# Financial Implications of an Ageing Population

## Presentation to
## Aged & Community Care Victoria's
## State Congress and Trade Exhibition

**Saul Eslake**
**Chief Economist**
**ANZ**

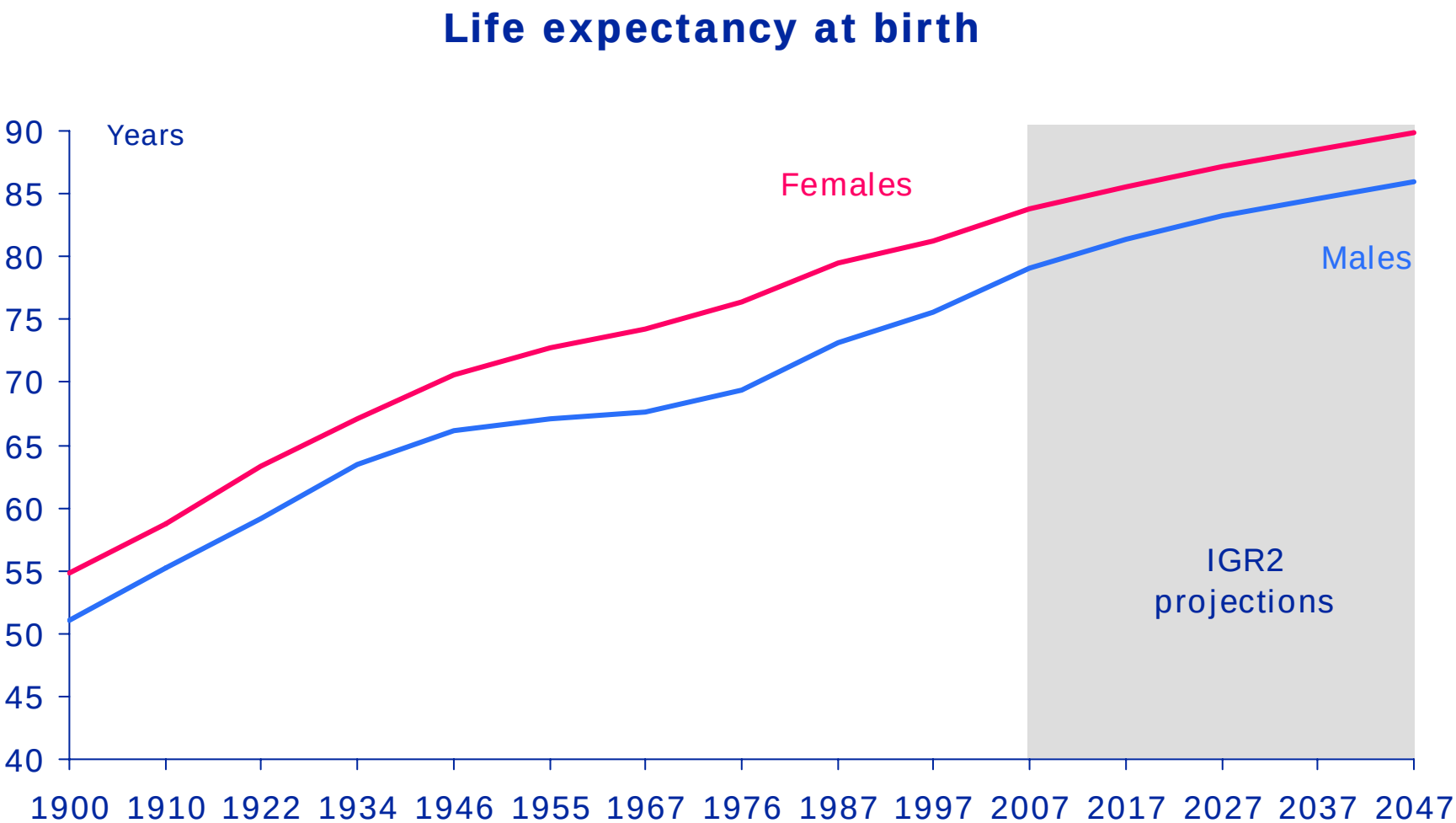
**Flemington Racecourse**
**Melbourne**
**25th May 2007**

www.anz.com/go/economics

economics@ANZ

# Part I:
# Demographic projections

# Australians are living longer …

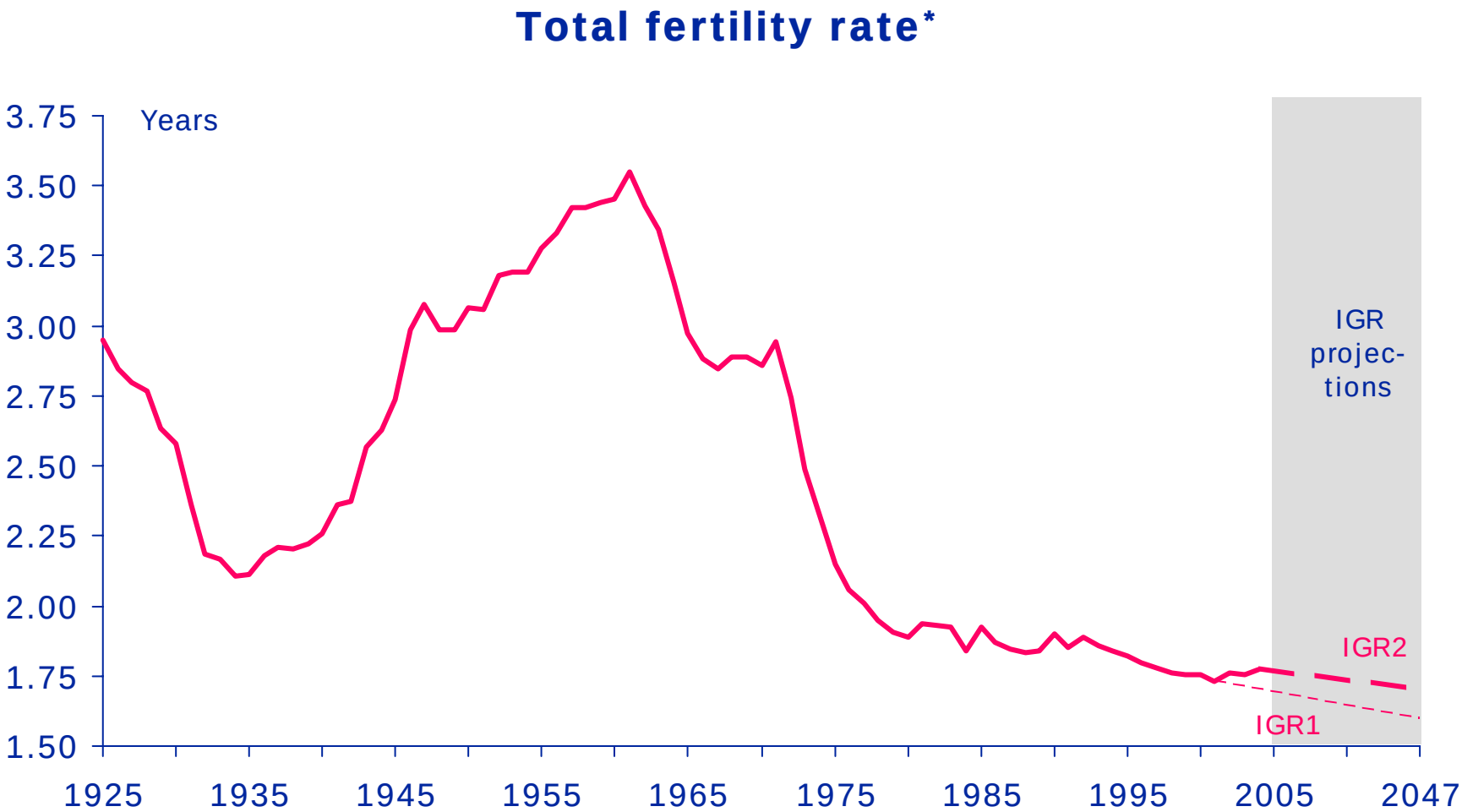



*Source:* ABS, *Historical Population Statistics* (3105.0) Table 48; Australian Government, *Intergenerational Report 2007* Table 2.1



economics@ANZ

# … and having fewer children




* The number of children a woman will have during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life

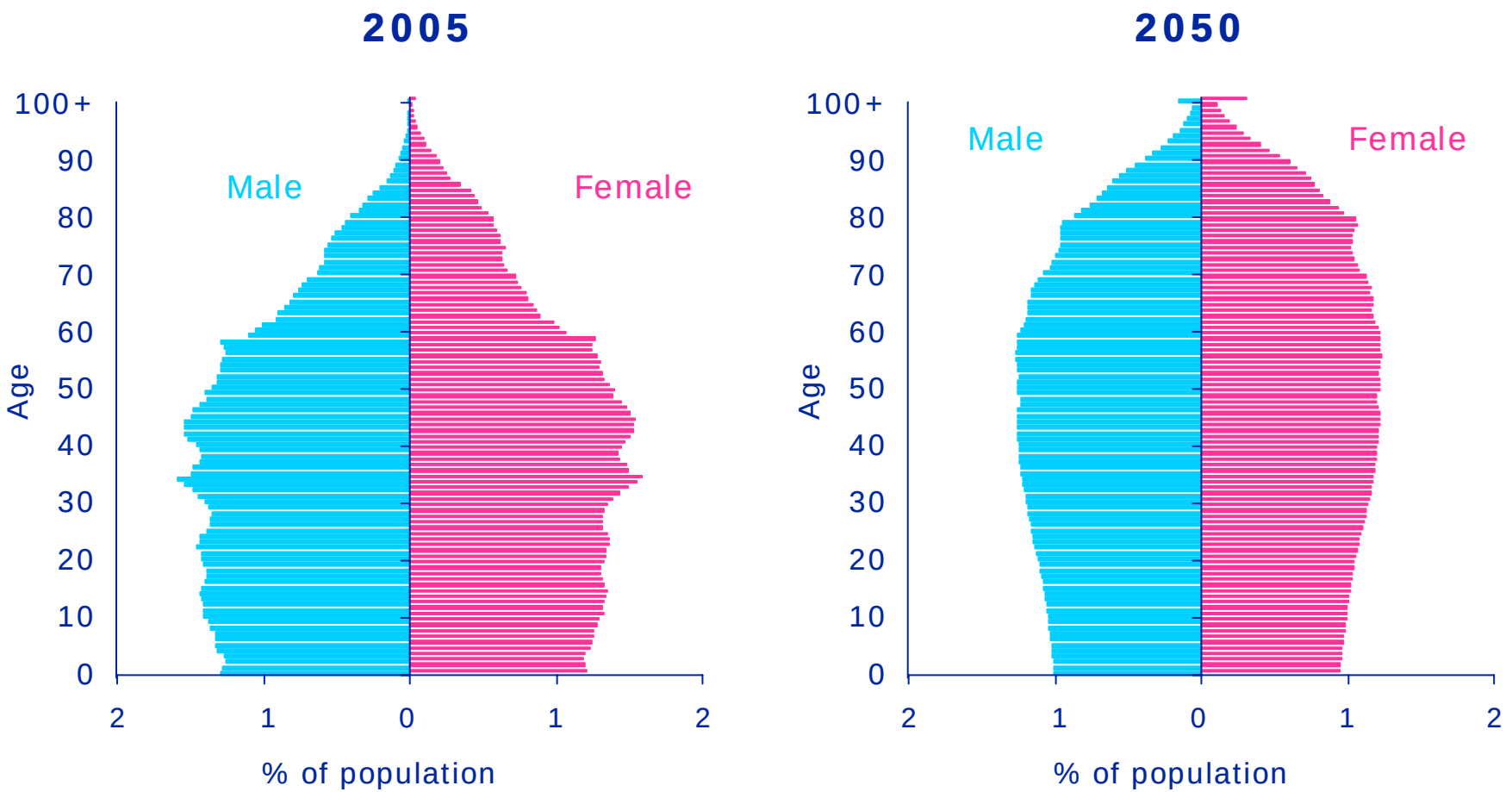
*Sources:* ABS, *Historical Population Statistics* (3105.0) Table 39; Australian Government, *Intergenerational Report 2007* Chart 2.2



economics@ANZ

# As a result, Australia's population profile will change dramatically over the next fifty years

## Age distribution of the Australian population

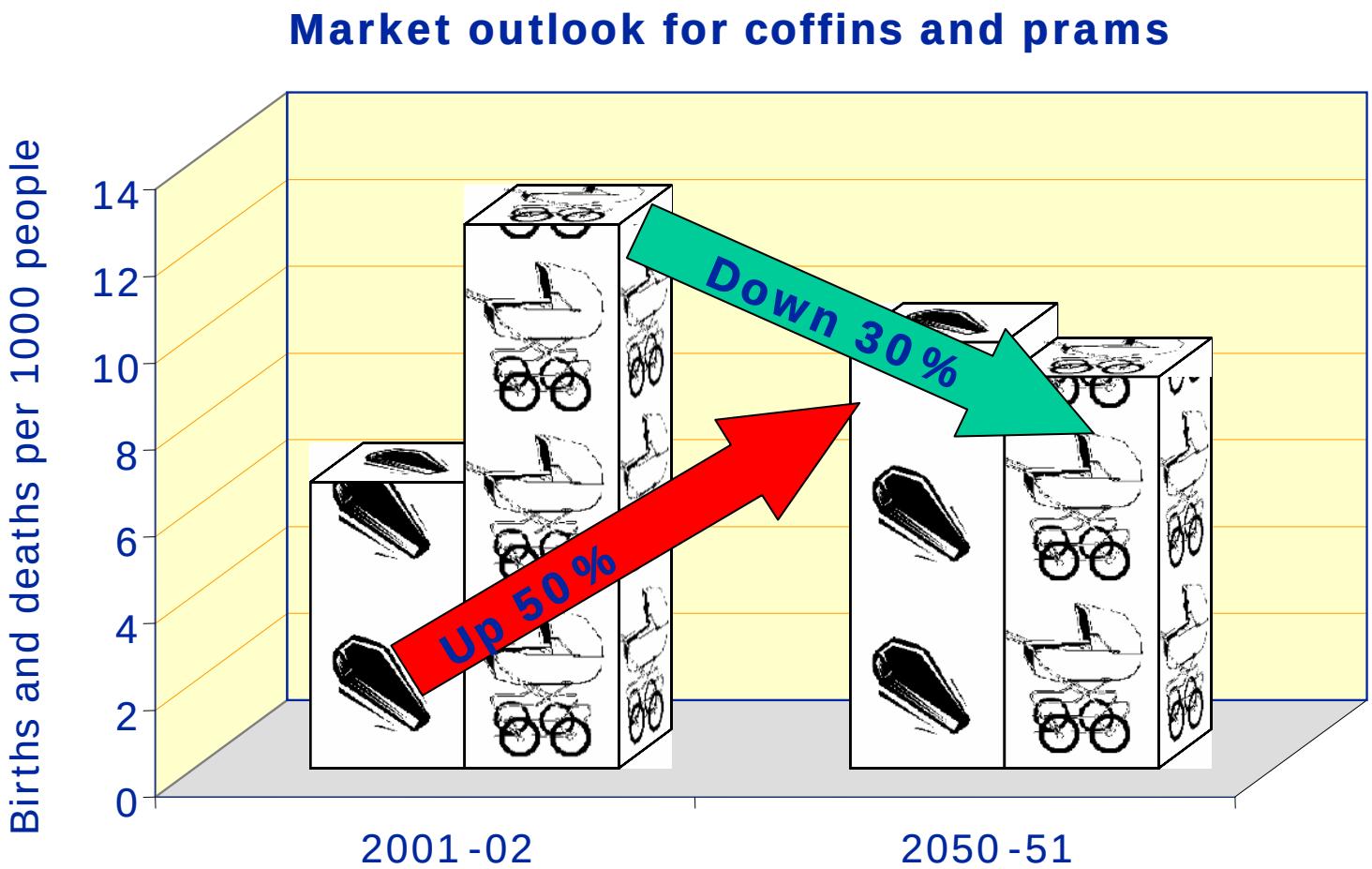



*Sources:* ABS, *Population Projections Australia* (3220.0) (Series B) and Economics@ANZ calculations



