

The Economic Impact of Australia's Ageing Population

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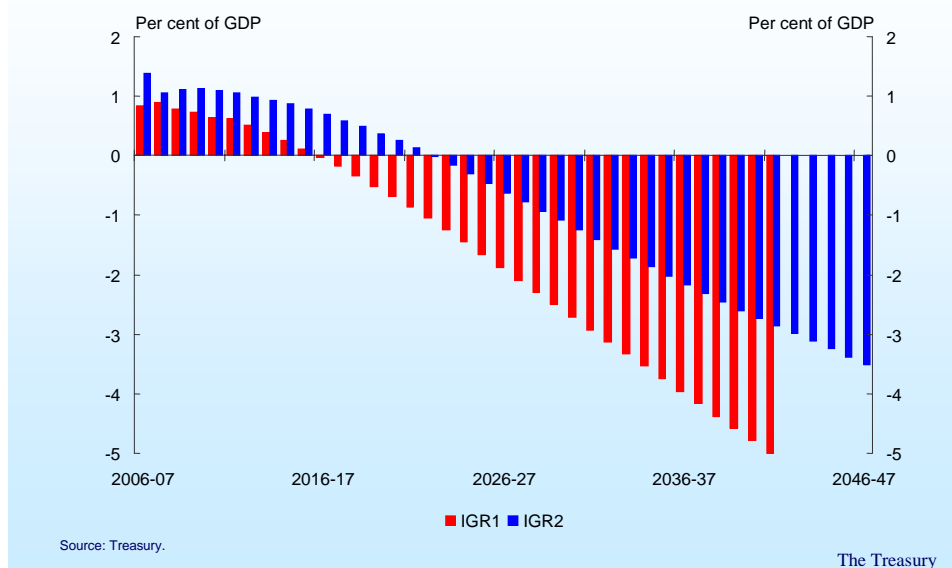
Address to CEDA State of the Nation Conference, 14 June 2007

Australia's population will age markedly over the next 40 years¹. This is due to both increased longevity and lower fertility, with the latter dating from the end of the post-WWII baby boom over forty years ago. Consequently, there is relatively little that can now be done to avoid the population dynamics that are now unfolding. We have no future choice but to adapt. As the Treasurer is fond of saying, "Demography is destiny".

The economics of this story is less certain than the underlying demography, in part because people do have future choices in this area. In particular, people have the endearing habit of changing their economic behaviour to make themselves better off. So there is clearly uncertainty in looking out over 40 years. But, the objective in thinking about the ageing problem is not to make a precise prediction of the future. Rather the challenge is to construct a plausible scenario which provides a sound basis for asking the "right" policy questions.

This is the context for the first and second Intergenerational Reports, released in 2002 and earlier this year. The particular focus was to examine how Australia's ageing population and other factors impact on the economic and fiscal outlook over the coming forty years. IGR2 shows that we have made progress in addressing the demographic fiscal challenge, including because of a better fiscal starting point better participation and policy measures which have been introduced over the last five years. As Chart 1 shows the improvement in the fiscal position from IGR1 as released in 2002 is around 2 percentage points of GDP in 2042.

Chart 1: Comparison of IGR1 and IGR2 Projected Fiscal Gap



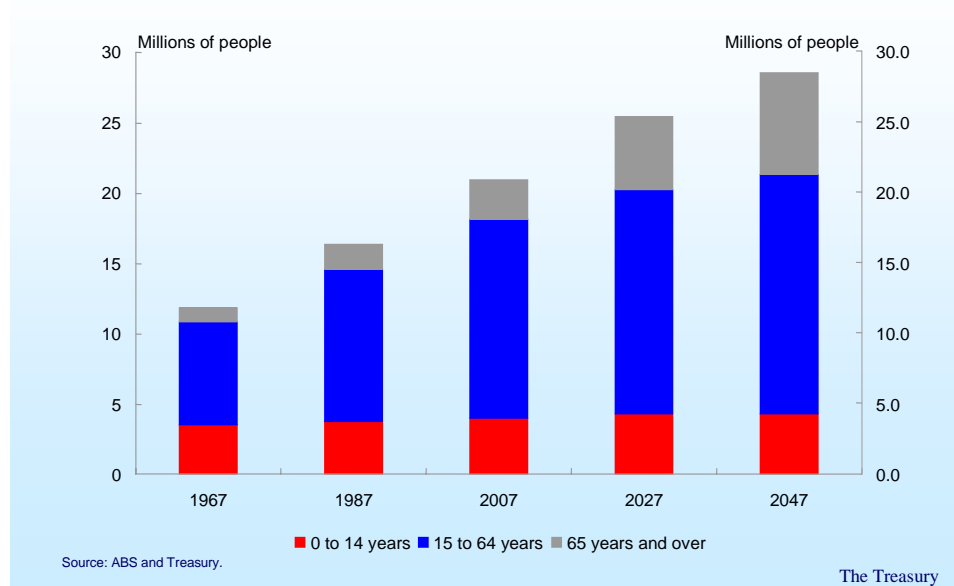
¹ I am indebted to Paul Roe for the compilation of factual and reference material in the speech taken from IGR2 and to David Gruen, David Tune, Mike Callaghan and Peta Furnell for helpful comments.

