Transitions to retirement – A review

Jeff Borland*

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* Department of Economics and Melbourne Institute of Applied Economic and Social Research, University of Melbourne, Melbourne VIC 3010, Australia – Email: jib@unimelb.edu.au.

Executive summary

1. The objective of this project is to present a conceptual framework for thinking about issues associated with the transition to retirement by older workers, and to review available Australian and international empirical evidence and literature on this topic. The concept of 'transition to retirement' is identified as a phase in which an older worker shifts from some 'relatively permanent' pattern of labour market activity to retirement.

2. For a variety of reasons, the transition phase for older workers from employment to retirement is of significant interest. It has implications for the well-being of workers and for the quality of labour supply; and of most importance recently, promoting employment of older workers has been seen as a potential policy response to the growth and fiscal consequences of the aging population.

3. A conceptual framework for describing the transition to retirement is developed that distinguishes:
a) Length of transition phase;
b) Main activities prior to, and after, transition phase;
c) Age at which transition phase/shift to retirement commences;
d) Hours of work during transition phase;
e) Type of job(s) during transition phase;
f) Location of employment; and
g) Whether in receipt of retirement income.

4. Direct empirical evidence for Australia on the transition to retirement is not available for older workers (due to an absence of longitudinal data). Instead a description of important characteristics of the labour market for the older population is presented, from which some conclusions on transition may be drawn.

5. Currently in Australia there are lower rates of employment for the population aged 55+ years than aged 25-54 years. Amongst older workers there is a higher incidence of part-time employment. The proportion of the older population in the labour force and employed declined from the mid-1970s to mid-1980s, and then increased from the mid-1980s onwards. Underlying this overall pattern have been divergent trends for males and females. The decrease in employment rates for older workers in the 1970s and 1980s was primarily due to declining employment for males aged 55 to 64 years. And the growth in employment of older workers from the mid-1980s onwards has been mainly due to increases in employment of females aged 45-54 years.

6. There is some evidence that older workers in Australia may be constrained in their labour supply and employment choices. For example, a very large (and apparently growing) proportion of older workers report 'job loss' as their reason for ceasing last job. And older workers perceive that they would have relatively low chances of obtaining a similar job to their current job if they were to become unemployed.

7. Data on short-term labour force transitions in Australia suggest that the older population is relatively more likely than other age groups to shift from full-time to part-time employment, to remain in unemployment, and to remain out of the labour force. This is consistent with a higher proportion of the older population being in part-time employment. While this may suggest that some proportion of the older workforce have a transition to retirement that involves a shift from full-time to part-time employment prior to retirement, the proportion of workers making this shift appears relatively small; and from existing data it is not possible to discern whether the shift is voluntary.

8. Evidence from the United States on transitions to retirement suggests that partial retirement and bridging jobs are relatively rare – being held by only about 10 to 15 per cent of workers prior to retirement. The main explanations for the absence of large-scale partial retirement appear to be effect of teamwork (complementarity between workers) on the hours of work employers require employees to work; fixed costs of employment; and substantial loss of job-specific skills and wage decreases due to job mobility if older workers change jobs. Evidence on the greater flexibility of hours of work in self-employment than as an employee, and the higher incidence of self-employment amongst part-time workers, seem to indicate that older employees may be constrained in their choices of hours of work.

9. Empirical evidence suggests a quite wide range of factors are likely to have important effects on labour market outcomes for older workers:
- Individual characteristics – For example, health condition; education attainment; family labour supply; and whether performing a carer role.
- Employer attitudes – Employer perceptions of the relative productivity, and of the scope for training mature age workers.
- Wealth and post-tax wages – For example, age of access to, and level of, superannuation and earnings from private investments are the main potential private sources of income.
- Old age pension – Age of eligibility, and level and structure of the pension.
- Discouraged worker effect – For mature age workers who become unemployed, the difficulties in finding a new job may cause them to withdraw from the labour force.
- Non-pecuniary job conditions – More stressful or physically demanding jobs may induce early retirement.
- Substitutability of older and younger workers – Relative productivity and wages.
- Technological change.

9. Some general lessons for policies relating to old age employment can be derived from the review:
- Policies to promote employment of older workers may cause substitution between older and younger workers, and hence no effect on aggregate employment, in the absence of growth in labour demand.
- Other factors such as increasing education attainment, and growth in wealth of the older population, are likely to operate together with the effects of any policies to promote employment of older workers, and to have large effects relative to policy effects.

- Effects of any policy need to examined carefully against the general objectives of policy.

10. Two main areas of future research on labour supply and employment of the older population seem most important:
- Descriptive work on the transition to retirement of the older population using new longitudinal data sources such as HILDA; and
- Developing a more rigorous understanding of the magnitude and relative importance of effects of the variety of causal factors for labour supply and employment.

1. Introduction

The objective of this project is to present a conceptual framework for thinking about issues associated with the transition to retirement by older workers, and to review available Australian and international empirical evidence and literature on this topic. The concept of 'transition to retirement' is identified as a phase in which an older worker shifts from some 'relatively permanent' pattern of labour market activity to retirement.

For a variety of reasons, the transition phase for older workers from employment to retirement is of significant interest. First, the nature of the transition phase is likely to matter for the welfare of older Australians. Whether a person is able to obtain employment, and how well the job they have matches their labour supply preferences, are likely to have important consequences for their well-being. A greater amount of paid work during a transition phase to retirement will increase income during that phase. It may also increase available retirement income – by reducing the rate at which accumulated savings are run-down prior to retirement, or by allowing additional contributions to savings prior to retirement (Commonwealth Department of Family and Community Services, 2003, p.13). Second, the type of jobs that are available to older workers and their labour supply decision may have important effects on 'quality' of labour input available to the Australian economy. The older population may possess different skills than younger population. Hence labour supply decisions by older workers may affect the availability of certain skills in the workforce. Finally, changes in labour supply and employment amongst the older population will of course affect the aggregate/employment population rate. Shifts in the age composition of the Australian population – in the absence of changes to workforce participation – are likely to create significant pressure on fiscal sustainability and reduce rates of growth in output (Commonwealth of Australia, 2002). Other things equal, this shift in population composition will increase the dependency ratio and lower the rate of growth in GDP in Australia. The anticipated effect of the ageing population on output and

the fiscal situation is creating pressure to increase labour force participation amongst the workforce age population. Once increasing labour force participation is identified as a policy goal, then the mature age population becomes the focus of attention. This is because of the decrease in the LFPR and employment/population rate for older workers over the last 35 years. Figure 1 shows that – for the populations aged 45 years and above, and 55 years and above – both participation and employment rates were relatively steady from 1966 to 1973, declined from 1973 to 1985, and then grew steadily from 1985 onwards. For the 45 years and above group, the employment/population rate is almost back at its level of the mid-1960s by 2003; but for the 55 years and above group, the employment/population rate remains about 8 percentage points lower in 2003 than the mid-1960s.

Section 2 presents a conceptual framework for identifying the main features of the transition phase to retirement. Sections 3 and 4 review available Australian and international evidence on transition to retirement and on labour market outcomes for older workers. Section 5 describes main findings on the determinants of labour supply and employment outcomes for older workers. Section 6 presents some brief general remarks on policies to promote employment of the older population. Ideas for future work are discussed in section 7.

2. Conceptual framework – How to identify and characterize a transition phase for mature age workers

In this project the transition to retirement is defined as a phase in which an older worker shifts from some 'relatively permanent pattern' of labour market activity to a state of 'retirement'. By 'relatively permanent pattern' what is meant is a pattern of labour market activity that an individual has had over an extended period of time. Obvious examples would be where an individual has worked full-time for 30 years, or has had a part-time job for 10 years. But such a definition could also encompass situations where an individual had a pattern of shifting between full-time and part-time work, or part-time work and no job,

over an extended period of time. The term ‘retirement’ can also potentially be multi-faceted. Generally, it seems that retirement has been interpreted as an individual not being engaged in any paid work. But use of the term retirement also seems to generally encompass situations where an individual is over 65 years of age, and engaged in a small number of hours per week of paid work.