economics@ANZ

# These demographic changes will have a profound impact on the pattern of economic activity



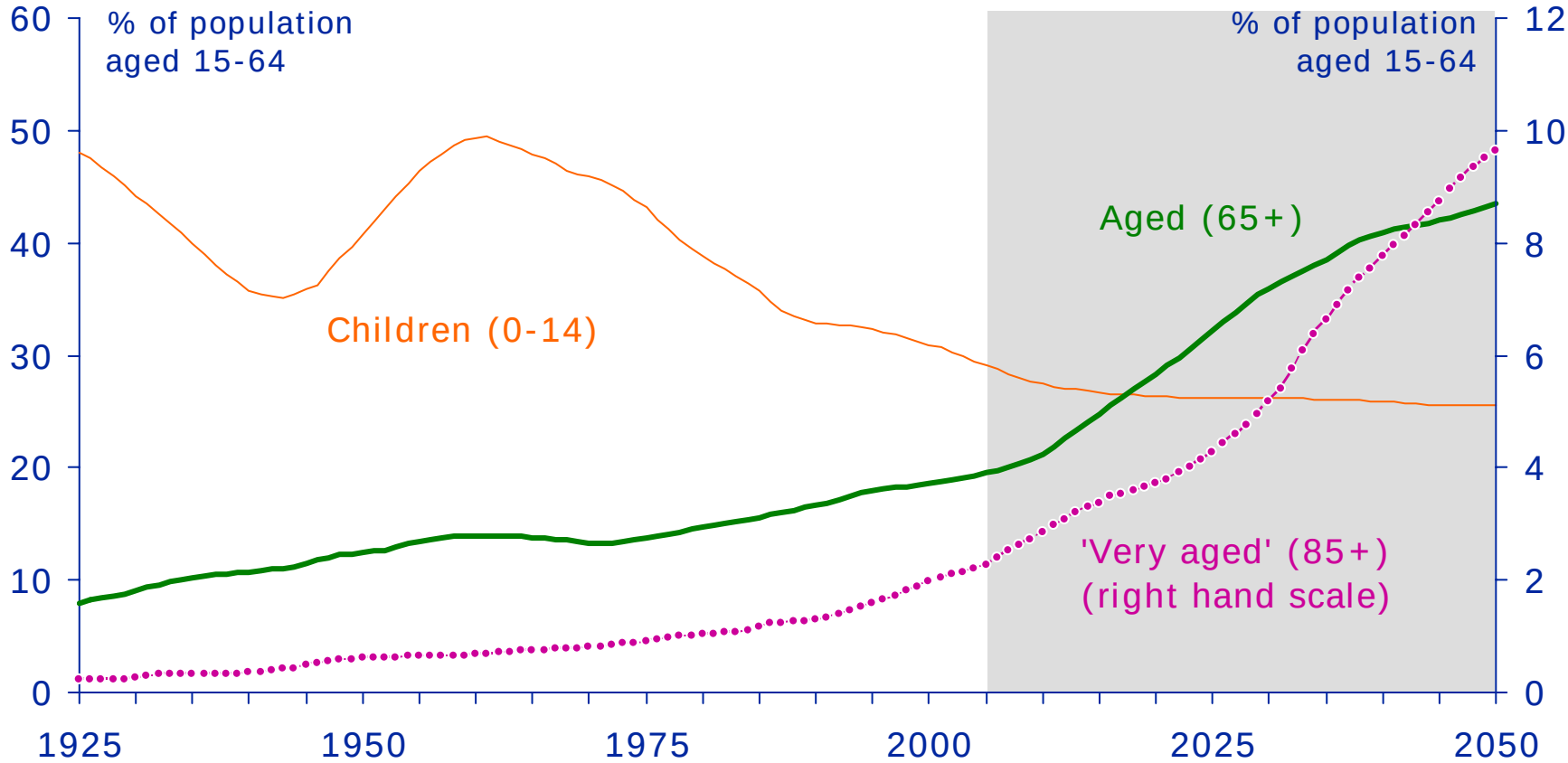

*Note:* Assumes that demand is proportional to births and deaths.
*Source:* Gary Banks, 'An Ageing Australia – Small Beer or Big Bucks', Adelaide, 29 April 2004.



economics@ANZ

# Today there are 5 people of working age for every one over 64; in 2050 there will be only 2.3

## 'Dependency ratios'

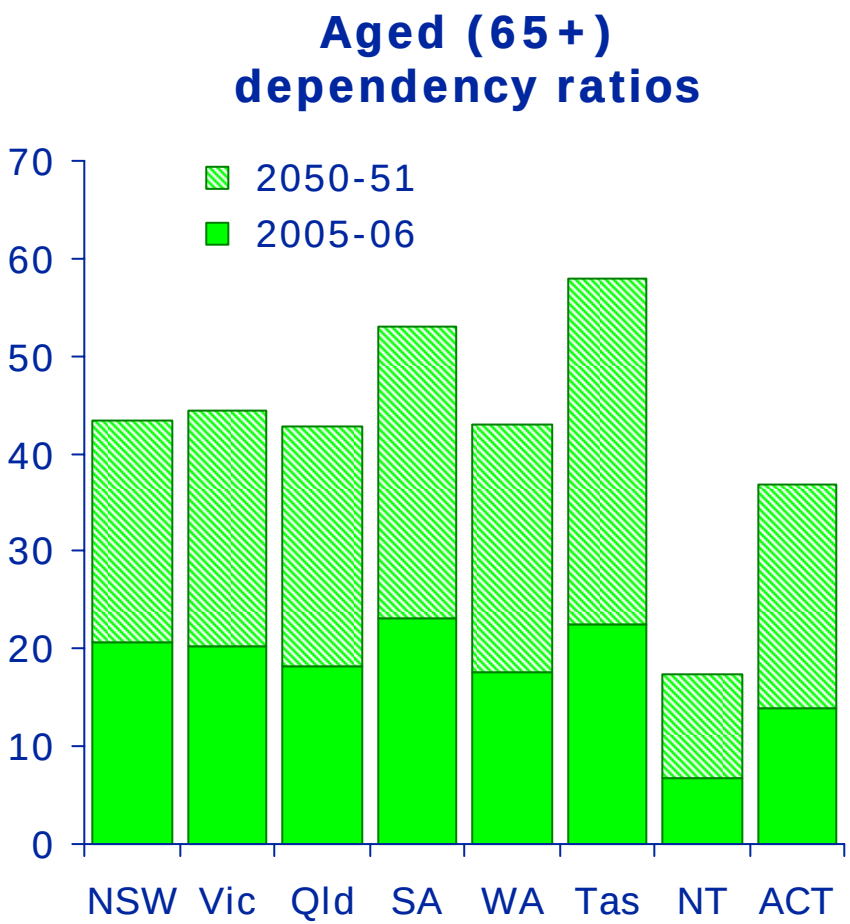


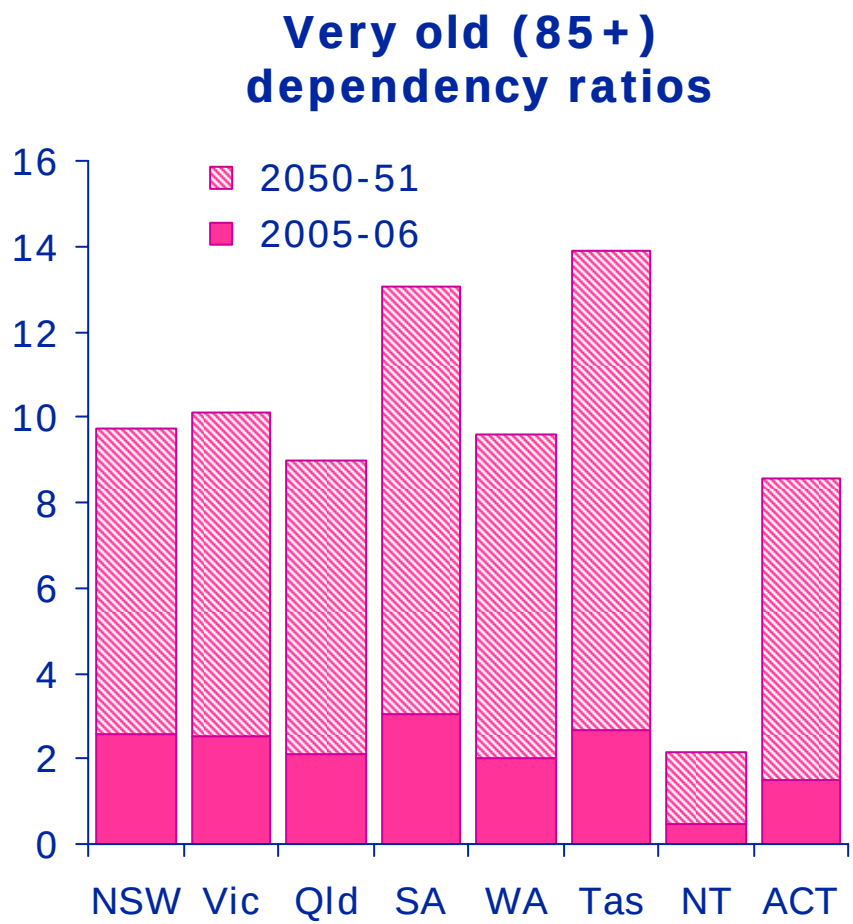

*Sources:* ABS, *Historical Population Statistics* (3105.0) Table 19; and *Population Projections* (3222.0) Table B19; Economics@ANZ.



economics@ANZ

# Population ageing will be faster in SA and Tasmania than in other States



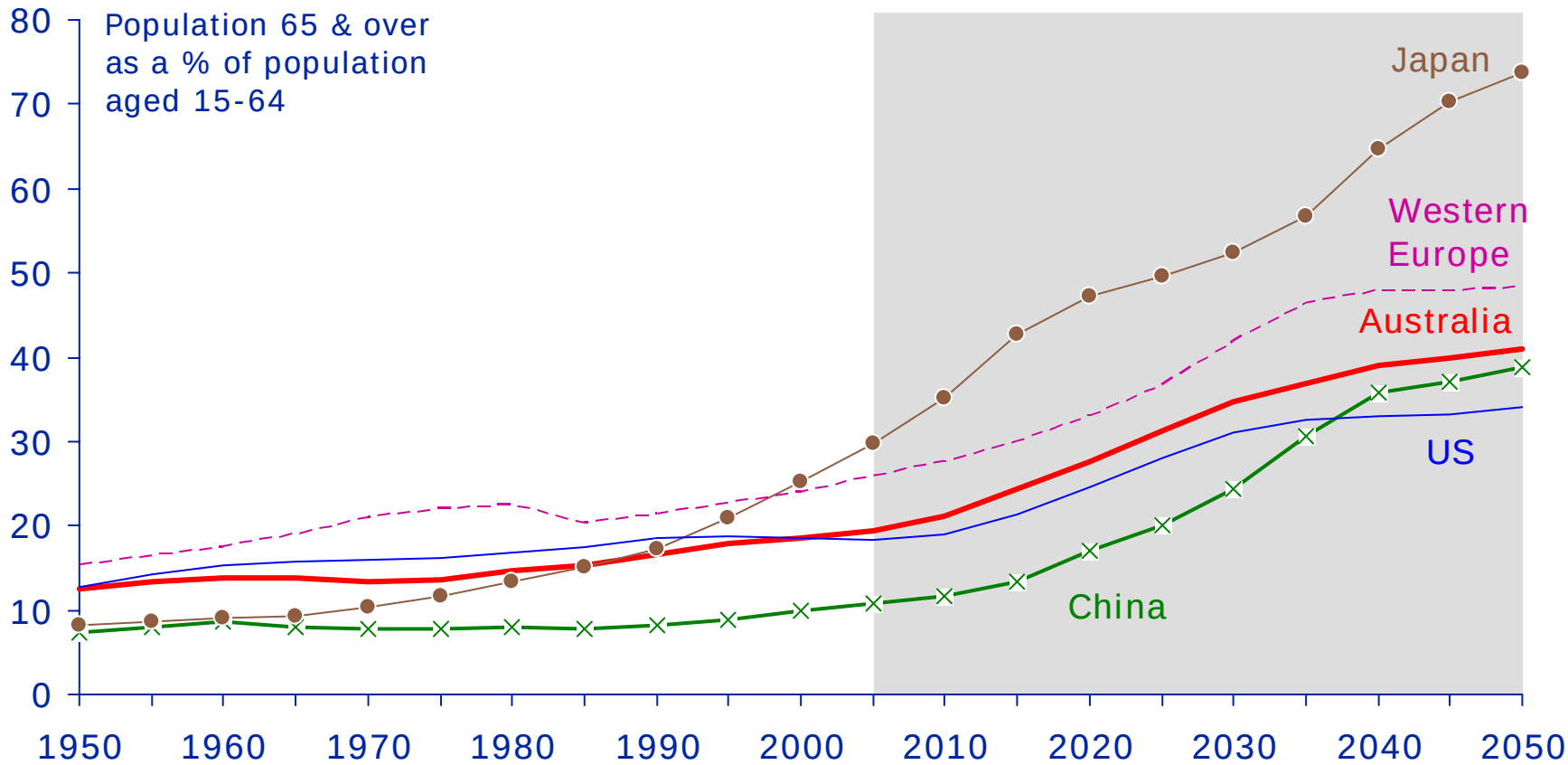

*Sources:* ABS, *Population Projections, Australia* (3222.0), Series B Tables B1-B8; Economics@ANZ.



economics@ANZ

# Population ageing will be more gradual in Australia than Japan or Europe

## 'Dependency ratios'




*Sources:* United Nations Department of Economic and Social Affairs, *World Population Prospects: The 2006 Revision* (medium variant).



economics@ANZ

# Part II:
# Demography and the economy

# Ageing and economic growth – the 3 P's of population, participation and productivity

$$\text{GDP} = \text{Population} \times \frac{\text{Labour force}}{\text{Population}} \times \frac{\text{Employment}}{\text{Labour force}} \times \frac{\text{Hours worked}}{\text{Employment}} \times \frac{\text{GDP per hour}}{\text{Hours worked}}$$

