Factors Influencing Medium-Term Employment Growth

This article examines some of the key factors that will influence Australia's potential employment growth rate over the medium term. This includes the outlook for labour force growth, particularly in the light of demographic factors.

INTRODUCTION

In the projections used to estimate Budget expenses and revenues over the forward estimate years from 2000-01 to 2002-03, employment growth of 2 per cent per annum is used. This is not intended to be a forecast, nor an estimate of the maximum potential rate of employment growth. Rather, it is based on analysis of underlying trends. In the forward estimate years and beyond, potential employment growth will depend on the rate of growth of the working age population, changes in the total participation rate and the scope for (sustainable) improvement in the unemployment rate over the period. All of these factors will be affected by both cyclical and structural influences, which together will determine the rate of sustainable employment growth at any point in time.

This article analyses the extent to which demographic and structural factors will impinge on the rate of employment growth likely to be achieved over the next decade, with a particular focus on the first few years of the next decade, the period of the forward estimates in the Budget.

The first part of this article analyses the key drivers of labour force growth, including projected working age population growth and factors affecting the total participation rate. The scope for further inroads to be made into the unemployment rate are then considered, with particular reference to an assessment of the likely level of the 'structural' level of unemployment. The final section draws out the implications of the analysis for employment growth over the forward estimate years and beyond.

EMPLOYMENT GROWTH

One element in sustaining strong economic growth over the medium term is strong employment growth. Employment growth, in turn, reflects trends in labour force growth and the unemployment rate.

LABOUR FORCE

The future rate of growth in the labour force will be a key factor influencing the rate of growth in employment. Labour force growth reflects the growth of the working age population and changes in the labour force participation rate.

The labour force has grown by an average of 1.9 per cent per annum over the past twenty-five years, reflecting growth in the working age population of 1.7 per cent and a long-run trend increase in the participation rate. An examination of the outlook for labour force growth over the medium term requires consideration of these underlying 'drivers' of labour force growth.

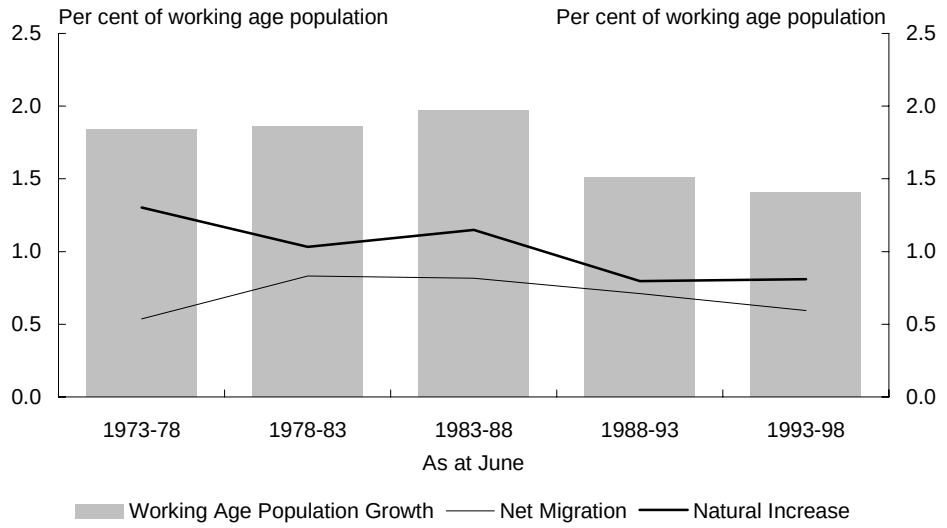
Working age population

The working age population[1] has grown by an average of around 1.7 per cent per annum over the past twenty-five years, reflecting average natural increase (ie the excess of births of fifteen years previous over deaths in the current year) of 1.0 per cent per annum and average net immigration of 0.7 per cent per annum. However, these long-run averages mask the underlying trends affecting population growth. Chart 1 illustrates this changing profile, by breaking these long-run averages down into five-year periods. In particular:

- The contribution of natural increase to working age population growth has been on a downward trend over the past twenty-five years, falling from 1.3 per cent per annum between June 1973 and June 1978 to 0.8 per cent per annum between June 1993 and June 1998.
- The contribution of net overseas migration to working age population growth rose from 0.5 per cent per annum between June 1973 and June 1978 to around 0.8 per cent per annum between June 1978 and June 1988, before falling back to 0.6 per cent per annum between June 1993 and June 1998.

