

# *HUMAN CAPITAL ISSUES IN AN AGEING WORKFORCE*

Associate Professor Judith A. Davey  
Director, New Zealand Institute for Research on Ageing  
Te Pūtahi Rangahau i te Pakeke Haere  
Victoria University of Wellington

## **Abstract**

Almost half the New Zealand workforce is now over the age of 40. This ageing trend will continue as smaller cohorts follow the baby boom bulge through the population. At the same time, skills and labour shortages are emerging. An imperative for the future is to improve the human capital we already have by maximising the potential of older workers. If those in mid-life are unable to contribute their full economic capacity due to unemployment, underemployment, premature retirement, discrimination or other circumstances, this has implications for their individual futures, for business enterprise and for society as a whole. This paper raises issues surrounding investment in human capital at the macro and micro levels, work–life balance, age discrimination, education and training. Expanding on the last, current patterns of educational participation by people in mid-life and later life are examined using national statistics and information from a New Zealand case study.

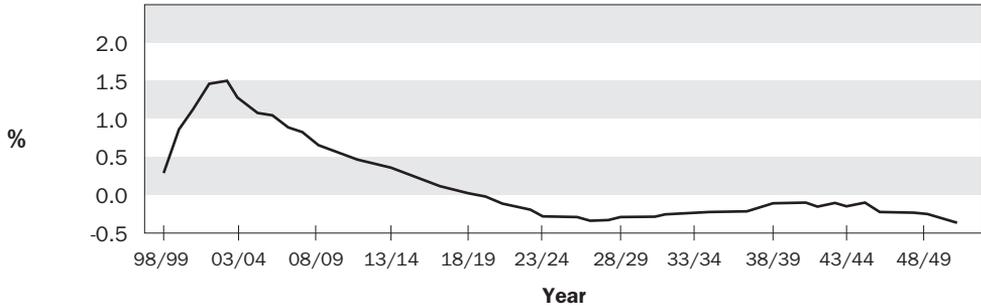
## **THE CHALLENGE**

According to the 2001 Census almost half of the New Zealand workforce is now over the age of 40 and this ageing trend is predicted to continue as smaller cohorts follow the baby boom bulge through the population. By around 2020, based on present assumptions about participation, growth in the labour force is expected to be negative (Scobie 2002) (see Figure 1). Thus we may well be facing labour shortages, and even now skills shortages are emerging here and in other OECD countries (Talbot 2002, Robson 2001). Looking to past and current trends, there is a clear pattern of falling male and growing female workforce participation in the age groups 40-plus, although female rates are still well below those for men (see Figure 2).<sup>1</sup> The fall in male participation, especially in full-time work, has also occurred overseas (Clark and Quinn 2002, Taylor et al. 2000).

