Two Essays on Demographic Change and the Australian Economy

Callum Jones
and
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Foreword

The University of Western Australia's Business School enjoys a reputation as a leader in business education. This reputation is based on an internationally-excellent business education for the benefit of our undergraduate and postgraduate students, and ultimately, the business sector and the wider community.

Our staff and students within the Business School continue to build on that reputation, notably through our high-quality teaching and research in the economics discipline. In 2007, that quality has again been reflected by two outstanding students – Callum Jones and Virginia Gogan – who excelled in winning first and second prize in the Reserve Bank of Australia's inaugural annual economics essay competition. Both students are in their third year and both are studying double degrees in Economics and Law. Their work stood out against entries from economics students around Australia addressing the consequences of an aging population for Australia's future productivity and economic growth, and the associated economic policy challenges.

The UWA Business School and the Law School attract very high-calibre students and produce graduates with outstanding records of achievement across a range of professional fields, as well as within the community more generally.

We are extremely pleased to be able to include the essays from these outstanding students as part of the UWA Economics Discussion Paper Series.

Professor Alan Robson
Vice-Chancellor
The University of Western Australia
December 2007

Background Information

In 2007, the Reserve Bank of Australia sponsored, in conjunction with the University of New South Wales Economics Society, a 2000-word essay competition for economics undergraduates across Australia. The question involved an analysis of the consequences and policy challenges of Australia's ageing population for future productivity and economic growth. Entries were assessed on their engagement with the question, critical analysis, organisation, conclusions and writing style.

The question in its entirety was:

> *What are the consequences of an ageing population for Australia's future productivity and economic growth? Discuss the challenges these consequences might have for economic policy.*

Entries were due on 31 August, 2007. Prizes were presented at a ceremony at the RBA in Sydney on 15 October, 2007 attended by the RBA Governor, Mr Glenn Stevens, the Head of Research at the RBA, Dr Chris Kent, the judging panel – Mr Adam Cagliarini from the RBA, Hazel Bateman and Glenn Otto both from the University of New South Wales, Ross Gittens from the Sydney Morning Herald and representatives from the University of New South Wales Economics Society.

First place received $1500, second place $750 and the best essay from a first year student received $500. The money was generously provided by the RBA. The RBA media release regarding the prize is attached to this document on page 27.

Acknowledgements

The roles of Adam Cagliarini from the Reserve Bank of Australia, and Hazel Bateman and Glenn Otto from the University of New South Wales in judging the competition entries are kindly acknowledged. Adrian Wong from the University of New South Wales Economics Society organised the competition. The Reserve Bank's sponsoring of the essay competition is also appreciatively acknowledged.

First Prize

Australia's Ageing Population: Economic Consequences and Policy Challenges

Callum Jones

In the months leading up to the 2006-07 Ashes Test series in Australia, many commentators suggested Australian pace bowler Glenn McGrath, at 36 years of age, was too old to sustain his outstanding bowling record (Reuters, 2006). Similar comments have been made on the effect of an ageing population on Australian economic performance, that it would not be able to sustain its growth performance as the age distribution of the citizenry shifts upwards. This essay seeks to examine these claims by investigating the consequences of an ageing population on Australian productivity and economic growth, and to analyse the challenges these changes have for economic policy.

Demographic Changes

Over the coming century, Australia's population is expected to age for two reasons, a decreasing fertility rate and an increasing life expectancy (Treasury, 2007). Migration will mitigate these influences because, in general, migrants are younger than Australia's resident population. Projections of the future age distribution of Australia's citizens are conducted by the Australian Bureau of Statistics (2005) under different demographic scenarios[1] and are presented graphically in the Appendix. Figure 1 provides projections under assumptions 'Series A', while Figures 2 and 3 provide similar projections under assumptions 'Series B' and 'Series C' respectively.

It is clear from projections under all three assumption sets that the age distribution of the Australian population will shift towards the elderly. Metaphorically, and perhaps ominously, the age distribution will begin to represent the top-heavy shape of a coffin (Productivity Commission, 2005, p. xiv). The challenge for future economic policy will be to accommodate the anticipated economic effects of these changes. It is these economic effects and the response of policy which this essay seeks to examine. The first important area of effect is the labour market.

The Labour Market

The effects of ageing will be felt most directly in the labour market. As fertility rates fall, the growth of the working-age population will decline, reducing the supply of labour and restricting the growth potential of the Australian economy. Consider

1

TABLE 1
ASSUMPTIONS FOR PROJECTION SERIES UNDER CAT. 3222.0

	Fertility Rate[(b)] (babies per person)	Net Migration[(c)] (persons per year)	Life Expectancy at Birth[(a)]	
			Males	Females
Series A	1.9	140 000	92.7	95.1
Series B	1.7	110 000	84.9	88.0
Series C	1.5	80 000	84.9	88.0

[(a)] From 2050-51
[(b)] From 2018
[(c)] From 2007-08 for Series A and Series B, and from 2004-05 for Series B

Source: Australian Bureau of Statistics (2005) Cat. No. 3222.0

Figure 4 which presents the historical and projected[2] growth rate of those of working-age (15 to 64 inclusive). As the bold-dotted line indicates, the annual growth of those aged 15 to 64 inclusive fell from about 2% in the 1980s, to 0.8% in 2007 and is projected to further decline to 0.43% in 2021 and 0.15% in 2051.

These changes are reflected in a projected increase in the aged-to-working 'dependency ratio' as mapped in Figure 5. The ageing effect is also expected to cause the participation rate of those 15 and over to decline from 64.5% in 2005-06 to 57.1% in 2046-47. Figure 6, adopted from the Productivity Commission (2005, p. 85) models the expected impact of ageing on the participation rate illustrating the decline in the relative supply of labour.

The decline in the supply of labour will reduce the growth potential of the Australian economy. The Australian economy should expect to see a lower rate of economic growth as the population ages. Figure 7 presents the Productivity Commission's (2005, p. 127) estimate of the effect of ageing on per capita GDP growth. Accordingly, decomposing growth into changes in population, participation and productivity, with a smaller influence on growth from population (growth of labour supply) and participation, the growth rate of real GDP per person would be primarily a function of the increases in productivity.

Future policy challenges lie in improving the participation, measured or unmeasured (for example, volunteering) of those above retirement age in the labour market to offset the decline in labour supply. A common suggestion is to increase the retirement age. However, this ignores political reality. A more practical approach is to develop a flexible industrial relations system, appropriate aged-care support ('Hogan Review', 2004) to enable carers to enter the workforce, and the provision of incentives to induce those older than 65 to work such as conditional health and superannuation benefits. In inducing older citizens to enter the workforce, the challenge is to disprove any notion that participation in the workforce is mutually exclusive to life in retirement. Furthermore, the potential exists for improvements in the participation of women in the workforce which would mitigate some of the decline in the labour supply (Access Economics, 2006). Paradoxically, to address an aged care issue, this could involve improving access to childcare.

In addition to the reduction in the growth of labour supply, the age-composition of the labour market will change over time. As illustrated in Figure 8, the proportion of the labour force, separated by decades has converged over time.

