing with 35% of the academic staff aged 55 years and over. New Zealand will be competing for academic staff from not only other sectors of the New Zealand economy, but also from overseas. Currently New Zealand universities recruit half of their academic staff from overseas (Association of University Staff, 2005). As the United States, United Kingdom and Australia also have an ageing tertiary sector, New Zealand will also have to face the issue of losing applicants to overseas positions (Association of University Staff, 2005; Mutch, 2006).

2.4.3 Public Service Sector

Research on overseas' experiences indicate that the public sector labour force constitutes a higher proportion of older workers than the private sector, with the education sector having the highest proportion (Rendall, 2004). In the New Zealand Public Service, there has been an increase in the proportion of older workers (55 years and older), characterised by a shift from comprising a lower proportion of older workers in 1995 (compared to the overall labour force) to having a higher proportion by 2002.

Overall, the proportion has increased from 7.4% to 14.3% and, in 2004, was expected to rise to about 24% over the following decade (Rendall, 2004). The State Services Commission's strategic plan recognises the increasing diversity (in both age and ethnicity) of the workforce and the impact this will have on attracting, developing, managing and retaining employees (R. Rendall, personal communication, 31 July 2006).

With respect to the gender/age distribution for the New Zealand Public Service, the Career Progression and Development Survey 2005 (State Services Commission, 2006) shows that the 45 years and older age group comprised 41% of workers (of which 53% were women, 14% identified as Māori and 3% as Pacific peoples).

It was further noted that, for the public servants aged 45 years and over, training and development issues were less important than to the younger workers. However, they were less satisfied than the younger age group that their managers were encouraging and supportive of their career development. They were more likely to work extra hours, and expressed less satisfaction in having a manageable workload than the younger group. A much older age profile was associated with those public servants with disabilities. Their length of service was much longer; 29% of those with disabilities had worked with their current organisation for 16 or more years, compared with 19% of those without disabilities.

2.4.4 Other Sectors

Occupational skills shortages in selected trades and professional occupations are evident from the Department of Labour occupation reports. Shortages in trades were partly

attributed to the drop in the number of young people entering the trades in the 1990s, evidenced by a higher than average median age for a number of trade occupations. Professional occupations evidenced a less acute skills shortage than trade occupations (see Table 7). However, how much of this was due to an ageing workforce is difficult to determine.

Table 7: Occupational Skill Shortage Assessment of Professional Occupations

Profession	Current Situation	Short-term Outlook
Civil Engineer	Genuine skill shortage	Genuine skill shortage
Architect	Genuine skill shortage	Genuine skill shortage
Dentist	No shortage	No shortage
Early Childhood Teacher	Genuine skill shortage, and recruitment and retention difficulties	Genuine skill shortage, and recruitment and retention difficulties
Electronic Engineer	Genuine skill shortage	Genuine skill shortage
Information Technology Professional	Genuine skill shortage	Genuine skill shortage
Registered Nurse	Recruitment and retention difficulties	Recruitment and retention difficulties (improving)
Occupational Therapist	Recruitment and retention difficulties	Recruitment and retention difficulties
Pharmacist (Hospital & Retail)	Genuine skill shortage	Genuine skill shortage
Social Worker	Genuine skill shortage, and recruitment and retention difficulties	Genuine skill shortage, and recruitment and retention difficulties (worsening)

Source: Department of Labour (2005b)

The decline in apprenticeships in manufacturing is an important factor that has contributed to the higher average age of employed people in this sector. Anecdotal evidence from Sheffield Consulting puts the average age of a tradesperson, for example, as 54 years (J. Martins, personal communication, 27 June 2006). Business New Zealand has acknowledged the potential shortage of tradespeople in 10 to 15 years time (B. Burton, personal communication, 2 August 2006). If industry is unable to attract younger New Zealanders into trades, then targeted immigration policies encouraging those with trade skills will be required to fill the gaps.

Newell and Perry (2005) note that a growing proportion of people working in small businesses will be in the older age groups, thus implying that owners of small businesses may need to delay retirement while they find replacement owners. Further, since 1981, the rate of older people owning businesses has risen at more than twice that of their overall participation in the workforce. The self-employed section, particularly part-time self-employed, has seen the greatest change. Newell and Perry (2005) suggest that the significant growth of part-time self-employed people over 55 years may reflect lifestyle choices, as well as a response to a decline in employment opportunities.

So, what are the implications for the future of ageing occupational sectors? The most obvious implication is the increasing labour and skills shortage in the greying occupations. Already, qualified trades people are becoming more scarce, which McGregor (2005, p.14) believes is also a result of “too easily discarding mature employees and ignoring their contribution”.

2.5 65+ Workers

While acknowledging the impact on some occupations of this “greying” phenomenon, it is important to remember that a significant proportion of the working population, both now and in the future, will be classified as older workers. As Brugiavini et al. (2005, p.259) note, in our almost indecent haste to acknowledge the potential burden of an ageing population, we “must not neglect the substantial productive potential of the elderly population”. When reflecting on the contribution of these people to the workforce, it is useful to note some of the occupational trends for those that continue to work past the age of 65 years:

- 22% of 65-69 year olds and 3% of 85 years plus are employed
- 7% of women and 17% of men aged 65 years and over are employed
- Māori aged 65 and over have the highest rate of employment at 14.8%, compared to the European rate of 11.8% and Pacific and Asian people at 8.2%
- People over 65 years are twice as likely to be self-employed or be an employer of others than younger workers (44.5% compared to 19.8%).
(Statistics New Zealand, 2004b).

Some jobs which are physically demanding have fewer older people employed in them. For example, in 2001, there were no older people over the age of 65 working as metal drawers and extruders, or paper pulp preparation plant operators. Occupations which need fast reactions which arguably decline with age comprise few older people. For example, there were no air traffic controllers over the age of 65 years in 2001. The advanced technology of a growing range of occupations mean that many older people have had less opportunity to develop the necessary skills and are, therefore, under-represented in fields such as computing (Statistics New Zealand, 2004b). On the other hand, there is a range of occupations which are comprised of a disproportionate number of older workers (see Table 8).

Table 8: Ten Occupations with Significant Proportions of People Aged 65 Years and Over

	Number of 65 and over employed	Total number employed	Percent 65 and over
Legislators	147	702	21
Musical instrument makers and tuners	30	162	19
Judges	36	270	13
Composers, musicians and singers	390	3,789	10
Mixed livestock producers	486	4,884	10
Bus drivers	456	4,896	9
Crop and livestock producers	2,310	25,917	9
Religious professionals	285	3,492	8
Livestock producers	3,387	43,209	8
Sculptors, painters and related artists	204	2,670	8

Source: Statistics New Zealand, Census of Population and Dwellings, 2001 (Statistics New Zealand, 2004b)

Although the contributions of those 65 years and older to the workforce are to be commended and encouraged, it is clear that, at the present rate of participation, this contribution is not enough to mitigate labour and skill shortages. While it would be pleasing to think that an increasing mean age in particular occupations signals a concerted effort to retain older workers, the more obvious explanation is a shortage of younger workers entering such occupations.

2.6 Summary

The ageing population will lead to continuing labour shortages, not only in New Zealand but internationally. A shortage of skilled workers also exists and New Zealand is competing with other countries in a similar position for the pool of skilled labour. The ageing workforce not only impacts on the supply of labour, it also influences the structure of the workforce.

In the future, we will see a more culturally diverse workforce with greater female participation (although this increase will plateau) requiring greater workplace flexibility. The nature of work itself will continue to change, requiring greater demand for more highly skilled and educated workers, which in turn places pressure on education and training resources, and the possibility of increasing the gap between those with access to those resources and those without such access. Structural changes in expenditure occasioned by an ageing population will also affect the nature of work undertaken with some sectors needing to increase their workforce numbers, while others will experience a decline. The high labour participation rate in New Zealand means more and more previously unpaid work will be required to be undertaken by paid employees.

The impact of the ageing workforce in New Zealand has been documented with regard to particular occupational sectors. However, systematic and comparable "demographic audits" (McGregor, 2004) of these sectors are difficult to source. Although the numbers of workers over the age of 65 is increasing, this is not enough to mitigate the current labour and skill shortage.

There are a number of obvious responses to the current and projected shortage of skills and labour. The first is to increase the birth rate. In other words, create more workers! Notwithstanding how this might be easily achieved, it is quite clear that any increase in births would not be felt until well after the impact of a changing age-structure has occurred. In addition, although the declining birth rate is one reason for an ageing population, increased longevity is also a major contributor.

A second response suggested previously is to import labour, that is, increase immigration rates to attract the young skilled labour required. Notwithstanding the international competition for such resources, this strategy clearly has potential to offset potential labour and skills shortages. However, as noted by Davey (2003a) previously, in practice adult immigration may actually add to the ageing workforce phenomenon. There are also issues surrounding the ability of local labour markets to first absorb the necessarily large numbers of internationally relocated workers and, secondly, to offer requisite training where needed.

A third response is to find ways to encourage new "recruits" and attract younger people to join certain occupational ranks. In order to facilitate this endeavour, some occupations may consider dropping their standards of entry. While this may be safely done in some areas, it may not generalise across the board. For example, do we want less educated

nurses? In addition, this strategy only creates potential shortages in other sectors given the limited supply of labour.

A fourth response, one which has been a consistent theme throughout this report, is to retain older workers. As Davey and Cornwall (2003, p.15) and many others working in the area argue, we need to “maximise the potential of older workers”. There has been a considerable amount of both research and policy work undertaken in New Zealand on issues related to the older worker and how retention of such workers might be achieved, not least of all by the New Zealand Institute for Research on Ageing. While it would be hard to argue that this work is not easily accessible and widely disseminated, there is clearly more work to be done to put it into practice.

This report does not attempt to address the need for the implementation of previously established knowledge, but rather seeks to identify whether there may still be gaps in our knowledge base. Part three of this report will provide an overview of this work and relevant international findings, with a view to identifying where knowledge and research gaps still exist (to be discussed in part four).

PART 3: Older Workers - Emerging Issues

3.1 Introduction

Part three of this report provides an overview of the emerging issues in relation to older workers, including a summary of the potential negative stereotypes which may serve to discourage their continued employment and other factors that may influence workforce participation. Where appropriate, research gaps are identified.