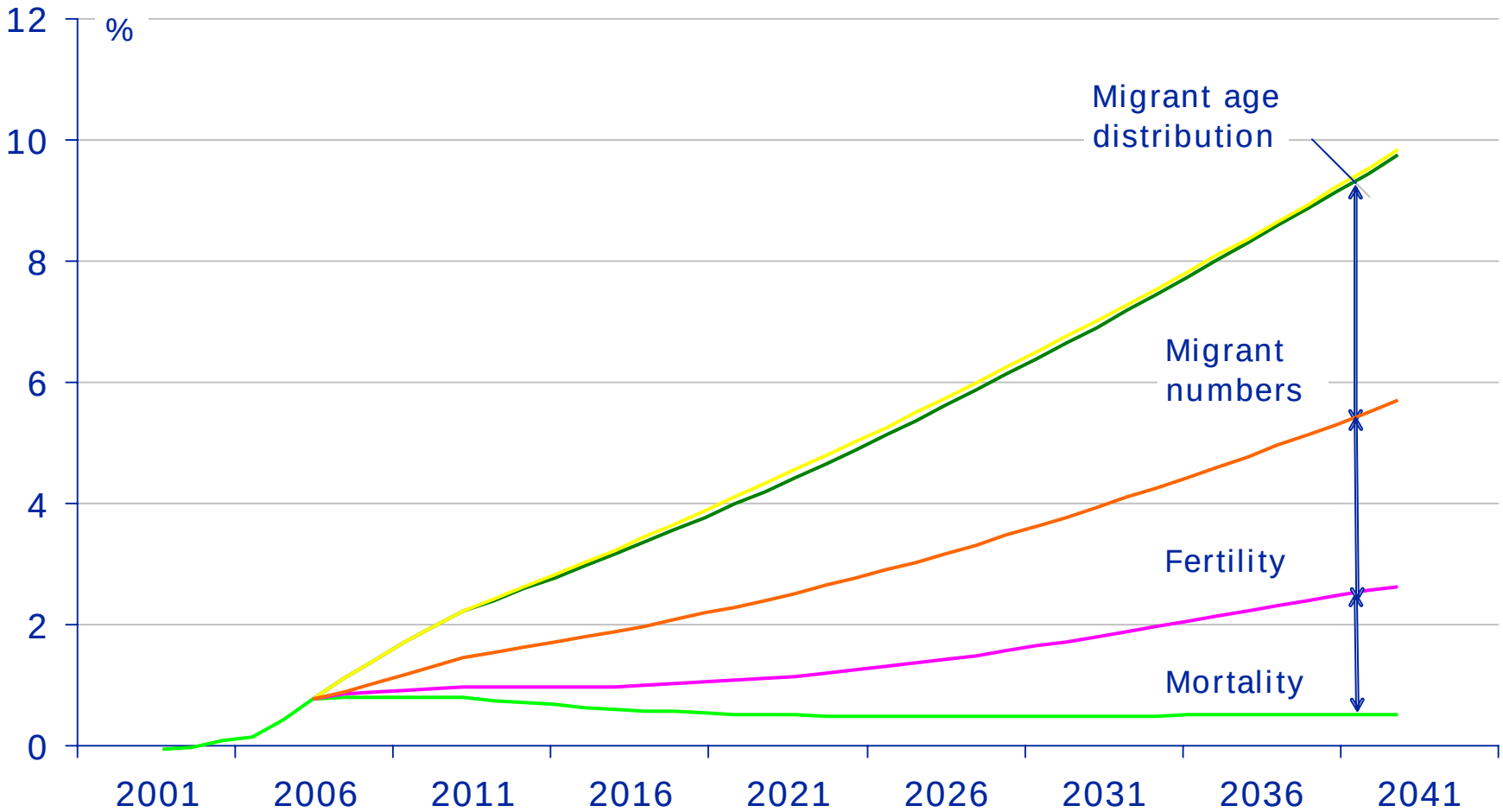
Labour force participation rate

1 – unemployment rate

Productivity

# Australia's population now expected to reach 27.8mn by 2042, as against 25.3mn previously

## Sources of upward revisions to the projections of population growth between IGR1 (2002) and IGR2 (2007)

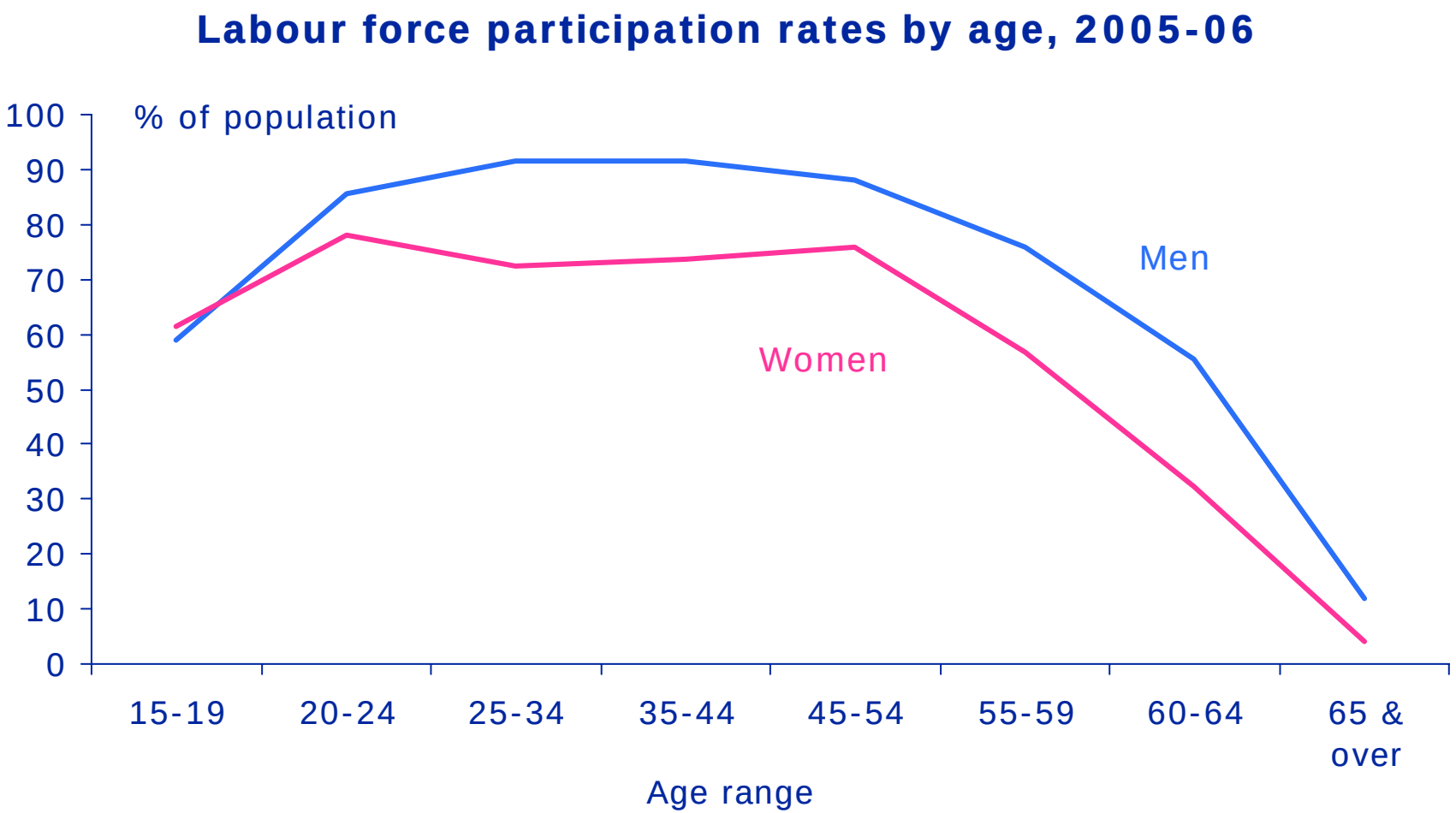



*Source:* Australian Government, *Intergenerational Report 2007* Chart 2.23.



economics@ANZ

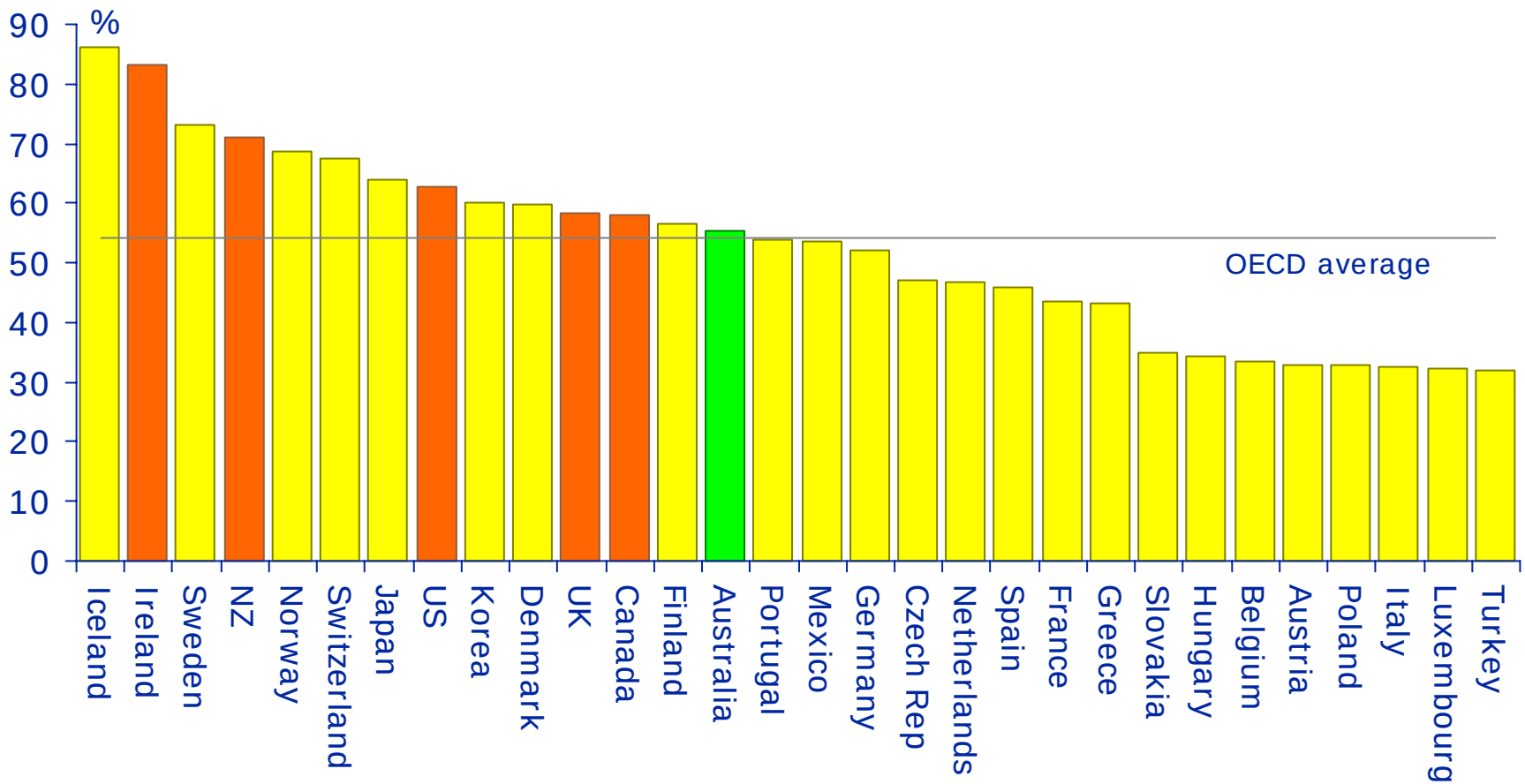
# Labour force participation typically declines sharply with age




*Source:* ABS, *Labour Force Australia – Detailed* (6291.0.55.001), Table 01.

# Participation rates of Australians aged 55-64 is lower than in comparable overseas countries

## Labour force participation rates of persons aged 55-64

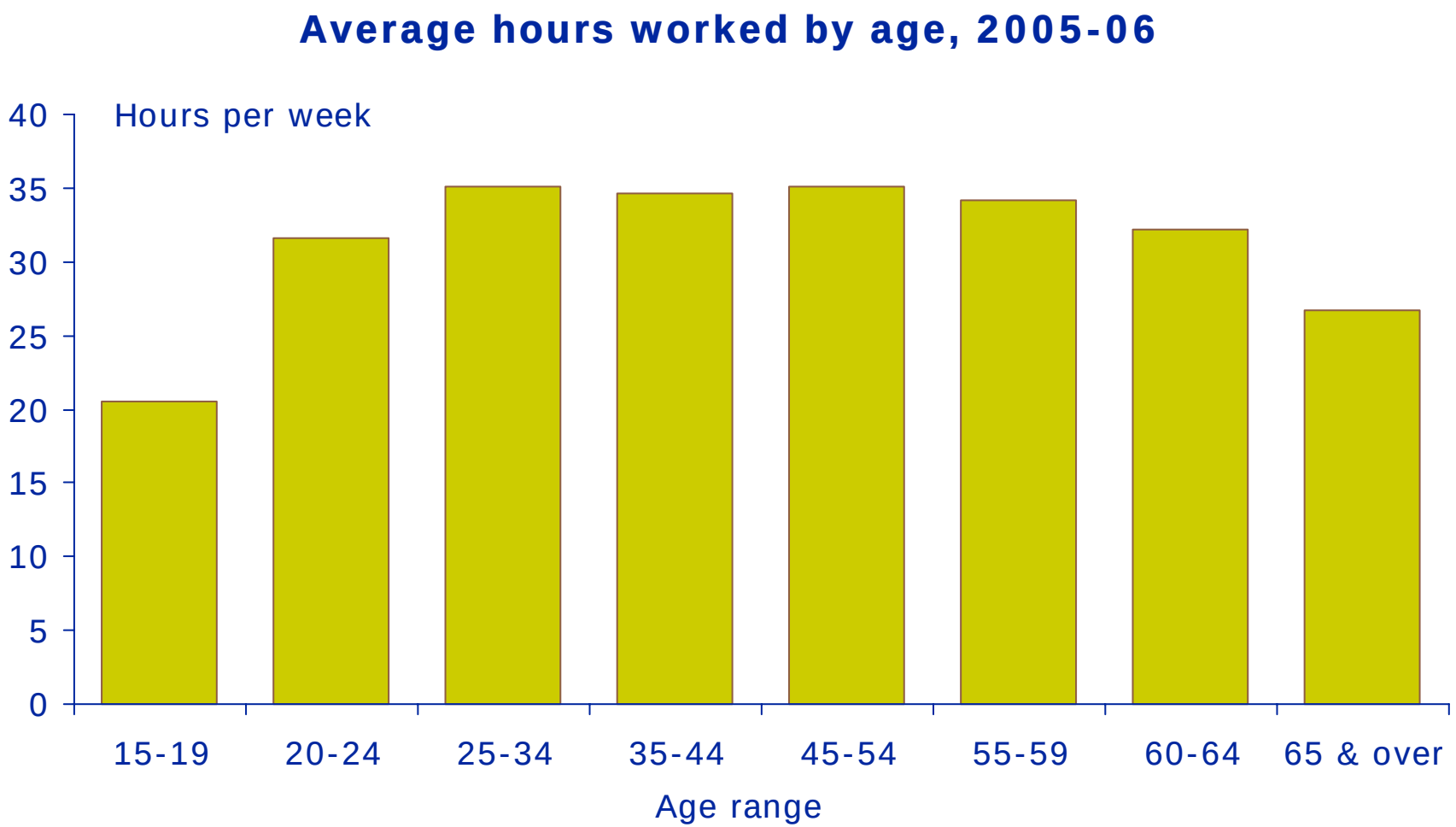



*Source*: OECD *Employment Outlook* (2006) Annex Table C.