The net impact of these adjustments on productivity is unclear, primarily because of uncertainty about countervailing influences on productivity levels across age groups. On one hand, older workers have more experience, greater 'corporate memory', lower job turnover and lower levels of absenteeism, and paradoxically, sick leave (Access Economics, 2001, p. 14). This is offset by the (historically) lower levels of education of older workers and their declining physical and mental abilities culminating in more accidents (DEWR, 2003). If there is a correlation between age and productivity, we should expect the productivity level of older workers to carry more weight in the overall productivity level.

[2] Assume the mid-range 'Series B' assumptions reported by the ABS.

In view of this uncertainty, Treasury (2007) and the Productivity Commission (2005) assume constant productivity growth of 1.75% and conduct sensitivity analyses above and below this level. For predictions of future growth, the significance of productivity should not be underestimated. What may appear to be minor differences in annual productivity growth will affect, significantly, long-run real GDP per capita. For example, the Productivity Commission (2005, p. 140) estimates that a reduction in annual productivity growth of 0.05% across 2003-04 to 2044-45 will cause the Australian economy to be $660 *billion* cumulatively worse (constant 2002-03 prices).

There may be scope for optimism about the size of future labour productivity. First, productivity should rise as citizens have a higher level of exposure to education (Day and Dowrick, 2004, who 'conservatively' estimate 2.0% annual productivity growth based on future educational propagation). Second, Gruen and Garbutt (2003) emphasise the application of information and communications technology (ICT) in improving productivity growth through large capital-deepening effects. For example, ICT investment is expected to provide older workers with the capacity to contribute productively by reducing the demands on physiological capacity. Third, Gruen and Garbutt (2003) suggest that labour force growth and productivity growth are strongly negatively correlated; as the labour force growth declines, firms will focus on improving productivity performance to increase output.

Policy will play a pivotal role in respect of the preceding analysis. The policy challenge will be to encourage productivity growth. Private ICT investment should be complemented, and perhaps spurred by public infrastructure investment, for example in a comprehensive broadband scheme. To optimise returns from any ICT investment, broad ICT educational projects should be implemented and targeted towards the technologically illiterate. Further, as much as possible should be done to ensure cross-country transfers in technological improvements.

Capital Markets

The above section considered projected changes in productivity and growth associated with Australia's ageing labour market. This section purports to examine the effect of dynamics in capital markets on future growth and productivity performance.

Consider the basic Solow Growth Model (Romer, 2006, pp. 9-17). As the labour supply contracts, the level of investment required to maintain capital per unit of effective labour declines. Higher actual investment is sustainable over time and the economy moves to a higher steady-state of capital per worker. By virtue of positive marginal productivity of labour with respect to capital, output per worker – productivity – increases. This is represented diagrammatically in Figure 10.

This result, while intuitive, is also simple. The overall dynamics are more complex. Demographic factors affect other variables influencing the level of capital accumulation an economy can sustain. Consider the question whether Australia can sustain the level of savings required to fund the investment required to deepen, or even widen capital investment. The life-cycle savings hypothesis (Modigliani and Brumberg, 1954) suggests that wealth as a function of savings rises up to retirement and then falls as savings are used to finance consumption. As the citizenry age, all

else equal, aggregate savings should fall reducing the amount of domestic funds available for capital investment.

This raises important questions of policy. Primarily, the challenge is to raise the level of domestic savings and reduce dependence on foreign savings levels with its associated negative effect on the balance of payments. The standard response is to suggest the government sector improve its asset position and reduce expected future spending pressures. This is examined below. A second method is to build personal savings of consumers. Practically, tax cuts should be directed to savings accounts, for example paid into superannuation, rather than into inflationary discretionary incomes (Keating, 2007). It is estimated that if *cumulative* tax cuts estimated at 6% of income were directed into superannuation, raising the total contribution to 15% of workers' income, the savings pool available for productive investment would be $300 billion above its present value (Keating, 2007). Additionally, as seen recently under the 2007 changes to superannuation, taxation incentives can be used to increase significantly the attractiveness of saving (Wright, 2007).

A further challenge for policy makers is to ensure capital markets are working with maximum efficiency where resources can be applied to areas providing the greatest return on investment, thereby minimising any deadweight loss arising from unnecessary regulatory costs or a lack of perfect information (Treasury, 2007). This is important in responding to anticipated changes in domestic demand. If capital markets are operating efficiently, the level of investment should reflect the future structure of demand with associated improvements in productivity performance in industries such as aged care.

Fiscal Pressure

As the population ages, public sector expenditure on health, pharmaceuticals and aged care are projected to increase. These expenditure pressures, combined with expected increases in the level of pension transfer payments, constitute a significant challenge for future economic policy (Treasury, 2007).

When these changes occur, governments could run fiscal deficits and sustain increasing levels of debt (Figures 11 and 12). This is undesirable as it increases the pressure on sources of savings. Alternatively, governments could increase taxes to make up for the shortfall. However this is particularly unattractive as it will discourage work effort and investment, and therefore productivity and economic growth, as well as amounting to 'an unconscionable assault on the incomes' of younger workers (Keating, 2007).

A more appropriate response, and the challenge for economic policy, is to improve the sustainability position of the government sector now in preparation for the future. The public sector should continue to build up a net asset position across all levels of government to offset expected increased demands for government funds, and to improve the level of gross national savings. For example, a fund, in the model of the Future Fund could be developed to finance preventative medicines or to prepare for the anticipated increase in the cost of geriatric health, particularly in relation to the Pharmaceutical Benefits Scheme (Treasury, 2007). To complement, and perhaps finance this policy, responsibility for health should be consolidated in the federal level

of government which one estimate suggests will result in an overall annual benefit of $14 billion (Australian Associated Press, 2007). These examples, combined with policies designed to improve participation and productivity could improve the sustainability of government finances.

Conclusion

Inevitably, over time the ageing population will depress the rate of Australia's economic growth. This is unavoidable; it is Australia's 'demographic destiny' (Peter Costello MP, Australian Associated Press, 2004). Much can be said on the impact of these changes on economic performance. This essay has attempted to give an overview of some of the important issues facing policymakers. The challenge for economic policy will be to accommodate these changes and improve as much as possible Australia's growth potential through improving participation and productivity, and ensuring markets work as efficiently as possible to adjust to new economic realities. As with the other future issue of climate change, policy should be focussed on sustainability. The key, as Glenn McGrath would point out, is preparation.