1. The ABS defines the working age population as persons aged 15 and over.

Chart 1: Components of working age population growth



Source: ABS Cat. Nos. 3101.0, 3201.0 and RBA Australian Economic Statistics.

In order to project the likely growth in the labour force over the next decade, it is necessary to examine more closely underlying trends in the rate of natural increase and net overseas migration.

Natural increase

The rate of natural increase in the working age population in a year reflects the number of Australians who attain the age of 15 in the year less the number of Australians aged over 15 who die in the year. In turn, this broadly reflects, respectively, the birth rate of 15 years previous and the death rate. Each of these elements is examined in turn.

The birth rate: the baby boom and bust

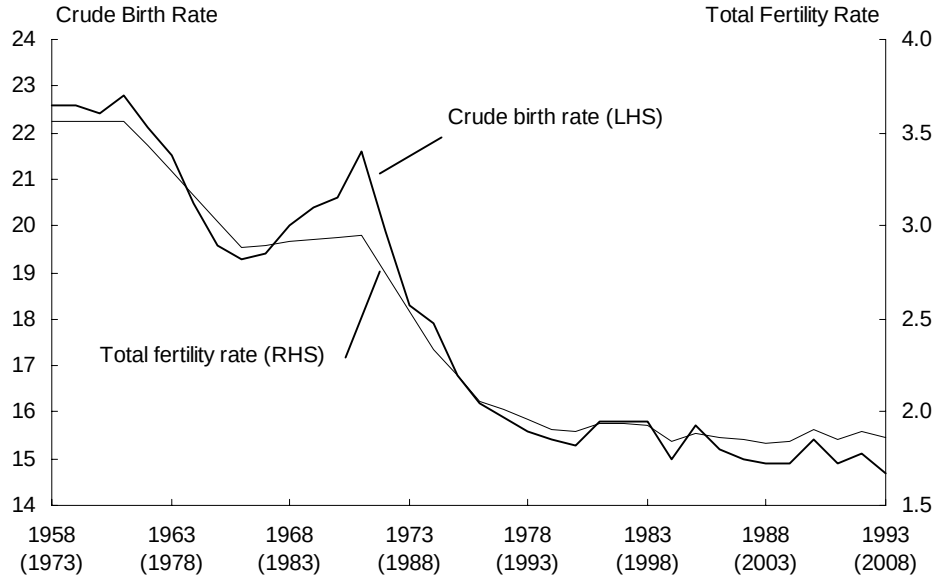
Projecting the contribution of the birth rate to growth in the working age population over the next decade is relatively straight forward because the number of children born in Australia fifteen years ago is already known. In principle, this figure should be adjusted to reflect the mortality rate in the first fifteen years of life and the net migration of children born fifteen years ago. In practice, however, these factors are unlikely to have a significant effect on working age population growth.

There are two broad measures of the birth rate: the crude birth rate and the total fertility rate. The crude birth rate is the number of children born in the year per thousand people in the population as a whole. It is not adjusted to reflect the proportion of the population made up of females of child bearing age. By contrast, the total fertility rate represents the number of children a woman

would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.

Each of these measures contains information of interest. The crude birth rate (with a fifteen year lag) provides more information about the impact of the birth rate on the gross increase in the working age population. However the total fertility rate is better equipped to illustrate trends and causes that underlie this increase. Chart 2 compares the crude birth rate with the total fertility rate between 1958 and 1993, with children born in these years entering the working age population between 1973 and 2008.

Chart 2: Alternative measures of the birth rate



Source: ABS Cat. Nos. 3101.0, 3301.0.

The key point from Chart 2 is that both the crude birth rate and the total fertility rate fell at the start of the 1960s, marking an end to the strong birth rate from the end of World War II (the 'baby boom'). Although the crude birth rate rose in the second half of the 1960s, the total fertility rate was relatively stable. Thus, the increase in the crude birth rate in the second half of the 1960s reflected the increase in the number of women of child bearing age, as 'baby boom' females moved into child bearing years. Both the crude birth rate and the total fertility rate fell sharply in the early 1970s (the 'baby bust'), and have remained at low levels since then.