The important feature that is intended to be captured by the definition of transition to retirement that is proposed here is that it represents a phase where an individual shifts from one relatively permanent or regular pattern of labour market activity to another pattern; and that this change in pattern should involve a decrease in hours of work or the extent of engagement in paid work to a very low level.

The key aspect of the conceptual framework will be development of a taxonomy to characterise the transition to retirement. It is important that this taxonomy should be able to be applied in empirical analysis. A preliminary taxonomy is:
a) Length of transition phase – for example, shift from full-time work to retirement could be immediate (=zero transition), or might involve an intervening phase of several years of part-time work;
b) Main activities prior to, and after, transition phase – for example, did ‘relatively permanent pattern’ prior to transition involve full-time or part-time work?
[Together (a) and (b) provide a perspective on the typical paths to retirement of labour force participants.]
c) Age at which transition phase/shift to retirement commences;
d) Hours of work during transition phase;
e) Type of job(s) during transition phase – (i) occupation (change from prior to transition?); (ii) industry; and (iii) nature of employment (for example, casual, permanent, self-employed?);
f) Location of employment – for example, at home, at employer’s business location; and
g) Whether in receipt of retirement income – that is, whether have commenced to receive payments from superannuation, or whether receive social welfare payments, during transition phase.

This taxonomy seems potentially useful in providing a fairly comprehensive characterization of the transition phase for older workers. It is a framework that underlies the questions on old age labour force participation and employment that have been included in the third wave of the HILDA survey, and hence will be able to be applied in subsequent empirical analysis for Australia. However, existing studies of labour supply and employment of the older population have tended to address a narrower set of issues, or to adopt a different organizing framework for empirical analysis. Hence, the conceptual framework presented in this section, while remaining useful as a way of organizing thinking about the main issues, will not be applied directly in the subsequent literature review.

3. Australian empirical evidence

There is no long-run longitudinal evidence on labour force transitions available for Australia of the type that has been described in the previous section for (primarily) the United States. In the absence of this type of evidence, the approach taken in this section will be to present data on labour force outcomes for older workers from which inferences can be drawn on the phase of transition to retirement.

a. LFPR and Employment

Figure 2a shows that – for the populations aged 45 years and above, and 55 years and above – both participation and employment rates were relatively steady from 1966 to 1973, declined from 1973 to 1985, and then grew steadily from 1985 onwards. For the 45 years and above group, the employment/population rate is almost back at its level of the mid-1960s by 2003; but for the 55 years and above group, the employment/population rate remains about 8 percentage points lower in 2003 than the mid-1960s.

Figure 2b shows LFPR and employment/population rate for males and females aged 45 years and over. For males the LFPR has declined from 73.9 per cent to

55.5 per cent between 1966 and 2003; and the employment/population rate decreased from 72.9 per cent to 53.4 per cent. The decline in the employment/population rate is largely concentrated between 1974 and 1983. For females the LFPR rises from 20.7 per cent to 38.4 per cent between 1966 and 2003, and the employment/population rate grows from 21.1 per cent to 38.0 per cent. Growth in employment for females has been concentrated in the period after the mid-1980s. For mature age females, it has also been growth in the LFPR and employment/population rate of married females that have mainly driven the overall increase.

Trends in the LFPR and employment/population rate in disaggregated age groups - within the category of the mature age population - have been broadly similar to those evident for the whole mature age population. The LFPR and employment/population rate for groups aged 45 to 54 years, 55 to 59 years, 60 to 64 years, and 65 years and above, are shown in Figures 3a to 3d.

Amongst males, declines in participation and employment rates occurred in all age groups, but have been most pronounced for the 55 to 64 year age group. Between 1966 and 2002 the employment/population rate decreased by 11.1, 19.6, 30.2, and 13.6 percentage points respectively for the age groups 45 to 54 years, 55 to 59 years, 60 to 64 years, and 65 years and above. Declines in participation have occurred fairly steadily for males aged 45 to 59 years, but are concentrated in the period between 1974 and 1983 for males aged 60 years and above. Declines in the employment/population rate for all age groups occur primarily between 1974 and 1983.

Amongst females, increases in participation and employment rates have been largest for the age groups 45 to 54 years, and 55 to 59 years. Little change occurred for females aged 65 years and over. Between 1966 and 2002 the employment/population rate grew by 34.6, 23.4, and 11.7 percentage points respectively for the age groups 45 to 54 years, 55 to 59 years, and 60 to 64 years, and decreased by 1.6 percentage points for females 65 years and above. Increases for the 45 to 54 year age group have occurred steadily throughout the

period since the mid-1960s, but for the 55 to 59 years and 60 to 64 years age groups, appear to have been concentrated in the period after the mid-1980s.

An issue that arises in describing trends in LFPR and the employment/population rate by age is the relative importance of 'age' and 'cohort' effects in causing those trends. As an example, suppose that the LFPR for females aged 45 to 54 years has been observed to increase 10 percentage points between 1990 and 2000. There are two possible explanations. One is that the cohort born between 1936 and 1945 have a LFPR that at all ages is 10 percentage points below the LFPR of the cohort born between 1946 and 1955. This would be described as a cohort effect; a possible source of the cohort effect would be changing social attitudes to work by women that have increased the scope for labour force participation by females born at later dates. The other possible explanation is that the pattern of LFPR by age has shifted so that females aged 45 to 54 years from any birth cohort would have a LFPR that is 10 percentage points higher in 2000 than in 1990. This would be described as an age effect; a possible source of the age effect would be a government policy to increase labour force participation that specifically targeted females aged 45 to 54 years. (Of course, some combination of these effects could also explain the change.)

Bacon (1999, p.83) presents a graphical representation of the relative influence of cohort and age effects on changes in LFPR of males and females. Examining the period between 1978 and 1996 it appears that for males, the main factor underlying the decline in LFPR at ages above 55 years has been age effects (although cohort effects do seem to play some role); whereas for females, the main factor in explaining the rise in LFPR for ages 45 to 59 years has been cohort effects. This analysis implies that for males – evolution of the LFPR for mature age workers must be understood as being to do with supply and or/demand factors that have had different effects on mature age and younger age workers. In other words, the relative decline in male mature age employment reflects factors that have caused a relative decline in supply and/or demand for mature age workers compared to younger male workers. But for females – the evolution of the LFPR for mature age workers is primarily being driven by

supply and/or demand factors that affect all age groups in a similar way. In other words, the growth in female mature age employment reflects factors that have caused a relative increase in supply and/or demand for successive birth cohorts of females.

b. Unemployment

Unemployment rates for the mature age population are not high by comparison with other age groups. However, mature age workers who become unemployed have a relatively low probability of re-employment, and hence spend long periods unemployed.

Table 1 shows the share of long-term unemployed (spells longer than 52 weeks), and average unemployment spell duration for disaggregated age groups. The notable feature of the unemployment experience for labour force participants aged between 55 and 64 years compared to younger age groups is that a much higher proportion has long-term spells, and average spell duration is longer.

One major source of unemployment is retrenchment. Retrenchment occurs where a worker is dismissed from a job for reasons relating to demand conditions. Retrenchment accounts for a larger share of job losses experienced by mature age workers than younger workers (Commonwealth of Australia, 2000, p.18); although the incidence of retrenchment does not appear to be strongly ordered by age (Borland and McDonald, 2001, Table 1). What is however most notable is that mature age workers are less likely to become re-employed once retrenched. Table 2 shows that retrenched mature age workers are less likely to be employed than retrenched workers aged 25 to 44 years; and what is particularly notable is the propensity of retrenched workers aged 55 to 64 years to have exited the labour force. This pattern is confirmed by a review of case study evidence on outcomes for retrenched workers which found that workers aged more than 45 years were less likely to be re-employed, and that workers aged 55 years and over were more likely to exit the labour force (Borland, 1998). Table 3 shows that in 1997 about one-third of retirees had

'job loss' as the main reason for ceasing their last full-time job. This proportion is larger for males than females, and may have increased somewhat between the 1980s and 1990s.