Appendix

FIGURE 1
POPULATION PROJECTIONS UNDER SERIES A ASSUMPTIONS

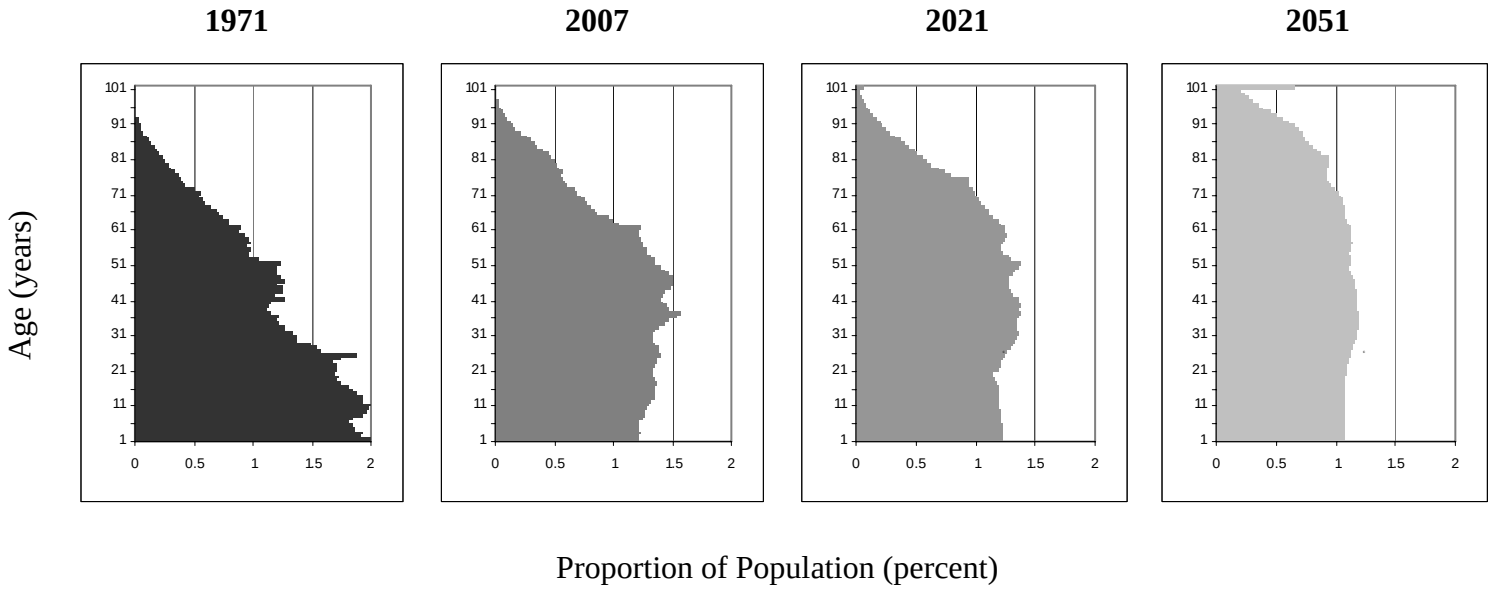


FIGURE 2
POPULATION PROJECTIONS UNDER SERIES B ASSUMPTIONS

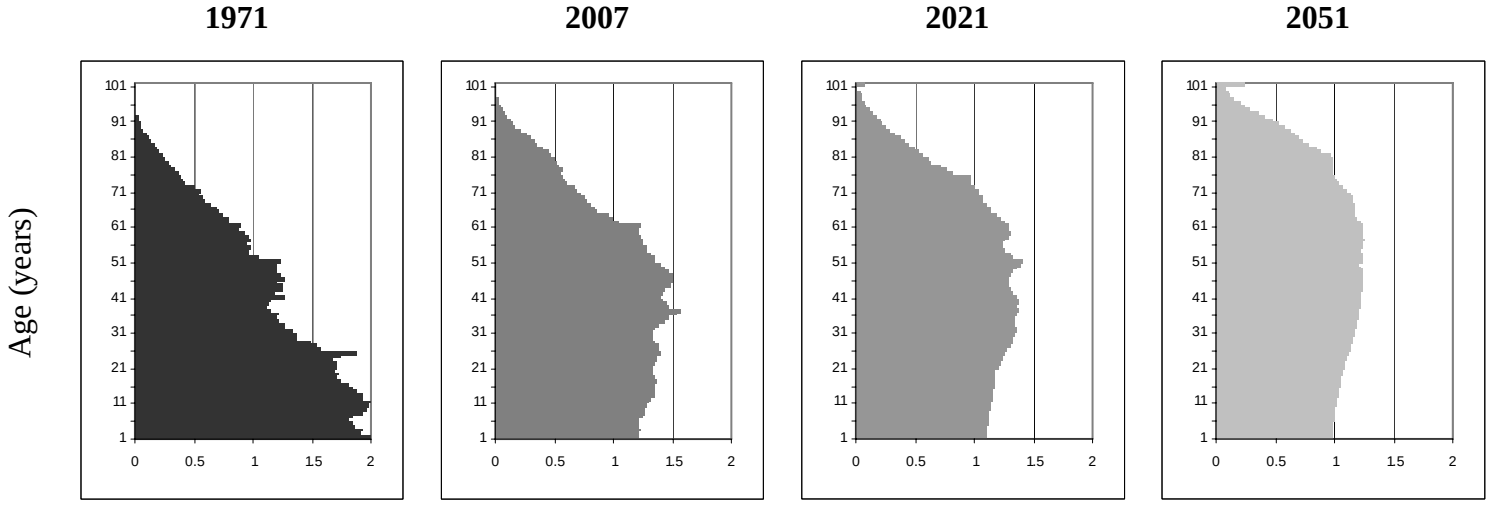


FIGURE 3