In 2001, the New Zealand Positive Ageing Strategy was launched which the Hon. Lianne Dalziel describes as a structure for setting the policy direction for not only older New Zealanders, but also for all generations of New Zealanders (Ministry of Social Development, 2001). The positive ageing goals are set within a framework encompassing income, health, housing, transport, ageing in place, cultural diversity, rural, attitudes, employment and opportunities. The goals of particular relevance to this report relate to attitudes, employment and opportunities. These are outlined in Figure 8, with relevant key points drawn from Positive Ageing in New Zealand (Ministry of Social Development, 2001).

The positive ageing endeavour will influence the way organisations manage the ageing workforce. For instance, some New Zealand Public Service departments have implemented steps to manage an ageing workforce. These include addressing future recruitment and workforce management; recruitment and retention; flexible working arrangements; career planning and development; and health issues (Rendall, 2004).

Figure 8: Selected Goals of the New Zealand Positive Ageing Strategy

- Attitudes –
Goal: People of all ages have positive attitudes to ageing and older people
Actions: “Ensure Government agency advertising and publicity campaigns portray positive images of older people; Promote intergenerational programmes in schools and communities; Foster collaborative relationships between central and local government, business, non-government and community sectors that promote positive ageing” (p.90).
Emerging Issues: “Baby boomers’ approach to life in older age will have a considerable influence on prevailing stereotypes and on attitudes to positive ageing” (p.90).
- Employment –
Goal: Elimination of ageism and the promotion of flexible work options
Actions: “Implement human resources policies in the Government sector that support employment of older workers; provide family-friendly workplaces by recognizing those with caring responsibilities and allow flexible and reduced hours of work; and ensure entitlements for training are provided to all workers, including older workers; Work with local government and the business sector to promote mentoring programmes that harness the skills and experience of older people” (p.98).
Emerging Issues: “The growing older worker population highlights the need for new human resources strategies to address attitudes, recruitment, retention, performance and training issues” (p.98).
- Opportunities –
Goal: Increasing opportunities for personal growth and community participation
Actions: “Improve opportunities for education for all; Implement adult education and retraining initiatives; Encourage utilization of the experience and skills of older people” (p.104).

Source: Ministry of Social Development (2001)

Despite the documented need to encourage continued workforce participation by older adults and the launch of the Positive Ageing Strategy with its emphasis on valuing the economic and social contributions of older adults, there still appear to be barriers to “maximising the potential of older workers” (Davey & Cornwall, 2003, p.15).

3.2 Maximising Human Capital

If we plan to maximise the human capital of our older workers, then significant effort needs to be expended into addressing the issue of discrimination towards and the negative stereotypes about older people. An examination of these stereotypes shows how most are myths which can be easily dispelled. It also highlights the need to educate employers, the general public as well as older people themselves, from an evidence-based perspective, as to what older individuals are capable of.

3.3 Discrimination

As noted earlier, the Positive Ageing Strategy puts forward a number of principles for its vision for Positive Ageing in New Zealand including “Ageism is [to be] eliminated from all sectors of society and everyone is valued for who they are regardless of age” (Ministry of Social Policy, 2001, p.13). Ageism reflect prejudices and negative stereotypes based on actual or perceived age (Glover & Branine, 2001), and in the workplace is manifested as discrimination against older workers across a wide variety of employment practices.

Direct discrimination occurs when older workers are treated less favourably than other workers. Examples include a compulsory retirement age, a maximum age for recruitment and age limits imposed on training opportunities. Additionally, older workers have usually been the first group to be considered for redundancy or reduced working hours during market declines. It has been suggested that unemployment, in fact, could be considered as discriminatory with respect to older workers, unless appropriate action is undertaken to ensure they have equal opportunities in labour markets (Samorodov, 1999). More indirect discriminatory practices relate to early retirement options, where older workers may be targeted in paring down the size of the workforce.

While New Zealand has legislated against discriminatory practices under the Human Rights Act 1993, age discrimination continues. Reporting on the findings of a survey of human resource practitioners and recruitment consultants conducted for the Equal Employment Opportunities (EEO) Trust, Burns (2000) advises that 95 percent of respondents felt that some groups of people faced unfair barriers to obtaining employment, many of whom were older workers. This group were also perceived to experience unfair discrimination; the more common forms relating to people thinking the applicant wouldn't ‘fit in’, stereotyped attitudes, clients wanting a younger employee, and specifications for a type of person rather than relying on the relevant merit of the individual for the job.

More recently, the EEO Trust has undertaken an online survey of over 6,000 workers (Work and Age Survey, EEO Trust, 2006) to gather information on what people want from work as they age, and what influences decisions regarding workforce participation and retirement. Age discrimination was noted in general attitudes, promotion opportunities, recruitment and salary level. Older people reported more discrimination in training opportunities than younger workers, while the younger people reported more discrimination in salary and promotion. The general attitudes which reflected age discrimination included employers wanting a younger person, organisations wanting a young culture, older workers being seen as a threat because they had more qualifications

and/or experience than the employer, and perceptions that people in their forties were old. One salient finding was that recruitment agencies were perceived as being more discriminatory than employers. Some examples of the sorts of discrimination reported in the survey are given in Figure 9.

Figure 9: Examples of Discrimination Reported by Respondents

- Under the present CEO this place has had a policy to “encourage” older people to resign/retire. Young people apparently have new ideas, while older people are too set in their ways. This is rubbish – now we have a workforce full of people who know nothing about anything and they don’t stay long enough to work out what they are doing.
- Older people tend to get bypassed because I believe younger managers feel threatened.
- Younger staff promoted over more qualified and experienced older staff. Told I was too old for promotion as the organisation was concerned with succession planning. I felt discriminated against.
- I have asked for training in my last three annual appraisals, but the training budget only goes so far. In my workplace there is certainly favouritism for some employees, and I feel that when it comes to allocation of training, for me age has an impact on the decision.
- New entrants to same role earning double my salary.
- Applicants aged over 50 are not considered for employment.
- “We couldn’t meet the salary expectations of a person with your experience” but they never asked what my expectations were.
- General remarks about senility and hearing loss – in a jocular sense, but too frequently to be harmless.
- Being told you are an old fart.
- Made redundant while younger workers were kept on lower salaries.
- Was not included in a number of team initiatives. Team events often were unsuitable for someone older (eg very active sports days, drinking nights, drinking games)
- Recruitment agencies do the most discriminating.
- I have had personnel agencies tell me outright that there is no use applying for certain positions because of my age.

Source: Work and Age Survey Report 2006 (EEO Trust, 2006)

The study also analysed who experiences age discrimination. One in three respondents reported they had experienced workplace discrimination owing to their age, particularly for those over 45 years. Men (34%) reported more age discrimination in the workplace than women (29%). An examination of discrimination by occupational groupings indicates that those in the production/manufacturing sector were most likely to report age discrimination, followed by trades and technical workers. The EEO Trust acknowledges that few people complain, and age discrimination is both difficult to define and identify and hard to prove (McNaughton, 2002).

In an interesting study, Harcourt and Harcourt (2002) obtained job application forms from New Zealand organisations that, together, employed approximately 10% of the workforce, and examined them for violations of section 23 of the New Zealand Human Rights. Over half the forms (56%) asked one or more unlawful questions about applicants’ age. Interestingly, recent Canadian research shows the potential economic consequences for organisations that engage in discriminatory practices. Ursel and Armstrong-Stassen (2006) examined the decline in stock prices following announcements of corporate age discrimination lawsuits and found larger firms had total stock value losses averaging \$40 million.

The EEO Trust (2006) survey provides an interesting picture of the incidence of discrimination from a large number of workers. However, it should be noted that the methodology and sampling for this study means generalising to the working population as

a whole should be undertaken with caution. What the study does provide is a useful snapshot of employees' perceptions of discrimination and suggests the need for a more systematic and representative investigation of such issues, both from the employee and employer perspectives.

3.4 Myths, Stereotypes and Attitudes

Discriminatory practices can stem from stereotyped attitudes and misperceptions. There is considerable international research regarding the existence of negative stereotypes held about older workers. Early New Zealand research found support for such notions (eg New Zealand Department of Labour, 1977; Singer, 1986; Singer & Sewell, 1989), and despite the changes to the Human Rights Act regarding age discrimination (1994) and compulsory retirement (1999), a number of later studies have shown New Zealand employers and employees still hold stereotypical views of older workers (eg O'Donohue, 2000; Green, 2001; Smith 2001).

An example of the typical findings of such studies is offered by the Employment of the Older Worker study (McGregor & Gray, 2002). Two large surveys were conducted examining the views of over 1000 employers and 2000 older workers. With respect to their views about common stereotypes associated with older workers, it was found that the majority of both groups held negative stereotypes about "adaptability" factors such as computer technology and resistance to change. In the older worker respondents group, 49.4% agreed that older people were more likely to resist change and 48.8% agreed that older workers were more likely to have problems with technology. In the employer respondents group, 60.1% agreed that older people were more likely to resist change and 55.4% agreed that older workers were more likely to have problems with technology. In the older worker group, 22.4% considered older workers were less flexible compared to 39.3% of the employers, and 19.7% of the older workers agreed that older workers would be difficult to train compared to 27.4% of the employers. While only 12% of older workers agreed that older workers were less creative, 22.4% of the employer group agreed with that view. These few examples illustrate that, while older workers also share some of the negative stereotyped views about themselves, these views are more strongly held by employers.

It is surprising how these stereotypes have remained resistant to change over the past few decades. In order to put in place practices that encourage older workers to remain longer in the workforce, myths and stereotypes relating to this group and their work performance need to be addressed. Erroneous beliefs about older workers can lead to their under-valuation and under-utilisation. Employers may encourage the early retirement of older employees when there is a decreased demand for labour, and may not actively promote ongoing training to keep them up-to-date with the latest knowledge and technology. Retirement Commissioner, Diana Crossan (2006) advises that, in this respect, the perpetuation of negative stereotypes means inefficient use of human capital and potential, costing both the individual and the nation. She notes "If people work, they are contributing to the GDP and potentially passing on skills and experience. They are also less likely to need additional financial state support" (Crossan, 2006, p.4). Further, older workers holding the same beliefs about their own abilities may well fall victim to stereotyped attitudes. By reviewing the range of stereotypical attitudes towards older workers, it becomes evident that many of these attitudes are indeed based on myths.