It also appears that mature age workers in Australia believe strongly that – if they are retrenched – they will have significant problems finding a similar job. Table 4 shows responses to questions on the probability of involuntary job loss in the next 12 months, on the probability of finding a similar job if retrenched, and a composite measure of the probability of being retrenched in the next 12 months and not being able to find a similar job. It is apparent that there is not a strong relation between age and the perceived probability of involuntary job loss, but that a strong inverse relation exists between age and beliefs about the probability of finding a similar job; overall, older workers believe they are more likely to experience the joint event of involuntary job loss and not being able to find a similar job. For example, on average workers aged 25 to 34 years believe their probability of job loss is 11.5 per cent, and probability of finding a similar job if retrenched is 62.6 per cent; whereas the corresponding average probabilities for workers aged 55 to 64 years are 11.4 per cent and 32.4 per cent.

While there is no doubt that older males who are retrenched have lower rates of re-employment than younger retrenched workers in Australia, OECD evidence (1998, p.144) indicates that the share of new jobs going to mature age workers in Australia is higher than in any other OECD economy. The ratio of the share of new jobs to the share of total wage and salary employment for the 45 to 64 year age group was 0.6 in Australia in 1995 – compared to an OECD average of 0.4.

c. Out of labour force

The population that is not in the labour force is defined as 'out of the labour force'. There are a variety of reasons for being out of the labour force – for example, retirement, health condition, a belief that it would not be possible to obtain employment, or caring for a relative.

The main activities of the mature age population in Australia that is out of the labour force are summarised in Table 5. The probability of retirement increases with age for both males and females. For males in the age group 45 to 54 years, disability or illness is the main reason for being out of the labour force; but for the 65 to 69 year group retirement is the main activity. For females in the age group 45 to 54 years, home duties is the main reason for being out of the labour force; but for the 65 to 69 year group retirement is the main activity. Caring for an ill or disabled person accounts for about 5 per cent of those out of the labour force; and is a more important main activity for females than males.

Some of the mature age population who have retired from full-time work will continue to work part-time. (Part time work is defined as between 1 and 34 hours per week.) Table 6 shows that this is the case for about 8 per cent of male retirees, and 15 to 20 per cent of females. This difference is probably due to the younger age profile of females who have retired. The proportion of retirees who are in part-time jobs appears to have increased between the mid-1980s and mid-1990s.

d. Transitions

Evidence on 'short-term' transitions is available from a study by Norris and Bradbury (2001) that examines changes in labour force status over an eight month period in 1996/97. Several main findings emerge from that study. First, for mature age workers aged 45 to 64 years, and who were employed in the initial month, there is a similar probability of remaining in employment as for workers aged 16 to 44 years; however, workers aged 65 years and above have a much lower probability of remaining employed with about one-third exiting the labour force. Second, the probability of a full-time worker moving to part-time work is substantially higher for workers aged 60 years and over, than for other age groups. Third, the probability that a mature age worker who is unemployed or out of the labour force in the initial month shifts into employment declines with age. Fourth, the propensity of mature age workers who are out of the labour force in the initial month to remain out of the labour force increases with age.

e. Summary

Currently there are lower rates of employment for the population aged 55+ years than aged 25-54 years. Amongst older workers there is a higher incidence of part-time employment. The proportion of the older population in the labour force and employed declined from the mid-1970s to mid-1980s, and then increased from the mid-1980s onwards. Underlying this overall pattern have been divergent trends for males and females. The decrease in employment rates for older workers in the 1970s and 1980s was primarily due to declining employment for males aged 55 to 64 years. And the growth in employment of older workers from the mid-1980s onwards has been mainly due to increases in employment of females aged 45-54 years. Neverthless, in the past few years, there have also been increases in labour supply and employment of older males. This is a pattern that has also been observed in the United Kingdom (Disney and Hawkes, 2003).

There is some evidence that older workers may be constrained in their labour supply and employment choices. For example, a very large (and apparently growing) proportion of older workers report 'job loss' as their reason for ceasing last job. And older workers perceive that they would have relatively low chances of obtaining a similar job to their current job if they were to become unemployed.

Data on short-term transitions suggest that the older population is relatively more likely than other age groups to shift from full-time to part-time employment, to remain in unemployment, and to remain out of the labour force. This is consistent with a higher proportion of the older population being in part-time employment. While this may suggest that some proportion of the older workforce have a transition to retirement that involves a shift from full-time to part-time employment prior to retirement, the proportion of workers making this shift appears relatively small; and from existing data it is not possible to discern whether the shift is voluntary.

4. International empirical evidence

International evidence on the transition to retirement for older workers exists primarily for the United States. This seems to be mainly due to the availability of longitudinal data on the older population (for example, the Retirement History Survey that contains information on the population aged 58 to 63 years in 1969 through to 1979; and the Health and Retirement Survey that contain information on the population aged 51 to 61 years in 1992 through to 1998). Studies are almost exclusively of retirement behaviour of males, as at the time that the Retirement History Survey was being conducted, older workers were predominantly male. Hence, an important caveat to the review in this section, is that it is largely describing patterns of retirement behaviour from the 1970s – and of course there may have been a substantial change in overall patterns of retirement in the past 20 years.

In summarizing research on transitions to retirement in the United States, it seems possible to separate between a first-generation and second-generation of studies that have reached quite different conclusions on the extent to which older workers are employed in 'bridging' jobs prior to retirement.

The first generation of studies concluded that partial retirement and bridging jobs were an important aspect of the transition of older workers to retirement (for example, Ruhm, 1990a, 1990b, 1991; Honig and Hanoch, 1985; and Gustman and Steinmeier, 1984). For example, Table 7 (from Ruhm, 1990a) shows that around 20 per cent of older workers are in partial retirement at any particular time. And Table 8 shows that – for a very large proportion of the workforce – their 'career job' ends before they reach 65. [A career job is defined – in Ruhm (1991) from which data for Table 8 is derived – as the longest spell of employment in a single firm up to and including the age at which the person was surveyed for the Retirement History Survey.]

Where partial retirement is a common phenomenon, the question that arises is – what are the bridging jobs that workers in partial retirement are moving to? Ruhm (1990a, 1991) presents several stylized facts on bridging jobs from analysis of the Retirement History Survey. First, that many workers end career jobs at relatively young ages, and the high incidence of partial retirement, imply

that most workers exit to retirement from bridging jobs. Second, many workers spend a relatively long period of time (over 5 years) in bridging jobs. Third, movement from career to bridging jobs, and partial retirement, generally involve a switch in industry and/or occupation.

The second-generation of studies of transition to retirement has reached a different conclusion on the incidence of partial retirement. There are a variety of studies that find similar results. Rust (1990) – using the same Retirement History Survey - estimates that at a minimum, 75 per cent of males aged 58-64 in 1969 moved directly from full-time work to retirement without an intervening period of part-time work. Using annual hours to classify workers as full-time or part-time it is concluded that 22% of males switch from full-time at part-time work during the 10 years of the survey; using a weekly hours definition the corresponding proportion is only 8%. Quinn et al. (1990) estimate that, among males who leave their full-time career jobs, 73% exit the labour force completely, 15% move to part-time employment, and 12% shift to other full-time employment. About 83% move directly from full-time employment to retirement. Blau (1994) estimates that just 12.6% of males initially observed to be working full-time shift to part-time work during the 10 years of the Retirement History Survey.

