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The wealth of generations

John Daley and Danielle Woods

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Overview

We have come to expect that each generation will be better off than its parents: wealthier, healthier and better housed. But the world is changing. Today's generation of young Australians may have lower standards of living than their parents at a similar age.

Over the last decade, older households captured most of the growth in Australia's wealth. Despite the global financial crisis, households aged between 65 and 74 today are $200,000 wealthier than households of that age eight years ago. Meanwhile, the wealth of households aged 25 to 34 has gone backwards.

In part, the wealth of generations has diverged because of the boom in housing prices. Older households made big capital gains. With lower and falling rates of home ownership, younger households shared less of this windfall.

Incomes also grew fastest for older Australians, allowing them to add more to their wealth by saving. Households aged 55-64 saved $12,000 in 2010, up from $1000 in 2004. Households aged 25 to 34 controlled their spending just as tightly, but their savings only increased to $11,000 in 2010 from $4000 in 2004, because their incomes did not rise as much.

Governments are also spending much more on older households for pensions and services, particularly health. In 2010, governments spent $9400 more per household over 65 than they did six years before. Budget deficits funded much of the increased spending. Future taxpayers will have to repay the debt, dragging further on the prosperity of younger generations.

In the past, each generation took out more from the budget over its lifetime than it put in. This generational bargain was sustainable when incomes rose quickly, as they did for 70 years.

Yet government transfers from younger to older cohorts are now so large that future budgets may not be able to afford them as the population ages. In other words, the generational bargain is at risk. Many expect that incomes will rise more slowly over coming decades. If so, the last decade in the United States and Britain illustrates the potential outcomes. The wealth and incomes of younger age groups in these countries have fallen behind those of their parents at a similar age.

Although older generations will ultimately pass on much of their accumulated wealth, this may not help younger generations much. On current trends, inheritances are typically received later in life and primarily benefit those who are already wealthy. Gifts to younger generations are typically small, and also primarily benefit well-off households.

Governments can choose to prevent the next generation being worse off than its parents. Targeting the Age Pension, reducing superannuation tax concessions and shifting towards asset taxes could reduce the transfers between today's younger taxpayers and older retirees. These reforms would fall most on those who have benefited from windfalls, government largesse, and paying lower taxes while deficits accumulated. And we shouldn’t delay: later implementation may leave a younger generation even worse off, as they miss out on the benefits their parents enjoyed.

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1 Introduction

This report examines how the economic position of Australians of different ages is changing. It analyses trends in household wealth, incomes, and government taxes and transfers by age groups. It identifies which age groups are benefiting most from economic and policy changes.

1.1 "Generations" and "age groups": key concepts for this report

The report considers the economic position of people of different ages at different points in time.

A **generation** or **birth cohort** refers to a cohort of individuals born at roughly the same time. People remain members of one particular generation throughout their life. There is no fixed method for determining the bounds of an individual generation, though the Australian Bureau of Statistics (ABS) tends to use a 20-year range. A more accurate range might be 29 years – the median age at which a woman today has her first child.[1]

An **age cohort** is the group of people within a particular age bracket at a given point in time. For example, the 20 to 24 year old cohort in 2004 includes all those people born between 1980 and 1984. The same cohort in 2010 includes everyone born between 1986 and 1990.

In this report we mainly consider the economic circumstances for a particular age group at different points in time. In other words, we compare the outcomes for different generations when they are at the same age. It is not particularly noteworthy that older people tend to earn more and to have accumulated more wealth than younger people. However, it is noteworthy if the income of a subsequent generation is lower than the income of a previous generation when they were at the same age.

1.2 The drivers of future prosperity

Lifetime economic well-being depends on consumption opportunities across different stages of a household's lifecycle. The long term economic position of households depends on a number of factors:

- net wealth – the store of resources that can be spent in future – which depends on past savings, plus appreciation in asset values;
- future income;
- future government spending and its incidence by age;
- future taxes – which depend on future government spending, plus any liability to repay accumulated government debt; and
- future inheritances and gifts.

This report is about how these factors have evolved, and might develop in the future.

[1] ABS (2013b)

1.3 How the report analyses prosperity by age group

The overall **wealth** of generations is discussed in Chapter 2. The wealth of households, particularly those over 45, has increased as a result of increasing house prices and a big jump in savings.

Government benefits and services also increased over the last decade, particularly for households over 65, as Chapter 3 describes. Twenty-year trends suggest that **government spending on health services** will continue to increase much faster than GDP.

Over the last two decades, the dollar value of taxes also increased, but not as much as spending. As a result, budget deficits increased, implicitly imposing significant increases in **future taxes** on younger households.