The impact of the sharp downward shift in the birth rate in the early 1960s and early 1970s has considerable implications for working age population and labour force growth more recently, with the shift from a relatively strong to a relatively weak birth rate contributing to a shift in the age-structure of the population. As a result, the (lagged) contribution of the birth rate to working age population

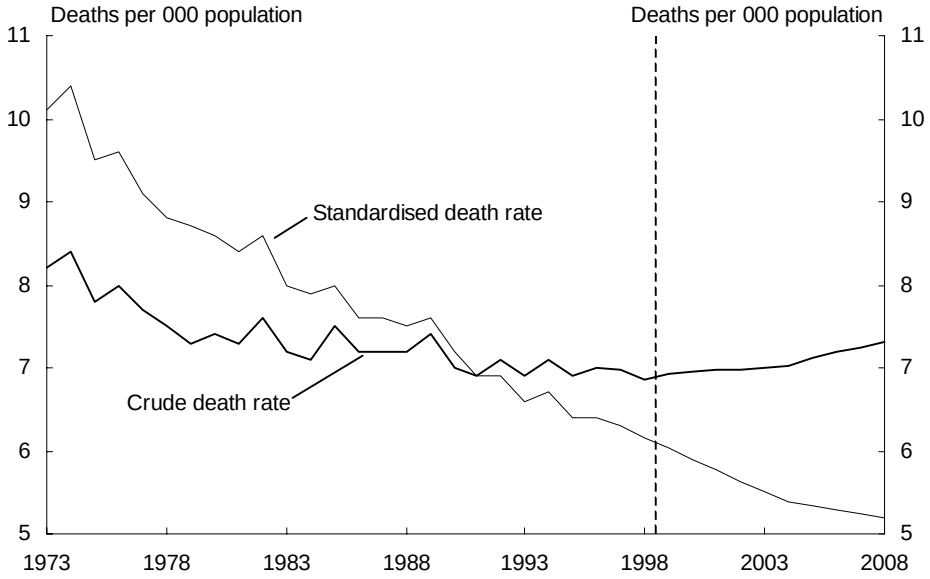
growth has been significantly lower since the mid-1980s and will continue to fall over the next decade.

The death rate: improved longevity and life expectancy

The other key factor influencing the rate of natural increase in the working age population is the significant improvement in longevity and life expectancy, as reflected in lower death rates.

As with the birth rate, there are two broad measures of the death rate: the crude death rate and the standardised death rate. The crude death rate is the number of people who die in the year per thousand people in the population as a whole. No attempt is made to adjust this figure to reflect the proportion of the population in older age groups. By contrast, the standardised death rate represents the overall death rate that would have prevailed in a standard population if it had experienced at each age the death rates of the population being studied (ie, it abstracts from the ageing of the population). Chart 3 compares the crude death rate with the standardised death rate over the past twenty-five years, and outlines projections for these rates for the next decade.

Chart 3: Death rate



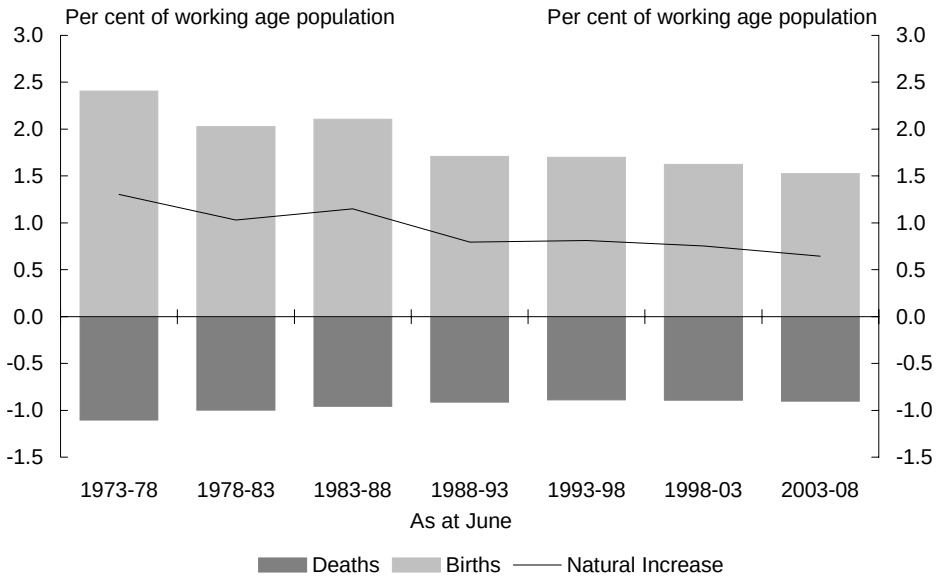
Source: ABS Cat. Nos. 3101.0, 3302.0.