Even though there has been a significant improvement in the projected fiscal gap it would be a mistake, indeed perverse, to think that the challenges of aging are behind us. We know that ageing will cause per capita growth to slow, that a sizable fiscal gap remains so that the overall share of government in the economy will rise and there will be a need for significant structural change. It will also be a challenge to hold the projected strong fiscal position out to the end of the next decade – that is through several political cycles – and the deterioration in the projected fiscal position thereafter eventually implies a substantial run up in government debt, unless action is taken to address it.

The Demographics

When the population as a whole is analysed it behaves with a remarkable regularity – in other words, on average people are born, they age and die in a relatively predictable way. This means that we can build up a reasonably robust picture of the future population, based on the population that is alive now and plausible assumptions for future trends in fertility, longevity and net migration. Chart 2 presents the base case populations projections from IGR2.

Chart 2: Australian Population for Selected Age Ranges



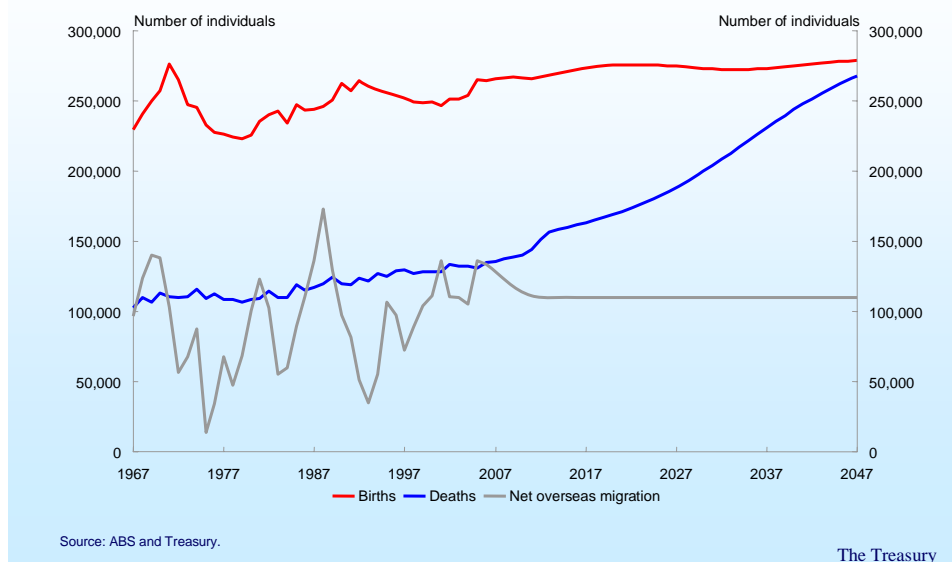
Total population will increase to over 28 million in 2047 and the age profile will shift substantially. The number of children will stay broadly the same – personally I find it a little sad that there will be relatively fewer children. The population of traditional working age of 15-64 years is projected to grow but at a slower rate than over the last 40 years. Consequently, this cohort will fall as a proportion of the total population by around 8 percentage points from current high levels of around 67½ per cent. [Within that cohort the fastest growing group is those aged 55-64, rising by nearly 50 per cent over the next 40 years. Those aged 55-64 years traditionally have lower labour market attachment than people of prime working age.]

People aged 65 and over will be the fastest growing cohort. Around 25 per cent of the population is projected to be aged 65 and over by 2047, almost double the proportion today. Within this cohort the fastest growing segment will be those aged over 85. Broadly speaking the older the cohort the faster it will grow.