economics@ANZ

# Average hours worked also typically declines after the age of 60



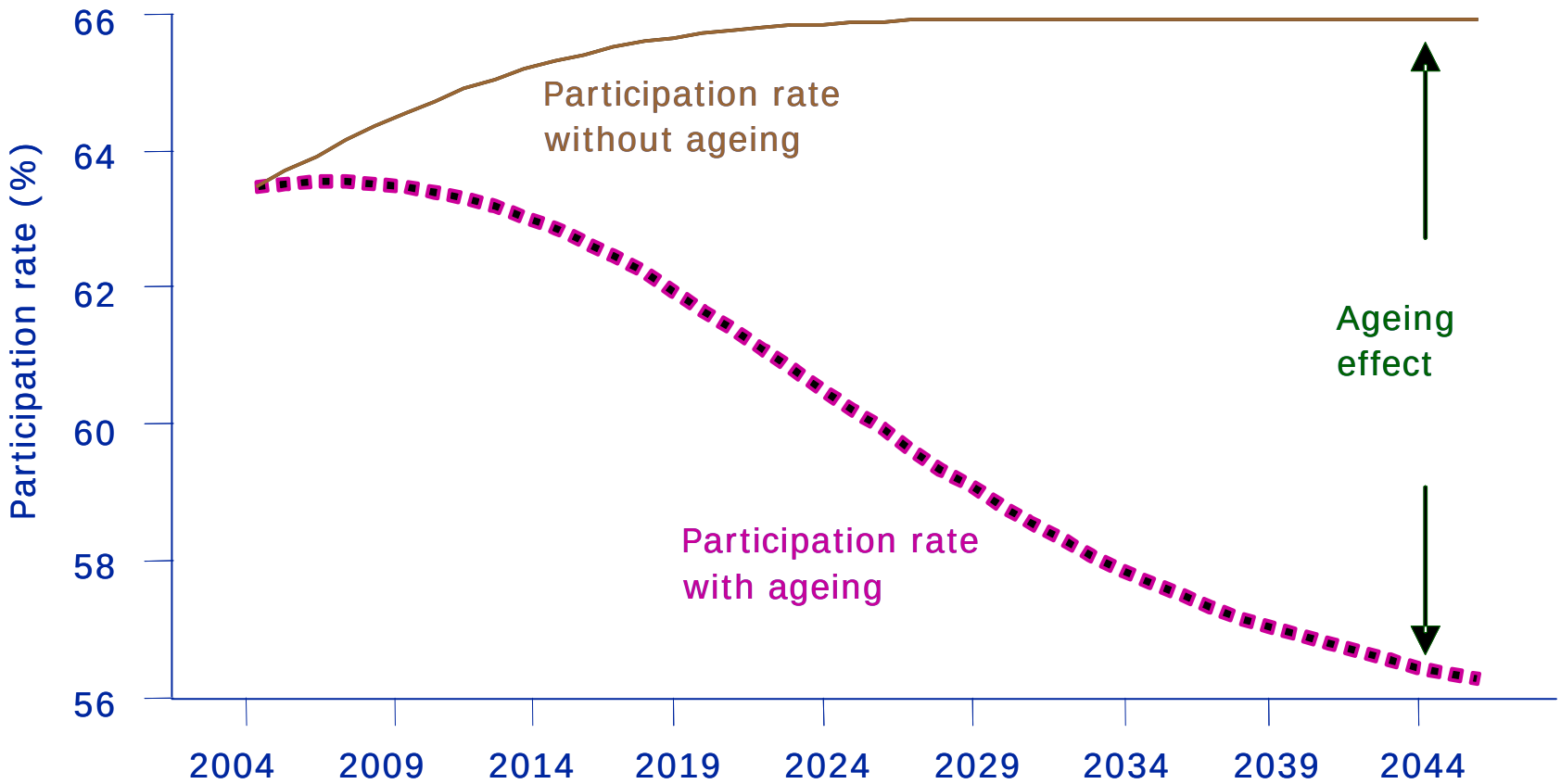

*Source:* ABS, *Labour Force Australia – Detailed* (6291.0.55.001), DataCube EM2; Economics@ANZ.



economics@ANZ

# In the absence of any change, labour force participation will drop 7 pc points by the 2040s

## Aggregate labour force participation rate, 2002-03 to 2050-01



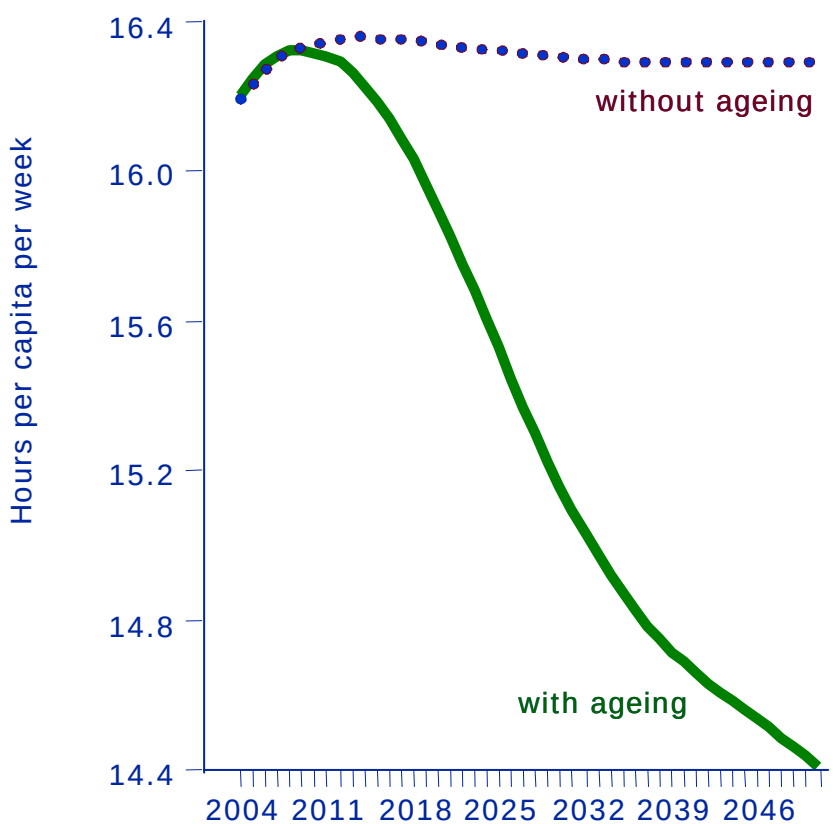

*Source:* Productivity Commission, *Economic Implications of an Ageing Australia*, March 2005.



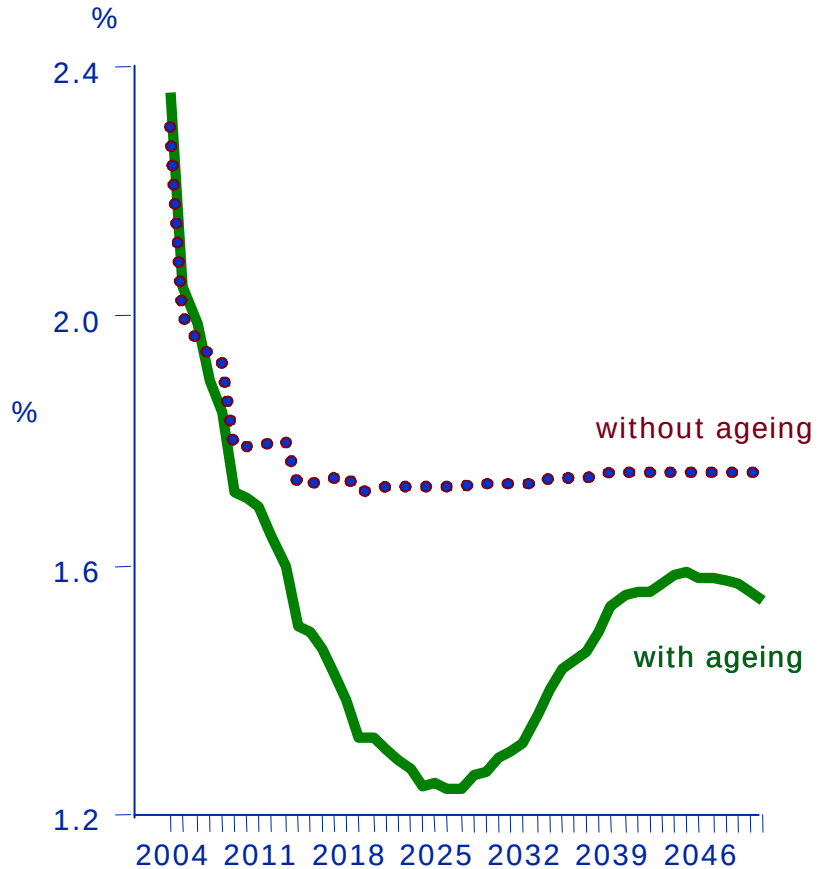
economics@ANZ

# … which would in turn result in a significant slowdown in economic growth

## Effective labour supply




## GDP per capita growth




*Source:* Gary Banks, 'An Ageing Australia – Small Beer or Big Bucks', Adelaide, 29 April 2004.

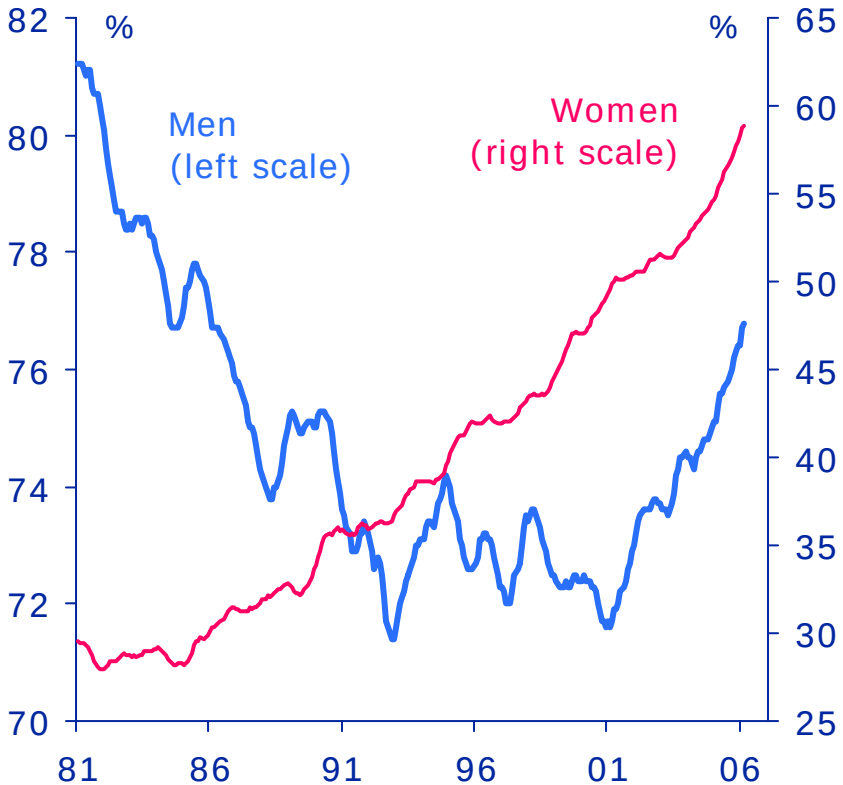


economics@ANZ

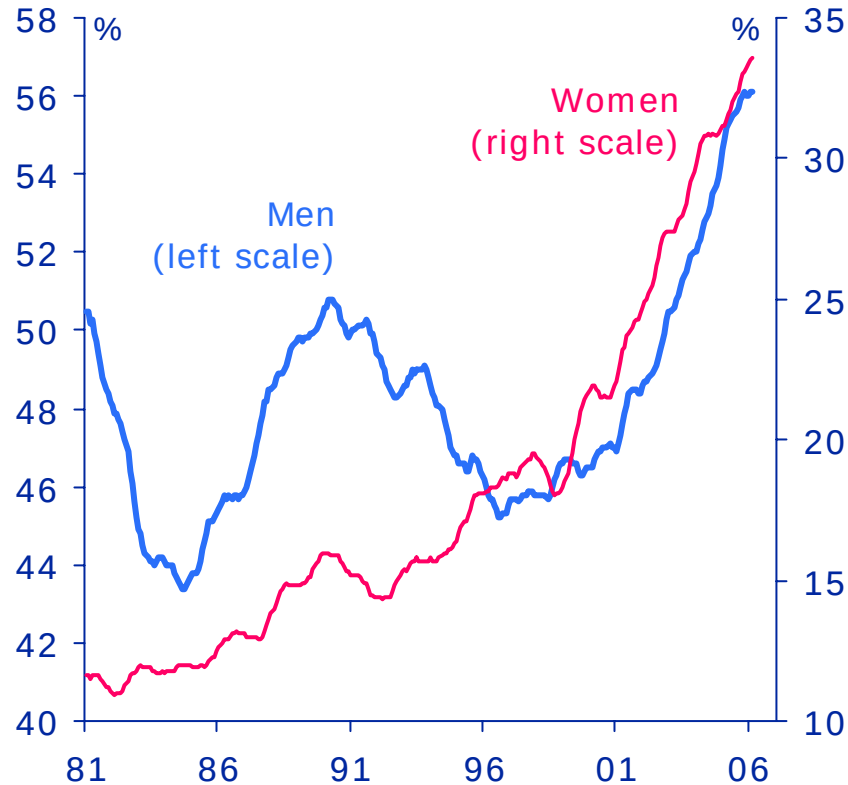
# There has been a noticeable rise in labour force participation among older age groups recently

## Labour force participation rates by age

### 55-59 year olds




### 60-64 year olds




*Source:* ABS, *Labour Force Australia – Detailed* (6291.0.55.001), Table 01. Data shown as 12-mth moving averages.



economics@ANZ

# Raising productivity growth is the 'best' answer to offsetting the economic impact of ageing

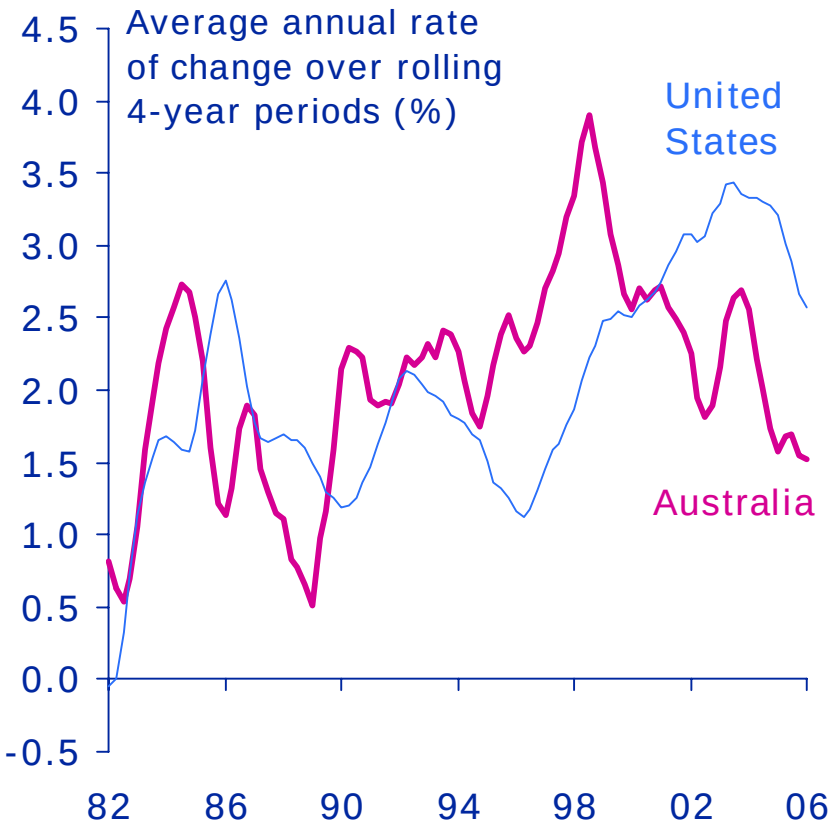
## Implications of alternative productivity growth assumptions

| | *Productivity growth of -* | | |
|---|---|---|---|
| | *2.05% pa after 2003-04* | ***1.75% pa after 2003-04*** | *1.45% pa after 2003-04* |
| *Average growth in GDP per capita* | % | **%** | % |
| 1990s | 2.14 | 2.14 | 2.14 |
| 2000s | 2.13 | 1.95 | 1.77 |
| 2010s | 1.76 | 1.46 | 1.16 |
| 2020s | 1.57 | 1.27 | 0.98 |
| 2030s | 1.80 | 1.50 | 1.20 |
| 2040s | 1.91 | 1.61 | 1.31 |
| Real GDP per capita in 2044-45 ($) | 82 036 | 72 708 | 64 417 |
| Increase over real GDP per capita in 2003-04 ($) | 42 712 | 33 384 | 25 093 |
| Additional real GDP 2004-05 to 2044-45 ($ billion) relative to baseline | 4 185 | 0 | -3 847 |
| Additional GDP 2004-05 to 2044-45 per mean population relative to baseline ($) | 170 755 | 0 | -156 949 |