POPULATION PROJECTIONS UNDER SERIES C ASSUMPTIONS

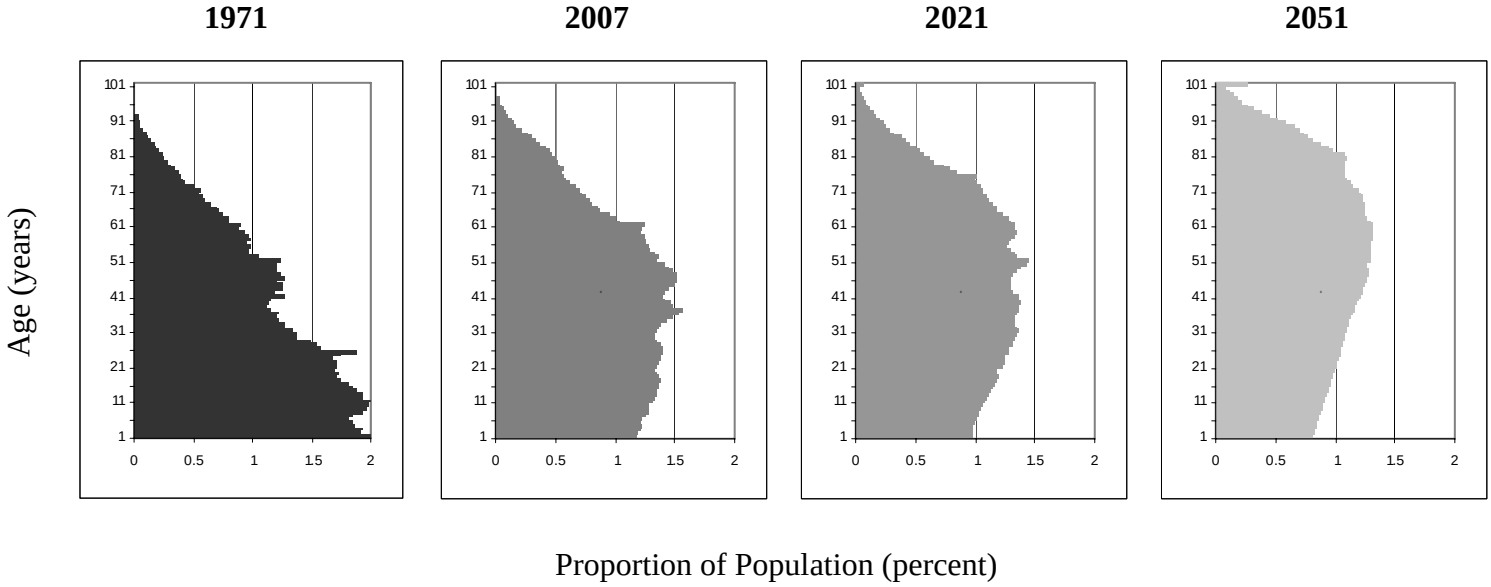


FIGURE 4

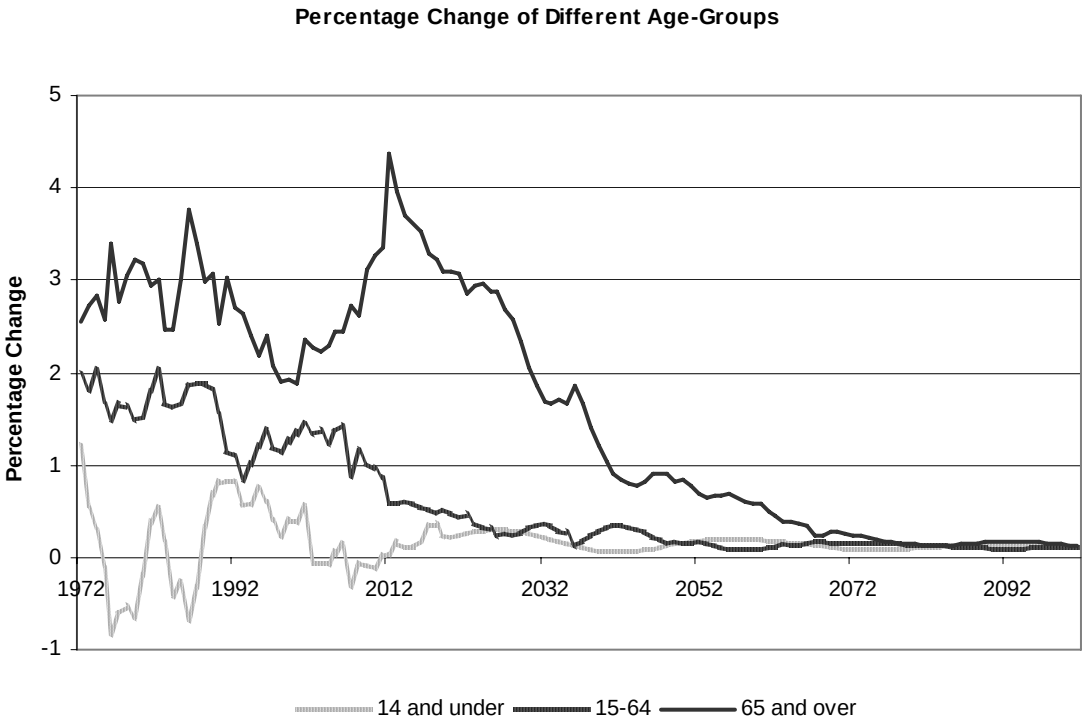


FIGURE 5

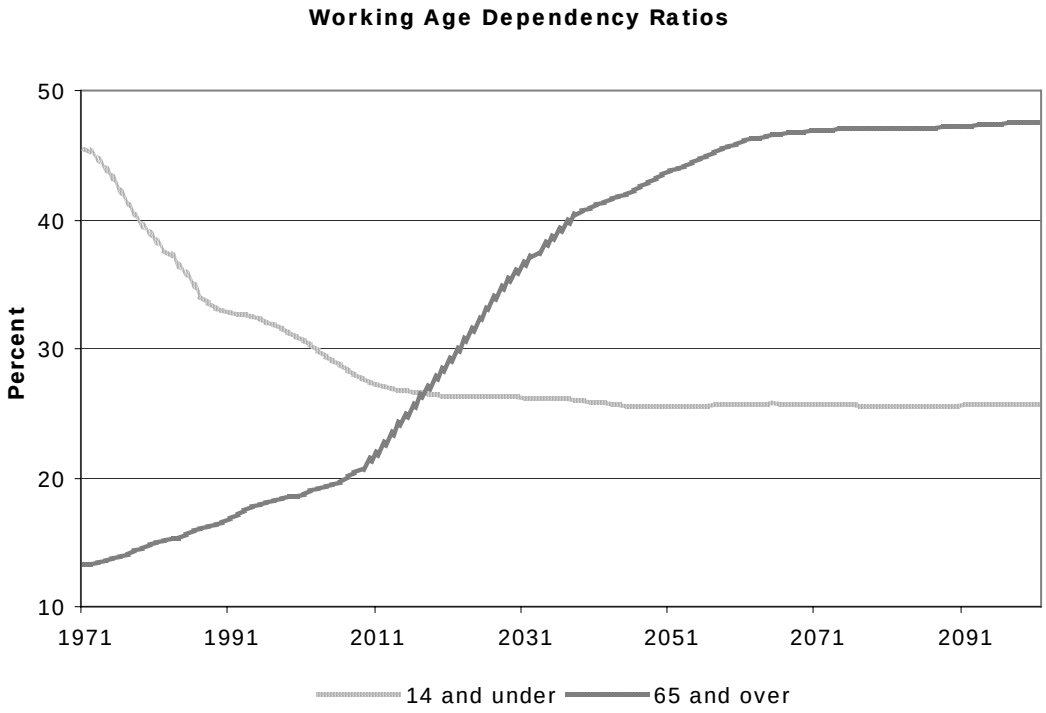
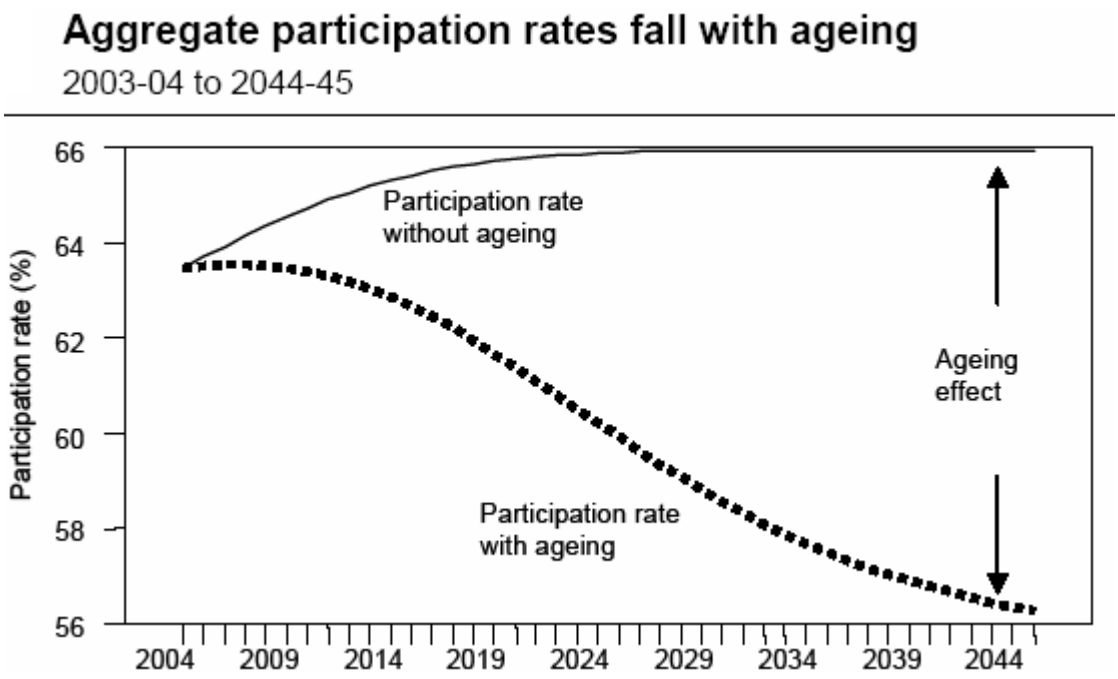