Future income depends primarily on economic growth rates, discussed in Chapter 4. Higher levels of income growth also make it easier to save. There are substantial risks that future income growth will be much slower than for recent decades.

Older generations may either consume or save their wealth. Wealth that is saved will ultimately contribute to the future economic resources of younger generations when it is passed on as **inheritances and gifts**. However, as we discuss in Chapter 5, many households never receive anything; most bequests are only received later in life; and large bequests are primarily received by those who are already well-off.

If the cost of government benefits and services continues to rise, if governments accumulate significant debts, and if income growth is sluggish, then a younger generation can find itself poorer than its parents at a similar age. The experiences of the **United States and United Kingdom** over the last decade provide a cautionary guide to how low or no economic growth can produce poor economic outcomes for younger cohorts, as Chapter 6 describes.

Government can affect these factors through age-based government welfare, other spending, and taxes, particularly Age Pension benefits and superannuation tax concessions. Governments can also affect the prosperity of one generation relative to another through budget policy. If a government has budget deficits and accumulates debt, it will affect future taxes and services.

Whether a younger generation is ultimately worse off than its parents will depend on policy change, the state of government finances, and economic growth. Chapter 7 outlines future work to analyse the budget impact of different growth scenarios and consider how plausible **policy changes** might affect the prosperity of younger generations relative to their parents.

1.4 Different stories for different ages: what explains the changing wealth of the old and young

A snapshot of changes over the last decade indicates how much changes in the economy and government policy have affected the long-term economic position of households. By looking at swings historically, we can understand which of these factors is likely to be most important to the economic outcomes for future generations.

Box 1: The components of wealth

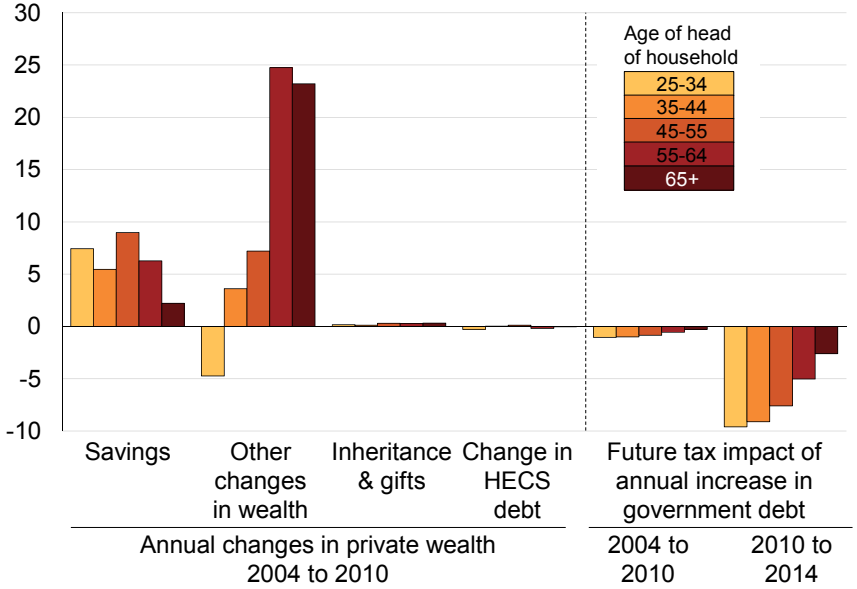
Changes in household wealth depend on saving, changes in the value and mix of assets (predominantly owner-occupied housing and superannuation) and liabilities. Other sources of changes in wealth include higher education loans and inheritances and gifts.

Figure 1.1 shows the average annual change in wealth between 2003-04 and 2009-10 from each of these sources.

Figure 1.1 also shows how changes in government debt can affect the future tax liabilities of households. For consistency, we examine average annual debt accumulated by governments between 2003-04 and 2009-10. The debt is distributed among households by age group based on their estimated future share of taxes, assuming the historical distributions of taxes by age group remain the same and that the debt is paid down over 15 years.

To show how much government debt per household grew annually between 2009-10 and 2013-14, the cost per household of paying down debt over this period is separately identified.