3.4.1 Physical Health

Declining physical health leading to absenteeism and higher injury rates is often cited

among the disadvantages of employing older workers. These purported declines are also said to be related to lowered productivity in older workers, compared to their younger counterparts (Peterson & Coberly, 1988; Prenda & Stahl, 2001). These myths and stereotypes are largely unsupported by the research literature. Older people do differ from younger people on physiological dimensions with age-related changes being evident in vision, hearing, bone, skeletal muscle, pulmonary function, skin, metabolism, motor function and immunity. However, performance shortfalls associated with age may not manifest until work demands exceed physical ability or when the system is stressed (Robertson & Tracy, 1998). While age-related changes occur at a greater rate with advancing age, most biological functions do show a wider variation than in younger people (Wegman & McGee, 2004). Further, the physical condition of the individual can mediate age-related declines such as motor function and cardio respiratory function. It may be that older people who maintain a high degree of physical fitness may perform better than sedentary, younger workers (Spirduso & MacRae, 1990).

Declines in physiological functioning in older workers can often be offset by adaptive skills. Further, many occupations do not require employees to perform to the utmost of the individual's capacity (Wegman & McGee, 2004). An individual experiencing some physical degeneration does not necessarily need to leave work for there are many ways that the work environment can be re-designed to compensate or alleviate physical difficulties.

While there is ample evidence to suggest that stereotypes about the impact of health on older workers' abilities are not justified, there is only minimal New Zealand data on the actual health concerns of older workers (eg McGregor & Gray, 2003), and even less on the physical health status of older workers and/or its relationship to workforce participation (eg Alpass & Towers, 2004). The Survey of Older People found, not surprisingly, that as health status declined for people aged 65 to 69 years, employment rates dropped (Statistics New Zealand, 2004b). Statistics New Zealand (2004c) provides a profile of persons not in the labour force. However, there is no readily available data on the effects of poor health on the employment rates of those in what we would generally regard as the pre-retirement phase of 55-65 years of age, the age at which strategies to retain older workers would be targeted.

3.4.2 Cognitive Functioning

It has been well documented that cognitive function declines with age. Park's (1994) examination of a large body of literature shows that cognitive ability declines significantly with age, as shown in slower response rates and deficits in long-term memory. However, Warr (1994) notes that, while response speed, working memory and selection attention degenerates with age, particularly on difficult tasks, a person can develop adaptive strategies to offset the decline in function. This argument has been well-supported and expressed in various ways. Salthouse and Maurer (1996) explain that there is a range of variables that mediate any relationship between age and job performance. These variables include knowledge, skills, abilities, personality characteristics, motivation, environmental factors and so forth. "If aging is really a continuum along which factors exert their influence, then although it is true that an individual at any age is a product of those influences, aging per se is not a direct cause of work behaviour" (Salthouse & Maurer, 1996, p.362). Specific intervention strategies are available that can assist older people for, as Schaie (1996) argues, intellectual decline in older age is not necessarily irreversible. Further, the "sustained, intense performance" required in laboratory-based experiments with respect to testing of cognitive function is rarely needed in the workplace (Griffiths, 1997, p.19).

Age has been found to account for only a small percentage of the variance in individuals' cognitive, perceptual and psychomotor abilities after type of occupation, experience and education has been controlled for (Griffiths, 1997). However, deterioration in visual or auditory function can mediate differences in cognitive abilities. As Griffiths points out, these functions can be offset by workplace design, and uses the example of the use of a large VDU display where visual function declines. Furthermore, there is considerable variability among older people with respect to their general functioning, their well-being, and various other factors, making generalisations about potential performance declines impractical. Older people can also deal creatively with age-related issues, using strategies of selection, optimisation and compensation (Baltes & Baltes, 1990).

There is continued debate as to the cognitive declines associated with normal ageing. For instance, some cognitive abilities are thought to decline more rapidly than others and, as noted above, there are large individual differences in how and when these declines occur. There is considerable evidence for a number of predictors of cognitive decline (eg blood pressure) in older adults (Christensen, 2001). However, much of the longitudinal research on predictors of change in areas such as cognitive functioning has been undertaken on post-retirement older adults and tells us little of the impact of declines in cognitive performance in the older worker (Hansson, Dekoekkoek, Neece, & Patterson, 1997). There is no evidence from any substantive, longitudinal research activity focused on the cognitive functioning of older adults and its relationship to work performance in New Zealand.

3.4.3 Work-related Stress

It is sometimes argued that older workers will be more prone to the effects of work-related stress due to the increasingly complex nature of the work environment for which they are considered to be ill-prepared. However, the effects of stress may be experienced by workers whatever their age, and for a variety of reasons. Work-related stress can be conceptualized as "an accumulation of minor insults and hassles, as well as the threat or onset of significant exposure to uncontrollable harm" (Hansson, Robson & Limas, 2001, p.248). These factors may result from the nature of the job, workload, time pressures, or exposure to toxic features of the physical environment. Further, the organisational and social environment of the workplace may trigger stress, for example, conflict with co-workers, threats to job security and unsupportive supervisors. The association between ageing and the stress and coping process is complex (Hansson et al., 2001). This is reflected in the wide individual variation in the type of stressors, the appraisal of possible stressors, the emotional and physiological reactions, along with the individual's coping abilities.

It may be that older workers may experience stress that derives from different aspects of the job compared to younger workers. According to de Vaus and Wells (2003), older workers are up against two opposing issues that may result in a stressful work environment. First, issues relating to the workplace may mean that employment is unpredictable, thus creating stress. For instance, constant restructuring and downsizing (in order to achieve higher productivity) in recent years has seen a number of technological changes that could potentially affect the older worker. Second, wider social, demographic and policy changes may result in older adults feeling they must continue working in order to be able to be financially secure. However, findings from their study of stress and the older worker (the Australian Healthy Retirement Project) seem to favour what Vaus and Wells (2003) call the "happy older worker" model. The majority of the 7000 older workers in their sample enjoyed their job, their workplace, the people they

worked with, and they felt appreciated. Even though there was a degree of uncertainty and change brought about by restructuring and so forth, these people did not report finding their work as highly stressful. Further key points that emerged from this study were that the oldest workers experienced the least stress and rated their place of work more positively than the younger workers in the sample of workers 50+ years. Physical effort was not related to stress but high levels of mental work were perceived as stressful and, not unexpectedly, healthy workers found their jobs less stressful than those who were not in good health.

In New Zealand, the Health and Safety in Employment Act 1992 requires employers to take all reasonable precautions to safeguard the health of employees, and a recent amendment emphasises the employer's obligation to protect employees from possible physical and mental harm caused by work-related stress. There is some evidence to suggest that financial work-related experiences of older workers have long-term consequences. Statistics New Zealand (2004b) report that single individuals over the age of 65 who experienced financial stress between the ages of 50 and 60 years were, on average, in poorer health than those who had not experienced such stress. Although work-related stress remains of interest to New Zealand researchers (eg Dewe & O'Driscoll, 2002; O'Driscoll & Beehr, 2000; Shouksmith & Taylor, 1997), there has been little focus on the work-related stress experiences of older workers (eg Alpass et al., 2004; McGregor & Gray, 2001). If we are to encourage older workers to remain in the workforce, then a better understanding of the types of work-related stressors they experience in mid-life and how best to mitigate the effects of that stress is necessary.

3.4.4 Job Performance and Productivity

Recent reviews of relevant literature show no evidence for a reliable relationship between ageing and work performance (Alpass, 2006; Davey & Cornwall, 2003). However, particular age band, level of education and type of occupation are important to take into account. Similarly, the overall findings of 100 research investigations showed no significant differences in work performance of older and younger workers (Warr, 1994). Warr found that, overall, older workers are considered to be less adaptable and slower at gaining new skills and knowledge than younger workers. On the other hand, they are seen to demonstrate higher consistency and better quality in their work, as well as being more effective with respect to reliability, conscientiousness and sound decision making when compared to younger workers.

While there are equivocal findings on older worker productivity, the evidence for age related absenteeism is clearer. Absence from work for older workers is more likely to be due to sickness, rather than to 'voluntary' absence when people take time off work for other reasons. Warr (1994) advises that, in many instances, there is no particular age pattern of absenteeism. In Canada, it was found that permanent workers aged 45 and over were absent an average of 9.7 days, compared to 7.9 days for those aged 25-44 (Human Resources Development Canada, 2002). Older people have less workplace injuries than younger employees (Wegman & McGee, 2004), therefore, less time off work in this respect. However, this may vary between country and type of occupation. As Crossan (2006) points out "older workers are less likely to pull a "sickie", burn the candle at both ends, suffer a high impact sporting injury or be awake through the night tending to a young baby. People of all generations have experiences that may affect their work and this is certainly not confined to the over 55s" (Crossan, 2006, p.4).

In the United States, Prenda and Stahl (2001) report that it has been found that older workers use health care benefits less than employees with young children and are much

less likely to file workers' compensation claims. One interesting finding reported by Prenda and Stahl (2001) was that the AARP (formerly the American Association for Retired Persons) noted that 89 percent of survey research among managers reported higher absenteeism rates for employers 50 years and older. However, when the actual attendance records were examined, it was found that, with respect to short-term sickness, older workers were less absent than younger employees. They also report that, at the age of 70, about a third of older workers do not have any medical conditions which necessitate absenteeism.

Job performance in the older worker is also a neglected area of research in New Zealand. Although performance remains a topic of research (eg, Black, 2000; Hambleton, Kalliath, & Taylor, 2000), the focus has been on improving the prediction of job performance (usually in younger workers), rather than examining the possibility of age related changes in performance across time. This is an area where longitudinal data is required that can track job performance as participants age, taking into account factors other than age that can impact on a worker's performance (eg changes in work design and industry productivity). This type of investigation should include rigorous, well researched, multi-method measures of job performance.

3.4.5 Technology and Training

One of the most pervasive stereotypes of older workers is that they can not learn "new tricks". As noted previously, often the most frequently cited negative characteristic regarding older workers is related to difficulties in adjusting to change and technology (eg Greene, 2001). However, the evidence suggests that older employees are certainly able to learn new skills and keep up with younger workers. Crossan (2006) believes that there is sufficient evidence which shows older people enjoy the challenge of learning new skills, new technology and change, and cites the increasing and prolonged use of the internet by people over 55 years. However, compared to younger workers, older people may be slower in new learning situations but this can be partially explained by differences in learning styles, being out of practice, or motivation (Moody, 2006). People training older people need to be aware of the importance of adopting an approach that embraces the different learning styles of older people.

"Misconception that older people do not understand technology. We invented it!"

"I am currently doing part-time study in computers so am adaptable and always willing to learn something new".

Responses from participants in the EEO Trust (2006) Work & Age Survey

There is a perception that older workers will retire before training investments pays off. However, it has been noted that older employees have a tendency to be loyal to their employers if their potential is recognized, compared to younger workers who are more inclined to change their jobs regularly (McNaughton, 2002). Further, Crossan (2006) addresses the argument that the perceived expense of older workers is a barrier by noting that, in fact, there is greater efficiency across the board when the skills and experience of an older worker is brought to bear. Problems can be dealt with efficiently and experience can be passed on to younger workers.