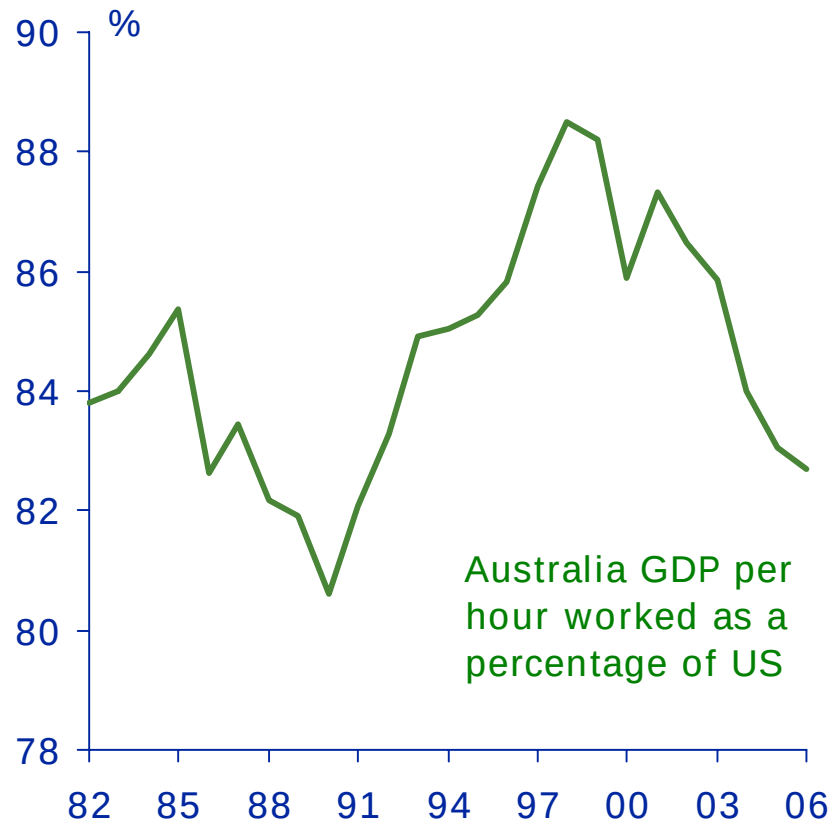
*Source:* Productivity Commission, *Economic Implications of an Ageing Australia*, March 2005.

# After improving significantly in the 1990s productivity growth has slowed this decade

## Labour productivity growth




## Labour productivity level



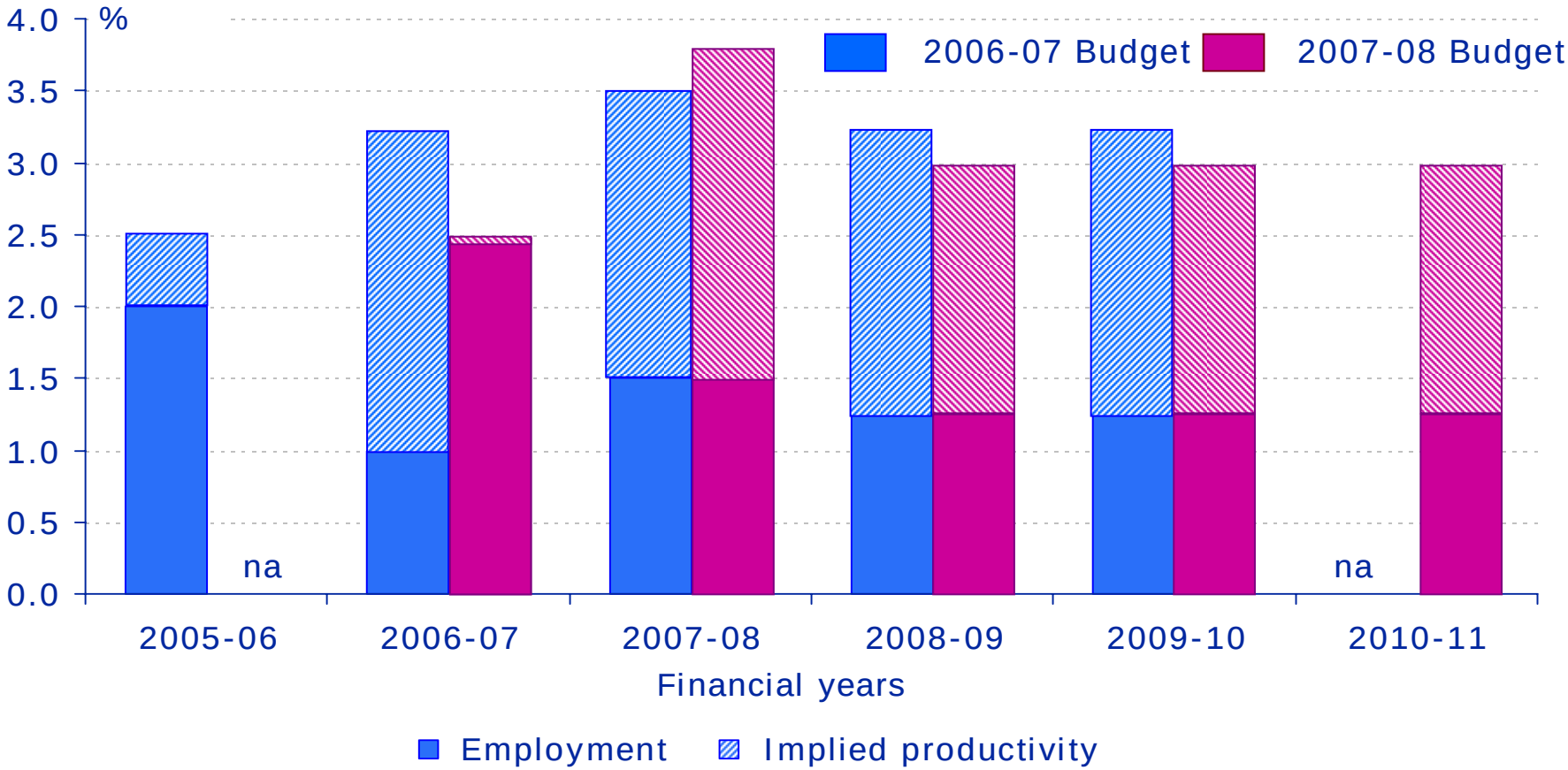

*Note:* labour productivity is output per hour worked in the non-farm business or 'market' sector.
*Sources:* ABS; US Bureau of Economic Analysis; University of Groningen Growth and Development Centre *Total Economy Database* January 2007.



economics@ANZ

# Official assumptions about productivity growth have been revised down over the past year

## Implied projections of productivity growth in the past two Budgets



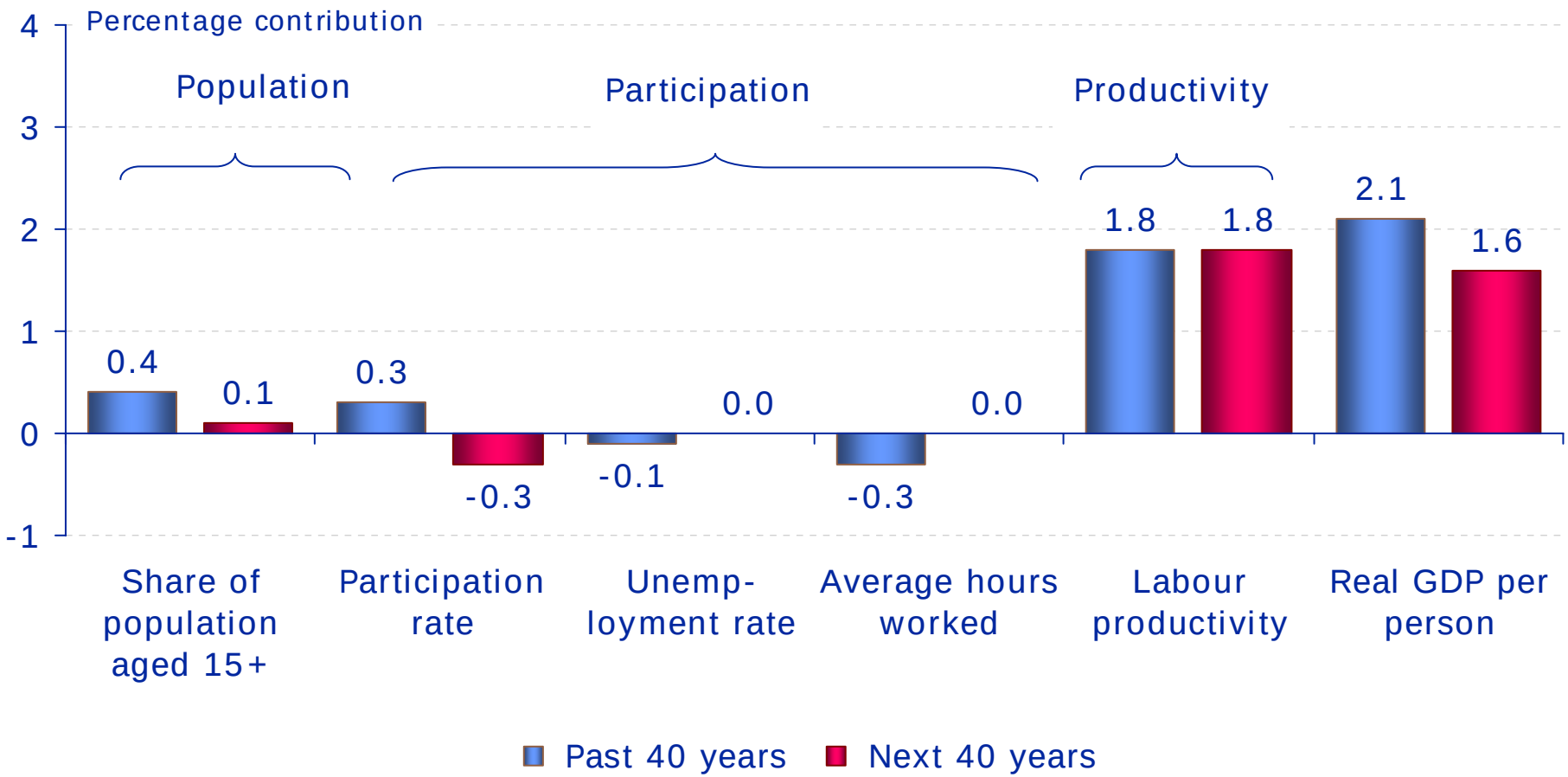

Implied productivity growth projections derived as the difference between projected real GDP and employment growth. *Sources:* Table 2, Statement No. 1 in Budget Paper No. 1, 2006-07 and 2007-08; Parliamentary Library *Budget Review 2007-08*, Table 4.