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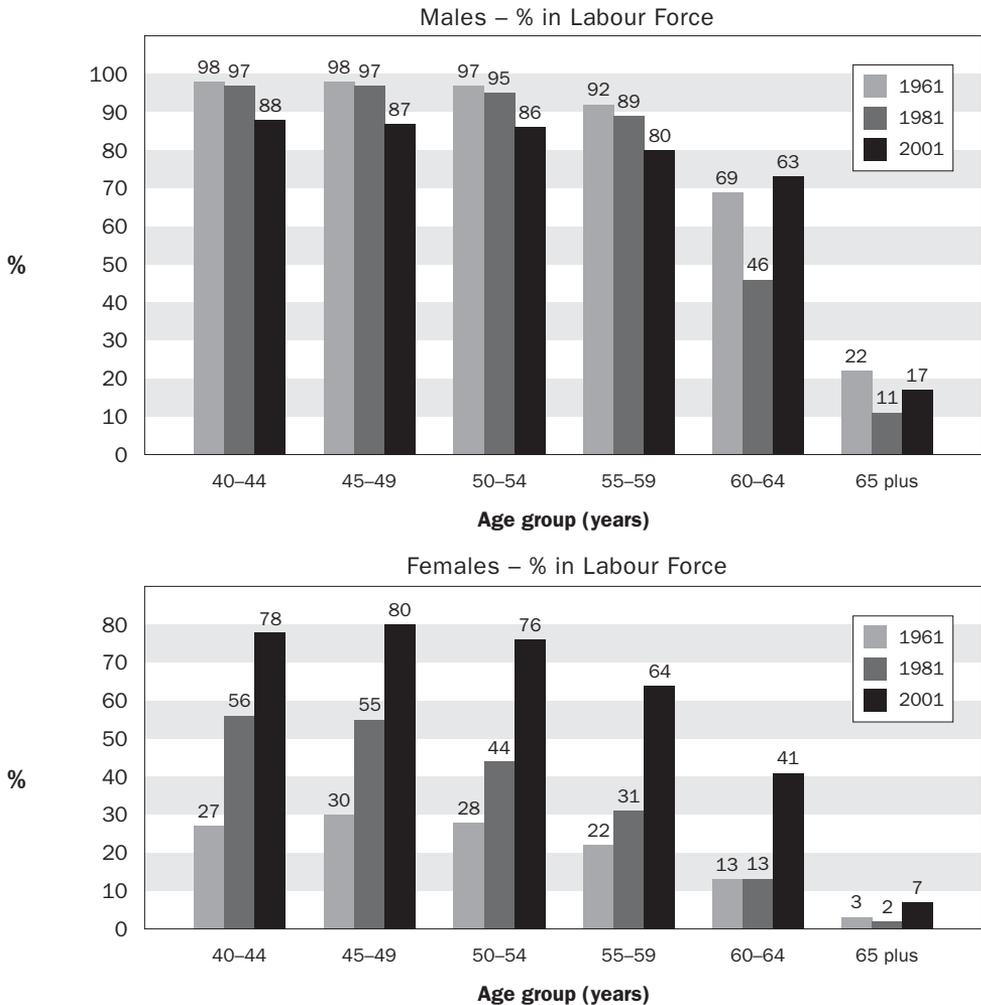
<sup>1</sup> The graph for males clearly shows an increase in participation in the 1990s for the 60-plus age groups, following the raising of the age of eligibility for retirement income support from 60 to 65. This is a good example of how policy can influence workforce behaviour.

Figure 1 Change in the New Zealand Labour Force, 1998–2049



Source: New Zealand Treasury

Figure 2 Participation in the Labour Force, Ages 40-Plus, by Gender, 1961–2001



At the same time, unless the environment changes in unforeseen ways, the costs of retirement income support and health care for older people will grow inexorably as the baby boom generation reaches old age. The number of people over 65 is expected to double by 2051 and the number over 85 will increase by 600% (Khwaja 2000). The fiscal impact of an ageing population is often expressed in terms of age dependency measured as the ratio of the number of people of retirement age relative to those of working age (Grimmond 2000). The definition of the latter is usually 15 to 64 years, which may be unrealistic given later entry into the labour force and the prospects of delaying retirement in the future.<sup>2</sup> Age dependency must also be seen in relation to youth dependency, which is projected to decrease in the future (Stephenson and Scobie 2002). Acknowledging all these caveats, even a crude ratio of older people (65-plus) to working-age people (15–64) illustrates another challenge of population change. At the moment there are 18 older people per 100 people of working age, and by 2051 this is expected to rise to 44 per 100 (Khwaja 2000).

Whether population ageing really constitutes a problem for the future cannot be addressed in detail here. Although numbers receiving New Zealand Superannuation (NZS) fell when the age of eligibility rose from 60 to 65, the cost still represented 41% of all welfare benefit expenditure and 4.8% of gross domestic product in 2000 (Ministry of Social Policy 2000). This is projected to rise to 8% of GDP by the middle of the century (McCulloch and Frances 2001). Projections of health costs also appear daunting. From mid-life onwards they rise steadily with age. Each woman aged 85 and over is consuming, on average, \$12,000 in health costs per annum and each man \$11,000. This is around 10 times the consumption of adults in mid-life. What actually happens in the future depends on whether longer life expectancy results in the prolongation of morbidity or in an increase in illness-free and disability-free years (Zodgekar 2000). There are a large number of unknown factors, suggesting that policy makers should be exploring options to meet the challenge of ageing, even if it is not depicted as a problem or even a crisis.