Unfortunately, there is evidence that older workers are less likely to receive opportunities for training and professional development than younger workers (Cully, VandenHeuvel, Wooden & Curtain, 2000), particularly in the use of new technologies (Steinberg, Walley, Tyman & Donald, 1998). Again, only minimal New Zealand evidence for this is available

(eg McGregor & Gray, 2003), and further investigation from both the employee and employer perspective is required.

In sum, negative myths and stereotypes about older workers do exist and do impact on the workforce participation of such workers. According to Prenda and Stahl (2001), most of the negative stereotypes generated about older workers are sourced from research based on the opinions of supervisors whose views, which may be biased, have led to misperceptions or assumptions about the productivity of older employees. Older workers may also hold similar ideas about their own abilities and believe the negative stereotypes. While the New Zealand research cited here confirms these views, it also highlights the perceived positive features of older workers.

3.5 Positive Features of Older Workers

The older worker may in many situations be more valuable to an employer than a younger worker, irrespective of any relationship between age and work performance (Salthouse & Maurer, 1996). A range of attributes are associated with older workers. McNaughton (2002) reports knowledge, skills, experience, reliability, stability, loyalty, strong work ethic, responsibility, people/customer care skills, motivation and initiative. It is noted that companies with older workforces have experienced higher profits, lower turnover/higher retention and lower absenteeism. Other qualities, according to Samorodov (1999), include discipline, punctuality, commitment to quality and personal maturity.

According to findings from the Work and Age Survey (EEO Trust, 2006), the main perceived strength of older people in New Zealand is reliability. Other impressions of older workers' strengths are good customer service skills, communication skills, commitment to careers, skills in training people, initiative, able to create a good atmosphere and technology skills. It was noted, however, that younger people did not rate the strengths of older people in the workplace as highly as older people themselves.

Crossan (2006, p.4) points out that the skills and experience that have been accumulated by older workers can translate into efficiency and "the ability to deal with problems quickly and effectively". They can pass on the benefits of their experience to younger workers, which also promotes greater efficiency all round.

3.6 Factors Affecting Workforce Participation

Address to the "Managing the Ageing Workforce Conference"

"As the labour market tightens, the over 55s will have more choices, and the most capable and accomplished among them are likely to be the most mobile and financially independent. The challenge is to find a way to reconnect with these employees before they're ready to take a retirement package and run – perhaps to a competitor. We are lucky in New Zealand that there is no legal retirement age but the lifting of the legal requirement hasn't meant that all workplaces have become suddenly friendly for older workers. Changes are definitely required in recruitment, work environments and professional development".

(Crossan, 2006; p.5)

Generally, in Western societies, we are socialised through cultural and societal expectations to anticipate retirement in our early sixties and, for most, this is a time when they become eligible for superannuation or pensions. For many, the decision to retire seems straight forward enough - retirement is a "desired goal" (Atchley & Barousch, 2004). For others, they may be forced to contemplate retirement due to ill-

health, family or societal pressures or redundancy. Those who are made redundant later in life may find it difficult to find new employment due to ageism and discrimination against older workers, and thus may contemplate retirement earlier than previously thought (Atchley & Barousch, 2004). For some, retirement may be less than a voluntary change, and for others, the decision to exit workforce participation at the end of their careers is by personal choice (Henretta, Chan, & O'Rand, 1992).

What are the factors that influence the decision to retire? A number of researchers have looked at "push" and "pull" factors that have some bearing on the retirement decision. Shultz, Morton and Weckerle (1998) describe push factors as negative attributes that drive the older worker out of workforce participation, such as poor health or job dissatisfaction. Pull factors, on the other hand, are positive attributes that entice the older worker to leave the workforce eg leisure pursuits (or conversely keep workers in the workforce). It is important to determine the factors that influence older workers' decisions on when to retire. Once these are better understood, then appropriate policies may be implemented to accommodate these factors.

3.7 Workforce Withdrawal

Attention is drawn to the largely invisible section of older discouraged workers who would like to be employed but for a variety of reasons have stopped looking for work. Reasons given for early retirement relate to ill health and job loss, but other factors individuals offer include believing that their age is a barrier, having a lack of skills or believing that their education level will preclude employment (Rix, 2004; Samorodov, 1999). The myths surrounding older workers, along with discriminatory attitudes and the practices of some employers, further serve to reinforce this situation. Hidden unemployment also exists among older women owing to their sometimes lower retirement age (Samorodov, 1999).

Overall, older workers are disproportionately represented in redundancies in several countries. With respect to New Zealand, McGregor (2005) advises that just under half of unemployed older workers are long-term unemployed (for more than 26 weeks). Furthermore, the long-term unemployment conceals the issue of older workers' unemployment rates which are actually portrayed as being below 5%. Age discrimination stemming from negative attitudes towards older workers hinders older people's efforts to return to the workforce. Unlike their older counterparts, younger workers do not stay unemployed for long (McGregor, 2005).

McGregor and Gray's report on mature job-seekers in New Zealand (2001, p.55) indicates that there is a "gendered labour market of mature job-seekers". Compared to men, women participate in work for different reasons, come up against different barriers, have different experiences of the labour market, and are more likely to seek part-time work.

Older men, especially those 51-55 years of age who have been made redundant, are vulnerable. While 10-15 years away from eligibility for government superannuation, those that are unskilled will have difficulty finding employment. McGregor and Gray (2001) advise that those who are skilled may have to accept lower wages than they received in former employment. With respect to training, the report revealed many older job-seekers were unsure what training they should be undertaking and did not receive much guidance. Indeed, some of these job seekers had made efforts to upgrade their skills, for example computer skills, only to find they were not relevant to industry requirements.

In the Work and Age Survey (EEO Trust, 2006), finances and health were given as the main reasons present workers think will influence their decision on when to retire. Health and caring responsibilities were central to women's decisions. Those under 45 years of age were more likely to be affected by financial reasons than those over 65 years (other factors that were reported by those currently employed, in order of frequency mentioned, are shown in Figure 10).

However, while those still presently working felt finances would be the significant factor in affecting their decision on when to retire, the respondents who were retired reported that health was the most important reason in their decision to retire. Nearly half (49%) stated they had retired owing to health reasons, compared to only 11% for financial factors. Other reasons given as to why they retired were: redundancy; lack of job opportunities; employer attitudes to older workers; moved town.

Figure 10: Factors Affecting Retirement Decision

- Job satisfaction, interest, enjoyment
- Other interesting and challenging opportunities, eg travel, creative pursuits, voluntary work
- Partner's employment circumstances
- Ability mentally and physically to still do the job
- Redundancy
- Contribution in workplace still valued
- Wanting to spend more time with family
- Job opportunities
- Professional contribution still valued
- Need for mental stimulation/keep active

Source: EEO Trust (2006)

These findings suggest the need for longitudinal data to track how push and pull factors may change over time as older workers transition from work to retirement. Intentions regarding reasons and the timing of retirement may, in fact, be quite different from actual behaviour as workers age. Understanding how intentions are related to behaviour and the influence of potential moderators on this relationship over time will be important in identifying the determinants of retirement decisions.

3.8 Extended Workforce Participation

There are a number of possible reasons for what seems to be a reversal of the tendency towards earlier retirement in New Zealand. These are:

- compulsory retirement was outlawed in February 1999
- surcharges on extra income earned while receiving superannuation were removed
- the age of eligibility to receive superannuation changed
- economic necessity
- improvements in health treatment
- a positive outlook and desire to keep active
- the nature of work is changing, reflected in a shift away from manual labour. (Statistics New Zealand, 2004b).

Similar reasons have been found for why older workers in the United States may choose to stay in the workforce, including stock market conditions leading to a reduction in people's savings; the erosion of health benefits; the elimination of compulsory

retirement; and a liberalisation of social security retirement earnings test (Rix, 2004). Overall, as people live longer lives and enjoy better health, higher incomes, improved health services and better education, the longer the time they can be employed in productive paid employment (Samorodov, 1995).

The EEO Trust (2006) survey also examined which work conditions would encourage current workers to keep working beyond their expected retirement age. Quality part-time work (66%) and flexible working hours (64%) were cited as the two main work conditions that would be influential in the decision to remain in work. Extended leave and return to work was also cited by fifty-three percent of current workers. Less likely to be influential in the retirement decision but still cited by a significant minority were higher pay (42%) and being able to work from home (47%). Other conditions that may encourage currently employed respondents to continue working were:

- challenging, interesting, varied work
- the ability to make a difference
- having your experience needed and valued
- less stress.

The retired respondents in the survey reported greater flexibility and part-time work, as well as better health; better understanding and support of health problems by employer; suitable job opportunities; and not being made redundant (EEO Trust, 2006, p.13).

These findings certainly point to factors that could influence continued participation in the workforce from the older employee's point of view. However, there is a need to take a longer term view to determine which factors are actually instrumental in retaining these workers. As noted earlier, despite the plethora of research on the need to retain older workers, the desire of many older workers to be retained and the benefits of doing so, there is little evidence of achieving this desired goal. There are certainly a range of strategies that can be and have been adopted to encourage older people to stay in the workforce.

3.9 Encouraging Workforce Participation

A number of agencies in New Zealand are working toward highlighting the needs and concerns of older workers within work organisations. For instance, the Equal Employment Opportunities Trust has an Employers Group, where member organisations commit to valuing diversity within the workplace including supporting the employment "aims and aspirations" of all workers regardless of age. Clearly, instrumental in that support is the use of strategies to encourage continued workforce participation of older workers.

McGregor (2005) concisely encapsulates potential strategies policy makers can make use of to encourage employers to retain older workers (see box below). McGregor advises that trade unions, workers organisations and researchers, together with those involved with the employment of older people, need to examine what is needed to encourage older workers to remain in the paid workforce. A number of strategies have emerged from previous research and policy work, and reflect some of the goals outlined in the Positive Ageing Strategy noted earlier.