economics@ANZ

# The '3Ps' of growth in real GDP per person

## Contributions of population, participation and productivity to growth in real GDP per person




*Source:* Australian Government, *Intergenerational Report 2007*
Chart 2.18

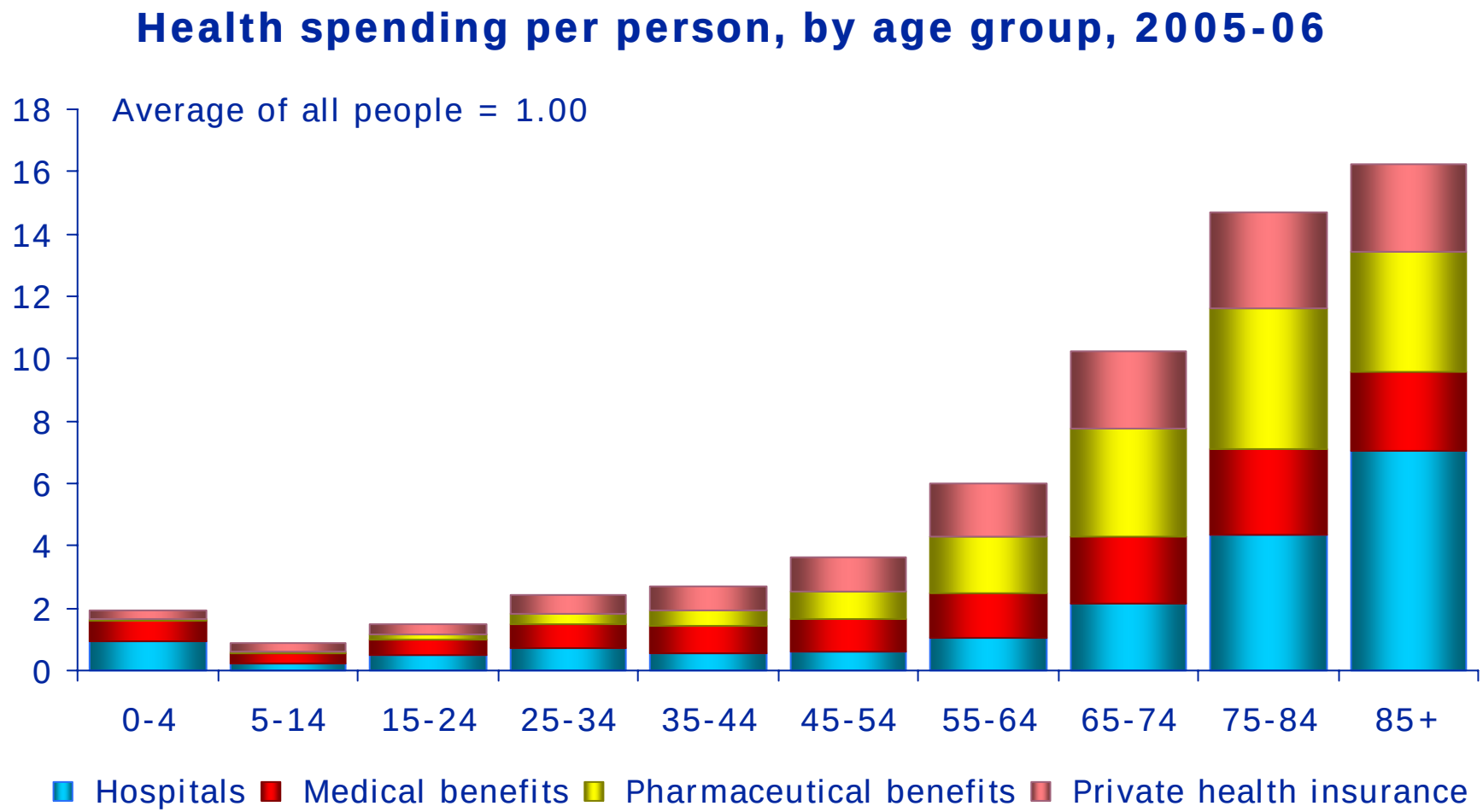


economics@ANZ

# Part III:

# The financial consequences of demographic change

# Health spending rises exponentially as people get older …



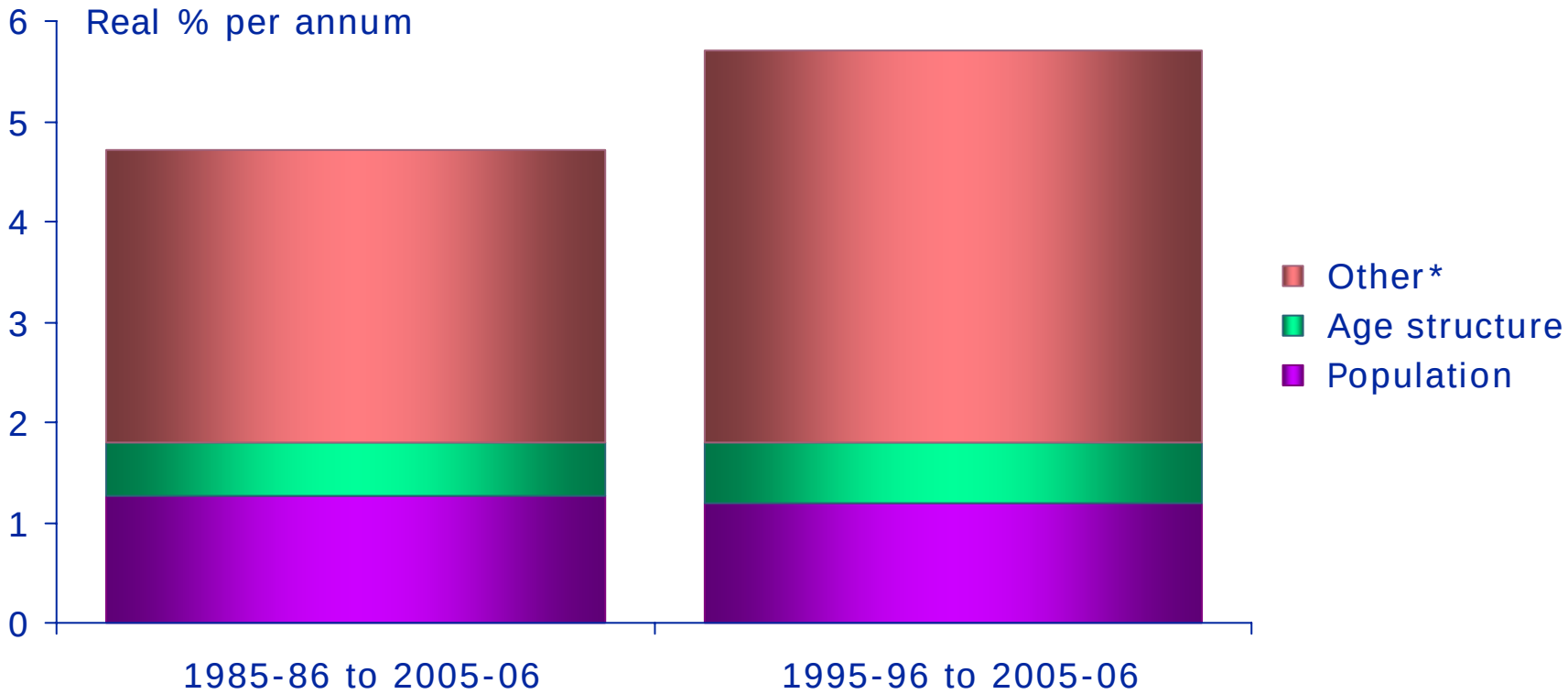

*Source:* Australian Government, *Intergenerational Report 2007*, Table C2.



economics@ANZ

# … but population ageing isn't the only, or even the biggest driver of increasing health care costs

## Main drivers of increases in Commonwealth Government health spending




* includes factors such as greater use of diagnostic procedures, listing of new medications on the PBS, and price or cost increases above the general rate of inflation.

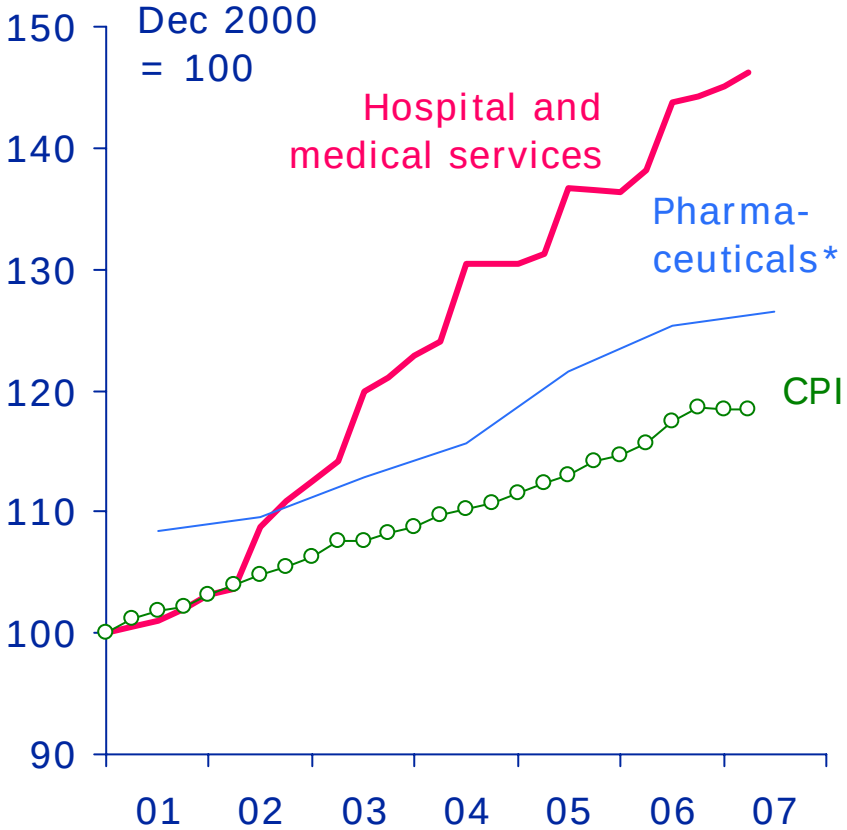
*Source:* Australian Government, *Intergenerational Report 2007*, Table 3.1.



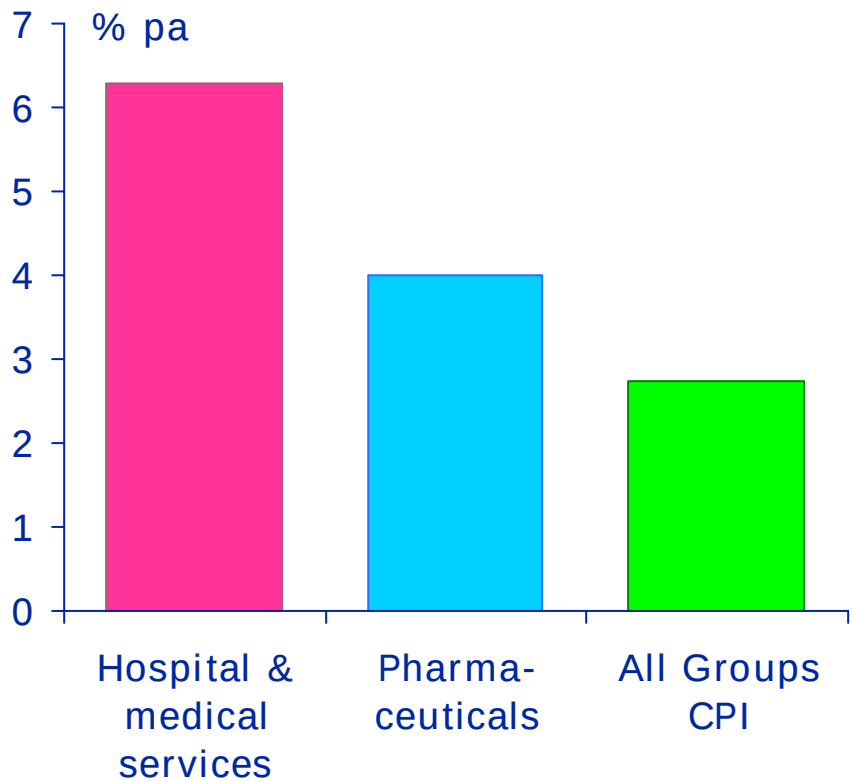
economics@ANZ

# It seems unquestioned that hospital, medical and drugs prices will keep rising in real terms

## Consumer prices




## Annual increase in consumer prices since Dec qtr 2000




* Pharmaceuticals shown at June quarters only because of pronounced seasonal fluctuations arising from the operation of PBS 'safety net'; 2007 is an estimate.

*Source:* ABS *Consumer Price Index* (6401.0) Table 7.



economics@ANZ

# Rising health care costs with age is a universal phenomenon

## Indexes of health care costs per capita by age

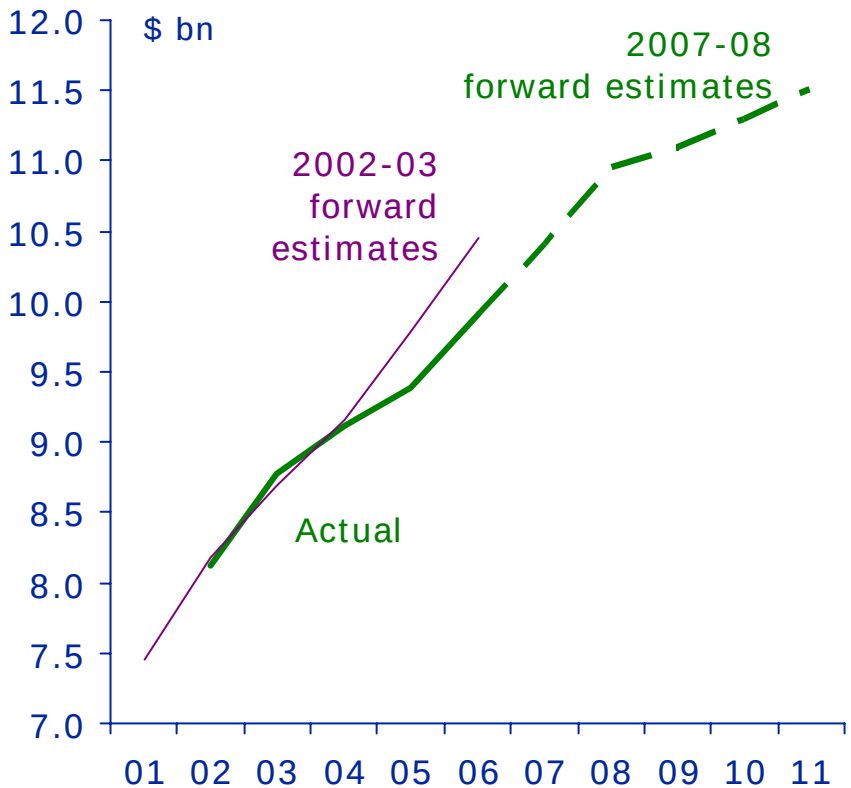
| | *Health expenditure on 25–29 year olds* | *Health expenditure on 65–69 year olds* | *Health expenditure on 85–89 year olds* |
|---|---|---|---|
| Australia | 100 | 387.6 | 614.2 |
| Belgium | 100 | 274.5 | 530.9 |
| Canada | 100 | 351.5 | .. |
| Denmark | 100 | 241.9 | 372.3 |
| Germany | 100 | 303.7 | 479.7 |
| Spain | 100 | 312.5 | 455.8 |
| France | 100 | 221.4 | 479.8 |
| Italy | 100 | 289.3 | 417.7 |
| Netherlands | 100 | 264.0 | 383.6 |
| Austria | 100 | 360.7 | 579.3 |
| Finland | 100 | 326.4 | 580.0 |
| Sweden | 100 | 276.3 | 423.7 |
| United States | 100 | 314.9 | 545.6 |

*Sources:* OECD, *A Disease-Based Comparison of Health Systems* (2003); Health Canada (2001); E. Meara et al, 'Trends in Medical Spending by Age', *Health Affairs* July-August 2004.

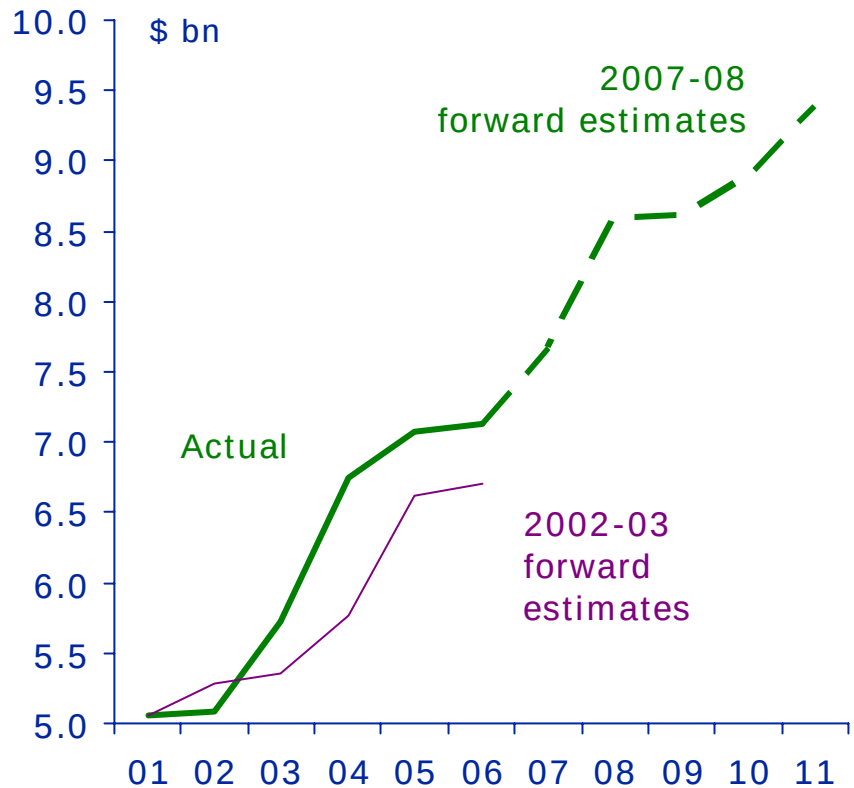
# The Commonwealth has curbed growth in its hospital costs, but not in the PBS