## THE OPTIONS

What then are the policy options for facing these demographic challenges and an ageing workforce? Increasing immigration may be neither feasible nor helpful. New Zealand will be competing with many other developed countries for skilled workers and will also find it difficult to retain its own. Adult immigrants arriving now and in the near future will themselves contribute to population ageing. The numbers required even to moderate the ageing trend

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<sup>2</sup> It also does not take into account dependants of working age, such as unpaid carers, or people who are ill, disabled or unemployed. Reductions in unemployment and even higher rates of female workforce participation will affect the ratio.

would be large, and high levels of immigration have the potential to cause social and political tension, as well as incurring costs of settlement and assimilation (McDonald and Kippen 2000).

Increasing fertility to counteract population ageing may also be questioned (Callister 2002). Unless social norms and expectations change radically, higher rates of child-bearing would reduce women's abilities to work and earn, while at the same time increasing demands on family incomes in raising more children.<sup>3</sup> Women have high levels of involvement in paid work in OECD countries and make significant contributions to household incomes, which may to some extent offset falling male participation and male unemployment. The fiscal costs of youth dependency would also rise in the medium term, to fund education, child health and other family-related services.

A more promising option is to use the human capital we already have by maximising the potential of older workers and enhancing their workforce capabilities through appropriate policy initiatives. This approach has advantages for the workers themselves, for their employers and for society as a whole. If large numbers of people in mid-life are unemployed, underemployed, prematurely retired or otherwise contributing less in economic terms than they are capable of, this has far-reaching implications. Their productivity as workers will be below potential. They will be contributing less as tax-payers and may be dependent on welfare benefits. Further, they will be less able to set themselves up financially through saving for their old age. The *Living Standards of Older New Zealanders* study showed that circumstances in old age are influenced by what happens to people in mid-life (Fergusson et al. 2001). People who had suffered adversity in their 50s, such as a serious illness, unemployment, marriage breakdown or a business failure, were over-represented among those ranking low on the living standards scale. Overseas studies show similar effects (Bowman and Eisenstadt 2001, Chan and Stevens 2001).

Many governments of developed countries are concerned about these trends and there has been a shift away from policies that encourage early retirement (Clark and Quin 2002, Jepsen et al. 2002, Rappaport 2001). The revised stance was stated very clearly in *Winning the Generation Game* (Cabinet Office 2000). In Australia a federal government report, *Population Ageing and the Economy* (Access Economics 2001) called older workers "too valuable to waste". The issue of prolonging workforce participation has also been raised by Treasury in New Zealand (Stephenson and Scobie 2002).