The pattern of demand and supply in the economy is going to be significantly affected. Paediatrics will not be much of a growth industry, but aged care and geriatrics will be. Demand for education services won't be driven by growth in the cohort of traditional age students. And, the age of the average voter will continue to rise.

We are presently experiencing a mini-baby boom and the fertility rate has lifted slightly, but it is still significantly below the replacement rate. As a result, natural increase, which is the number of births minus the number of deaths, is projected to continue to decline and turn negative in the 2050s so that population growth will increasingly come from net immigration.

Chart 3: Net Migration and Natural Increase in Population

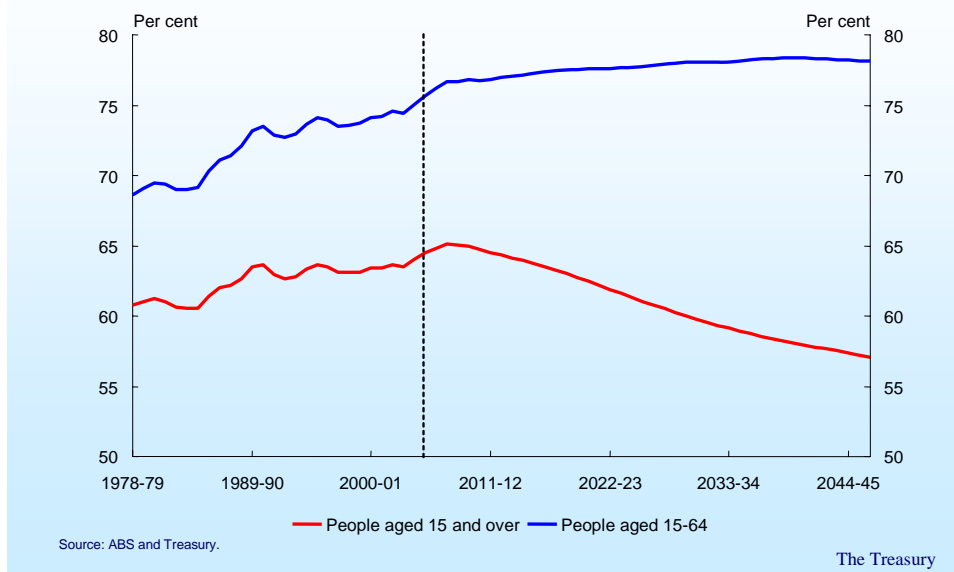


Economic Consequences

Once we have population, building up the economic story is, conceptually, a relatively straightforward exercise. We need to make assumptions about how much people will work and how productive they will be. This is the 3Ps framework of population, participation and productivity which projects the economy from the supply side.

How much people will work is affected, in part, by how old they are, with participation rates declining substantially after age 55. So, an older population will work less in aggregate. The ageing of the population is projected to lead to falling total participation rates. The participation rate for people aged 15 and over is projected to fall from around 65 per cent towards the end of this decade to 57 per cent by 2046-47.

Chart 4: Historic and Projected Participation Rates



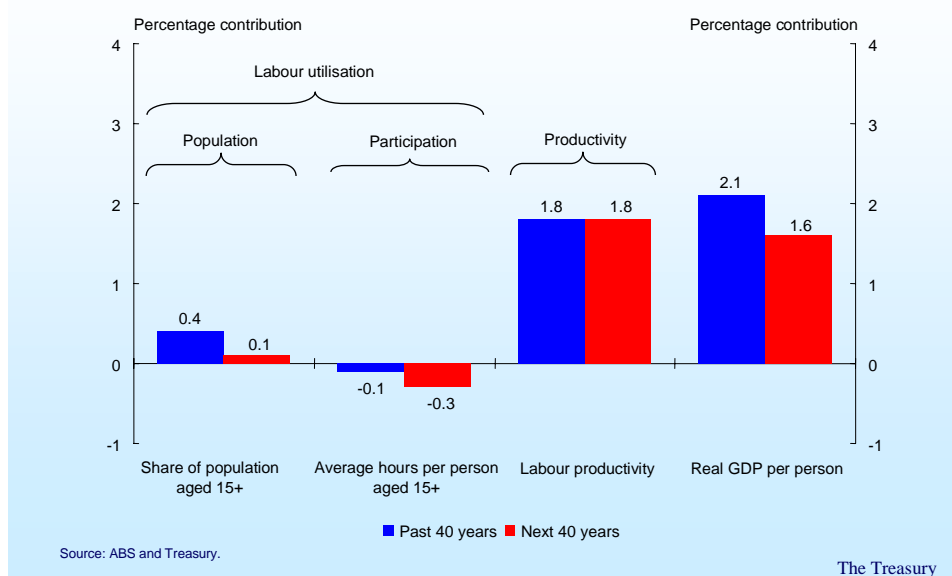
We have seen an improvement in age specific participation rates, particularly of older workers and this is expected to continue. However, the aging effect is projected to dominate the recent trend improvement in participation by older cohorts. Specifically, older workers are choosing to work more but they still work less than younger workers and, with relatively more, older workers and fewer younger workers, the aggregate participation rate declines. Incidentally, the decline in participation is less than projected in IGR1.