Table 9 – with data on hours of work prior to retirement – also shows that the main pattern of work prior to retirement is for full-time work. Although the likelihood of working part-time increases as retirement age grows. Blau (1994, p.124) also finds that partial retirement is more common amongst males who leave the labour force at relatively old ages, and that this may reveal “a preference for attachment to the labor force”.

Analysis of more recent data from the Health and Retirement Study by Gustman and Steinmeier (2000) finds that 17 per cent of ‘transitions’ between the states of full-time work, partial retirement and retirement involve a decrease in workforce participation, but 6 per cent involve an increase in participation, and 77 per cent of ‘transitions’ involve no change in workforce participation.

Why do differences exist between the first and second-generation studies? There appear to be several explanations. First, studies by Ruhm use a self-definition of retirement, whereas the second-generation studies use labour market outcomes (for example, hours of work) to define retirement. Generally, labour market outcome data is considered the more reliable indicator of retirement status. Second, the definition of a bridge job used by Ruhm seems to include jobs that are not taken as a way of making a transition to retirement. For example, about one-quarter of the bridging jobs in Ruhm's study commence before a worker is aged 50 years. Using a definition of a bridging job as one that is held after 55 years of age, after exiting a career job, and one to four years prior to retirement, it is found that just 14.4% of all workers had bridge jobs (Hurd, 1996, p.17).

Given that second generation studies do not find a large proportion of workers in bridging jobs or partial retirement prior to retirement, an issue that arises is whether this is 'voluntary' or due to constraints on older workers' capacity to choose their desired hours of work. As one way to examine this issue Hurd (1996, p.18) presents evidence on hours of work of self-employed and employee older workers, and on the proportion of workers in self-employment by age. It is shown that there is greater dispersion in hours worked by self-employed than employees, and that the proportion of workers in self-employment increases with age. This is interpreted as evidence that self-employment is associated with greater choice of hours of work, and that older workers shift to self-employment in order to obtain flexibility in hours of work that is not available as an employee.

There are several reasons why employers may not be willing to offer bridging jobs with reduced hours of work, or why such jobs would not be attractive to workers. First, requirements of team production will necessitate similar work schedules and hours of work of all employees in an organization. Second, fixed costs of employment (such as health insurance, and recruitment/training expenses) will cause the wage for a new part-time job to be lower than for an equivalent job, but with full-time hours. For example, Hurd (1996, Table 1.9) estimates that annual earnings may decrease from $20,000 to $5,000 for a

worker in a job with a full-time productivity of $40,000 and part-time productivity of $20,000, and where fixed costs are $10,000 per annum. Third, where a worker's current employer is not willing to offer reduced hours of work in a bridging job, there is the alternative of switching to another job. But where this occurs the worker will lose accumulated job-specific skills; and any new employer will have a relatively low incentive to invest in the worker's skills due to the short period prior to retirement. Evidence indeed suggests that older workers experience large wage losses in switching between jobs – for example, Gustman and Steinmeier, 1985 find that hourly wage rates of older workers changing jobs decrease by about 30%.

5. Main determinants of old age employment outcomes

Empirical evidence suggests a quite wide range of factors are likely to have important effects on supply of, and demand for, mature age workers in Australia. Some of these factors will be common to all age groups within the mature age population:

- Individual characteristics – Willingness to participate in the labour force will be greater: the better a person's health condition; for persons with higher levels of education attainment; where a person's spouse is employed; and where there is no requirement for a person to act as a carer for a family member. These factors will affect labour supply at all ages; however, the relative impact may differ by age – for example, the effect of health on labour supply is likely to increase with age.

Health has been found to be a significant determinant of worker productivity, and hence labour force participation. The risk of poor health and disability increases with age, and the onset of poor health is known to affect the timing of retirement for a significant proportion of older workers (OECD, 1998, p.136, Blau, 1994, Coile and Gruber, 2002, and McGarry, 2002). Some studies have suggested that the size of role of health effects will depend on the availability and level of social security payments

(Quinn, 1977). However, health factors cannot be used as an explanation for the decline in labour force participation by the older population, as health outcomes have improved over the past several decades (Ruhm, 1990b). Poor health and disability have also been found to lower the probability of employment and labour force participation for the mature age population in Australia (Woodland, 1987, Wilkins, 2002).

Labour force participation is lower for population groups with lower levels of education attainment (for example, Blau, 1994). The gap in participation between education groups increases with age in most OECD countries (OECD, 1998, p.141). A wide range of studies find that education attainment is strongly positively related to labour force participation in Australia (Kenyon and Wooden, 1996). (That effect operates by increasing potential earnings from labour market activity, and hence raising the opportunity cost of leisure.) Hence, the increasing level of education attainment appears to be an important explanation for the growth of female participation since the mid-1970s (Borland, 1997).

International evidence suggests that family influences are an important determinant of labour supply decisions. One issue is inter-dependence between spouses. Here, there appears to be compelling evidence of an important effect of the value that spouses place on spending time with each other on joint retirement decisions (Gustman and Steinmeier, 2002). Another issue is on the role of family members as carers – Here, the most recent major review concludes that "Many studies have found an empirical relation between caregiving and labor force participation. There is also a substantial evidence that a disproportionate amount of the caregiving responsibilities falls on women…" (Lumsdane and Mitchell, 1999, p.3297). Australian evidence also suggests that there are inter-dependencies between decisions of mature age family members regarding labour supply. For example, older females are more likely to participate in the labour force if their husband works, and if they believe their husband wishes them to continue working; and similarly, older males are more likely to participate if their wife is working (Evans and Kelley, 2002a and 2002b). Descriptive evidence also shows that a quite large proportion of the mature age population who are out of the labour force are involved in carer roles. It is quite likely that undertaking these carer roles has implications for labour supply of those

persons, although there is little evidence on this issue (Delpachitra and Beal, 2002, p.7).

• Employer attitudes – Employer perceptions of the relative productivity, and of the scope for training mature age workers, will affect demand for their labour services. These factors will operate for employers in their decisions about whether to retain an existing mature age worker, and about whether to hire a mature age worker to a job vacancy.

International evidence suggests that attitudinal effects related to age exist, and that they affect labour market outcomes of older workers. For example, evidence from the United States is that about 10 per cent of workers aged over 55 years believe they had been discriminated against on the basis of age; an example of the effect of employer attitudes is that workers with an injury are more likely to return to work where their employer is willing to adjust to health problems (Lumsdane and Mitchell, 1999, pp.3293-96). Other evidence is from implementation of age discrimination legislation in the United States (the 1967 Age Discrimination in Employment Act). A review of the effect of that legislation has concluded that there is substantial evidence of discrimination against older workers in hiring prior to enactment of the legislation; that discrimination seems to have been due more to mis-perceptions about productivity of older workers than to preferences for younger workers (whereas the opposite finding is generally found for the sources of racial discrimination); and that the introduction of the age discrimination legislation has increased employment of older workers (Neumark, 2001, p.34). From a review for the United Kingdom, Disney and Hawkes (2003) are more ambivalent about effects of employer attitudes, and more particularly with regard to the effects of voluntary codes of practice.

There is a variety of evidence that employer attitudes may also constitute a barrier to employment for older workers in Australia. Older workers appear to be discriminated against, primarily during the hiring process, and primarily because employers believe their skills are outdated (for example, no computer skills), they are harder to train, less adaptable, will not fit into a younger workforce, and have potential health problems (for example, Pickersgill et al. 1996, Encel and Studencki, 1996, Encel, 1998,

Commonwealth of Australia, 2000, pp.101-108, and Bittman et al., 2001). (On the other hand, employers do seem to view older workers positively in terms of their experience, loyalty, and work ethic – Bittman et al., 2001, p.43.) Some studies have highlighted several perceptions of employers regarding older workers (for example, have lower productivity, or will not fit into a younger workforce) – and show that these perceptions are most often incorrect (Pickersgill et al., 1996, and Bennington and Tharenou, 1999). Other evidence indicates that the key factors that influence whether an employer will hire a mature age worker are: the age of the typical client of the business; the employer's perceptions about the age at which an employee will make the best contribution to the business; and whether a mature age worker would have relevant skills and technical experience. (Bittman et al., 2001, pp.57-62).