Figure 1.1: Big changes in household balance sheets were a consequence of savings, capital appreciation and government debt
Average annual change, 2014$ '000s



Notes: Savings are calculated as average expenditure on goods and services less disposable income between 2003-04 and 2009-10. The increase in HECS debt is calculated from information on existing HECS liability provided in the 2003-04 and 2009-10 HES. Savings from gifts and inheritance are based on average value of gifts and inheritance in a given year, with the assumption that this income is saved at the same rate as other income sources (HILDA survey). Changes in government debt per household are calculated as the total change in general government debt (Commonwealth, state and territory). These changes are then apportioned to households based on their estimated share of total tax liabilities for the next 15 years (Box 1). Households' savings rates are positively skewed. To limit the impact of this skew on our analysis, we remove the lowest and highest deciles.
Source: Grattan analysis based on HILDA (2012), ABS (2011b), ABS (2011a) and Treasury (2013a)

Over the last six years, the wealth of households headed by those **55 to 65 and 65+ year olds** increased faster than households in any other age group. These households saved more but they mainly benefited from capital appreciation (particularly rising house prices). Households headed by someone over 65 will be relatively unaffected by the increase in government debt that accumulated over this period. Retirees, who pay much less in taxes, are unlikely to contribute much to paying off the debt.

By contrast, the financial position of **25 to 34 year old households** barely improved. These households did not benefit in the same way from the windfall gains in housing because most bought at the end of the boom if they bought at all. Although they had higher HECS debts than their predecessors (as a result of higher HECS charges and participation rates), the impact of changes in these debts on overall wealth was relatively small.

Because government debt increased rapidly, particularly since 2008, younger households will pay substantially higher future taxes than would otherwise be the case. Younger households could face an additional $10,000 tax burden associated with each year of growing debt between 2010 and 2014.

Some of this debt was due to cyclical deficits that may have helped maintain incomes during the economic downturn. But there is also a sizeable structural component – the Commonwealth Government had structural budget deficits of more than two per cent of GDP for the past five years (Chapter 3). The annual increase in future tax liability outweighs the annual savings of 25-34 year old households.

The remainder of this report explores these components of changes in economic prosperity in more detail.

1.5 What the report does not do

The report focuses on indicators of financial wellbeing.

Other **economic, social and environmental changes** will also affect the future welfare of today's young. Higher youth unemployment may lead to long run unemployment, blighting the economic prospects of many who try to enter the workforce when unemployment rates are relatively high. Yet while current rates of youth unemployment are high, they are still below those that persisted for several years in both the 1980s and 1990s.[2] The size of the long-term impact of youth unemployment is beyond the scope of this report. Future youth unemployment is closely tied to overall rates of unemployment,[3] which are difficult to forecast.

Climate change creates a substantial downside risk to the future living standards of young people.[4] While beyond the scope of this report, it is important in a holistic consideration of intergenerational fairness. Climate change will have more impact on those who are young today, and have longer to live. Attitudes to government policies to reduce carbon emissions are strongly correlated with age.[5]

[2] Borland (2014a)
[3] Ibid.
[4] Garnaut (2008)
[5] The 2014 Lowy Institute Poll found that Australians under 45 years are more likely to regard global warming as 'a serious and pressing problem' (51 per cent)

The report does not provide a comprehensive account of the **financial position of different generations over the lifecycle**. Older Australians are right to point out that they have paid taxes over their lifetime and are entitled to support in retirement. This generational bargain is longstanding. On current settings, people on average contribute to government budgets between the ages of 24 and 58, and draw down when younger and older.[6]

Yet there are real questions about the quantum of this support, how it should be targeted, and whether it will be sustainable in the future. There are concerns that the current policy settings will lead to younger generations putting considerably more into the system than they take out over their lifetimes. Research underway at Grattan Institute will look at this "generational accounting" for different generations under different policy assumptions.

The report also does not explicitly address issues of **intra-generational fairness**. In considering economic outcomes across generations we focus on the average (and median) outcomes for different age groups. This conceals considerable variability within each age group. Some young people have seen their wealth grow rapidly just as some older people struggle to make ends meet.

Large and increasing differences in income and wealth among people of a similar age raise important policy issues.[7] It is difficult to justify a political system that leads to some people having so few resources that they do not have opportunities to pursue lives that they have reason to value.[8] Many believe there are good reasons to try to reduce the gap in outcomes further.[9] Yet many others oppose government interventions focused primarily on reducing the variability in outcomes, either because it mutes the incentive for individual effort, or because it implies a much larger role for the state.

The report deals with fairness between different generations. It raises different issues to fairness within generations. Fairness between generations depends on economic circumstances – particularly asset price changes and income growth – and government policy, particularly age-based tax, welfare and benefit policies, and the scale of budget deficits. Unlike the outcomes within a generation, individual talent and effort play little role. It is difficult to justify making policy decisions that would leave a subsequent generation worse off, particularly if that generation has little or no say in the decisions.

Intra-and inter-generational fairness are linked. If a generation does relatively badly, the poor of that generation may be particularly vulnerable. Indeed, people today who are both young and poor are probably the most financially vulnerable group in society.[10]

compared with those 45 years and older (40 per cent). See: Lowy Institute (2014), p. 9.