Chart 3 illustrates that, even with the assumption of continued reductions in age specific death rates, the crude death rate is expected to rise slightly in the next decade, as the proportion of the population in older age groups increases. As a result, increases in the crude death rate are expected to detract a little from working age population growth in the next decade.

Contribution of natural increase — summary

In summary, the moderation evident since the mid 1980s in the contribution of natural increase to working age population growth is expected to continue in the next decade. Chart 4 illustrates the components of the natural increase in the working age population growth over the past twenty-five years, and that projected over the next decade.

Chart 4: Components of natural increase in working age population



Source: ABS Cat. Nos. 3101.0, 3201.0 and RBA Australian Economic Statistics.

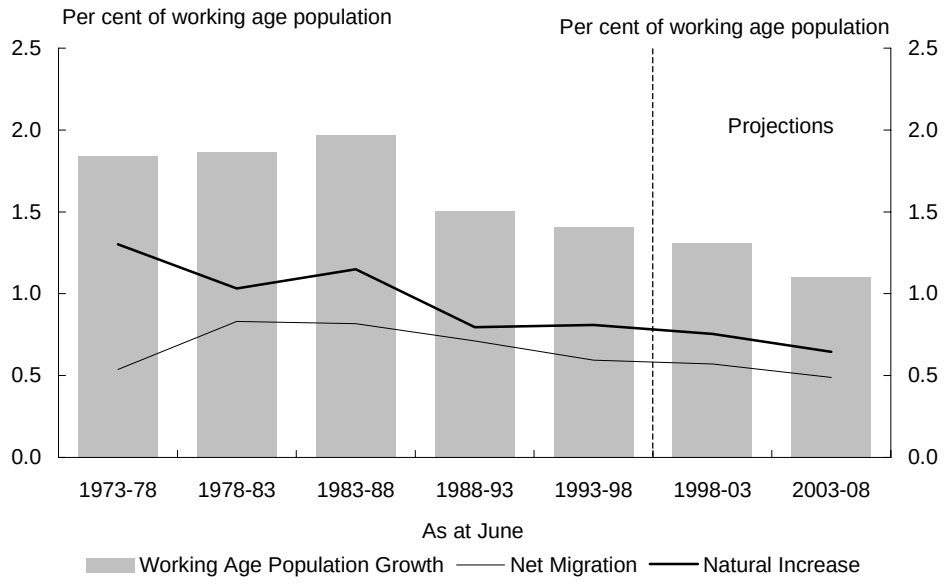
The impact of immigration

The other key element of working age population growth is the level of net overseas migration. Net overseas migration averaged around 75,000 persons per annum between 1991-92 and 1997-98. It is assumed for the purposes of this analysis that net migration will decline from its 1997-98 level of around 106,000 to around this average level by the end of the forward estimate years (ie, June 2003), and then stabilise around that level. Clearly, there is more uncertainty around this assumption than around the contribution of natural increase to future working age population growth. However, to put this uncertainty into perspective, a variation of 20,000 persons per annum around this assumption would only change prospective growth in the working age population over this period by 0.1 percentage point per annum.

Summary — working age population growth

On the basis of these projections for natural increase and net migration, working age population growth is projected to be around 0.1 per cent per annum lower over the five years to June 2003 than in the previous five years, and around 0.2 per cent per annum lower again in the next five year period. By this time, working age population growth would be around 1.1 per cent per annum, compared to the recent peak of nearly 2 per cent per annum between June 1983 and June 1988. The extent to which this projected slowdown in the rate of growth in the working age population will be reflected in growth in the labour force, however, will be influenced by future trends in the total participation rate. This issue is discussed below.