- Wealth – Higher levels of wealth are generally associated with a lower propensity to participate in the labour force.

Wealth does appear to have effects on labour supply behaviour of the older population. Workers with more generous superannuation coverage appear to retire earlier (although effects are small), and workers who are offered money to delay retirement will do so (Leonesio, 1993, Lumsdane and Mitchell, 1999, pp.3287-88, Blundell et al, 2002). Differences in the structure of superannuation schemes – defined benefit compared to defined contribution – also appear to be a source of variation in retirement incentives. Defined contribution plans may encourage deferral of retirement since superannuation fund value accumulates in every year that retirement is postponed; whereas under a defined benefit plan there is often a strong incentive for workers to retire at their peak earnings (Disney and Hawkes, 2003). Australian cross-section studies of the determinants of labour supply also find that availability of superannuation has a negative effect (Woodland, 1987).

- Post-tax Wages – A lower potential wage rate for a mature age worker is likely to be associated with a lower probability of labour force participation. (Other things equal, a lower wage rate represents a higher replacement rate for government allowances and/or pensions.)

Recent evidence that wages affect labour force participation exists for the United States (see Ruhm, 1990b). Between the late 1960s and late 1980s there was a significant expansion of earnings inequality in the United States, part of which involved a fall in real earnings of low-pay workers. Some empirical studies have found that the fall in real earnings is the main explanatory factor the decline in labour force participation by older males during that period (Juhn, 1992, Peracchi and Welch, 1994). There is also evidence of a relation between tax rates on earnings from labour market activity and rates of labour force participation amongst the older population. For example, there is a high cross-country correlation between 'tax force' (equal to the sum of tax rates on earnings of workers aged 55 to 69 years) and degree of 'non-work' between ages 55 and 65; a 10 per cent increase in the 'tax force' measure reduces labour force participation by 3 percentage points (Gruber and Wise, 2001, and 2002).

• Non-pecuniary job characteristics – Workers in jobs that involve 'worse' characteristics are more likely to retire early.

There is evidence for the United States that workers in jobs that involve stress and/or intense physical demands are more likely to retire early. Interestingly, these workers are also likely to have relatively high accumulated superannuation, suggesting that early retirement was anticipated (Filer and Petri, 1988).

• Old age pension – For mature age workers for whom the Age pension is necessary to fund retirement, the age of eligibility for the pension will be an important determinant of the date of withdrawal from the labour force. The official retirement age may also act as a 'focal point' for other workers making a decision on when to retire.

There is strong evidence of incentive effects of social security payments on LFPR. First, there appear to be significant effects from the age of eligibility for old age social security payments on retirement behaviour. A universal finding in the United States is that a 'spike' exists in the rate of retirement at ages where eligibility for old age payments commences (for example, Blau, 1994, Hurd,

1996, Ellwood, 2001, and Lumsdane and Mitchell, 1999, p.3266). As well, cross-country evidence suggests that an increase in the retirement age will raise LFPR of mature age males – for example, Blondal and Scarpetta (1999) find that increasing the retirement age by one year raises the LFPR of males aged 55 to 64 years by about 1 percentage point (see Table 16). However, it does not appear that the entire 'spike' in the rate of retirement at 'official' retirement age can be explained solely by incentive effects. Hence it seems that the official retirement age acts in part as a focal point or social norm in conditioning retirement decisions, or that credit constraints are an important factor in labour supply decisions (Gruber and Wise, 2002, and Anderson et al., 1997). Second, the level and structure of old age payments matter. Cross-country evidence shows that a higher accrual rate in the old age pension prior to retirement will delay retirement (Blondal and Scarpetta, 1998). Studies for the United States and Canada find that a $1000 increase in 'peak value' (difference between current social security wealth and wealth at optimal retirement age) reduces the probability of retirement by between 0.05 and 0.2 percent (Coile and Gruber, 2000, and Baker et al., 2003). Other evidence shows that an increase in social security wealth raises the probability of retirement – for the United States and Canada estimated effects for a $1000 increase in wealth are between 0.2 and 0.6 percent (Coile and Gruber, 2000, Neumark and Powers, 2003, and Baker et al., 2003). Related studies show that the taper rate at which the pension is reduced for an increase in labour market earnings affects labour supply behaviour of the population who have retired from full-time work (for example, Leonesio, 1993, and Disney and Smith, 2002).

There is a variety of evidence that availability, level and structure of the Age pension appear to affect labour supply in Australia. (For a review of the Age pension in Australia, see Commonwealth Department of Family and Community Services, 2003.) First, there is evidence that eligibility for the age pension has a strong negative effect on labour supply (Woodland, 1987). Second, there is evidence of correlation between the rise in real value of the Age pension and decrease in LFPR for males aged above 65 years in 1970s and 1980s – see Table 17 (Merrilees, 1982, 1983, and 1986, and Howe, 1980). Third, cross-country evidence suggests that the age of eligibility for the Age pension, the accrual rate associated with that pension, and the

replacement rate on early retirement benefits, are factors that affect the LFPR of males aged 55 to 64 years (Blondal and Scarpetta, 1998).

• Discouraged worker effect – For older workers who become unemployed, the difficulties in finding a new job may cause them to withdraw from the labour force. This is particularly likely to occur where there are social security payments (such as DSP or ASP) available to support non-employed persons who are not actively seeking work, and those payments have high replacement rates.

Evidence for several countries suggests that older workers who are retrenched have a lower probability of being re-employed (especially in the same industry/occupation sector) than younger workers (for example, Hutchens, 1993, Gregg and Wadsworth, 1995). In Australia there is quite strong evidence that for some groups of older workers – especially low-skill males – discouraged worker effects are likely to be particularly important as a determinant of labour supply. First, it appears possible to classify some exit from the labour force by mature age workers as involuntary – for example, Borland (1996) shows that only a very small fraction of the decline in participation by 55 –59 year old males during the 1980s can be explained by retirement intentions data. Second, as has been described above, re-employment probabilities for retrenched older workers are lower than for younger workers, and this is a fact that is clearly understood by older workers (Borland, 2003). A significant factor influencing withdrawal from the labour force by discouraged job seekers appears to be availability of non-work related social security payments such as the Service pension and DSP. Many studies have noted the apparent association between decreasing participation of older males and increasing take-up of those payments – see Table 18 (McCormack, 1996, p.132; O'Brien, 2001; Davis et al., 2001; Carey, 1999; Merrilees, 1982, 1986, Kumar and DeMaio, 2002, and Stricker and Sheehan, 1981).

• Availability of bridging jobs – Availability of part-time jobs, and the capacity for workers to shift between jobs at older ages, may affect labour force

participation. (But little is known about dynamics of labour supply and employment of the mature age population in Australia.)

For the United States there is debate about the incidence of a pre-retirement phase in which older workers transit from a full-time (career) job to a part-time job prior to retirement (for example, Ruhm, 1990 and 1991 against Blau, 1994 and Hurd, 1996). Those who argue that there is not a high incidence of such a phase also suggest that to the extent that it is due to unavailability of bridging jobs for older workers, it may constitute an impediment to labour force participation by the older population. Case study-type analysis has found that there can be a high take-up rate of phased retirement plans, and that the incidence of take-up by individual workers is strongly inversely related to employee performance (for example, Allen, 2003).

• Evidence on substitutability of young and old workers – There does not appear to be strong evidence that relative demand for older and younger workers is or should be significantly affected by their relative productivity.