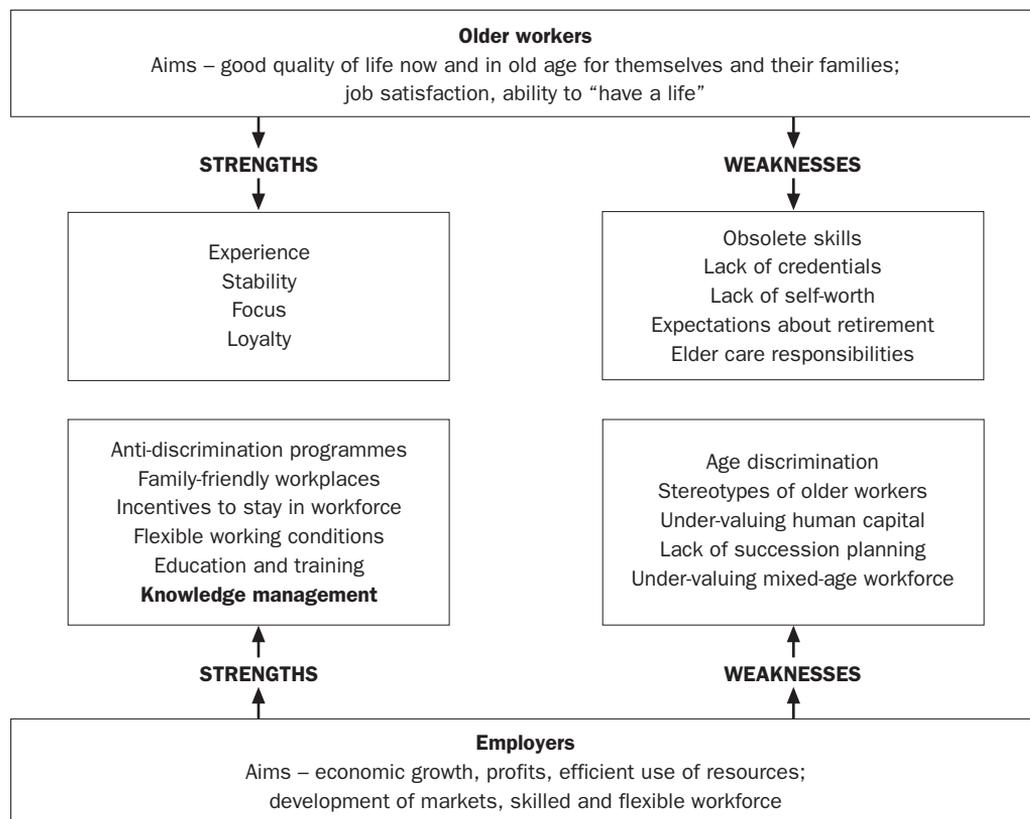
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<sup>3</sup> It was ironic that the day after Kevin Andrews, the Australian Federal Minister for Ageing, gave a speech at the International Federation on Ageing Conference in Perth (October 2002) exhorting Australians to have more children, the headline in the local newspaper announced that raising two children would cost a couple \$500,000.

### ISSUES FOR NEW ZEALAND

The debate both here and overseas suggests that considerable benefit could be derived from research and policy work examining human capital issues in an ageing workforce. It would help individuals by demonstrating a wider range of choices in mid-life, confronting age discrimination and negative stereotypes, and contributing to improved standards of living in later life. It would have benefits for employers and for the economy in general by making better use of human capital and helping to alleviate labour and skills shortages. It would also contribute positively in coping with the policy and fiscal challenges of an ageing population. The New Zealand Institute for Research on Ageing (NZiRA), in collaboration with the Canterbury Development Corporation and the Third Age Foundation, convened a meeting in Christchurch, in July 2002, to discuss human capital issues in an ageing population and to work towards a research agenda. Many of these issues can be summarised by a strengths–weaknesses diagram, taking the points of view of workers and employers (see Figure 3).

Figure 3 Maximising the Employment Potential of Older Workers



The following sections outline five broad sets of issues that were identified at the meeting and in subsequent work carried out by NZiRA. These are followed by a more extended discussion of education and training issues, including information from the “Education in Mid and Later Life” study.

### Investment in Human Capital – Macro-Level

At the level of the economy as a whole, the present government aims to enhance growth and raise New Zealand’s economic performance ranking (Governor-General 2002). Emerging skills shortages are likely to hamper progress towards this objective. Can they be mitigated by retaining experienced mid-lifers in the workforce? If so, how would extending and enhancing participation affect the economy? How can skills supply and demand be matched in an ageing workforce and how should issues of skills obsolescence and retraining be tackled? Under-employment of people in mid-life, often arising from redundancy, unemployment and premature exit from the workforce, constitutes another impediment to economic growth.

### Investment in Human Capital – Micro-Level

Firms and enterprises also need to adjust to an ageing workforce. This will include knowledge management in mixed-age workforces – realising and building on the strengths of both younger and older workers. Careful succession planning will be needed to replace discriminatory retirement schemes (Lissenburgh and Smeaton 2003). We need to know more about the behavioural responses of business and employers to the perceived and actual effects of ageing on worker productivity (Stephenson and Scobie 2002). How do organisational cultures adapt to changes driven by population ageing? There are many new ideas and innovative schemes described in the literature, which could assist employers, once they were evaluated in the local context (Top Drawer Consultants 2001).