"Government should be paying more attention to business needs to retain older workers. For example, there is evidence that employers perceive that performance management is too blunt a human resource tool to use to ease out older workers at the end of otherwise valuable working lives. Incentives to retain older workers need to be given consideration by policy makers just as employers' groups need to actively confront stereotypical assumptions and ageism. Incentives may include piloting of phased retirement, negotiated

transitions, less conventional part-time and flexible work arrangements and newer ways of working. Current employment legislation needs to allow for such flexibility. Some of New Zealand's older employers, in their seventies, eighties and nineties, could be used as role models and champions to promote mature employment in different industry sectors." (McGregor, 2005, p.19)

Ongoing education for employers, employees, the recruitment industry and the community at large about ageing can be used to help dispel myths and negative stereotypes about older people. Further, people can learn of the value of mature people and what they can offer in the workplace.⁴ The provision of ongoing training that reflects a lifelong concept of education enables all workers to keep up to date with technology. In particular, training techniques can be tailored to suit specific age groups. Flexible working arrangements can be provided for older workers, for example, part-time or bridging employment, longer holidays and flexible working hours. The New Zealand Council for Trade Unions is currently raising issues around work-life balance and flexible working arrangements with regard to the retention of older workers (C. Beaumont, personal correspondence, 1 August 2006).

Increasing longevity and delayed childbirth may have implications for older workers and the management of their caring responsibilities. For example, the rising female labour force participation rates experienced over the past 30 years may possibly plateau owing to these responsibilities (Ministry of Social Development, 2001). According to McGregor & Gray's (2001) mature job-seeker survey, 11% of those surveyed stated that the reason they were not presently looking for work was because of family responsibilities (men 4% and women 6.8%). However, many work-life balance initiatives tend to focus upon workplaces that are family-friendly and accommodating the needs of younger working parents with child-care responsibilities. Older workers have more eldercare responsibilities (State Services Commission, 2004) and, because of the trend towards later childbirth, many have both elder and child-care commitments. On the other hand, since birth rates have fallen since the 1970s, there will be reduced numbers of family carers for the forthcoming older generations (Davey, 2003a).

Work arrangements will need to be flexible enough to accommodate all levels of family caregiving. As the Department of Labour has already concluded, "At a practical level, both employers and employees have to co-operate to meet this challenge" (2003a, p.30). Indeed, many employers are already committed to such practices as evidenced by the EEO Trust Work and Life Awards which honour New Zealand workplaces that "enable and encourage work-life balance".

In many situations, the work itself and the work environment can be redesigned and re-organised to enhance the working experience for older workers, and reduce factors that contribute to work-related stress. For instance, where appropriate, changes in the direction of employment for older people could be implemented, for example, moving to less physically based activities and/or adopting mentoring roles. Many organisations may need to restructure retirement policies, pensions, and superannuation arrangements that served an earlier goal of encouraging early retirement. There has been considerable growth in assistance and guidance provided for older job seekers in terms of job search and training. Actively promoting information about what services are available to older people with respect to employment seeking would also be beneficial. Finally, policies that encourage and guide people with respect to better health care and attention to fitness also play a part in maximising the ongoing participation of older workers in the workforce.

4. Judy McGregor's (2005) book "Lifework: Celebrating Older Workers in New Zealand" is an excellent tool for demonstrating the value of older workers.

One could argue that many of these strategies have been advocated for quite some time already, and that restating them here makes them no more likely to be adopted in the future. For such strategies to be readily adopted, a cultural change will be required in how older people in general and older workers specifically are viewed and valued. The demands of a rapidly ageing population will be likely to force the change required, and reveal the usefulness of strategies that maximises the potential of older workers and encourages their ongoing workforce participation. While this is eagerly anticipated by many, not least by future older workers, there is an urgent need to demonstrate the efficacy of such strategies now. This needs to be carried out through a combination of both research and practice.

3.10 Other Sources of Labour

While this report clearly agrees with the practice of encouraging older workers to participate longer in the workforce in order to counter the effects of an ageing population, it is important that other sources of labour are not neglected. As noted earlier, there is a section of discouraged workers, unemployed and under-employed people, many of them older individuals, who could benefit from similar strategies as those outlined above and who could be assisted in various ways to get back into the workforce.

One under-employed sector could arguably be those people with disabilities. The Equal Employment Opportunities Trust (2005, p.1) reflect that, while New Zealand employers continue to say that the skills shortage is one of the largest barriers to their success in business, there are people who “find it consistently difficult to obtain work that taps into their skills and talents” and advise that people with disabilities comprise part of this sector.

Through an on-line survey, the EEO Trust asked people with disabilities about their employment experiences in an effort to discern what this group could offer to employers, why their abilities were under-utilised, and what employers could do to maximise their skills. The survey found that 57% of respondents worked 30-40 hours or more per week, 10% were not currently in paid employment, and that nearly all of the latter would like to be employed. The key issues that emerged from their survey were:

- disabled people are often highly educated and trained, and bring a wide range of skills, talents and qualities to the workplace
- a positive attitude by managers and colleagues is critical to successfully tapping into the skills of disabled people. Disability awareness training could make a difference to people’s attitudes, and would certainly indicate to disabled workers that they are valued
- flexibility around hours is the one most valuable initiative that workplaces could offer to enabled disabled people contribute fully at work
- employees may need support if they acquire a disability
- businesses could benefit from being more aware of and better utilising the funding and support services available to them.

(EEO Trust, 2005, p.1).

3.11 Summary

The New Zealand Positive Ageing Strategy provides a structure for setting the policy direction for older New Zealanders with positive ageing goals relating to workforce participation. Although this strategy may influence the way organisations manage the impact of an ageing workforce, New Zealand and overseas research indicates that there

are many barriers to maximising the human capital of older workers. Discrimination on the basis of age is perceived to occur, more frequently by older workers, despite legislation in New Zealand outlawing such behaviour.

The ongoing prevalence of negative stereotypes regarding the health, resilience, productivity and trainability of older workers by both employers and employees, undermines the potential contributions these people could be making to the workforce. There are many under-recognised positive benefits to organisations that choose to actively encourage older worker participation. The push and pull factors that influence withdrawal from the workplace or extended workforce participation for older workers are many and various.

Both New Zealand and overseas researchers have consistently put forward strategies to encourage older adults to remain in the workforce and to maximise their potential. Other sources of labour, such as discouraged workers, unemployed and under-employed people, many of them older individuals, would also benefit from similar strategies. A number of areas have been identified where there is need for ongoing investigation and research from a New Zealand perspective. These are discussed more fully under broad topic headings in the following section.

PART 4: Research Challenges

4.1 Introduction

A great deal of the research on the implications of an ageing population has focused on the financial impact on the provision of superannuation and health services. However, as discussed earlier, there will also be other societal impacts such as that on the workforce. This section summarises the identified knowledge gaps in relation to issues surrounding the ageing of the workforce, and recommends where future research and analysis efforts could be targeted.

4.2 The Issues

4.2.1 Workplace Diversity

The recent Ministry of Social Development Research on Ageing Forum in 2005 highlighted demographic changes and increasing diversity in the older population as a key research priority area. This is of particular importance for the future structure of the workforce. The first part of this report described the demographic changes that will occur as New Zealand's population ages. We have seen how these changes, along with the increasing proportion of Māori and Pacific peoples in the working-age sector, and increased participation by women, will impact on the future workforce. Coupled with the projected increase in the median age of the workforce over the next few years, New Zealand can expect increased diversity within the workplace.

Future research on the impact of an ageing workforce must recognise the heterogeneity of tomorrow's workforce. For instance, Māori and Pacific peoples are currently under-represented in tertiary education, signalling a potentially narrower range of work opportunities for individual workers and a further shortage of advanced skills in the future workforce. What will be the workforce experiences of Māori and Pacific workers as population changes serve to swell their numbers in the future?

In addition, the experiences of older women in the workforce will be of increasing interest. As Stephenson and Scobie (2002) note, "cohort specific participation rates" will lead to an increase in women with higher lifetime participation rates. This raises the prospect of the potential prejudicial attitudes to older women becoming more prominent. The recent EEO Trust (2006) survey showed that men and older workers perceived more discrimination due to age than women and younger workers. However, it is not clear whether older men perceived more discrimination than older women. A growing number of women in the workforce may face the double injustice of discrimination based on their age and gender. Additionally, there are cumulative disadvantages that older female workers may have accrued over their lifetime, due to discontinuous work histories and family responsibilities, that may influence their workforce participation in later life.

Increasing immigration is often seen as one response to labour and skills shortage. Clearly, the nature and makeup of the migrant mix will also impact on workforce diversity. The New Settlers Research Programme provides an excellent framework for examining the workforce experiences of recent immigrants to New Zealand and the policies and practices of employers regarding new settler employees.

While the concept of "managing diversity" has had its critics in New Zealand (Jones, Pringle & Shepherd, 2000; Jones, 2004), a demographically diverse workforce has implications for how organisations undertake their business and engage with their staff.

Are current organisational practices sufficient to respond to the coming changes in workforce structure? What approaches will SMEs adopt (compared to large multi-nationals) in response to a mixed-age workforce? The New Zealand Institute for Research on Ageing at Victoria University, supported by the Institute of Management, is currently developing a research project which will investigate the implications of an ageing workforce from the employers' perspective.

Challenge: Given the dramatic changes to the nature and make-up of New Zealand's workforce occasioned by population ageing, further investment needs to be made in research that reflects the increasing diversity of that workforce. These investigations should explore the unique work experiences of older women and Māori and Pacific peoples in particular. In addition, the response by employers to workforce changes needs to be systematically examined across a wide range of employing organisations.

4.2.2 Training

As noted in section two of this report, the nature of work itself is changing with increased demand for higher skilled and educated workers. Despite the availability of potentially under-used capacity, older workers are less likely to receive opportunities for training and professional development, particularly in the use of new technologies (Steinberg et al., 1998).

New Zealand research has shown that negative stereotypes about older workers in relation to their trainability, their acceptance of new technology and their adaptability to change are still held both by employers and employees (EEO Trust, 2006; McGregor & Gray, 2002; Smith, 2001). One of the actions cited in the Positive Ageing Strategy is to "*Implement human resources policies in the Government sector that.....ensure entitlements for training are provided to all workers, including older workers*". This is a commendable goal and one supported by the State Services Commission's People Capability Strategic Plan. However, attitudes and practices in the wider community of work in relation to ongoing training for older workers are not well documented. The proposed study by NZiRA (mentioned above) seeks to address this issue by asking employers about the educational and training opportunities they provide their workers, with particular reference to age-related issues.