Chart 5: Components of working age population growth



Source: ABS Cat. Nos. 3101.0, 3201.0 and RBA Australian Economic Statistics.

The participation rate

The participation rate is defined to be the number of persons in the labour force as a percentage of the working age population. Over the past twenty-five years, the total participation rate has risen from around 61 per cent to around 63 per cent, resulting in labour force growth being 0.2 percentage points per annum higher over this period than the rate of growth in the working age population.

Changes in the participation rate can reflect changes in either the **age-composition** of the working age population, or participation **within age-groups**, or both. Recent movements in the participation rate were discussed in detail in the Summer 1999 edition of *Economic Roundup.*

Age-composition effect on participation

As participation rates vary markedly between different age groups, changes in the age-structure of the working age population can influence the total participation rate. The ageing of the population (in isolation) has placed downward pressure on the total participation rate in recent decades. This downward pressure is expected to increase over the next decade, as the 'baby boom' moves into the lower participation 'early retirement' age group.

Over the past twenty-five years, changes in the age-structure of the population has resulted in the participation rate being around one percentage point lower than it would otherwise have been (all other things being equal), as the proportion of the working age population over age 65 increased. Over the next decade, this effect is projected to put additional negative pressure equivalent to around 1½ percentage points on the participation rate. This acceleration reflects the move of the baby boom generation into the (lower workforce participation) early retirement years.

Trends in participation within age-groups

The fact that the total participation rate has risen over the past twenty-five years, despite the negative impact of the ageing population, as discussed above, can be explained by reference to trends in participation within age-groups. In particular, female participation rates in most age groups have increased significantly over this period, more than offsetting a steady decline in the rate of workforce participation by males in most age groups (see Chart 6). Bacon (1997)[2] noted that male and female participation rates have been converging for the past fifty years. Looking forward, judgement is required as to the rate of convergence and when it may cease. In turn, this requires analysis of the various social, cultural and economic factors that can influence workforce participation within age groups. In any case, it seems likely that the rate of convergence will slow as the point of maximum convergence is approached. Indeed, there is some evidence that such a slowing may already be underway.

In assessing likely movements of workforce participation within age groups over the next decade, an important consideration is how they will be affected by the move of the 'baby boom' generation into the 'early retirement' cohorts. The importance of this issue is underscored by the OECD's observation that the economic effects of population ageing would be greatly diminished 'if it were possible to increase labour force participation rates amongst persons aged 55 and over to the levels recorded in the 1960s'.[3]

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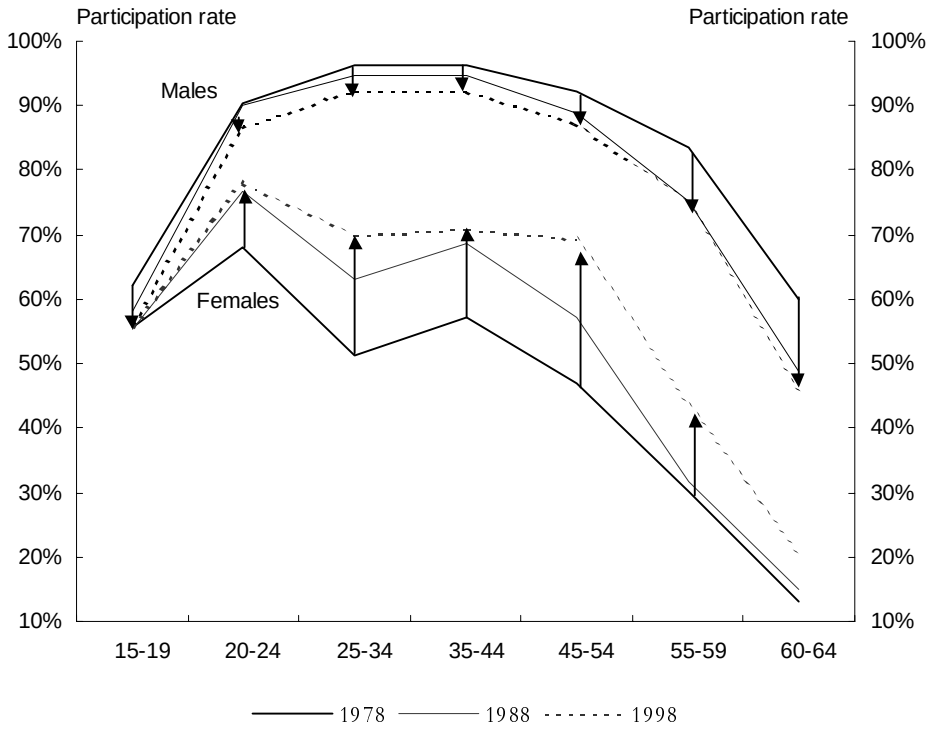
2. Bacon, B.R., 1997, 'Work, Retirement and Dependancy'*People and Place, Vol. 5 No. 2.*