### Work–Life Balance

Life-course analysis and longitudinal studies help to illustrate the influence of mid-life experiences on old-age situations. How do individuals, over their life cycle, make choices about labour force participation? What incentives and disincentives operate and how are attitudes surrounding retirement changing? Little work has been done on these questions in New Zealand. Considerable attention has been focused on family-friendly policies with respect to child-rearing, but workers in mid-life may have responsibilities to older parents or relatives, ranging from social contact to personal care (Phillips et al. 2002). How does this impinge on working lives, productivity, career aspirations, incomes and the ability to save for their own retirement? A third set of issues under this heading relates to voluntary work.

What impact would prolonging participation in the workforce have on voluntary work now undertaken by younger retired people?<sup>4</sup>

### Age Discrimination

Age discrimination is often cited as a barrier to participation in work (Murray 2002). Despite the passing of anti-age-discrimination legislation and the widespread acceptance that such discrimination exists, age was the grounds for only 9% of complaints to the Human Rights Commission in the first half of 2002. While attention has been directed at employers' attitudes (McNeill 2002, McGregor and Gray 2002), part of the answer may lie with the individuals involved. Stereotypical expectations surrounding age and retirement ("only a few years to go", "younger people deserve the work more") may inhibit older workers from challenging ageism. The value and impact of anti-discrimination measures, initiated through organisations like the EEO Trust and by individual employers, need evaluation (Murray 2002).

### Education and Training

The traditional view that education is confined solely to childhood and youth has been strongly challenged in the context of economic, social and technological change. Jarvis (1997:99) summed this up:

Today, no one can hope to amass during his or her youth an initial fund of knowledge which will serve for a lifetime. The swift changes taking place in the world call for knowledge to be continuously updated.

Education and training in mid-life can assist in addressing skills shortages and maximising the potential of older workers. Nevertheless, there are both supply and demand barriers to take-up. How far do opportunities offered by educational institutions meet the need of older workers and their employers? Are pay-back periods for older workers seen as too short to justify investment in their training? What incentives and disincentives influence older workers themselves? Some of these questions are addressed in the next section of this paper.

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<sup>4</sup> *Winning the Generation Game* (Cabinet Office 2000) placed emphasis on voluntary and community work for people in mid- and later life who could not or did not wish to be in the paid workforce. To what extent would this be a policy option for New Zealand?

## EDUCATION AND TRAINING IN MID-LIFE

There are several sources of information about educational participation by people in mid- and later life (see Appendix). Recent censuses have included a question on participation in formal study in the preceding period. Although there are some inconsistencies in these questions, which affect comparability over time, the data provide a broad indication of educational participation. Taking the age group 40–59 as representative of people in mid-life, Table 1 suggests an increase in educational involvement, especially between 1996 and 2001. Women had higher rates of participation than men did, and the number of women who had been studying increased by 35% over the decade, as against a 29% increase for men.

**Table 1** Age Group 40–59, % Studying in the Period Prior to 1991, 1996 and 2001 Censuses, by Gender

	<b>1991</b>	<b>1996</b>	<b>2001</b>
Male	4.7	4.8	5.7
Female	9.0	8.6	10.3
Total	6.9	6.7	8.1

*Source: Census "Study" question, 1991, 1996 and 2001, From Birth to Death databases.*

In all ethnic groups more women had been studying than men (see Table 2).<sup>5</sup> The proportion of Māori women who had been studying grew from 8% to 14% over the decade and for Pacific women from 4% to 8%. Patterns of growth for Pākehā/Other women and for men in all ethnic groups were less dramatic, but for all groups the proportion studying in 2001 was higher than in 1991. About half of people aged 40–59 who undertook study in all three years were employed full time and studying part time, another 15% were employed part time and studying part time, and 20% were not in the workforce. Working part time and studying full time, which is a common pattern for younger students, is not significant for this age group.

<sup>5</sup> The data used are from the *From Birth to Death* databases, which include over 90% of the usually resident population (Davey 1998). Ethnicity is defined using the hierarchical method, which is consistent from census to census. Pākehā/Other includes all people who specified their ethnicity and who were not classified as Māori or Pacific people.