FIGURE 6

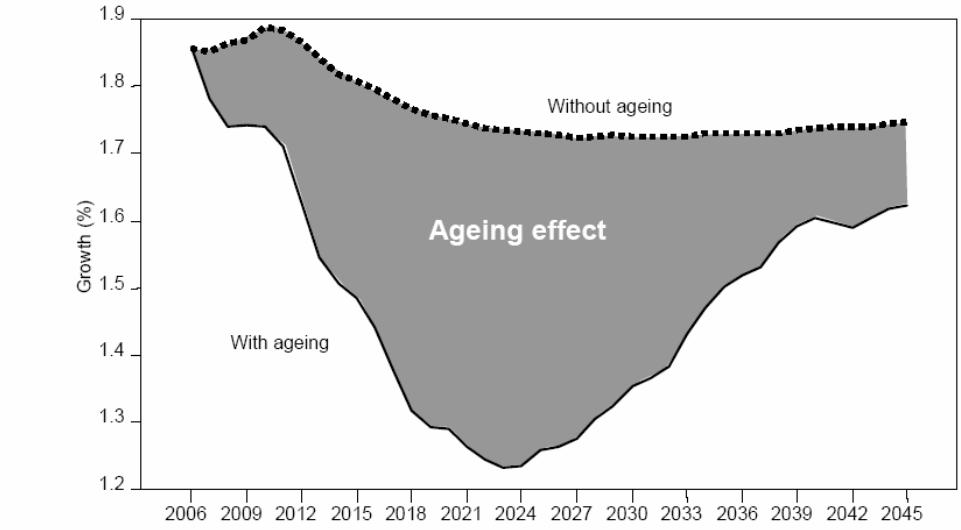


Source: Productivity Commission (2005, p.85)

FIGURE 7

Economic growth in Australia — a 40 year projection

Per capita GDP, 2005-06 to 2044-45



Data source: Commission estimates, assuming long-term labour productivity growth of 1.75 per cent per annum.

Source: Productivity Commission (2005, p. 127)

FIGURE 8

Change in Working Age Composition, By Age Group

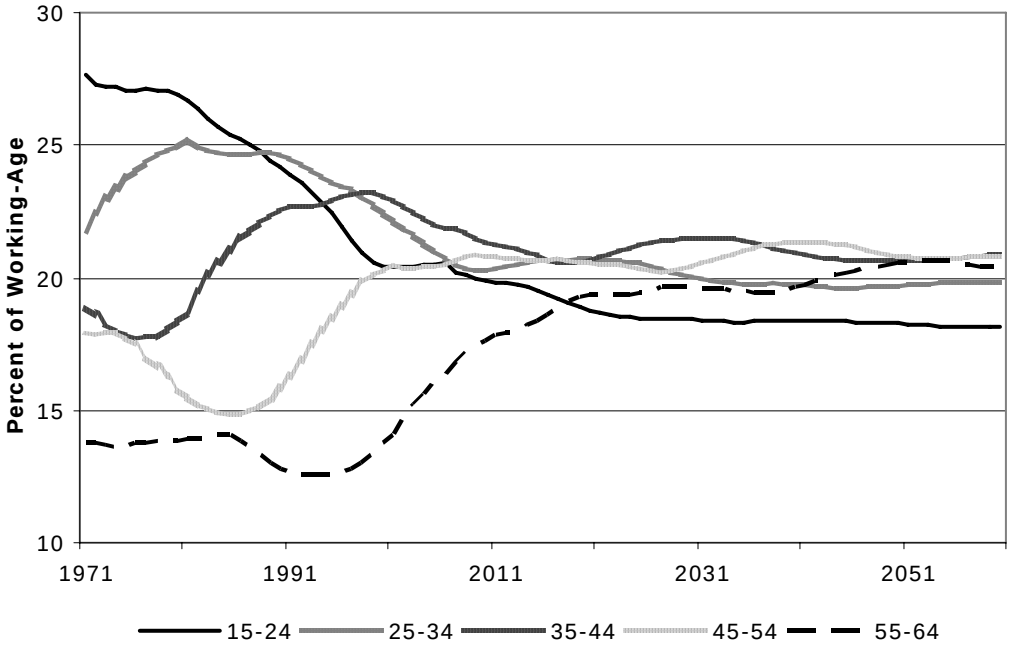
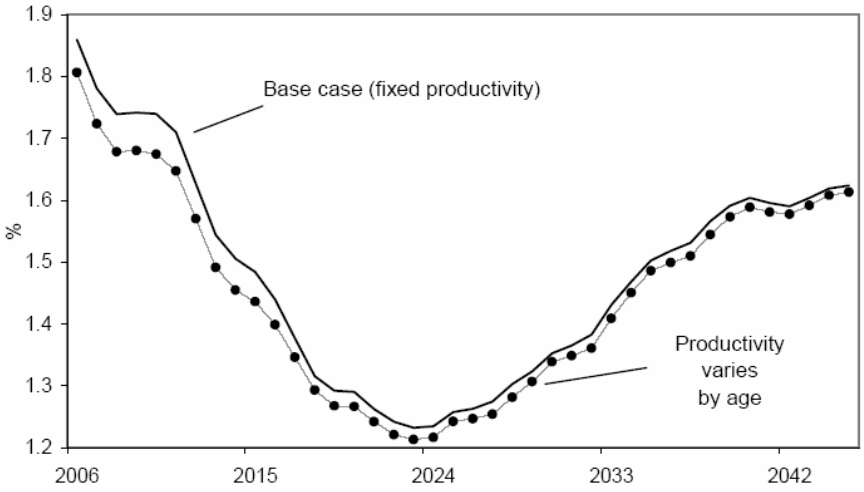


FIGURE 9

The effects on economic growth of varying productivity levels by age

2005-06 to 2044-45[a]



Source: Productivity Commission (2005, p. 131)