There is a further layer of detail here to get from participation to total labour input, specifically changes in unemployment and hours worked. These are second order influences and I am not going into the detail of these today.

Finally, labour productivity growth averaged 1.8 per cent a year over the past 40 years, and IGR2 is projecting the same average annual rate of growth over the next 40 years.

Bringing the 3Ps together, GDP growth per person is projected to fall from an annual average of 2.1 per cent over the past 40 years to 1.6 per cent over the next forty years. This $\frac{1}{2}$ of a percentage point difference is quite significant over a long timeframe. In 40 years time, the standard of living will be around 20 per cent lower than it would otherwise have been without the projected slowdown in per capita GDP growth.

Chart 5: The 3Ps of Growth in Real GDP Per Person

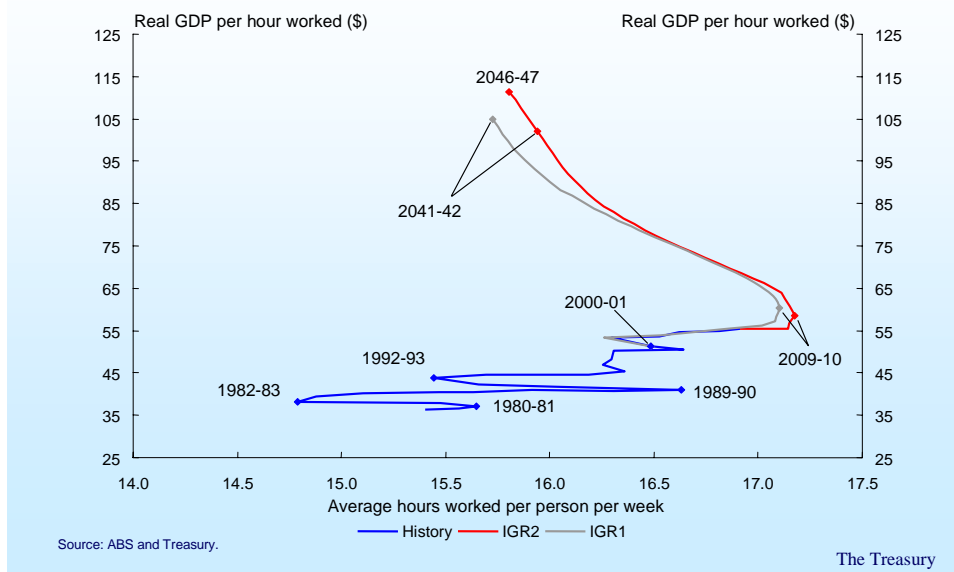


This growth slowdown is due to population ageing – specifically a relatively smaller part of the population will be of traditional working age and in aggregate they will work less. Combining the population and participation elements of the ‘3Ps’, provides a broad measure of labour utilisation. In the past 40 years, higher labour utilisation contributed 0.3 per cent a year to real GDP per person growth [plus 0.4 per cent from population increase less 0.1 per cent from a decline in average hours worked]; in the next 40 years declining labour utilisation will subtract 0.2 per cent a year. The turning point will be quite soon, specifically around 2010 as increasing numbers of the large baby boomer generation retire.

Labour utilisation and productivity can be plotted to provide combinations of real GDP per hour worked through time. Up to 2000-01, there was a general north-eastward movement of the line, reflecting increases in labour utilisation and productivity. The substantial side-to-side swings correspond to recessions and subsequent recoveries.