Table 2 Age Group 40–59, % Studying in the Period Prior to 1991, 1996 and 2001 Censuses, by Gender and Ethnicity

<b>Ethnic Group</b>	<b>Year</b>	<b>Male</b>	<b>Female</b>
Māori	1991	5	8
	1996	8	10
	2001	8	14
Pacific	1991	3	4
	1996	6	7
	2001	5	8
Pākehā/Other	1991	5	9
	1996	5	9
	2001	6	10

Source: Census “Study” question, 1991, 1996 and 2001, From Birth to Death databases.

Can these patterns be corroborated from other sources? The 1996 Education and Training Survey, conducted by Statistics New Zealand, included mid-life adults from aged 40–64 and asked about involvement in the previous year. To date this survey has not been repeated. Compared to the 1996 Census “study” data, the figures are roughly comparable: 4% of males (census 4.8%) and 7% of females (census 8.6%) were studying for a qualification. The totals for “any study” (which includes “on-the-job” training) were higher, at 22% for men and 20% for women in the 40–64 age range.

Ministry of Education data provide a third source of information, in this case for the 40-plus age group. In 2001 over 66,000 people aged 40 and over were enrolled in tertiary education institutions, 68% of them women (similar to the Census “study” findings).<sup>6</sup> In 1994 students 40 and over accounted for 14% of all those enrolled. This rose to 18% by 2001 (Ministry of Education 2002: Table 13). Comparisons of participation levels over time are complicated by the greater variety of institutions now in existence, especially private training establishments and wānanga. Because of this, trends are examined using university and polytechnic statistics, which accounted for 48% and 27%, respectively, of tertiary students aged 40 or more in 2001. There have been significant increases in enrolments for both men and women (Table 3) and also growth in the proportion of those studying as a percentage of the age group.<sup>7</sup> People 40 and over account for a growing proportion of completed qualifications in public tertiary education institutions, rising from 12% to 14% for males between 1997 and 2000 and from 16% to 20% for females. The increases for Māori and Pacific peoples have been very significant. In 2001 nearly 3,000 Māori aged 40 and over completed qualifications (an

<sup>6</sup> The figures presented here cover only tertiary education, although it is acknowledged that there are mid-life adults attending secondary schools and that community-based education can include vocational and skills-related courses, as well as recreational study.

<sup>7</sup> The percentage is only around one in every 100 because it includes people 60 and over.

increase of 168% since 1997) and also 657 Pacific students (a growth of 146% since 1997 for males and 229% for females) (Ministry of Education 2002:Tables 50 and 64).

**Table 3 People Aged 40 and Over Enrolled as Students at Universities and Polytechnics, by Gender, 1991, 1996 and 2001**

		<b>1991</b>	<b>1996</b>	<b>2001</b>
University	Male	3,663	5,049	6,457
	Female	6,669	8,209	11,436
Polytechnic	Male	3,757	5,721	6,449
	Female	4,153	8,289	11,483

*Source: Ministry of Education data*

The statistical data suggest that increasing numbers of people in mid-life are taking up formal education, although this still represents only a small proportion of the age group as a whole. Why is this happening and to what extent is the trend associated with workforce change? The following section explores the findings of the “Education in Mid and Later Life” study.

### The “Education in Mid and Later Life” Study

In early 2000 a questionnaire was sent to every student at Victoria University aged 40 years or more. Nearly 1,000 replies were received, a 60% response rate. The survey enquired about study experiences, educational, family and work circumstances (Davey 2001). At that stage people aged 40-plus represented 13% of the total student body as against 10% in 1997.

The respondents were typical of adults engaged in education in New Zealand and similar countries. About two-thirds were aged 40–49, 30% were 50–59 and only 5% were 60 or older. This age distribution suggests vocational reasons for participation rather than either preparation for retirement or retirement activity. Seventy per cent were female, compared to 56% of the total student body. Four out of every five – both men and women – were in some kind of paid work. Half were working full time (30 hours and over) while studying part time. The main gender difference was that a higher proportion of women were studying part time while working part time or being out of the labour force. These patterns fit the analysis of the Census “study” question. Vocational motives were also illustrated in the choice of subjects and qualifications. For full-time workers, the most popular course was the MA (Applied) (which includes practical work and vocational placements) and the most popular subjects were nursing, recreation and leisure studies, social science research, environmental studies and criminal justice. Teaching qualifications, the Master of Business Administration and Master of Public Policy were also selected mainly by those in full-time work. The BA was dominant for people not in the labour force or working part time.