FIGURE 10

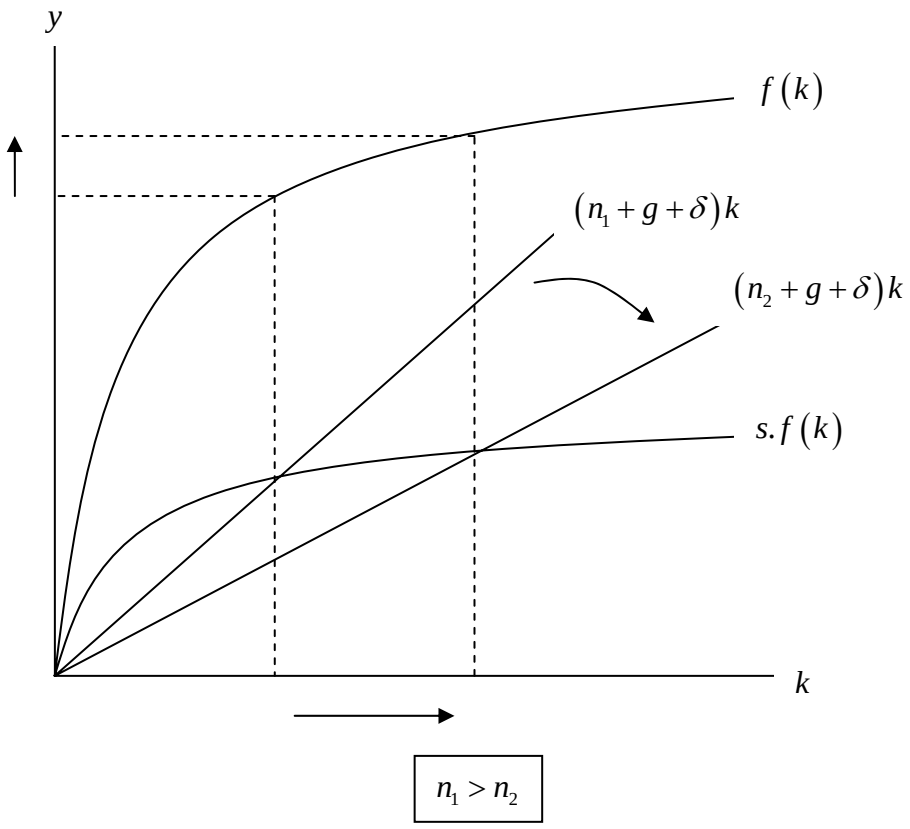
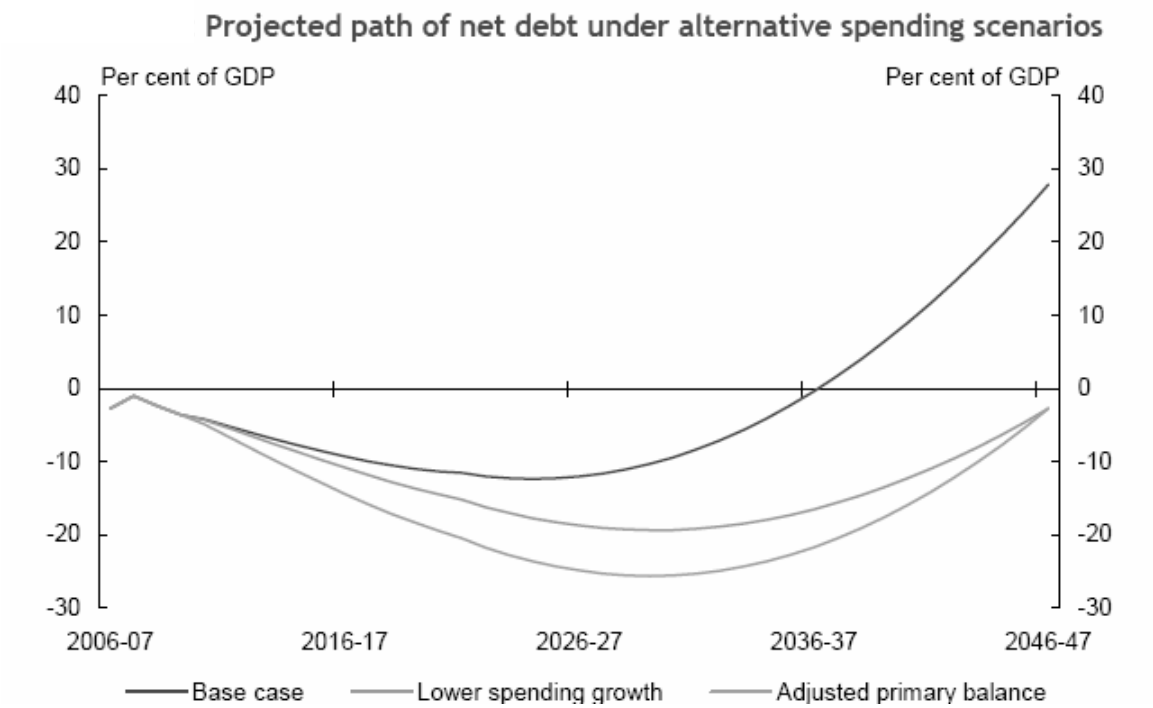
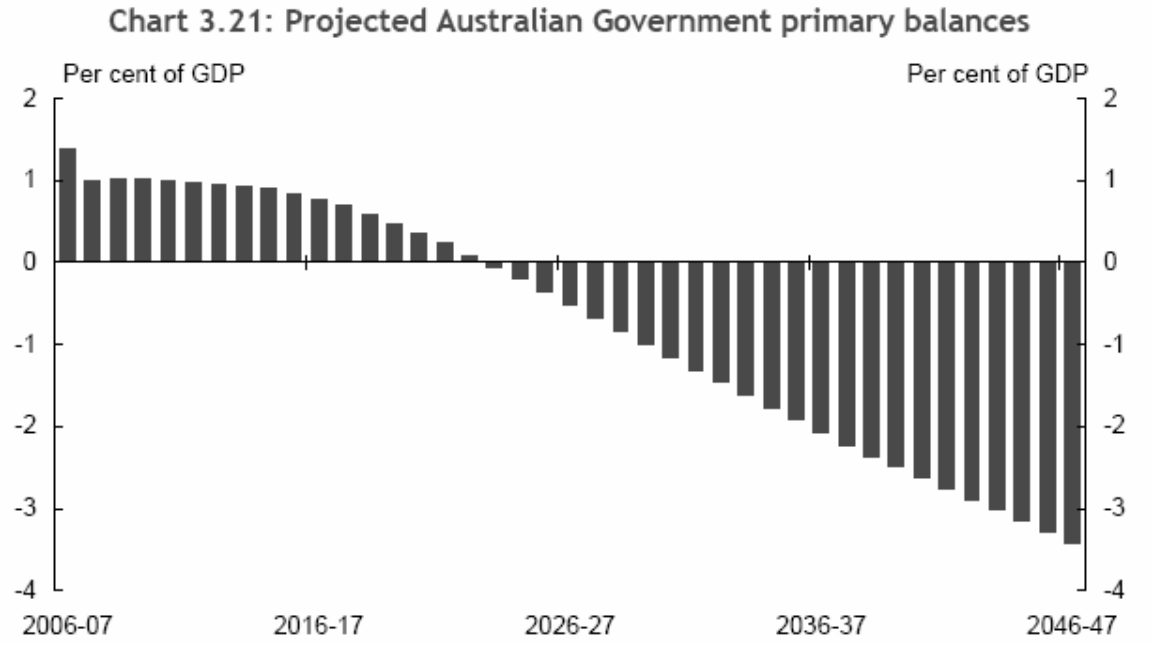