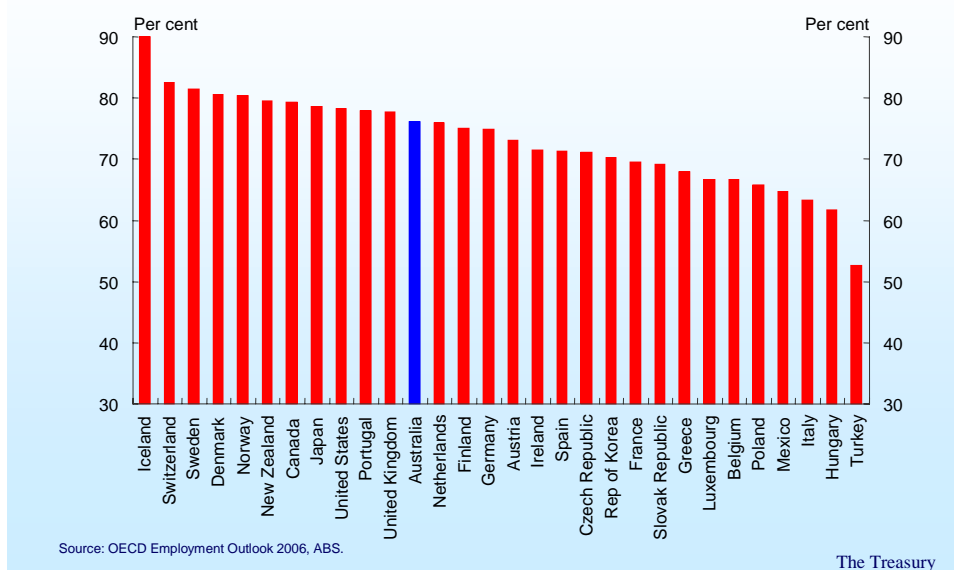
The impact of population ageing on labour utilisation can be seen in a general leftward drift in the graph from the end of this decade. Compared with the IGR1 projections there is a significant improvement due principally to higher projected participation rates for older workers that have been observed over the past five years.

Chart 6: Productivity and Labour Utilisation



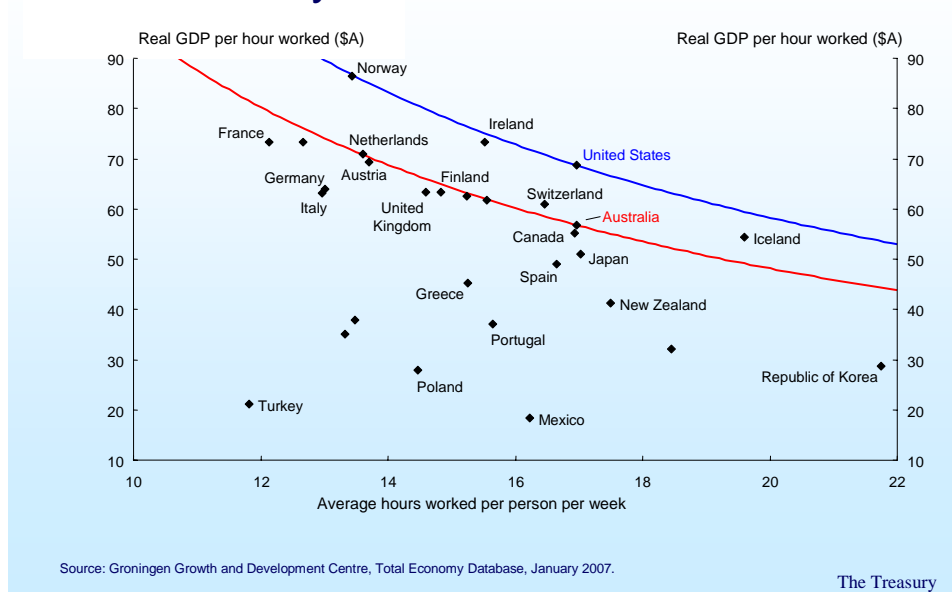
Nevertheless, the decline in labour utilisation is still very significant – in net terms it will take us back to a position that is comparable with the early stages of the current economic expansion. So it will be important to continue with policy reforms to improve labour force participation and productivity to address the challenges of Australia’s ageing population.

Chart 7: OECD Participation Rates 2006: People Aged 15-64



Australia's participation rate for those of traditional working age was the twelfth highest in the OECD in 2006. This ranking has improved in recent years but there are some OECD countries which have much higher participation rates than Australia in some age cohorts. The participation rate for New Zealand Males aged 55-64 is 81 per cent, compared with 67 per cent in Australia. For females of the same age, the participation rate is 62 per cent for New Zealand compared with 47 per cent for Australia. So there is scope for Australia to improve further.