International studies suggests there do not appear to be significant productivity differences between workers by age (Hurd, 1996 and OECD, 1998). One survey of gerontological/psychological studies concludes that there is no significant overall difference between the job performance of older and younger workers; older workers tend to be more reliable and have better inter-personal skills, whereas younger workers are more adept at very rapid production line and information processing work (Warr, 1994). More recently, a review of econometric evidence on labour demand by the OECD (1998, p.131) also concludes that "…workers of different ages are quite good substitutes in production".

• Technological change – Has been found to have opposing effects on retirement and labour force participation of the older population (for example, Bartel and Sicherman, 1993, and Friedberg, 2001). First, workers with higher levels of specific skills associated with technology are likely to retire later. Second, older workers in industries that experience unexpected technological change are likely to retire at younger ages.

Over the past 25 years in Australia there appears to have been a significant increase in the demand for high skill workers relative to low skill workers (for example, Borland, 1996, and 1999). An important dimension of that growth in demand for high skill workers, has been an increase in demand for workers with high levels of education attainment. Average education attainment is lower amongst current cohorts of mature age workers (who for the most part had completed their formal education prior to expansion of the higher education system in the 1970s and 1980s). Hence it is likely that the growth in relative demand for high skill workers has acted to reduce demand for mature age workers. (This is not an effect associated with age 'per se'; it is associated with differences between younger and mature age workers in levels of education attainment.)

6. What can policy do?

Without a strong understanding of the nature of the transition phase for older workers in Australia, it may be premature to seek to comment on policies for promoting labour supply and employment of the older population. However, while a better understanding of the transition phase will no doubt better inform policy-making, it still seems that some general lessons for policy do emerge from the review undertaken in this report.

One general lesson is that in absence of an increase in aggregate labour demand, a policy that increases the employment/population rate of the older population may simply represent substitution of older for younger workers. For example, policies to promote to businesses the value of hiring older workers, or requirements for organizations to report on the age composition of their workforce against targets for employment of older workers, may induce businesses to hire a greater proportion of older workers. However, while labour demand remains static, such hiring would have to be in place of workers in other age groups. Increasing the employment/population rate of the older population in this way will therefore not contribute to an objective of increasing the aggregate employment/population rate.

A second general point that seems important is that, even if aggregate labour demand rises, so that there is scope for the employment/population rate of the older population to increase without crowding out other age groups from employment, other factors apart from will play a primary role in determining labour supply and employment outcomes for the older population. For example, increasing education attainment of successive cohorts of older workers, changed employer attitudes towards employing older workers, increases in wealth of the older population due to for example the recent housing price boom, the rise in the proportion of service sector jobs, and an increase in demand for carers due to the rise in the proportion of elderly population, are all likely to have significant effects on demand for older workers, and willingness of the older population to remain in the labour force. For example, Miller (1983) has suggested that most of the very large decline in labour force participation by males aged 60-64 years during the 1970s was voluntary, due to large increases in asset prices during that period. The message here is that policies for promoting employment of older workers are likely to be operating in an environment where other factors are also having very large effects on incentives to supply labour and on demand for older workers.

The third general lesson is that any policy option needs to be considered in the context of the general objectives that policy is seeking to achieve. One example is the policy of facilitating 'phased retirement' for older workers. Labour supply theory predicts a mixed effect on lifecycle employment of availability of phased retirement. A worker who is able to adjust hours of work as retirement approaches is likely to gradually decrease hours of work across time up to the time of retirement. If the same worker is constrained to choosing, for example, between working full-time or working zero hours, then the worker is likely to continue working full-time beyond the age at which hours of work would have begun to decrease if hours could be adjusted, but to switch to working zero hours at any earlier age than if hours could be adjusted. Therefore the effect on aggregate employment is ambiguous. Facilitating phased retirement will cause a worker to work less hours when working, but to remain in the workforce for a longer period of time. Hence, assessed against the objective of increasing aggregate employment, the policy of facilitating phased retirement may not produce significant (if any) benefits. On the other hand, it will improve worker well-being (by increasing

the labour supply choice set available to workers, which is likely to result in a better match with preferences of some workers).

7. Future work

The review undertaken in this report can provides a useful perspective on opportunities for future research on labour supply and employment of the older population in Australia.

First, there is an absence of longitudinal research on labour force transitions of older workers in Australia. Therefore little is known about the nature of transitions to retirement within the Australian workforce. Obviously the lack of research is primarily due to the absence of longitudinal data sets. The availability of HILDA (and the special set of questions included in the third wave of HILDA) will in future years allow some picture of the transition to retirement to be developed; although it will be many years before it is for example possible to follow a cohort of older workers for 10 years, which is probably the minimum length of time required to develop a precise knowledge about transitions.

Second, a significant weakness of the existing literature on employment outcomes for older workers in Australia is that there appears to be little knowledge of the quantitative significance of each of the potential causal factors for labour supply or labour demand. For example, studies have found that age of eligibility for the old age pension and for superannuation appear to have some role in explaining labour supply decisions of older workers. But there is no robust evidence about the quantitative significance of these types of factors, or about the relative influence on labour supply compared for example to family influences. Developing such a knowledge would require estimation of structural models of labour supply by older workers and modelling of demand for labour or worker productivity by age (for example, Gruber and Wise, 2002). An improved knowledge of policy effects on labour supply could also be gained by quasi-experimental analysis of recent policy changes such as the introduction of the Pension Bonus Scheme.

Table 1: Duration of unemployment spell by age – 2003(August)

	Males			Females		
	Proportion of ue (%)	**Rate of long-term ue (weeks)**	**Average duration**	**Proportion of ue (%)**	**Rate of long-term ue (weeks)**	**Average duration**
15-34 years	59.3	20.6	37.8	61.6	13.2	28.4
35-54 years	32.0	34.6	83.2	33.1	21.6	48.1
55+ years	8.7	48.5	107.5	5.3	43.7	105.9

Source:
ABS Supertable: Unemployed persons (ST UM3) by age, sex, state and duration of unemployment - from Apr01

Table 2: Workers retrenched between July 1994 and June 1997 – Proportion by current labour force status - Status at July 1997

	Employed (%)	**Unemployed (%)**	**OLF (%)**
Males			
18-24 years	46.8	47.6	5.6
25-34 years	60.4	31.9	7.7
35-44 years	64.6	27.4	8.0
45-54 years	58.4	31.6	10.0
55-64 years	33.4	29.5	37.1
Females			
18-24 years	52.4	32.1	15.5
25-34 years	57.1	19.2	23.8
35-44 years	56.5	18.9	24.6
45-54 years	55.8	15.4	28.8
55-64 years	30.0	6.5	63.5

Source: ABS, Retrenchment and Redundancy, catalogue no.6266.0, July 1997 (Table 4).

Table 3: Retired population – Main reason for exit from last full-time job – 1983 to 1997

	Job Loser	
	1983 (Sept)	**1997 (Nov)**
Males	29.9	46.6
Females	15.9	20.0
Persons	20.9	30.8

Source: ABS, Retirement and Retirement Intentions, catalogue no.6238.0.

Table 4: Responses to questions on job security – Mean responses – Employed wage and salary earners aged 18 to 64 years – Pooled data for August 1999 to May 2002

	Probability of job loss	**Probability of finding a similar job**	**Probability of job loss and not finding a similar job**
18-24 years	12.7	65.2	3.8
25-34 years	11.5	62.6	4.6
35-44 years	12.4	55.2	5.9
45-49 years	12.1	49.4	6.9
50-54 years	11.8	42.7	7.4
55-64 years	11.4	32.4	8.5

Source: Borland (2003, Table 3).