Although the recent EEO Trust (2006) survey elicited information from employees on their perceptions of discrimination regarding training (older workers reported more), the online nature of the survey means a representative sampling of the New Zealand working population was not achieved and, as such, the research provides a snapshot of employees experiences, rather than the full picture. McGregor and Gray (2001) have argued that the training of older workers needs to be better researched. One way this can be addressed is through understanding the training needs of older workers and how training may be used as a tool for retaining such workers. The National Centre for Vocational Education Research in Australia is currently undertaking such a study which will identify and analyse older workers perspectives on training and its relationship to retention. Using both qualitative and quantitative methodologies, the researchers will investigate these issues in three industries: aged care, construction and finance. The findings of this research (due October 2006) will be of interest to New Zealand researchers and policy makers, and could be used to drive and develop comparable research here.

Challenge: Support is required for the development of a large systematic survey of a broad range of employing organisations across occupational sectors in order to understand current practice and policies for training older workers. A further large scale

investigation of a representative sample of the older New Zealand working population is required to investigate the training experiences of older workers. In conjunction with this, smaller sector focussed research could examine the effects of opportunities for training on the retention of older workers.

4.2.3 Ageing Occupational Sectors

Section two of this report highlighted a number of occupational sectors where the effects of an ageing workforce have become readily apparent. The impact on various occupational groups within the New Zealand health sector has been of particular relevance and urgency in recent years. The Health Workforce Advisory Committee provides an independent assessment of workforce capacity and workforce needs for the Minister of Health on the health and disability workforce. Despite some criticisms of its performance in this regard (Roy, 2006), the Health Workforce Advisory Committee provides relevant data on the age-structure of the sector.

Another source of relevant sector data comes from the Department of Labour initiative - the Job Vacancy Monitoring Programme - which provides assessments of skill shortages in trades and professional occupations. Recent reports have noted shortages in some occupations due to workforce ageing and a reduction in new recruits. These reports are based on a number of sources of information, including in-depth interviews with employers, and data from the Census and Household Labour Force Survey. The identification of occupations in which population ageing is of particular concern for workforce planning is essential.

Challenge: Available data can be used to form the basis for sector specific research, where more in-depth analysis of the age structure of these occupations and its relationship to skill shortages could be achieved. Research that examines the retention and recruitment issues in these occupations, including the effects of ongoing training on the retention of older workers as described above, would be particularly useful for addressing future workforce planning issues in particular ageing occupational sectors.

4.2.4 Health and Functioning

Declining health status is often cited as a disadvantage of employing older workers. While age-related changes in health and functioning do occur, there is considerable international evidence to suggest that the impact of these changes on the ability of workers to perform is minimal. However, health (along with finances) is consistently found to be one of the most often cited factors affecting retirement decisions. There has been only minimal New Zealand research on the actual health status of older workers and even less on its relationship to workforce participation. The OECD (2006a) argues that the links between health, work and retirement need further longitudinal investigation. To date, most of the large-scale longitudinal studies of this nature have been in the United States.

Decline in cognitive functioning is a characteristic of normal ageing, particularly those areas related to processing capabilities. Cognitive functioning is also an area of research that is relevant to the continued workforce participation of older adults where the changing nature of work increasingly requires competence in cognitive abilities. There is continued debate as to the individual variability apparent in the type, timing and severity of such declines. The interaction of these factors and the complex nature of cognitive processes make the understanding of the impact of such declines on individual work performance and participation difficult. In addition, much of the longitudinal research on

change in cognitive functioning has been undertaken on post-retirement older adults and tells us little of the impact of these changes in older workers.

Section three of this report highlighted the potential for increased work-related stress faced by older workers, not least because of the perception of age-related discrimination in the workforce. It is likely that, as the workforce ages, the impact of such stressors will become more evident. In order to safeguard against the effects of work-related stress reactions, employers must be aware of the nature of the stressors that impact on older workers.

The author currently heads a longitudinal study which will follow 2,500 New Zealanders aged 55 to 70 years and over as they transition from work to retirement (Health, Work and Retirement Study). The first wave of postal survey data has recently been collected. Self-reported health status has been measured, as has workforce participation and retirement plans. This data will provide ongoing information on the influences on health and wellbeing in late mid-life that lay the basis for decisions about continued work participation in later life. The study will track changes in the 55 to 70 age cohort across time and, in the future, plans to undertake face-to-face interviews with a sub-sample of the participants. This offers the opportunity for additional studies that could draw on the expertise of physicians, cognitive and industrial and organisational psychologists, and gerontologists to investigate biomedical markers of health, cognitive functioning, and work-related stress. In addition, this study can track those workers over the age of 65 and identify work-related health and functioning issues that are salient for this growing proportion of the workforce.

Challenge: Support for longitudinal research is required to investigate the health status of older workers and its relationship to workforce participation over time. The role of cognitive functioning and the potential changes in cognitive status in late mid-life on work performance should be examined. Work-related stress issues facing the growing number of older workers and the health and functioning of 65+ aged workers and its relationship to continued workforce participation should be a focus of research.

4.2.5 Worker Productivity

Although there is no evidence for a reliable relationship between ageing and work performance, the potential for a reduction in productivity due to age related declines in health and functioning remains an ongoing concern. This is not a minor concern – if there are productivity declines that are age specific, then this represents a potentially large drop in overall productivity with attendant economic consequences (Stephenson & Scobie, 2002).

Recent work by Borsch-Supan (2002) has attempted to quantify “the potential productivity effects induced by the age structure of the working population” in Germany and concluded that these “are much smaller than the loss of production arising as a result of the fall in the relative size of the economically active population” (Borsch-Supan, 2002, p.17). However, Guest (2005, p.4) argues that the effects of population ageing on productivity “remains an elusive question – unresolved in theory and empirically”. So, is this an area that requires further research in New Zealand?

Job performance remains a continuing topic of research attention in this country. However, older workers have not been a specific focus of interest. Although there appears to be an ongoing perception that older workers are less adaptable and slower at gaining new skills than younger workers, much of the research cited in this report also highlights

the positive aspects of older worker performance such as quality, consistency, reliability and conscientiousness. Rather than focusing on the potential declines in performance occasioned by age, future research endeavours could investigate the positive performance values of older workers, and focus on the strategies these workers bring to the workplace to compensate for any age related declines in health and functioning.

The role of employers and recruitment agencies in perpetuating the myths and stereotypes about the productivity and performance of older workers needs to be examined. The work by McGregor and Gray (2002) affords some insight into the congruent stereotypes held by both employers and employees regarding older workers. The EEO Trust (2006) survey also provides an informative snapshot into the perceptions of workers regarding the attitudes of employers to older workers on a number of dimensions. How well do these perceptions match the perceptions and practices of employers? The proposed study by NZiRA (mentioned above) provides the opportunity to examine what contributes to these perceptions and what actions employers are taking to meet the challenges of an ageing workforce.

Burns (2000) found that a large percentage of recruitment consultants (93%) thought that the managers and clients they were working for discriminated against applicants based on age. Twenty-one percent also reported first-hand experience of other recruitment consultants discriminating due to age. While these figures are alarming, the methodology employed means the data probably serve to under-estimate the true extent of age discrimination by recruitment agencies. The EEO Trust (2006) survey found that workers perceived recruitment agencies to be more likely to discriminate on the basis of age than employers and they were seen by some to act as gate-keepers barring access to prospective employers, reflecting previous findings with employers, older workers and mature job seekers (Green, 2001; McGregor & Gray, 2001). However, as the latter researchers acknowledge, the influence of discriminatory practices is hard to quantify. Future research could examine discrimination from a different perspective by investigating the responses of recruitment agencies to job applications from different-aged applicants with the same work history and qualifications, as has been done to investigate discrimination on the basis of ethnicity and disability in New Zealand.

One of the interesting findings from the EEO Trust (2006) survey was that a large number of current workers did not want to retire straight from full-time work. However, of those already retired, a significant number did just that (46%). Along with numbers of mature job seekers unable to gain employment, this adds force to the existence of a large unused or under-used labour capacity in the country. This is also evidenced by the large number of potentially under-employed people in New Zealand. According to the June 2006 Household Labour Force Survey, currently there are 444,000 part-time employees in the workforce and, of these, 15.4% (68,500 people) indicated they would prefer to work more hours (Statistics New Zealand, 2006a). With the labour and skill shortages envisioned from the effects of an ageing workforce, it is apposite to aim not only to maximise the potential of older workers, but also that of other potentially under-employed workers.

Challenge: Future research should quantify the actual positive performance attributes of older workers, and identify the successful compensatory strategies used by older workers in response to declines in health and functioning. Focusing on employers and recruitment agencies, researchers can examine attitudes about the productivity of older workers and mature job seekers, and explore how these lead to discriminatory practices. An examination of the work experiences of the under-employed and the factors influencing their workforce participation would be timely.

4.2.6 Retirement Decisions

There is a wealth of international information regarding the push and pull factors that affect an individual's retirement intentions and decisions. Studies consistently find similar factors influence retirement decisions, for instance health and financial factors seem most influential. However, cultural differences and policy environments clearly affect the patterns of retirement and workforce participation. For instance, much of the research has been undertaken in the United States which has quite dissimilar health and social security systems compared to New Zealand. In addition, there has been no attempt at tracking the influence of factors that impact on workforce participation for older workers across time. As McGregor (2005) notes, many of us change our minds regarding our intended retirement date as we approach it. We need to identify the factors which influence the decision-making process over time.

While health status and financial position tend to be seen as the key variables that individuals take into consideration when determining their retirement age, there is also a need to explore those work-related factors that can encourage or dissuade workers from remaining in the workforce. The EEO Trust (2006) survey identified a number of work-related factors as influential on workforce participation decisions including the need for more flexible work environments, lack of job opportunities and employer attitudes to older workers. Other important factors to consider are the retirement intentions of significant others and care-giving responsibilities that may change over time (eg from older parents to grandchildren to partners). It is also important to remain cognisant of the aspirations of older workers. Much of the discussion surrounding retirement decisions is predicated on the assumption that individuals have a choice about when and how they retire. For many, there may be little choice involved, and the research findings that consistently find health and finance factors most salient in the decision making process reinforces this. In addition, the current discourse also assumes that older workers can be persuaded to extend their working lives, wherein fact they may be unwilling to do so.

Longitudinal data allows us to examine interactions and pathways between multiple factors including multi-level analysis of environmental and personal factors affecting workforce participation. This will help to clarify the role in the retirement decision process of individual factors such as health and family commitments, as well as industry-level and policy-level factors such as workforce sector ageing and welfare eligibility changes.

The Health Work and Retirement (HWR) study mentioned above seeks to address some of these research issues. The study is designed so that findings can be compared to larger international data sets in the United States, the United Kingdom and Europe. One component of the HWR study undertaken by Judith Davey at NZiRA will investigate workforce participation from a qualitative perspective, and will look at the health and wellbeing consequences of the mismatch between desired and actual levels of workforce participation. A further study being undertaken and funded by the Retirement Commission will look at gender differences in financial planning and their relationship to retirement decisions.