Chart 8: Labour Utilisation and Productivity in OECD Countries, 2006



A comparison of OECD country data on labour productivity and labour utilisation in 2005 show a wide range of outcomes. For each country, GDP per hour is expressed in Australian dollars at purchasing power parity. The lower line in the chart shows combinations of GDP per hour and hours per person that generate the same GDP per person as in Australia in 2005. For example, the Netherlands has higher productivity and lower average hours but the same GDP per person.

While Australia is doing well in terms of productivity compared to a large number of other OECD countries there is still room for improvement. Australia cannot completely close the productivity gap with the US – our geography constrains us here – but if we could halve the productivity gap we could increase the size of the Australian economy by around 10 per cent.

The Global Context

Population ageing is a global challenge. These demographic trends are manifest in rising old-age dependency ratios, which are projected to at least double for Australia, Europe, India and Japan, but more than triple for China from now until 2050. The US old-age dependency ratio is projected to rise but, with relatively favourable demographics, less than for other major countries and regions.

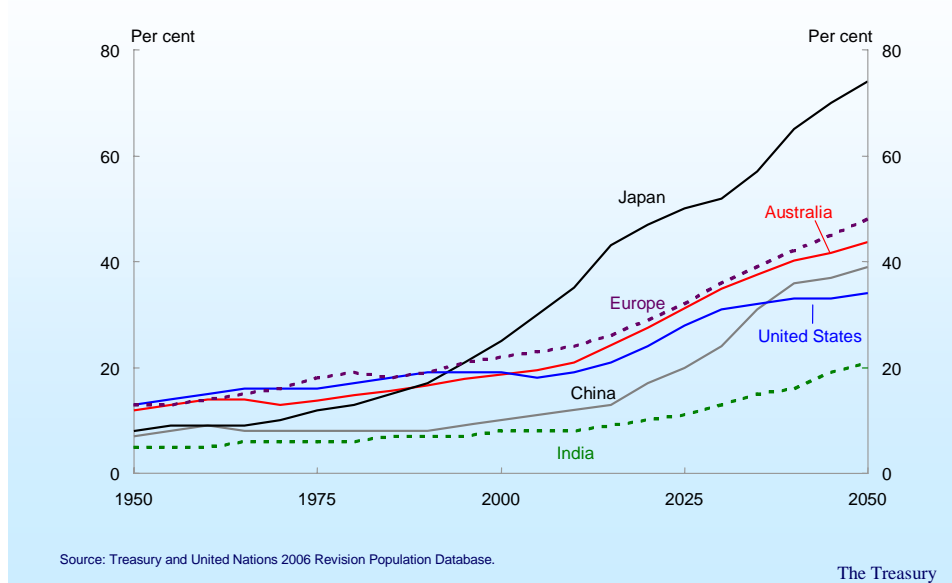
These global trends will have wide-ranging implications; savings behaviour, asset returns, international capital flows, and the supply of labour are all likely to be affected.

Estimating the precise magnitude and direction of these impacts over time, and the way they will interact, is a complex and difficult task – not that this has stopped people trying. Indeed there is a

vast number of studies which attempt to model the impacts, and (not surprisingly) the findings are very diverse.

Chart 9: Old-age Dependency Ratios

(Ratio of over 64-year-olds to 15-64-year-olds)



Although we can't predict what the exact impacts will be, one clear policy message emerges from the analysis of global ageing trends. Countries that have an open and flexible economy, with innovative financial markets and opportunities for migration, are the ones best placed to adjust to the consequences of demographic change.

To take one example, as the global population ages there is likely to be an increased demand for financial instruments that assist in the management of retirement incomes. This may include annuities, long-term indexed bonds, new derivatives related to demographic characteristics, and housing equity withdrawal products.