Respondents were asked to rank motives for returning to study. Over half (52%) gave first place to “wishing to acquire new knowledge or qualifications to improve job performance and prospects” and 7% chose “concern about redundancy or changes at work”. So nearly 60% gave work-related motives. Fewer (46%) placed personal development and fulfilment motivations first (some respondents nominated joint first choices). Personal development as the first choice increased with age, to include 66% of students aged 60 or over, but even in this group 42% chose work-related motives as the most important. There were no significant differences by gender.

Respondents to the “Education in Mid and Later Life” questionnaire were segmented according to their circumstances and motives, as follows:

**Group 1: Workers studying part time (46% of respondents)**

These were mainly full-time workers, studying vocational courses part time to assist with their careers. They were over-represented in commerce and law and over half were men. This group had the highest proportions of older students working on masters or MA (Applied) degrees, diplomas and certificates. Workers funded their university study mainly through paid work, although one in three had assistance from their employers.

**Group 2: Full-time students (7% of respondents)**

A small but significant group had been in full-time work but then either left employment completely or went part time and became full-time students. Like Group 1, over half were men. For one-third, job loss or redundancy was the trigger for study. While a career change was the goal for some, the group as a whole put more emphasis on personal development than job-related knowledge. Many members of this group were taking undergraduate courses and had low educational achievement when they began studying, so this is largely a “second chance” group.

**Group 3: Women raising their skills (31% of respondents)**

Most of this group (97%) had taken time out from their careers for either full-time or part-time childcare. They placed seeking knowledge relevant to paid work ahead of personal development as a motive for study. The group contained a high proportion trained in female-dominated jobs, especially teaching and nursing. Members of this group were more likely to be working part time than full time and some were combining childcare with part-time study (consistent with later child-bearing), which distinguishes them from Group 1.

**Group 4: Retired and the remainder (16% of respondents)**

This diverse group had the highest proportion of respondents aged 50 or more and included all who were retired. Most were pursuing personal development goals and many had gained previous educational qualifications.

## THE ROLE OF EDUCATION IN AN AGEING WORKFORCE

Statistical information suggests, and the Victoria University case study certainly shows, that people in mid-life are indeed using tertiary education as a means of increasing work-related skills, furthering their careers and improving their chances of remaining in the labour force. This should contribute to the objective of maximising human capital potential in an ageing population and to realising the social and economic advantages outlined earlier. But evidence from the “Education in Mid and Later Life” study and from the literature also identifies obstacles in the form of attitudes, expectations and policies on the part of employers, institutions, governments and mid-lifers themselves.

The view that education is only for those under 25 years is deeply entrenched. The administrative systems of many academic institutions are not well attuned to the needs of older students. The New Zealand tertiary education system has some advantages not shared by other OECD countries, including open adult entry, no age limit on student loans, general degrees and opportunities for part-time study. On the other hand, there is little government support for adult retraining. The Adult Education and Community Learning Working Party report (2001) gave little attention to work-related issues. High tertiary fees and low student living allowances make it difficult for people to respond to calls for lifelong education.

Moreover, although some employers assist workers to improve their education, others see little advantage in enabling their older employees to engage in study. The Victoria study showed that employers provided help to people in Groups 1 and 3, who already had other advantages. Incentives and encouragement for employers to extend financial assistance and other measures to facilitate study, such as special leave and flexible hours, would help a wider range of mid-life workers.