Challenge: Continued support for longitudinal research is required so that factors that influence decisions taken by older workers about workforce participation and retirement can be tracked over time. This research should examine health and financial factors, along with work-related factors (eg job and training opportunities, work design) and family related factors (eg caregiving responsibilities, retirement intentions of other family

members).

CONCLUSIONS

This report set out to achieve four main objectives: to outline the changing nature of work and its relationship to demographic changes, both globally and in New Zealand; to identify the extent of workforce ageing in New Zealand and the particular occupations where ageing is a significant phenomenon; to identify emerging issues in research and policy in relation to workforce ageing and ageing occupations; and to identify knowledge gaps in relation to workforce ageing and ageing occupations.

Addressing these objectives, a number of themes emerge. The demographic changes to New Zealand's population will have implications for the workforce in the future. An ageing population will lead to increasing labour and skill shortages, not only in New Zealand but internationally where we will be competing for skilled labour. New Zealand's workforce will also increase in diversity requiring more workplace flexibility. Work itself will continue to change requiring greater demand for higher skilled and higher educated workers. Changes in expenditure brought on by an ageing population will mean some sectors will require increasing labour while others will decline. Many sectors will experience severe impacts on their labour supply as their workforce "greys" and is not replaced by new recruits.

A number of approaches have been proposed to respond to these changes. One such approach is to "maximise the potential of older workers" (Davey & Cornwall, 2003, p.15).⁵ Despite initiatives such as the New Zealand Positive Ageing Strategy which sets policy for positive ageing goals related to workforce participation (with the potential to mitigate the effects of an ageing workforce), there still appear to be barriers to the implementation of policies and practices that encourage workforce participation by older workers. A review of recent relevant literature and research demonstrates that the continued prevalence of negative stereotypes regarding the health, resilience, productivity and trainability of older workers serves to undermine efforts to encourage on-going workforce contributions by older workers.

There has been a considerable amount of relevant research undertaken that helps us understand the many faceted implications of an ageing population on the workforce. The sources of information are various including academic units (disciplines such as psychology, sociology, demography, social policy, economics, health), Recruitment and Consultancy organisations, Statistics New Zealand, the Department of Labour, the Equal Employment Opportunities Trust, the Human Rights Commission, the Retirement Commission, Ministry of Social Development and The Treasury.

The research varies in approach, (from an individual differences perspective to a broader social policy perspective) and methodology (qualitative and quantitative). There are a number of areas where data from one or more agencies can be used to better inform research and practice in others. Clearly, such a diverse range of agencies makes coordination of research activities and the sharing of knowledge difficult and uneven. It would not be the first time that a call has been made for more effective co-ordination of such activities, particularly with regard to the nexus between research and policy and, most importantly, in the application of both. Although not addressed here, it is apparent that, despite the abundance of knowledge derived from research locally and,

5. The monograph, "Maximising the Potential of Older Workers", published by NZiRA is currently being updated.

internationally, the implementation of relevant findings is less than ideal. The potential for action research to advance the application of such knowledge should not be overlooked.

This report has demonstrated that we have a wealth of research findings and ongoing research initiatives surrounding workforce ageing to draw on. However, there are a number of knowledge gaps and research challenges identified in this report that will require further systematic research and, obviously, funding into the future.

REFERENCES

- Ahmad, R. (2002). The older or ageing consumers in the UK: are they really that different? *International Journal of Market Research*, 44(3), 337-360.
- Alpass, F. (2006). Work and health in older adults. In J. Low & P. Jose (Eds.), *Lifespan Development: New Zealand Perspectives* (169-178). Albany, Auckland: Pearson Education New Zealand.
- Alpass, F., Flett, R., Humphries, S., Massey, C., Morriss, S., & Long, N. R. (2004). Stress in dairy farming and the adoption of new technology. *International Journal of Stress Management*, 11(3), 270-281.
- Alpass, F., & Towers, A. (2004, August). *Predicting health disparities among older workers and retirees*. Paper presented at the New Zealand Psychological Society Annual Conference "Psychologies for Aotearoa New Zealand", Te Papa, Wellington.
- Association of University Staff. (2005). *Fact Sheet 5: Recruitment and retention*. Wellington: Association of University Staff.
- Atchley, R. C., & Barusch, A. S. (2004). *Social forces and aging: Introduction to social gerontology* (10th ed.). Australia: Thomson/Wadsworth.
- Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In New York: Cambridge University Press.
- Black, J. (2000). Personality testing and police selection: Utility of the 'Big Five'. *New Zealand Journal of Psychology*, 29(1), 2-9.
- Borsch-Supan, A. (2002). *Labor market effects of population aging*. Mannheim: University of Mannheim.
- Brugiavini, A., Croda, E., & Mariuzzo, F. (2005). Labour force participation of the elderly: Unused capacity. In A. Borsch-Supan, A. Brugiavini, H. Jurges, J. Mackenbach, J. Siegrist & G. Weber (Eds.), *Health, Ageing and Retirement in Europe* (pp. 236-240). Mannheim: Mannheim Research Institute for the Economics of Aging (MEA).
- Burns, J. (2000). *EEO Trust Recruiting Talent Report*. Auckland: EEO Trust.
- Cavanaugh, M. A. (1997). *The older worker: A model of the retirement decision process*. Unpublished doctoral thesis, University of Minnesota, Minnesota.
- Chappell, C., Hawke, G., Rhodes, C., & Solomon, N. (2003). *Major Research Program for Older Workers*. Sydney: The Australian Centre for Organisational, Vocational and Adult Learning.
- Christensen, H. (2001). What cognitive changes can be expected with normal ageing? *Australian and New Zealand Journal of Psychiatry*, 35(6), 768-775.
- Crossan, D. (2006, February). *Managing the ageing workforce*. Address to the Managing the Ageing Workforce Conference, Wellington.
- Cully, M., VandenHeuvel, A., Wooden, M., & Curtain, R. (2000). Participation in, and barriers to, training: The experience of older adults. *Australasian Journal on Ageing*, 19(4), 172-179.
- Davey, J. A. (2003a). *The context and implications of population ageing in New Zealand* (Background Paper). Wellington: New Zealand Institute for Research on Ageing.
- Davey, J. A. (2003b). Human capital issues in an ageing workforce. *Social Policy Journal of New Zealand*, 20(June), 156-172.
- Davey, J. A., & Cornwall, J. (2003). *Maximising the potential of older workers*. Wellington: New Zealand Institute for Research on Ageing.
- Dawe, S. (2002). *Focussing on generic skills in training packages*. South Australia: National Centre for Vocational Education Research.
- de Vaus, D., & Wells, Y. (2003). Stress among older workers and retirees. In C. L. Peterson (Ed.), *Work Stress: Studies of the context, content and outcomes of stress* (pp. 245-269). New York: Baywood Publishing Company.
- Department of Labour. (2003). *Work Trends: How work is changing in New Zealand*. Wellington: Department of Labour.
- Department of Labour. (2004). *Future of Work*. Retrieved 1/06/04, from <http://www.dol.govt.nz/futureofwork/workforce-ageing.asp>

- Department of Labour. (2005a). *Dentist: Occupational skill shortage assessment*. Wellington: Department of Labour.
- Department of Labour. (2005b). *Overview of the findings from ten professional occupation skill shortage assessment reports*. Wellington: Department of Labour.
- Department of Labour. (2005c). *Registered nurse: Occupational skill shortage assessment*. Wellington: DOL.
- Dewe, P., & O'Driscoll, M. (2002). Stress management interventions: What do managers actually do? *Personnel Review*, 31(2), 143-165.
- Encel, S. (2003). *Age can work: The case for older Australians staying in the workforce*. Sydney: University of NSW.
- Equal Employment Opportunities Trust. (2005). *Disability and employment - on-line survey analysis*. Wellington: Equal Employment Opportunities Trust.
- Equal Employment Opportunities Trust. (2006). *EEO Trust Work & Age Survey Report 2006*. Retrieved 15.6.06, 2006, from www.eeotrust.org.nz
- Glover, I., & Branine, M. (2001). *Ageism in work and employment*. Aldershot: Ashgate Publishing Ltd.
- Greene, B. (2001). *Employer's perceptions of the relationship between age and employee performance/employability*. Dunedin: Department of Management, University of Otago.
- Griffiths, A. (1997). Ageing, health and productivity: a challenge for the new millennium. *Work & Stress*, 11(3), 197-214.
- Guest, R. (2005, 14-15 April 2005). *Some good news about an ageing workforce*. Paper presented at the Workshop on Labour Force Participation and Economic Growth, Wellington.
- Hambleton, A. J., Kalliath, T., & Taylor, P. (2000). Criterion-related validity of a measure of person-job and person-organization fit. *New Zealand Journal of Psychology*, 29(2), 80-85.
- Hansson, R. O., DeKoekkoek, P. D., Neece, W. M., & Patterson, D. W. (1997). Successful aging at work: Annual Review, 1992-1996: The older worker and transitions to retirement. *Journal of Vocational Behavior*, 51, 202-233.
- Hansson, R. O., Robson, S. M., & Limas, M. J. (2001). Stress and coping among older workers. *Journal of Prevention, Assessment and Rehabilitation*, 17(3), 247-256.
- Harcourt, S., & Harcourt, M. (2002). Do employers comply with civil/human rights legislation? New evidence from New Zealand job application forms. *Journal of Business Ethics*, 35, 207-221.
- Hardy, A., & Robinson, M. (1999). *Forecasting the characteristics of consumers in 2010*. Canberra: National Centre for Social and Economic Modelling, University of Canberra.
- Health Workforce Advisory Committee. (2002). *The New Zealand Health Workforce: A stocktake of capacity and issues 2001*. Wellington: Health Workforce Advisory Committee.
- Henretta, J. C., Chan, C. G., & O'Rand, A. M. (1992). Retirement reason versus retirement process: Examining the reasons for retirement typology. *Journals of Gerontology*, 47(1), S1-S7.
- Human Resources Development Canada. (2002). *Challenges of an aging workforce*: Human Resources Development Canada.
- Jones, D. (2004). Screwing diversity out of the workers? Reading diversity. *Journal of Organizational Change Management*, 17(3), 281-291.
- Jones, D., Pringle, J., & Shepherd, D. (2000). "Managing diversity" meets Aotearoa/New Zealand. *Personnel Review*, 29(3), 364-380.
- Koopman-Boyden, P. (Ed.). (1993). *New Zealand's ageing society and its implications*. Wellington: Daphne Brasell Associates Press.
- Marshall, V. W. (2001, July). *Canadian research on older workers*. Paper presented at the International Association on Gerontology Conference, Vancouver, British Columbia, Canada.
- McGregor, J. (2004, November). *The quiet revolution – older workers as employees, employers, self-employed and unpaid workers*. Paper presented as part of the NZiRA/Tower 2004 Seminar Series. Wellington.
- McGregor, J. (2005). *Lifeswork*. Wellington: Dunmore Publishing.