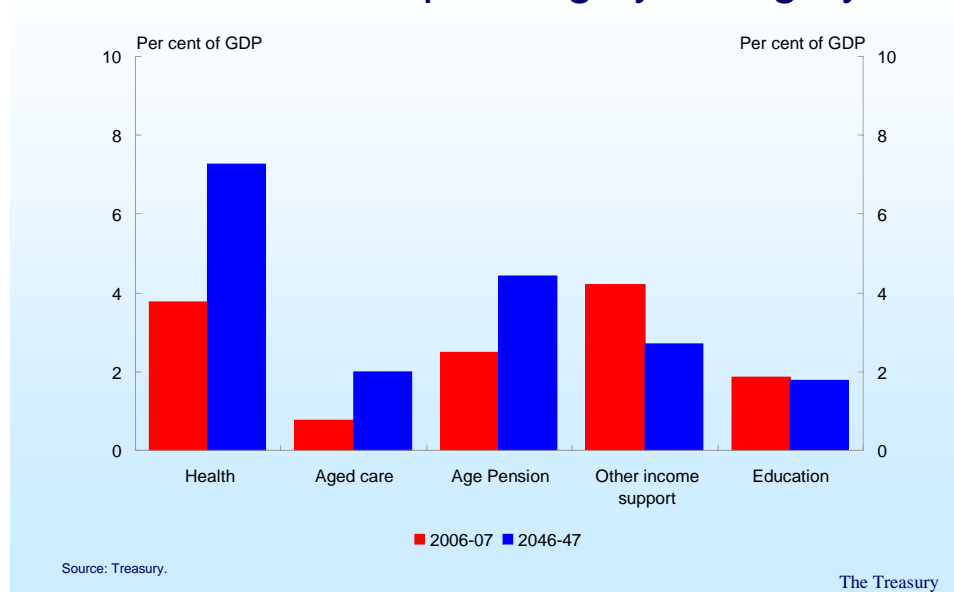
The main role for government is to ensure that markets are open to foster the ongoing development of these products – in essence, ensuring that regulatory regimes support innovation. These issues have been canvassed in detail by the G-20 in the past three years.²

² See G-20 Workshop on Demography and Financial Markets, Sydney, Australia, 2006, http://www.g20.org/documents/publications/conference_volume_2006.pdf, G-20 Workshop on Demographic Challenges and Migration, Adelaide, Australia, 2005, http://www.g20.org/documents/publications/2005_workshop_proceedings.pdf, and 2006 G-20 Ministerial background note – Demographic Change, http://www.treasury.gov.au/documents/1192/PDF/Session_3_Background_Note_Demographic_Change.pdf

The Fiscal Impact

In terms of fiscal impacts, IGR2 projects that over the next forty years spending pressures will increase by 4¾ percentage points of GDP. The main spending pressures continue to be in health, age pensions and aged care. All these areas will be affected by the ageing of the population as well as non-demographic factors such as the impact of the development of new drugs on health spending.

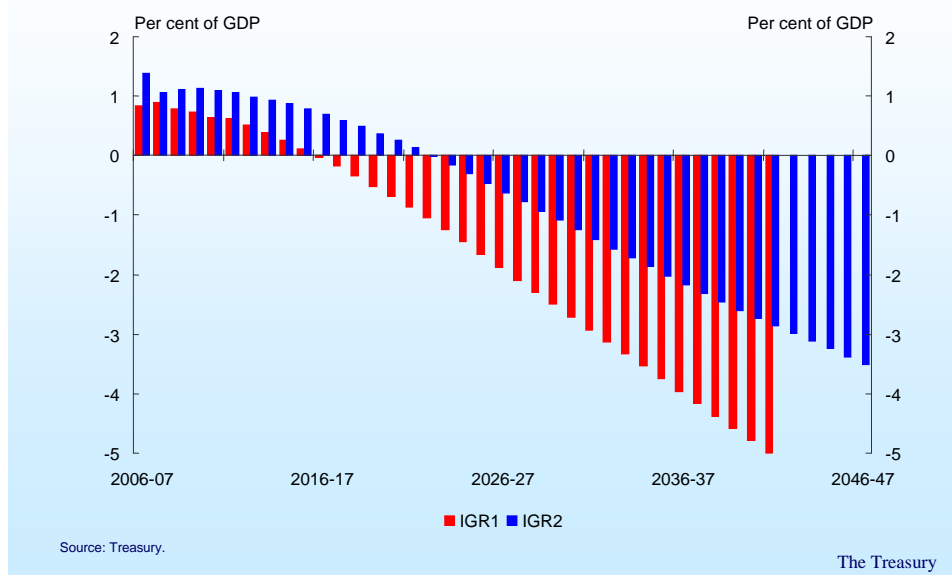
Chart 10: Projections of Australian Government Spending by Category



IGR2 projects a 'fiscal gap' or the amount by which spending is projected to exceed revenue by around 3½ per cent of GDP by 2046-47. The outcome for the IGR2 compares to a projected fiscal gap in IGR1 of 5 per cent of GDP by 2041-42.