## Actual and forward estimates of selected areas of Commonwealth Government health expenditures

### Hospital services and health care agreements




### Pharmaceutical services and benefits

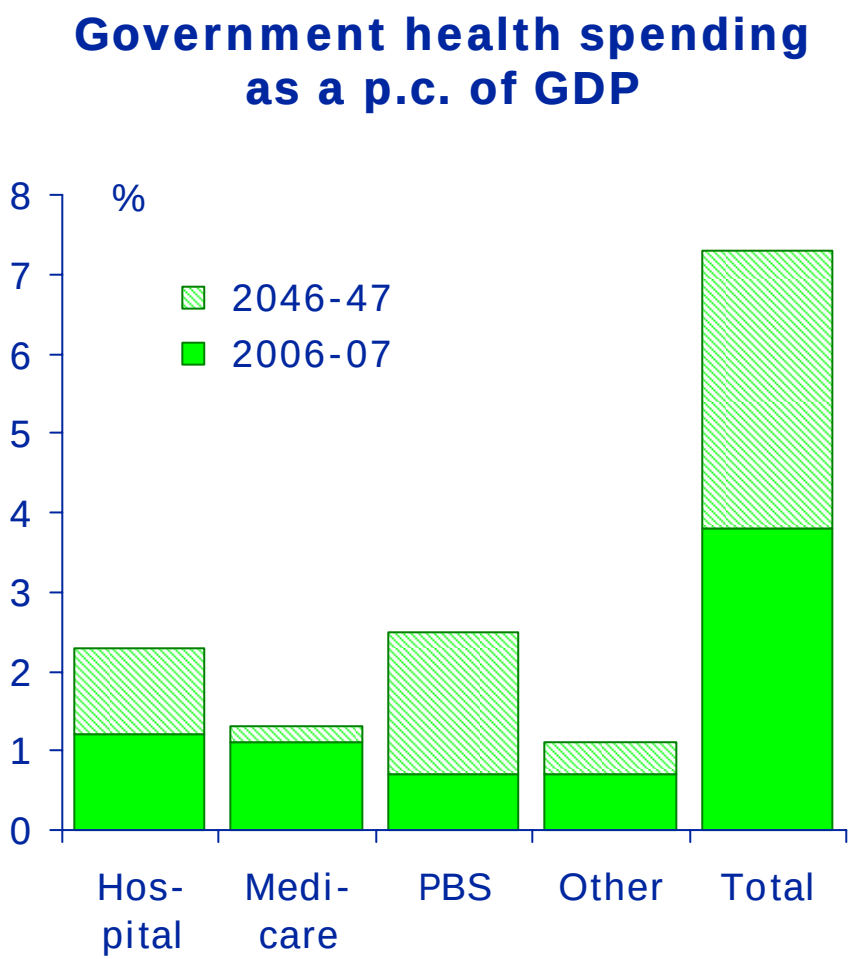



*Source:* Statement 6, Budget Paper No. 1, *Budget Strategy and Outlook*, 2002-03 and 2007-08.



economics@ANZ

# Health care costs will rise substantially as a percentage of GDP

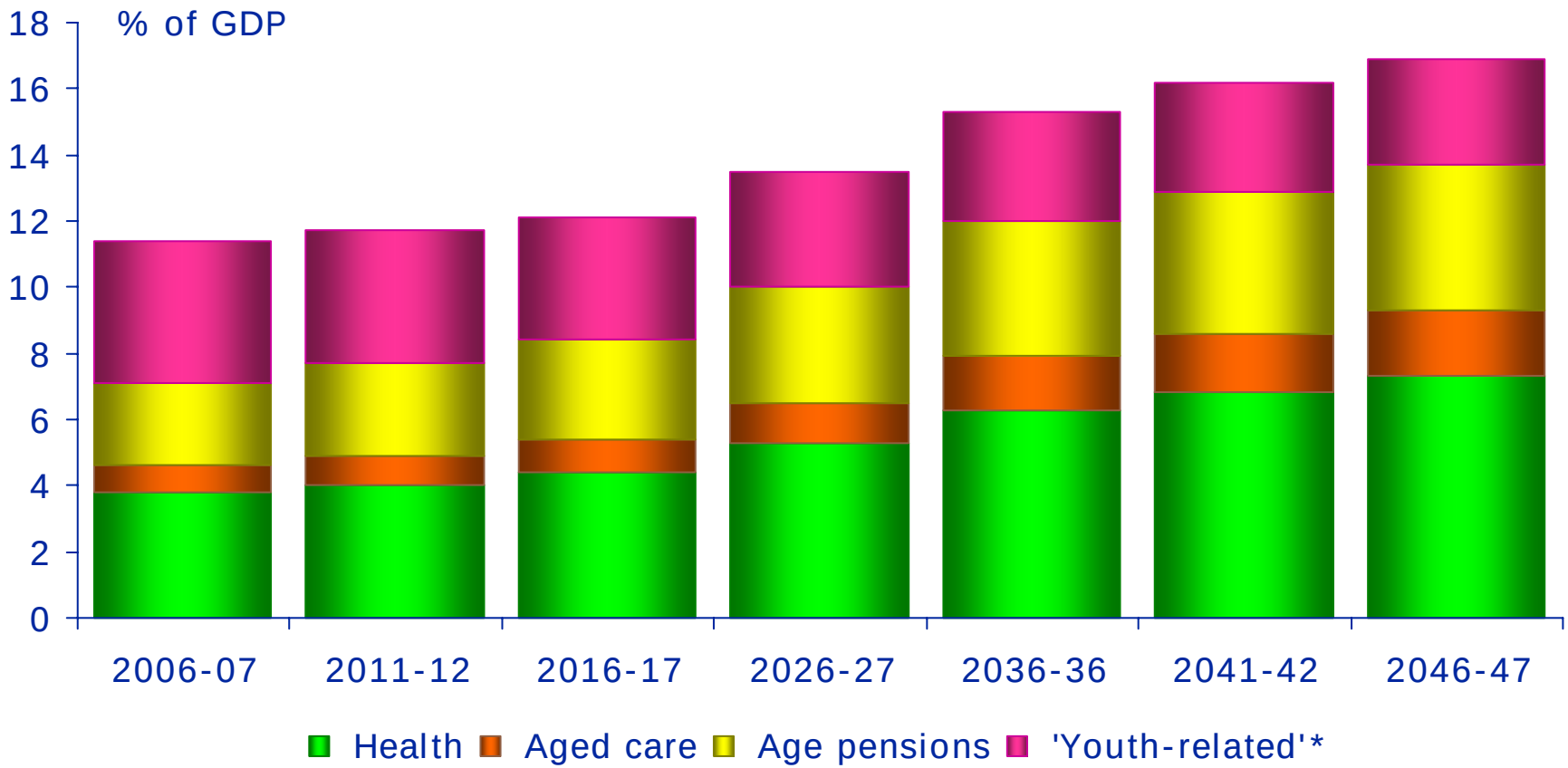



*Source:* Australian Government, *Intergenerational Report 2007*, Table A1.

- Commonwealth hospital expenditure will rise from 1.2% to 2.3% of GDP by 2046-47
- Medicare expenditures will rise rather less steeply, from 1.1% to 1.3% of GDP
- Spending on the pharmaceutical benefits scheme will rise more than threefold, from 0.7% to 2.5% of GDP
  - increases in drug prices ahead of general inflation an important additional factor
- Total Commonwealth spending by governments will rise from 3.8% to 7.3% of GDP
- Total Commonwealth age-related spending will increase from 7.1% to 13.7% of GDP

# Age-related Commonwealth spending will jump from 7% to nearly 14% of GDP by 2046-47

## Age and youth-related Commonwealth government spending




* Education spending plus family, child care, maternity, and parenting benefits or payments and youth allowance and Austudy.

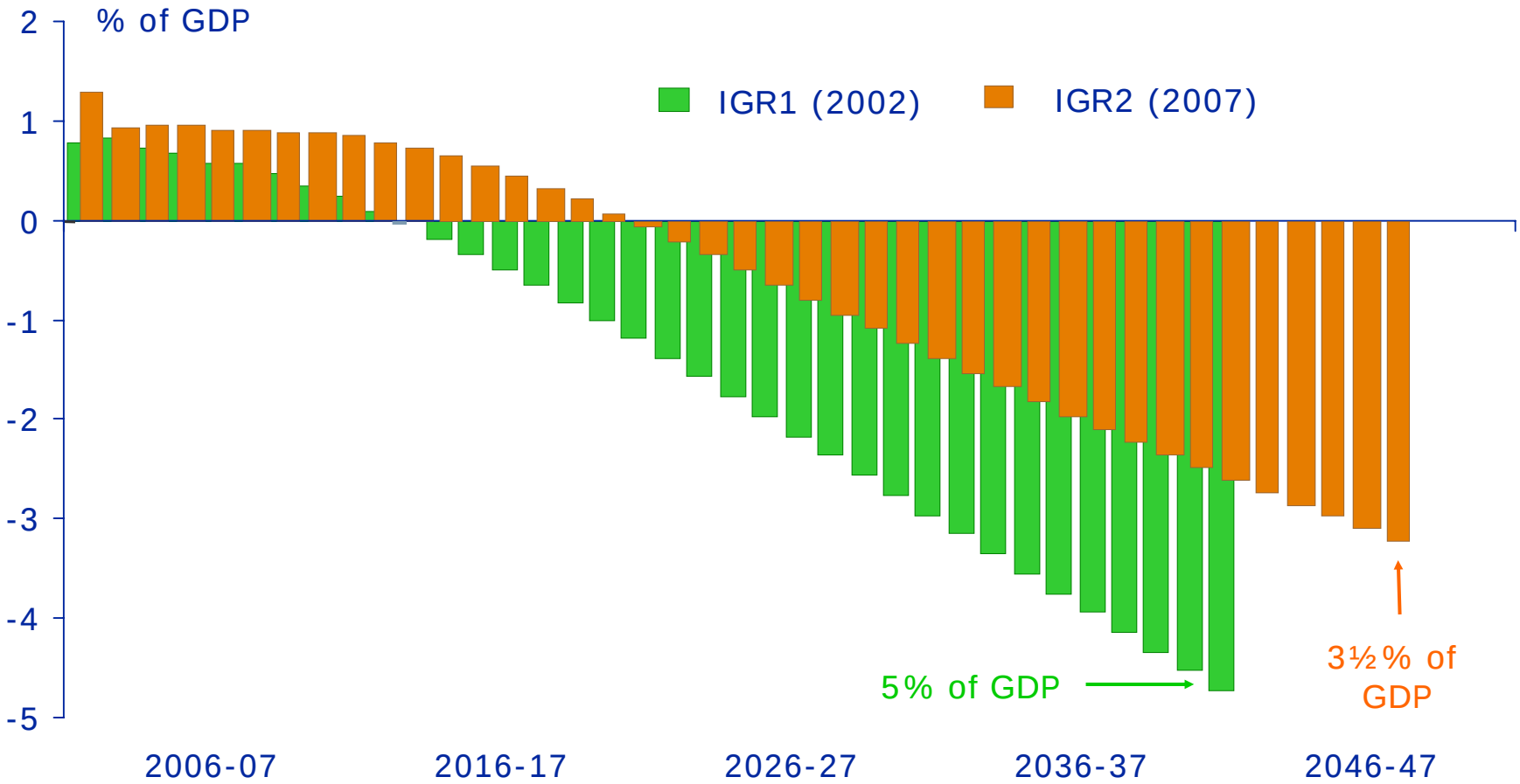
*Source:* Australian Government, *Intergenerational Report 2007*, Table A1.



economics@ANZ

# Ageing of the population will push the budget into deficit – but not by as much as first thought

## Commonwealth Government 'primary balance'*




* 'Primary balance' means excluding net interest payments and Future Fund earnings.

*Source: Intergenerational Report 2007*, Chart 3.22.



economics@ANZ

# Less dire fiscal projections reflect slower health spending and larger economy

- Projected growth in real health care spending per person has been revised down (from 3.6% pa to 3.3% pa) since IGR1
  - partly reflecting policy changes to PBS (eg generic drugs)
  - partly due to more refined modelling methodologies
  - over 35 years amounts to $535 dollars per head (2006-07$)
- More importantly, the level of nominal GDP is expected to be more than 16% higher by 2041-42 than projected in IGR1
  - largely due to the population now being expected to be 10% larger than forecast in IGR1
  - with most of the remainder attributable to the greater-than-expected improvement in Australia's terms of trade (export prices relative to import prices) since IGR1, which lifts the GDP deflator by 5 pc pts compared with the IGR1 forecast
  - real GDP per person in 2041-42 is expected to be only 1% higher than forecast – entirely attributable to an increase in hours worked per person (with higher labour force participation offset by other demographic factors)
- Higher nominal GDP boosts the revenue projections
  - since revenue is assumed to be a constant % of GDP

# Most of the additional costs will be borne by the Federal Government, but State costs will rise too

## Health expenditure as a share of GDP

| | *2002-03* | *2014-15* | *2024-25* | *2034-35* | *2044-45* |
|---|---|---|---|---|---|
| Australian Government hospital | 1.40 | 1.58 | 1.79 | 2.03 | 2.25 |
| Medicare | 1.23 | 1.40 | 1.56 | 1.69 | 1.80 |
| PBS | 0.68 | 1.29 | 1.91 | 2.34 | 2.59 |
| Australian Government other | 0.60 | 0.67 | 0.73 | 0.80 | 0.86 |
| **Australian Government total** | **3.90** | **4.94** | **6.00** | **6.85** | **7.50** |
| State hospital | 1.19 | 1.35 | 1.54 | 1.74 | 1.92 |
| State other | 0.60 | 0.67 | 0.74 | 0.81 | 0.88 |
| **State government total** | **1.78** | **2.02** | **2.29** | **2.55** | **2.79** |
| **Total government expenditure** | **5.69** | **6.96** | **8.28** | **9.40** | **10.28** |

*Source:* Productivity Commission, *Economic Implications of an Ageing Australia*, March 2005.

# Four 'solutions' to the fiscal costs of ageing

## Allow the deficit to rise

- Borrowing to fund fiscal costs of ageing would result in public debt of $4.2 trillion (200% of GDP) by 2045
- Although if governments were willing to run larger surpluses over the next 20 years, the resulting net financial assets could be drawn down without boosting debt

## Raising taxes

- Covering the entire fiscal cost of ageing would require a 20% increase in average tax levels …
- … which would in turn adversely affect incentives
- Some increase in taxes is probably inevitable – but better done by broadening the base rather than raising rates

## Cutting services

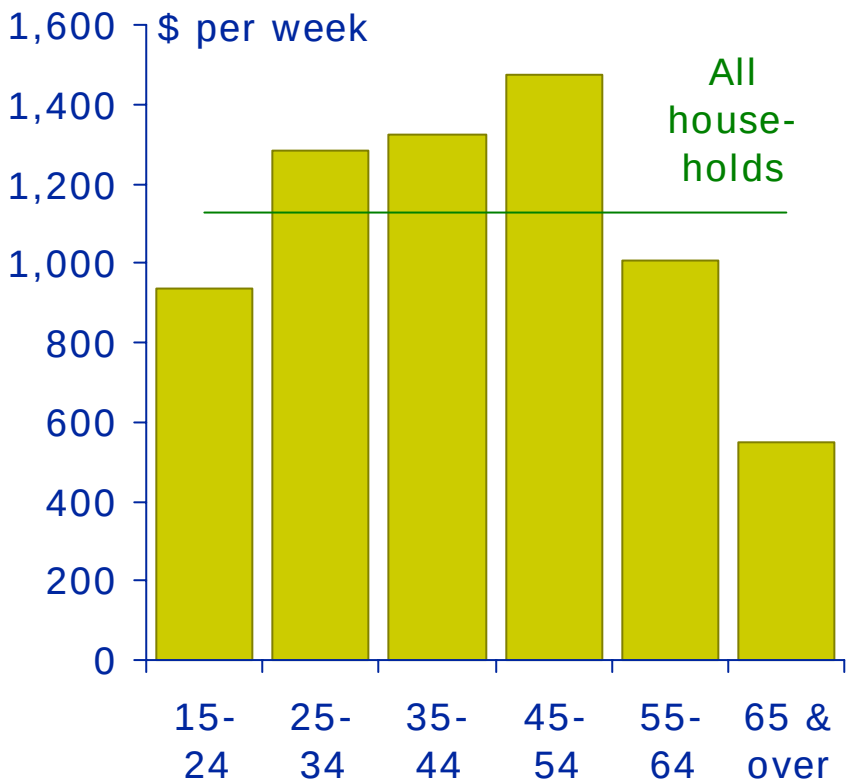
- Feasible, but politically difficult – especially given the rising proportion of seniors among voters (51+ will represent a majority of adults after 2035)
- Also likely to be inequitable given that service reductions will probably impact more on lower-income households