Table 5: Persons not in the labour force – Share of population by main activity by age and gender – September 2002

	45-54 years	55-59 years	60-64 years	65-69 years
Males				
Retired	16.5	31.6	53.7	77.4
Home duties	9.9	8.8	6.7	4.2
Disability/Illness	54.2	46.2	27.7	6.6
Carer for ill/disabled	5.1	2.0	2.5	1.7
Other	14.4	11.4	9.4	10.0
Total	100.0	100.0	100.0	100.0
Females				
Retired	8.2	23.3	39.8	50.4
Home duties	63.0	45.6	41.3	35.4
Disability/Illness	15.7	13.4	6.7	3.5
Carer for ill/disabled	5.7	7.9	4.0	2.5
Other	7.4	9.7	7.8	8.3
Total	100.0	100.0	100.0	100.0

Source: ABS, Persons Not in the Labour Force Australia, catalogue no.6220.0, September 2002, Table 2.

Table 6: Percentage of part-time workers in retired population – 1986 to 1997

	1986 (Nov)	1992 (Oct)	1997 (Nov)
Males		8.0	8.7
Females		16.6	19.2
Persons	6.4	13.1	15.0

Source: ABS, Retirement and Retirement Intentions, catalogue no.6238.0.

Table 7: Transition to retirement – Labour force status of older workers in the United States – 1969, 1975 and 1979

		Age in 1969		
	All	**58-59**	**60-61**	**62-63**
1969				
Not retired	78.0	87.1	79.3	65.9
Partial retirement	8.4	5.1	7.8	13.0
Retired	13.6	7.8	12.9	21.1
1975				
Not retired	19.9	31.7	14.7	11.6
Partial retirement	18.9	16.8	21.3	18.7
Retired	61.3	51.5	64.0	69.7
1979				
Not retired	9.0	11.1	8.1	7.4
Partial retirement	16.6	18.7	16.5	14.3
Retired	74.4	70.2	75.4	78.3

Source: Ruhm (1990a, Table 1).

Table 8: Characteristics of career job – United States – 1969 to 1979

	All workers	**White males**	**Females**
Career job ends by:			
40	9.6%	7.9%	13.8%
45	16.1	14.4	20.4
50	26.3	24.5	31.2
55	38.9	36.6	45.0
60	58.2	54.9	65.7
62	70.6	68.3	76.2
65	90.7	90.4	91.2
67	94.6	94.4	95.3
70	96.6	96.2	96.5

Source: Ruhm (1991, Table 2).

Table 9: Distribution of hours worked before retirement – United States, 1978

	Age			
	Less than 62	**62-64**	**65-67**	**68+**
1-34	14.8	15.3	17.6	57.6
35-40	58.7	62.1	54.1	28.3
40+	26.5	22.6	28.3	14.1

Source: Hurd (1996, Table 1.3).

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Figure 1: Transition to Retirement: Conceptual Framework

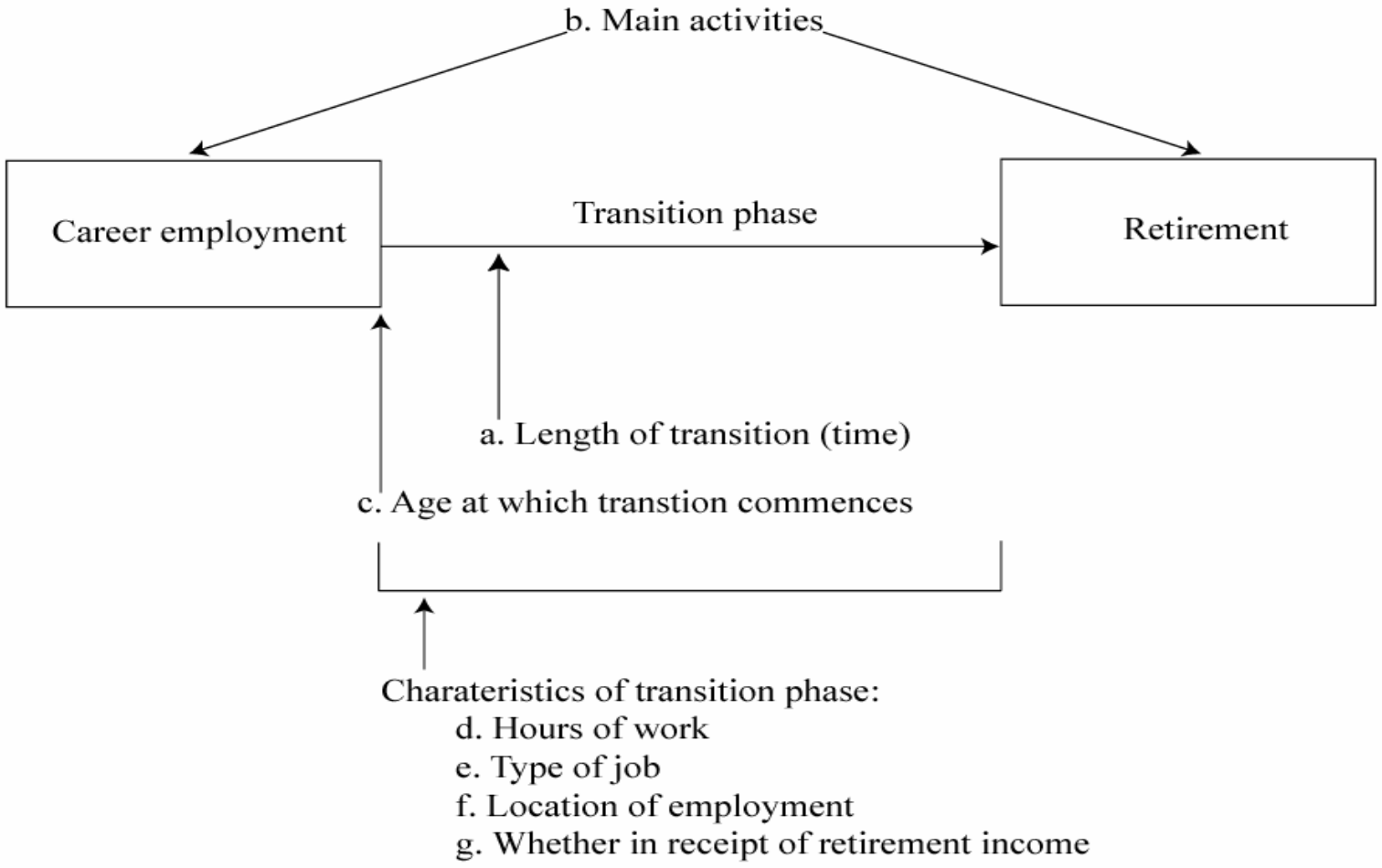

Figure 2a: LFPR and Employment/Population rate - Civilian population aged 15 years and above - 1966 to 2003 (August)

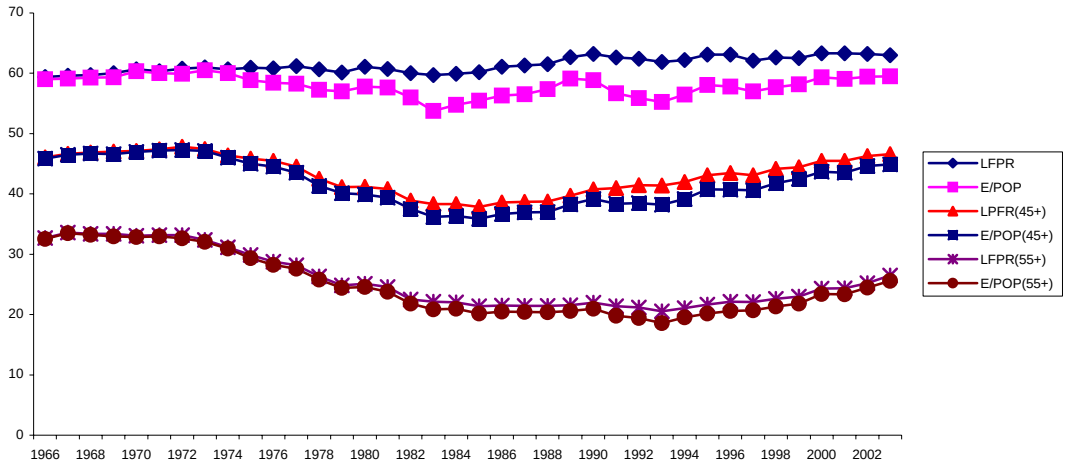

Figure 2b: LFPR and Employment/Population rate - Civilian population aged 45 years and above by gender - 1966 to 2003 (August)