3. OECD, *Economic Survey of Australia 1998-99,* pp. 135-143.

Chart 6: Participation rate by age and gender over time



Source: ABS Cat. No. 6202.0.

Most males (over 60 per cent) who retire early (ie, before age pension age of 65) do so involuntarily,[4] with the main reasons given for early retirement being their ill health, injury or retrenchment. Further, the decline in workforce participation between age 55 and 64 is significantly greater for those without tertiary education.[5] As 'baby boom' males have a higher level of educational attainment than previous generations, they may experience a lower level of involuntary early retirement than previous generations. Indeed, the relative stability (following a period of steady decline) over recent years in the participation rate of males aged between 55 and 64 may reflect the emergence of this effect.

It is considered likely that, as 'baby boom' females have maintained a higher level of workforce attachment during their 'peak working years', they are likely to maintain a greater connection to the workforce that their predecessors in the 'early retirement' age groups.

Nevertheless, there remains considerable uncertainty as to how both male and female 'baby boomers' will approach the 'early retirement' decision. On the one

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4. Australian Bureau of Statistics, November 1997, Cat. No. 6238.0, *Retirement and Retirement Intentions.*

5. OECD, *Economic Survey of Australia 1998-99.*

hand, they may place a greater value on leisure in retirement than previous generations, resulting in an increase in voluntary early retirement. On the other hand, recent measures aimed at removing incentives for early retirement could see a decrease in voluntary early retirement. At this stage, it is too early to tell what the net effect of these factors may be.

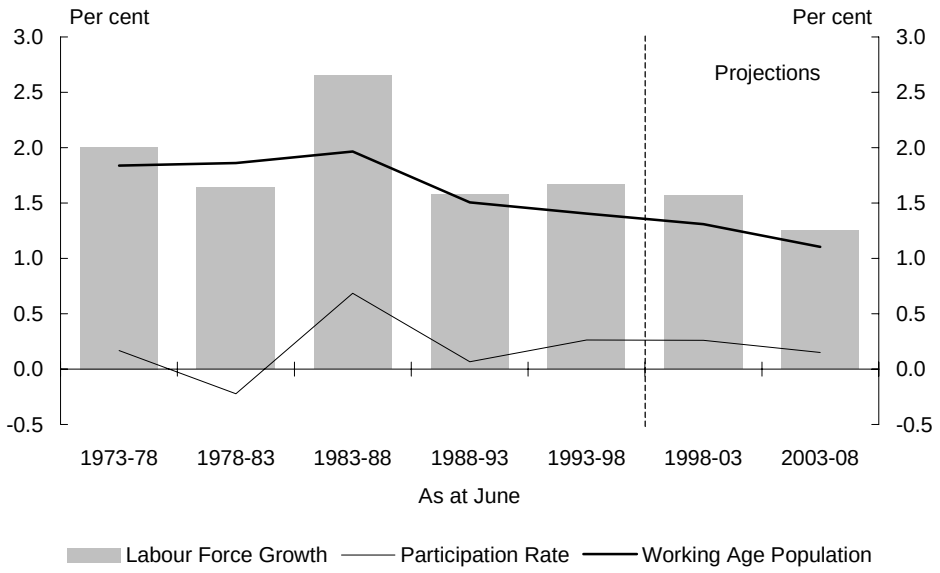
Participation rate — summary

In summary, while there appears to be scope for continued increases in the participation rate over the early years of the next decade, it is likely to become more limited in the latter half of the next decade. This is when the downward influence of the changing age-structure of the working age population accelerates and the rate of convergence of male and female participation rates within age groups starts to slow.