The improved outcome is due to a lower rate of growth of projected spending per person and higher projected nominal GDP per person compared to IGR1. The lower projected spending is mainly in health partly offset by increases in some areas such as education and aged care. The higher projected nominal GDP per person is predominantly attributable to the recent strong rise in the terms of trade. Higher labour force participation and skilled migration also have increased nominal GDP per person compared to IGR1.

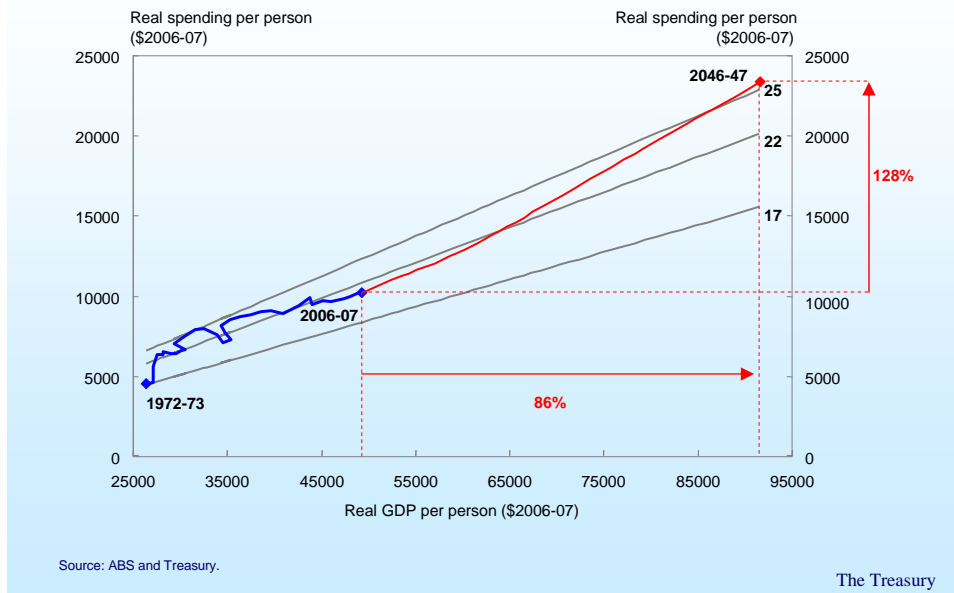
Chart 11: Comparison of IGR1 and IGR2 Projected Fiscal Gap



The importance of the continuation of policies to support strong economic outcomes is highlighted by projections of real Government spending per person to real GDP per person. According to IGR2, over the next forty years the ratio of government spending to GDP will increase by 4.7 percentage points, from 20.8 per cent to 25.5 per cent, taking the ratio to levels not seen in the past 40 years.³ This increased burden of government arises because over the next 40 years projected real GDP per person will grow by about 86 per cent, while real government spending per person will grow by about 128 per cent.

³ The spending data in the Chart excludes interest payments. There is a structural break in the series between 1998-99 and 1999-00 due to methodological and data source changes associated with the move to an accrual accounting framework. In addition, the provision of GST revenue to the States and Territories from 2000-01 under the *Intergovernmental Agreement on the Reform of Commonwealth-State Financial Relations* is not included in Australian Government spending.

Chart 12: Government Spending and GDP



It is impossible to be definitive about the 'optimal' size of government – this is a complex and subtle area which I don't have time to go into in depth today. However, theory and empirical research by the OECD lends support to the notion that government expenditure, and the taxes required to finance it, can have negative effects on efficiency as governments become larger. Similarly, it appears that a larger government is associated with slow growth. So, it is reasonable to think that Australia has been well served by having a general government sector that is relatively small and stable compared with other OECD countries. We also know that in a fully employed economy, increasing the size of government must crowd out the private sector.

All of this serves to underline the desirability of limiting the projected slowdown in the growth of real GDP per person over the coming forty years by lifting productivity growth from its historic averages and further reducing barriers to participation. It also underlines the need to be vigilant about pressures to increase real spending per capita and the overall share of government in the economy. This is the policy challenge thrown up by the IGR.