Redundancy and fear of redundancy were important triggers for university study. Many people were concerned that their colleagues were more highly educated than themselves and saw gaining a further qualification as “insurance” against losing their jobs. In follow-up interviews with people who had been made redundant, it was learnt that counselling, where offered, rarely mentioned the option of further study (Davey 2003). Employers could be encouraged to take responsibility for ensuring that workers are made aware of educational opportunities when restructuring takes place. The labour force certification policies of government and professional organisations also influence educational choices. Many older students were at university because their study was compulsory, especially among teachers (of special needs children), nurses, social workers and polytechnics tutors. Credentials acquired in institutional contexts have come to be the primary means of access to paid employment. They are more highly valued than before and non-credentialled skills have become de-valued. Credentialism may contribute to the under-use of human capital by

raising requirements to unrealistic and unnecessary levels. Lack of formal qualifications is a trap for older workers, many of whom trained on-the-job (for example, as apprentices or in the armed forces).

Individuals may need more encouragement and support than is presently available to return to a regime of study which will produce heavy demands on their family and recreational time, in addition to financial pressure. Some are reluctant to shift away from long-term specialisation even if this opens up new employment opportunities. And given threats of unemployment and redundancy, those occupying secure jobs may not wish to divert their time and energies into study unless the benefits are very clear. Older workers may be less likely to volunteer for training, linked to low expectations and self-esteem in older workers, particularly women.

Setting educational issues into a broader workforce context, there is now widespread agreement by governments and supra-governmental bodies throughout the developed world that we need flexible workforces, capable of learning and adaptation. Considerable support has been expressed for lifelong education initiatives, both in relation to prolonging workforce involvement and in meeting skill shortages (Belanger and Valdivielso 1997, Griffin 1999, Tobias 1999). The analysis of human capital issues in an ageing workforce highlights the need for more information to guide policy development, focusing on people in mid-life, their choices in terms of workforce involvement, further education and training. Equally important would be to examine how these choices may be constrained by their own attitudes or those of others (employers, funders and providers of education and training), by the opportunities presented (the availability, accessibility and funding of educational opportunities), and by policy settings.

The creation of opportunities for mature age workers to undertake retraining and the breaking down of barriers to access retraining are critical issues. The establishment of a culture of continuous learning and re-skilling is essential to maximizing the contribution of mature age workers to economic growth. (Hon. Bronwyn Bishop in Access Economics 2001:xv)

## APPENDIX: SOURCES OF STATISTICAL INFORMATION ON EDUCATION IN MID-LIFE

### Census "Study" Data

There has been considerable variation in the way in which questions on educational participation have been asked in the last three censuses. This relates to the wording, how questions are grouped and located, and the period of time referred to.

Question 41 on the 2001 Census Individual Form included educational participation at the end of a list of unpaid activities such as household work, childcare and voluntary work. The specific wording was:

In the last 4 weeks, which of these have you done, **without pay** [emphasis in original]:

- Attending or studying for 20 hours or more per week at school or any other place
- Attending or studying for less than 20 hours per week at school or any other place.

The 1996 Census (Individual Form, Question 30) included a question that related solely to educational involvement:

In the [7 days before the census], did you:

- attend or study for a **full-time** course at school or anywhere else
- attend or study for a **part-time** course at school or anywhere else.

This question preceded those on educational qualifications. The notes defined a full-time course as one that “you spend 20 hours a week or more on (including times at classes, studying etc.)”. The question did not cover training at work unless it was a formal course.

The 1991 Census asked a similar question, but in the context of a variety of activities. Question 20 asked: “Which of the following activities did you do last week?” The options included “Looked after children at home; Housework; Took part in physical recreation or sport.” The education-related options were:

- attended full-time study or training course (including job training for unemployed persons)
- attended part-time study or training course.

The notes did not define “full-time” or “part-time”.

### Education and Training Survey

In September 1996 Statistics New Zealand carried out an Education and Training Survey as a supplement to the Household Labour Force survey. Questions were asked to assess how many people (in the working-age population – aged 15–64) had:

- studied towards a qualification;
- taken part in in-house training provided by their employer; or
- participated in employment-related training that was not provided by an employer.

### Ministry of Education Data

The Ministry of Education collects information every year (on July 1) from educational institutions, on their enrolments, by age, gender and ethnicity. Being administrative requirements, these figures may be more reliable than the Census. However, if they are amalgamated there will be over-counting as individuals may be enrolled in more than one type of education. The upper age group in published data is 40-plus.

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