Labour force — summary

In summary, labour force growth is expected to moderate over the next decade, particularly in the latter half, primarily reflecting a projected moderation in growth in the working age population (see Chart 7). Although some further increase in the participation rate is considered likely over this period, this is expected to slow in the latter half of the decade, as the dampening effect of demographic factors increases, and the rate of convergence of female and male participation rates starts to slow.

Chart 7: Components of labour force growth



Source: ABS Cat. No. 6202.0, RBA Australian Economic Statistics.

Unemployment rate

In addition to labour force growth, the other key element influencing the rate of sustainable employment growth is whether the structural rate of unemployment is above or below the prevailing unemployment rate. Put simply, the extent to which employment growth can (sustainably) outstrip labour force growth over a period depends on the scope for the unemployment rate to fall below its present level without igniting inflationary pressures.

In practice, the measurement of the structural rate of unemployment is difficult. The relationship between unemployment, wages and inflation is complex and changing over time. Inflation, for example, may rise for reasons other than generalised wage increases. Firms may be in a position to exercise greater pricing power, at least in the non-tradable goods sector, in buoyant demand conditions, or import prices may be rising because of a falling exchange rate. *Prima facie* evidence of a structural problem in the labour market exists, however, if, for firms generally, wage increases exceed the net effect of productivity growth and price rises (ie, real unit labour costs rise) at high rates of unemployment, reducing incentives to increase employment and investment.

Measurement of the structural rate of unemployment is also conceptually difficult as unemployment may be falling at a pace such as to influence the wage claims and outcomes of those already in employment, even though the unemployment rate is above what might otherwise be considered its structural level.

The current unemployment rate is above most estimates of the structural rate of unemployment. For example, the OECD[6] noted that most estimates of the structural rate of unemployment in Australia are in the 6½ to 7½ per cent range for the mid-1990s. However, such estimates generally do not include an allowance for the likely beneficial effects on structural unemployment of recent reforms to product and labour markets. Some of these benefits are likely to be still accruing. Nor do such estimates make any allowance for future reforms in the labour market. More fundamentally, they do not acknowledge that structural unemployment may have a dynamic element, such that the rate will fall as actual unemployment falls.

More recent studies tend to suggest a lower range for the structural unemployment rate than reported by the OECD, as noted above. For example, Gruen, Pagan and Thompson (1999)[7] estimated the structural rate of unemployment to be between 5 and 7 per cent through the 1980s and 1990s,

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6. OECD, *Economic Survey of Australia 1998-99.*

7. Gruen, D., Thompson, C. and Pagan, A., 1999, *The Phillips Curve in Australia*, RBA Research Discussion Paper 1999-01. For further discussion, see Bernie, K. and Downes, P., 1999, *The Macroeconomics of Unemployment in the Treasury Macroeconomic (TRYM) Model*, paper presented at the Reserve Bank of Australia, Seminar Series, 27 January.

while the structural unemployment rate derived from the Treasury Macroeconomic (TRYM) model is below 6½ per cent.

In short, there is scope for the unemployment rate to fall significantly below its present level of around 7½ per cent over the medium term without igniting inflationary pressures. The extent of these further falls in unemployment depend, in part, on the extent of further labour market reform, taxation reform, social security reform and microeconomic reform more generally.

SUMMARY

Employment growth of around 2 per cent per annum, or above, would seem to be achievable on average in the early years of the next decade, given the demographic influences on medium term labour force growth and scope for further falls in the unemployment rate. Looking ahead to the latter half of the next decade, demographic factors are likely to have a moderating influence on the outlook for labour force growth, and by extension, employment growth. That is, the level of employment growth associated with a steady unemployment rate is likely to be somewhat lower than has been the experience of recent decades. The employment growth outlook in that period will also be affected by the extent to which further inroads can be made into any remaining structural unemployment.