FIGURE 11



Source: Australian Treasury (2007)

FIGURE 12



Source: Australian Treasury (2007)

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Second Prize

The Economic Consequences of Australia's Ageing Population: Challenges for the Future

by

Virginia Gogan

The transforming age structure of Australian society may be one of the most challenging economic developments facing all levels of governments in the next thirty years. The proportion of the population aged over 65 years is projected to increase from 13.3% currently to around 25%, or 6.2 million people by 2042, mainly in response to beneficial social changes including increased life expectancy and controlled fertility. The wide-ranging economic effects of this change will become prominent when the first of the 'Baby Boomers', born during a period of post-war heightened fertility between 1946 and 1965, achieves the age of 65 in 2011. Two significant and interrelated economic consequences are predicted to arise; firstly the rate of participation in the workforce will fall from 65% currently[3] to approximately 56% in 2044-5, [4] reducing aggregate output and economic growth expressed as GDP growth per capita. Secondly, a decrease in income taxation revenue and an increase in government expenditure in the areas of welfare, health and aged care will result in pressure on the fiscal budget balance and levels of public debt. The complexity of these consequences necessitates a multifaceted response, with an emphasis on initiatives to increase productivity growth rates and workforce participation to stimulate economic growth, which will filter through to government tax revenues. Government expenditure outlays may be reduced via reducing dependence on welfare through encouraging mature aged employment and increasing incentives to superannuation, and by increasing cost-effectiveness in the health and aged care sectors.

The reduced participation rate will constrain labour supply growth, a major determinant of GDP, forecasted to result in levels of GDP growth falling to around 1.25% per year in the mid 2020s, roughly a third lower than without the effects of ageing.[5] The loss in productive capacity to the economy will accumulate over the forty years from 2005 to a total of $4100 billion.[6] The labour shortages which ensue, while having the positive incidental effect of decreasing the rate of unemployment, may result in an increase of the cost of production which may result in cost-push inflationary pressures. However, in this case the GDP per capita figure may be an ineffective measurement of population welfare, as the appreciation of leisure in retirement, the contribution of retirees to the community through volunteer associations, and providing care for family members cannot be quantified by this method. The 'crisis' of an ageing population can therefore be overdramatised by projected GDP growth figures, which also expect Australia's forecast GDP per capita to reach $73,000 in 2002-3 prices, almost double the current level without factoring in any corrective policy measures.[7]

The effects of ageing on labour productivity growth are unclear, as they are dependent on the net impact of gains from a reduced share of inexperienced youth entering the workforce, and losses from a large number of older workers retiring. The traditional view of the correlation between age and productivity posits that an individual's

[3] Australian Bureau of Statistics, Labour Force, Australia, Jul 2007, Cat. No. 6202.0, ABS Ausstats, 2007, retrieved 27th August 2007 <http://www.abs.gov.au/ausstats/abs@.nsf/ProductsbyTopic/362607CA0519045ACA25712B000D0425?OpenDocument>

[4] Productivity Commission, *Economic Implications of an Ageing Australia*, Research Report, Canberra, 2005, pp XII

[5] Productivity Commission pp.125

[6] Ibid

[7] Productivity Commission, pp.126

productivity rises with age, until peaking in middle age and declining as the benefits of experience are outweighed by the detrimental physical and mental effects of ageing. However this analysis may be challenged by the next generation of older workers, who will be more highly educated and are likely to be healthier than previous cohorts, and may consequently only reach their prime in their late 60s or even early 70s. As the nature of employment evolves to decrease the physical demands on workers through an increased services-based economy, the productive disparity between age cohorts will diminish, as already evident in innumerable positions of public importance fulfilled by older employees. The Productivity Commission forecasts that the aggregate effect of these changes will be "negative but negligible", as the majority of the workforce remains in the most productive stage of their careers. [8]

Ageing may also indirectly affect the capital-to-labour ratio, another key determinant of labour productivity. The depletion of savings of retirees may decrease the national savings rate, from which funds for investment are derived – lower capital per worker and decreasing productivity. However, as the Commission demonstrates, Australia has sustained remarkably stable levels of capital deepening over the past forty years, and the international mobility of capital in addition to the large superannuation holdings of Australians, capital deepening should remain unaffected, and may even increased due to the fall of the effective labour supply.

Though there is little evidence to suggest that productivity will be significantly affected by ageing, the importance of productivity may arise as a key counterbalance to the economic effects of ageing. GDP growth per capita is broadly dependent on population growth, effective participation rates (measured in amount of hours worked), and productivity. The essence of the Productivity Commission's 2005 Research Report is that, in a period in which effective labour supply growth will be close to zero, the GDP growth rate will become largely dependent on productivity growth. Therefore, improving productivity growth is expected to provide a key solution to the detrimental economic effects of ageing – a stimulus which would not only increase economic growth alone but contribute to correcting the fiscal balance through increased taxation revenues. In fact an increase in annual productivity growth rates to 2.05% instead of the assumed 1.75% until 2044-5 would correspond to a dramatic positive difference in cumulative GDP of approximately $4200 billion – enough to displace the entire predicted impact on GDP from ageing.[9] Though that particular increase in productivity to match the miraculous performance of the 1990s would be very difficult to sustain for forty years, a continued emphasis on increasing productivity by increasing the qualitative stock of human capital through education and training, encouraging research, innovation and entrepreneurship, and capital deepening may contribute to alleviate the negative effects on GDP growth and the fiscal balance.

The effect of the gap which will arise between decreased income tax revenue and increased expenditure will be to push the government budget towards deficit and increased public debt. The Productivity Commission projects the fiscal pressures to accumulate a gap amounting to an 8% rise in taxes, or alternatively a $4.2 trillion

[8] Productivity Commission, pp.68
[9] Productivity Commission, pp.126

stock of public debt by 2044-5 (in 2002-3 prices) mainly a response to increased expenditure rather than to decreased revenue.[10] In a sense, this expansionary fiscal movement may offset the slowed GDP growth caused by the lower participation rate, by increasing aggregate demand. However, increased government spending may also cause inflationary pressures to mount, and in addition to increased public debt, may contribute to a reactionary interest rate rise. There is a risk that these factors may cause a 'crowding out effect', where private investment is displaced due to its interest rate sensitivity, and such a fall in investment may place downward pressure on GDP growth.