- McGregor, J., & Gray, L. (2001). *Mature job-seekers in New Zealand*. Palmerston North: Massey University.
- McGregor, J., & Gray, L. (2002). Stereotypes and older workers: The New Zealand experience. *Social Policy Journal of New Zealand*, (18), 163-177.
- McGregor, J., & Gray, L. (2003). *Older worker employment transition*. Palmerston North: Massey University.
- McMullin, J. A., & Cooke, M. (2004). Labor force ageing and skill shortages in Canada and Ontario, London, Canada: Canadian Policy Research Networks Inc.
- McNaughton, T. (2002). *Valuing Older Workers*. NZiRA Tower Seminar, 9 September 2002, Wellington
- Ministry of Economic Development. (2003). Population and sustainable development. Wellington: Ministry of Economic Development, Ministry of Social Development, Department of Labour.
- Ministry of Social Development. (2001). *Positive Ageing in New Zealand: Diversity, participation and change*. Wellington: Ministry of Social Development.
- Ministry of Social Policy. (2001). *The New Zealand Positive Ageing Strategy*. Wellington: Ministry of Social Policy.
- Moody, H. R. (2006). *Ageing: Concepts and controversies* (5th ed.). Thousand Oaks, CA: Sage Publications.
- Mutch, L. (2006). *Strategic review of the tertiary education workforce: Recruitment and retention*. Retrieved 2006, from www.tec.govt.nz/funding/et-reviews/s-reviews/strategic.htm
- New Zealand Department of Labour. (1977). *The employment position of older workers in New Zealand*. Wellington: Research and Planning Division, Department of Labour.
- New Zealand Health Information Service. (2001). *Primary health care and community nursing workforce survey - 2001*, 2006, from www.nzhis.govt.nz/publications/community-nursing-survey.htm
- New Zealand Health Information Service. (2004). *New Zealand Health Workforce Statistics 2004 - Nurses and Midwives*, 2006, from www.nzhis.govt.nz/stats/nursestats.html
- Newell, J., & Perry, M. (2005). Older people and self-employment. In C. Massey (Ed.), *Entrepreneurship and Small Business Management in New Zealand* (pp. 282-289). Auckland: Pearson Education New Zealand.
- O'Donohue, S. J. (2000). *A Canterbury employer's perspective of the ageing workforce and the use of flexible work options for older workers*. Palmerston North: Massey University.
- O'Driscoll, M., & Beehr, T. A. (2000). Moderating effects of perceived control and need for clarity on the relationship between role stressors and employee affective reactions. *Journal of Social Psychology*, 140(2), 151-159.
- OECD. (1998). *Maintaining prosperity in an ageing society*. Geneva: OECD.
- OECD. (2001). *Bridging the "Digital Divide": Issues and policies in OECD countries* (No. DSTI/ICCP(2001)9/FINAL). Geneva: OECD - Directorate for Science, Technology and Industry. Committee for Information, Computer and Communications policy.
- OECD. (2006a). *Live longer, work longer*. Geneva: OECD.
- OECD. (2006b). *Older workers: Living longer, working longer*. Geneva: OECD.
- Pande, M. M., Fretter, J., Stenson, A., Webber, C., & Turner, J. (2006). *Part III General practitioners in urban and rural New Zealand*.
- Park, D. C. (1994). Aging, cognition, and work. *Human Performance*, 7(3), 181-205.
- Peterson, D. A., & Doberly, S. (1988). The older worker: myths and realities. In R. Morris & S. A. Bass (Eds.), *Retirement reconsidered: economic and social roles for older people*. New York: Springer Publishing.
- Pool, I., Baxendine, S., Cochrane, W., & Lindop, J. (2005). New Zealand regions, 1986-2001: Population Structures. PSC Discussion Papers. Hamilton: Population Studies Centre.
- Prenda, K. M., & Stahl, S. M. (2001). *The truth about older workers*. Retrieved 1/06/04, 2004, from <http://infotrac.galegroup.com/itw/infomark/244/444/49325052w1/p>
- Rendall, R. (2004). *Facing an ageing workforce: Information for Public Service HR managers*. Wellington: State Services Commission.

- Rix, S. E. (2004). *Aging and work - A view from the United States*. Washington, DC: AARP Public Policy Institute.
- Robertson, A., & Tracy, C. S. (1998). Health and productivity of older workers. *Scandinavian Journal of Work and Environmental Health*, 24(2), 85-97.
- Roy, H. (2006). *Press Release: Govt Health Workforce planning a sick joke*. Retrieved 23/08/06, from <http://www.scoop.co.nz/stories/PA0607/S00244.htm>
- Salthouse, T. A., & Maurer, T. J. (1996). Aging, job performance, and career development. In J. E. Birren & K. W. Schaie (Eds.), *Handbook of Psychology and Aging* (4th ed.). California: Academic Press.
- Samorodov, A. (1999). *Ageing and labour markets for older workers*. Geneva: Employment and Training Department, International Labour Office.
- Schaie, K. W. (1996). Intellectual development in adulthood. In J. E. Birren & K. W. Schaie (Eds.), *Handbook of the Psychology of Aging* (pp. 266-286). California: Academic Press.
- Shouksmith, G., & Taylor, J. E. (1997). The interaction of culture with general job stressors in air traffic controllers. *International Journal of Aviation Psychology*, 7(4), 343-352.
- Shultz, I., Morton, K. R., & Weckerle, J. R. (1998). The influence of push and pull factors on voluntary and involuntary early retirees' retirement decision and adjustment. *Journal of Vocational Behavior*, 53(1), 45-47.
- Singer, M. S. (1986). Age stereotypes as a function of profession. *The Journal of Social Psychology*, 126(5), 691-692.
- Singer, M. S., & Sewell, C. (1989). Applicant age and selection interview decisions: Effect of information exposure on age discrimination in personnel selection. *Personnel Psychology*, 42, 135-154.
- Smith, D. J. (2001). Old enough to know better: Age stereotypes in New Zealand. In I. Glover & M. Branine (Eds.), *Ageism in Work and Employment*. Aldershot: Ashgate Publishing.
- Spiriduso, W. W., & MacRae, P. G. (1990). Motor performance and aging. In J. E. Birren & K. W. Schaie (Eds.), *Handbook of the Psychology of Aging* (3rd ed., pp. 184-200). California: Academic Press.
- State Services Commission. (2006). *Career progression and development survey 2005*. Retrieved 28.06.06, from www.ssc.govt.nz/career-progression-survey05.
- Statistics New Zealand. (2000). The changing face of New Zealand's population. Key Statistics - September 2000. Retrieved 21/08/06, from <http://www.stats.govt.nz/NR/rdonlyres/F1B65DFA-F759-4DF3-BC2E-B8CB39892243/0/ChgFaceNZPop.pdf>
- Statistics New Zealand. (2004a). *National Labour Force Projections 2001 (base) - 2051 update: Commentary*. Retrieved 21/08/06, from <http://www2.stats.govt.nz/domino/external/pasfull/pasfull.nsf/7cf4>.
- Statistics New Zealand. (2004b). *Older New Zealanders - 65 and beyond*. Retrieved 26/06/2006, 2006, from www.stats.govt.nz/analytical-reports/older-nzners/chap2.htm?print=Y
- Statistics New Zealand. (2004c). *A profile of persons not in the labour force - article*. Retrieved 20/08/06, 2006, from <http://www.stats.govt.net/products-and-services/Articles/profile-per...>
- Statistics New Zealand. (2005a). *Demographic Trends 2005*. Wellington.
- Statistics New Zealand. (2005b). *National Labour Force Projections 2001 (base) - 2051 update*, from <http://www2.stats.govt.nz/domino/external/pasfull/pasfull.nsf/7cf4>.
- Statistics New Zealand. (2005c). *National Ethnic Population Projections 2001(base)-2021 update*. Retrieved 20/09/06, from <http://www.stats.govt.nz/store/2006/07/national-ethnic-population-projections-01%28base%29%E2%80%9321-update-hotp.htm>
- Statistics New Zealand. (2006a). *Household Labour Force Survey*. Wellington.
- Statistics New Zealand. (2006b). *Household Labour Force Survey March 2006 quarter: Commentary*. Retrieved 2/08/06, 2006, from <http://www2.stats.govt.nz/domino/external/pasfull/pasfull.nsf/4c2..>
- Statistics New Zealand. (2006c). 2001 Census: National Summary. Retrieved 27/08/06 from <http://www.stats.govt.nz/census/default.htm>.

- Steinberg, M., Walley, L., Tyman, R., & Donald, K. (1998). Too old to work? In M. Patrickson & L. Hartmann (Eds.), *Managing an ageing workforce*. Australia: Business and Professional Publishing.
- Stephenson, J., & Scobie, G. (2002). *The economics of population ageing*. Wellington: New Zealand Treasury.
- Sullivan, S. E. The changing nature of careers: A review and research agenda. *Journal of Management*, 25(3), 457-484.
- Szmigin, I., & Carrigan, M. (2001). Learning to love the older consumer. *Journal of Consumer Behaviour*, 1(1), 22-34.
- Taylor, A. (2005). What employers look for: the skills debate and the fit with youth perceptions. *Journal of Education and Work*, 18(2), 201-218.
- Thomas, K. (2005). *GP numbers trending dangerously downward*. Retrieved 22/08/2006, from http://www.rnzcgp.org.nz/news/statements/2005/gp_numbers.htm
- Ursel, N. D., & Armstrong-Stassen, M. (2006). How age discrimination in employment affects stockholders. *Journal of Labor Research*, 27(1), 89-99.
- Warr, P. (1994). Age and job performance. In J. Snel & R. Cremer (Eds.), *Work and Aging: A European Perspective* (pp. 309-322). London: Taylor & Francis Ltd.
- Wegman, D. H., & McGee, J. P. (2004). *Health and safety needs of older workers*. Retrieved 13/07/04, 2004, from <http://www.nap.edu/openbook/030909111Xhtml/1.html>