## Increasing user charges

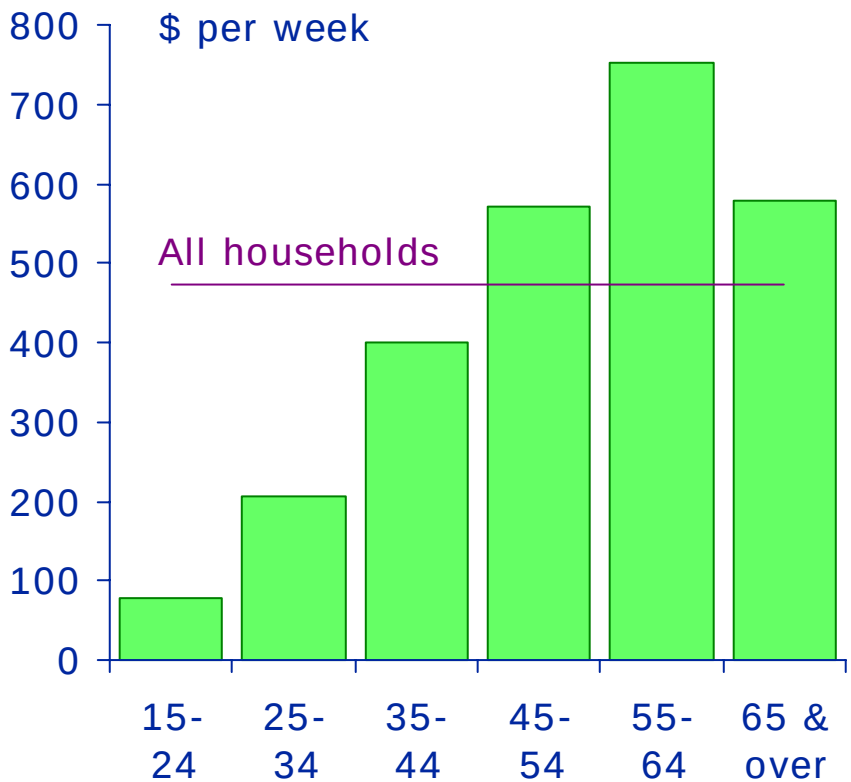
- Feasible, but politically difficult given rising political 'clout' of seniors
- Some scope for greater use of means-testing for access to 'free' services …
- … and for use of bonds, etc., for wealthy aged

# Seniors typically have low incomes – but lots of assets

## Mean gross household income by age group*, 2003-04




## Mean household net worth by age group*, 2003-04



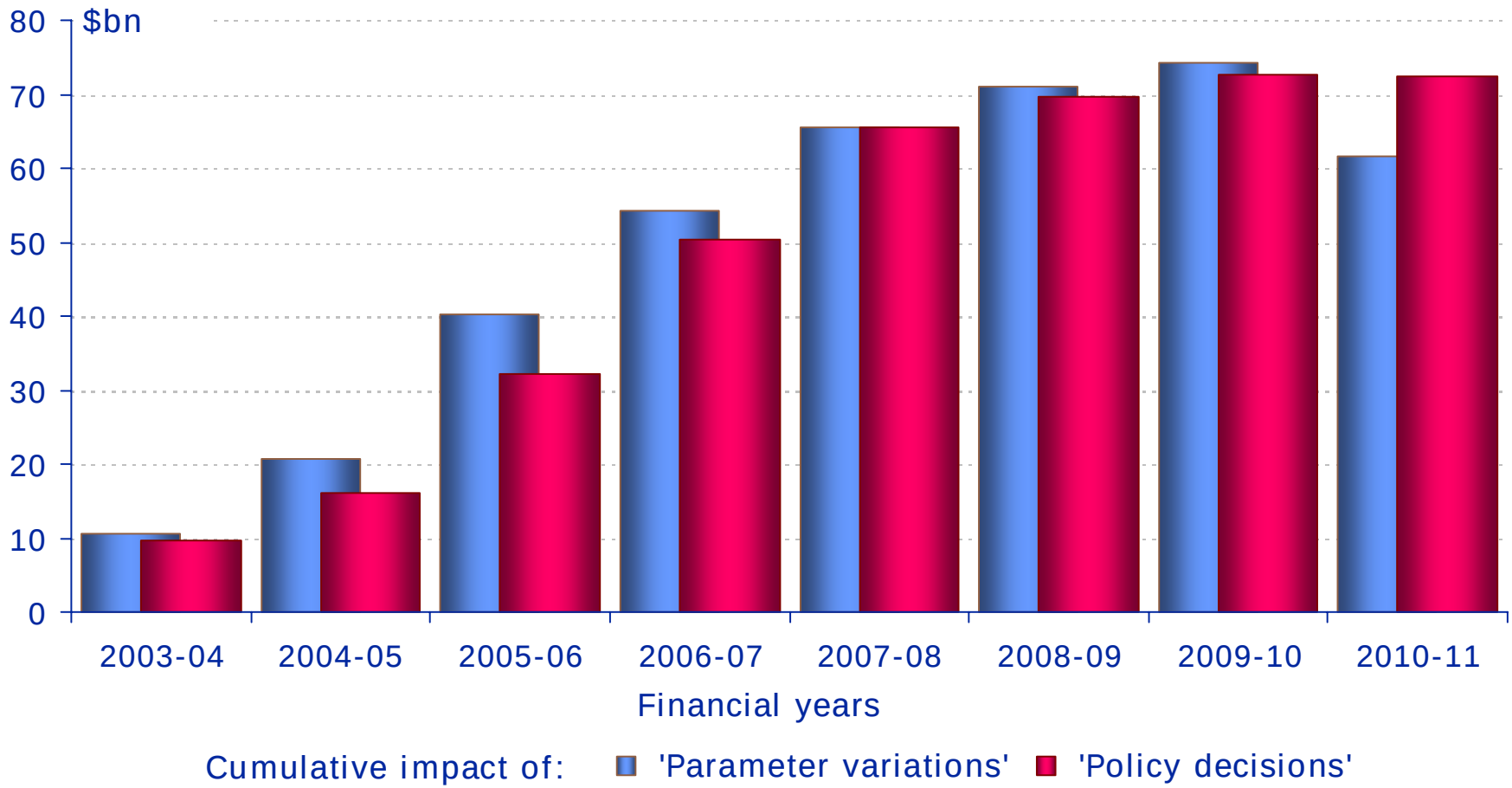

* Age of 'reference person' (household head).
*Source:* ABS, *Household Expenditure Survey* 2003-04 Table 20.



economics@ANZ

# Over the past 5 Budgets, 'parameter variations' total $398 bn and policy decisions $388bn

## Cumulative net impact on the 'underlying' cash balance of 'parameter variations' and 'policy decisions' over past 5 Budgets

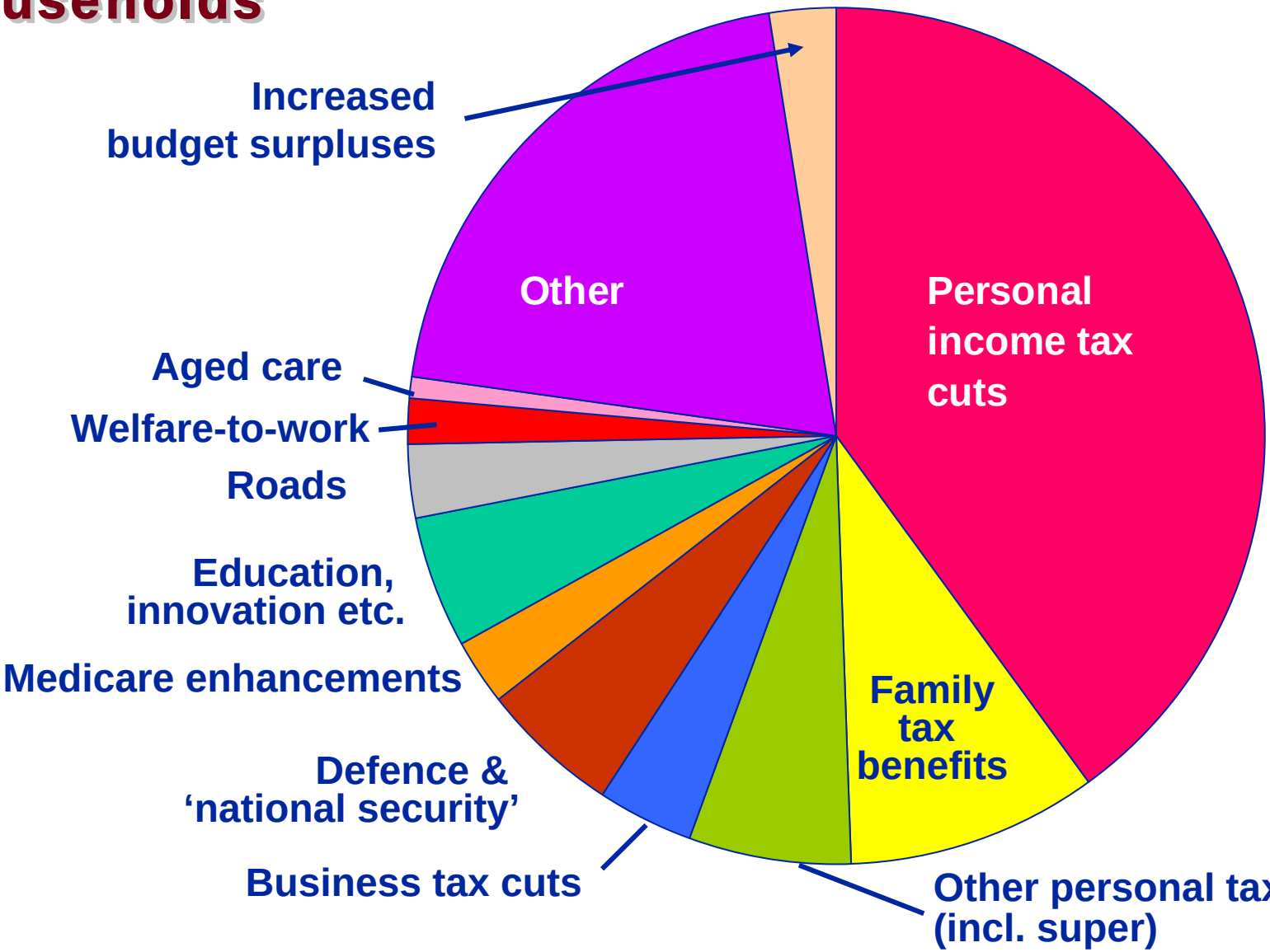



*Source:* Table 4, Statement No. 1 in *Budget Paper No. 1* (various years); Economics@ANZ.



economics@ANZ

# 56% of this has been handed over in cash to households



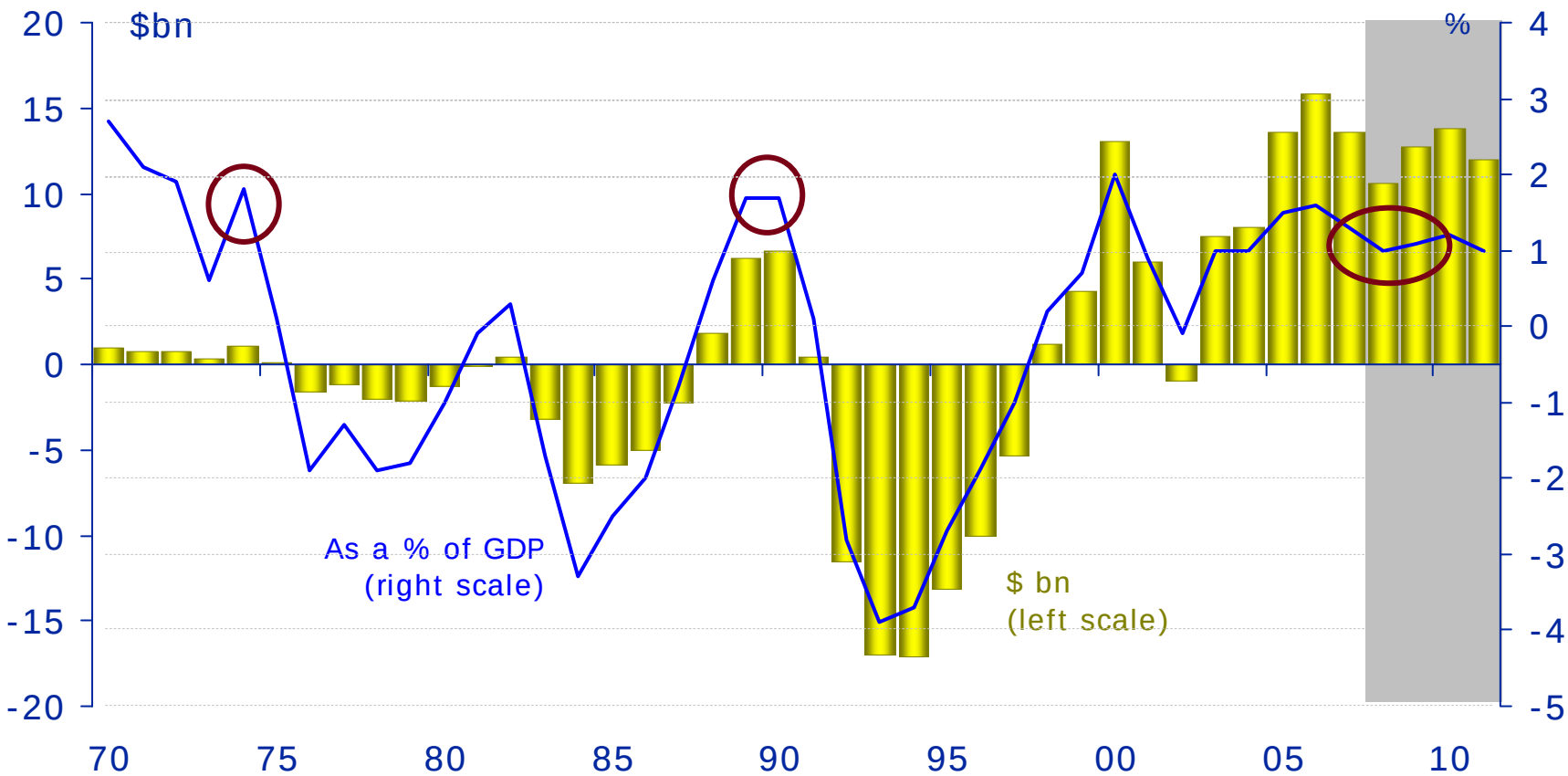

*Sources:* As for previous slide. Total is A$398bn over nine years.



economics@ANZ

# The projected Budget surpluses are smaller than at the same stage of previous business cycles

## Commonwealth 'underlying' cash balance




*Sources:* 2007-08 *Budget Paper No. 1,* Statement 13, Table 1 (and previous issues).



economics@ANZ

# Part IV:
# Getting things in perspective

# Ageing and its costs in perspective

- Population ageing is primarily an indication of economic and social success -
  - longer life expectancy
  - conscious decisions by men and women with higher education and greater choice to have fewer children
- Australia's population will age much less quickly than that of most other Western (and many Asian) countries
  - and we are much better placed to absorb the cost of providing retirement incomes than most other Western countries
- Population will occur gradually, not suddenly, and there is plenty of time to implement measures designed to deal with the fiscal problems associated with demographic change
- Australia will be a richer country in forty years time, with greater capacity to absorb the costs of population ageing
  - on reasonable assumptions, average per capita incomes will be significantly higher in 2044-45 than in 2006-07
- But it would be preferable if the Commonwealth Government were saving more now, while it can and should