The policy implementations of the Commonwealth Government have already been relatively successful in encouraging financial self-sufficiency in retirement, thus reducing reliance on future welfare expenditure. Though the average superannuation balance across all ages is only $39,663 currently, Access Economics has most recently projected that more than 80% of workers are likely to retire with enough to drop their working income by only a third, due to the maturing of the mandatory employer contribution scheme, the large capital gains of recent years, and an increase in voluntary contributions.[11] The 1992 Superannuation Guarantee[12] required mandatory contributions to superannuation funds by employers, which in 2002 was raised to 9% of income, a policy which resulted in over 90% of those intending to retire belonging to a superannuation scheme.

Two recent policy developments have sought to encourage increased superannuation holdings through the Government Co-contribution Scheme[13] and the Simplified Superannuation program. The former was introduced in 2003, and commits the government to match the voluntary contributions to superannuation up to $1500 per lower or middle income earner. Half of all employers voluntarily contribute to superannuation funds, an average of 3.6% of their salary, and voluntary savings have been identified as a crucial third pillar (in addition to the age pension and mandatory superannuation) to financial security in retirement.

The recent Simplified Superannuation reforms[14] aim to reduce the prevalence of early retirement, a recommendation of the OECD report, and to increase incentives to delay withdrawal of superannuation past the statutory preservation age of 55, by making superannuation tax-exempt from the age of 60. In increasing superannuation holding, the program has been overwhelmingly successful, leading to an estimated $10 billion of extra funds contributed in the June quarter[15]. The preservation age is legislated to increase from 55 to 60 years between 2015 and 2025 in response to the aging population. These reforms have evidently contributed to the approach of workers to their financial security during retirement, with only 25% of those intending to retire expecting the aged pension to provide their main source of income, whereas 44% of

[10] Productivity Commission, pp.XXXVII

[11] Access Economics, AMP Superannuation Adequacy Index, 25th July 2007, Australia, retrieved 27th August 2007, http://www.amp.com.au/group/2column/0,2445,CH942%255FCT5%255FCI171863%255FSI3,00.html

[12] Superannuation Guarantee (Administration) Act 1992

[13] Superannuation (Government Co-contribution for Low Income Earners) Act 2003

[14] Tax Laws Amendment (Simplified Superannuation) Act 2007

[15] Association of Superannuation Funds of Australia, A Stunning Sunday for Super, Australia, retrieved 27th August 2007 http://www.superannuation.asn.au/mr070704/default.aspx\

intending retirees expected superannuation to provide the bulk of their retirement income. This compares to the 44% of retirees who currently rely on the aged pension for primary support.[16] The financial independence of a high proportion of self-funded retirees will significantly reduce the welfare costs of supporting an aging population.

Increasing the level of mature aged employment may be another useful policy initiative to dually decrease dependency on government welfare in retirement, and to increase the participation rate, thereby contributing towards increased GDP. The Commonwealth and State governments have been actively promoting mature aged employment, emphasising the accumulated experience, skill and work ethic of older workers and debunking assumptions linking older workers with inefficiency, low productivity, and mental incapacity. The perception that employers are reluctant to recruit mature aged employees is reinforced by ABS figures in which 65% of 125,000 discouraged job-seekers aged from 60-64 cited the main reason they were not actively seeking work was "being considered too old by employers"[17]. The emphasis must be in reducing the barriers to participation in the workforce which have caused the mature aged population to have the highest levels of long-term unemployment, most importantly the provision of education and training to reduce skills obsolescence. Other recommendations of the Standing Committee on Health & Ageing include providing training to managerial staff to reduce discrimination against older workers, encouraging flexible working arrangements to cater for family obligations, and to prepare mature aged workers for the job market through career planning programs. In particular, the policy approach has been to encourage the promotion of mature aged employment as not only the responsibility of government, but of collaboration with business through the principles of corporate social responsibility.[18]

The projected costs of health expenditure are projected to rise from around 6% of GDP currently to 10.3% by 2044-5, whilst aged care expenditure is expected to rise from 0.86% of GDP currently to 2.24% in the same period[19], though projections are sensitive to assumptions regarding technology, demand and sector productivity..[20]
Encouraging productivity and cost-effectiveness in these sectors will become vital to maintaining fiscal control, though any reduction in expenditure can be politically sensitive. The encouragement of private health insurance could alleviate pressures on the public system, as has been partially achieved by the Commonwealth government rebates on insurance which increase for over 65s, however only 43.5% of Australians hold private cover.[21] In aged care, the focus is on providing services to older Australians in their own homes, through programs such as Meals on Wheels, increasing self-sufficiency and decreasing residential care costs. These expenditures will pose perhaps the greatest challenge to the State and Commonwealth

[16] Australian Bureau of Statistics, Barriers and Incentives to Labour Force Participation, Aug 2004 to Jun 2005, Cat. No. 6239.0, retrieved 27th August 2007, http://www.abs.gov.au/Ausstats/abs@.nsf/39433889d406eeb9ca2570610019e9a5/7e7adc44fef2c0a9ca25710c00748337%21OpenDocument
[17] Australian Bureau of Statistics, Persons not in Labour Force, Cat. No. 6220 Australia, September 2006, retrieved 27th August 2007 http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6220.0Sep%202006?OpenDocument
[18] Parliamentary Standing Committee on Health and Ageing, Future Ageing, Parliament of the Commonwealth of Australia, Canberra, 2005
[19] Productivity Commission, pp.144, 183
[20] Productivity Commission, pp.150
[21] Private Health Insurance Administration Council, Annual Coverage Survey, Australia, retrieved 27th August 2007, http://www.phiac.gov.au/statistics/survey/aust.htm

governments, and the solution may be to adopt more user-pays schemes or face drastically increasing taxation.

While the changing age structure of the Australian society will pose significant challenges for government, and as a global reality in both developed and developing nations, it should not be perceived as a crisis, but rather the result of trends which have been beneficial both economically and socially. The OECD report compares Australia's preparation favourably with that of other developed countries, and steps have already been taken to reduce public debt, reform superannuation regulations, and encourage mature aged employment.[22] By gearing the economy towards high productivity growth and an increased participation rate, and increasing the self-sufficiency and independence of the older population in terms of retirement income, aged care and private health insurance, the benefit of foresight and appropriate response should alleviate many of the problems associated with an older population.

[22] Carey, David, Coping with Population Ageing in Australia, Economics Department Working Papers No.217, Organisation for Economic Co-operation and Development, July 30th 1999

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RBA ECONOMICS COMPETITION 2007 AWARDS

The Reserve Bank is pleased to announce the winners of the inaugural RBA Economics Competition. This competition is run by the Bank in conjunction with the UNSW Economics Society.

- First prize ($1500): Callum Jones, the University of Western Australia
- Second prize ($750): Virginia Gogan, the University of Western Australia
- Best essay from a first year student ($500): Ashley Cheng, the University of New South Wales

These students' essays – which addressed the consequences of an ageing population for Australia's future productivity and economic growth, and the associated economic policy challenges – stood out among a number of good entries.

Essays were submitted by students from 12 different universities in Australia.

Prizes will be presented to these students by the Governor at a ceremony at the Reserve Bank of Australia in Sydney in October.

Congratulations to each of the winners and to those who submitted an entry to the competition.

The Reserve Bank is pleased to announce it will be sponsoring a similar essay competition next year, with the question, and other details, to be announced in May 2008.

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