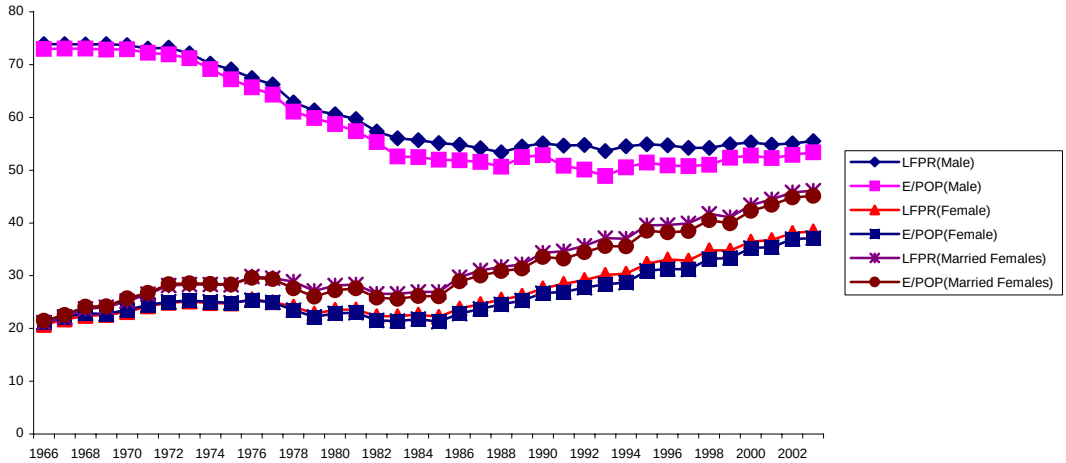

Figure 3a: LFPR and Employment/Population rate - Civilian population aged 45 to 54 years by gender - 1966 to 2003 (August)

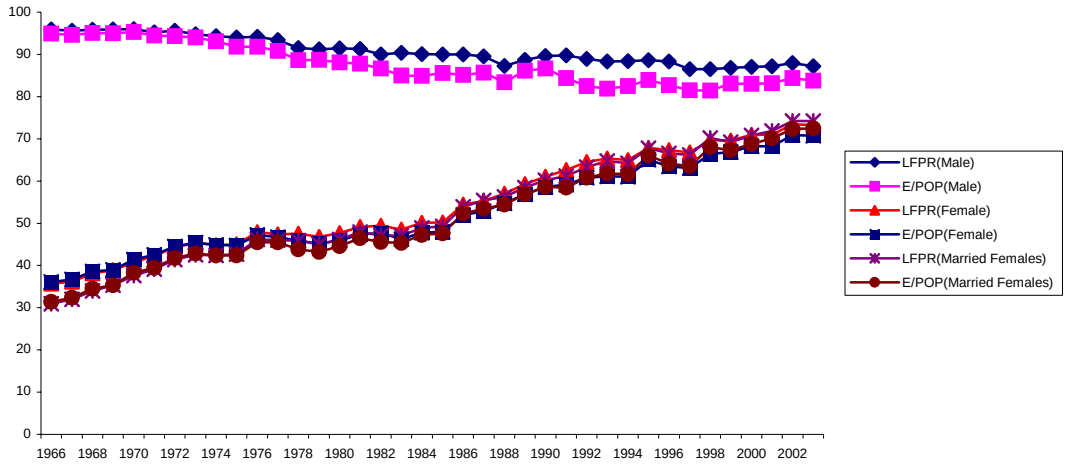

Figure 3b: LFPR and Employment/Population rate - Civilian population aged 55 to 59 years by gender - 1966 to 2003 (August)

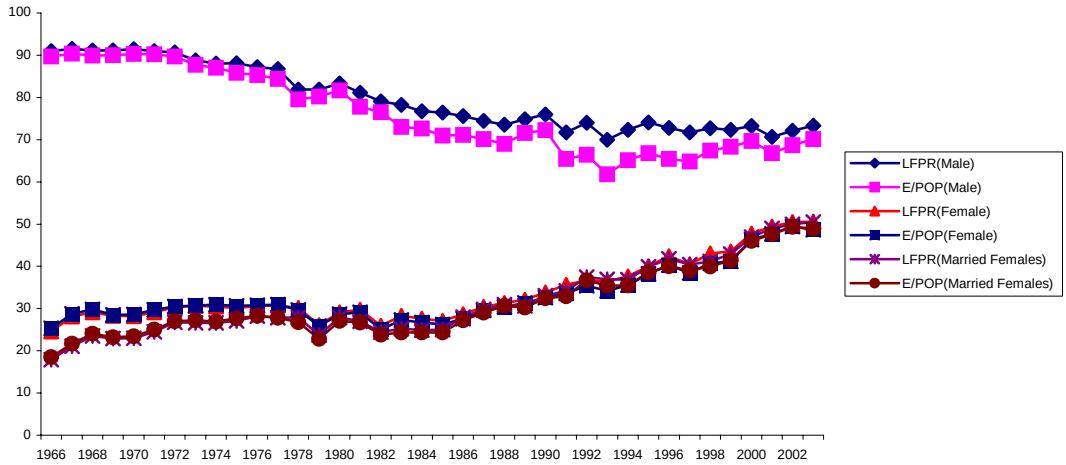

Figure 3c: LFPR and Employment/Population rate - Civilian population aged 60 to 64 years by gender - 1966 to 2003 (August)

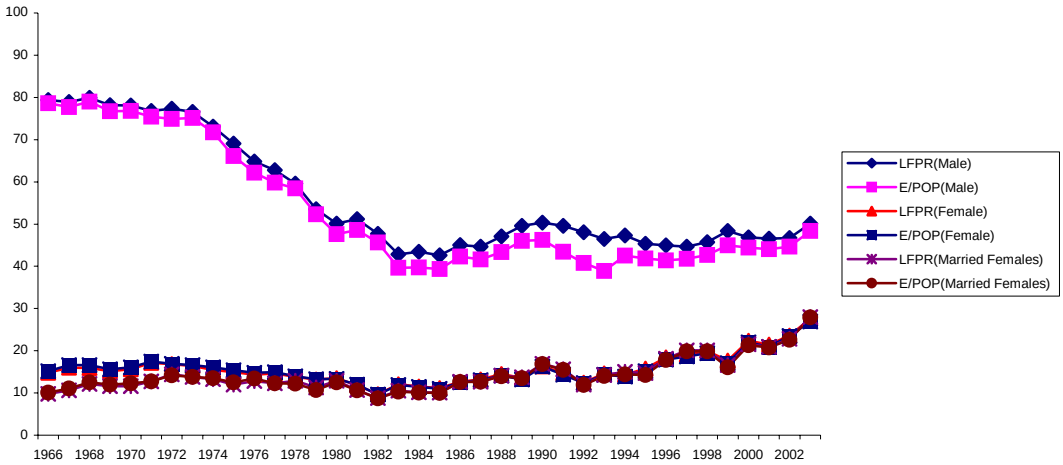

Figure 3d: LFPR and Employment/Population rate - Civilian population aged 65 years and above by gender - 1966 to 2003 (August)