[6] Rice, *et al.* (2014)

[7] OECD (2011)

[8] Sen (2009), p. 253-254; Daley, *et al.* (2013), p. 36-37.

[9] OECD (2011), p. 40-41; Daley, et al. (2013), p. 36.

[10] A higher percentage of people over 65 are estimated to live in poverty (incomes below 50 per cent of median income) than for younger adults. However, the low levels of Newstart and Youth Allowance leave young people on income support particularly vulnerable. More than 55 per cent of those receiving Newstart and 50 per cent on Youth Allowance sit below the poverty

A generation whose income is lower than that of its parents may also tend to be a particularly unequal generation. Wealth is likely to become more concentrated if a large part of a generation's wealth is inherited rather than earned. Inheritances tend to concentrate wealth, as shown both by our study of Australia over the last decade, and international experience (see Section 5.2).[11]

Many interventions that are likely to reduce inter-generational inequality would probably also reduce intra-generational inequality. Which provides all the more reason to pursue them.

line. This compares to 16 per cent on the Age Pension. Lower levels of home ownership among today's young (Chapter 2) compounds their future vulnerability as home ownership provides significant protection against poverty for people as they get older. See: ACOSS (2014)

[11] In periods when the return on capital is high relative to economic growth (which it may well be in decades to come – Chapter 4), inherited wealth becomes more important in determining the economic outcomes of future generations. See Picketty (2013)

2 Growing wealth has not benefited the young

Over the last decade, older households captured most of the growth in Australia's wealth. Despite the global financial crisis, households aged between 65 and 74 today are $200,000 wealthier than households of that age eight years ago. Meanwhile, the wealth of households aged 25 to 34 has gone backwards.

In part, the wealth of generations has diverged because of the boom in housing prices. Older households made big capital gains. With lower and falling rates of home ownership, younger households shared less of this windfall.

Incomes also grew fastest for older Australians, allowing them to add more to their wealth through savings. Households aged 55-64 saved $12,000 in 2010, up from $1000 in 2004. Households aged 25 to 34 controlled their spending just as tightly, but their savings only increased to $11,000 in 2010 from $4000 in 2004, because their incomes did not rise as much.

2.1 Older age groups – but not others – are becoming more wealthy

Most age groups are more wealthy than they were in 2003-04, even though almost all age groups lost wealth between 2009-10 and 2011-12 in the aftermath of the global financial crisis. Yet it was older households who captured much of the increase in wealth over the decade.

For example, an average 55 to 64 year old household was $173,000 richer in real terms in 2011-12 than was a household of that age in 2003-04 (1.9 per cent annual growth). The average 65 to 74 year old household was $215,000 better off over the same period (2.7 per cent annual growth) (Figure 2.1).

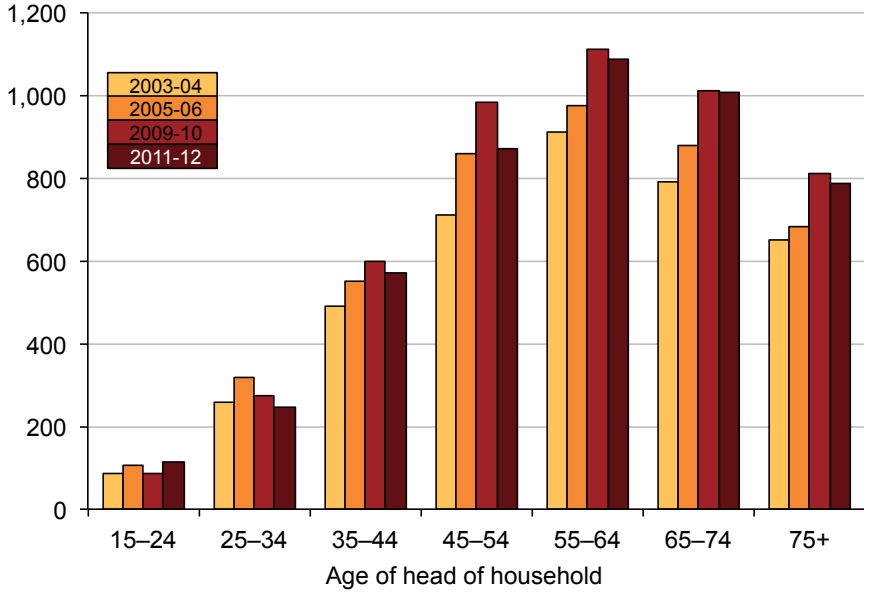
By contrast, younger age groups increased their net assets less. The average 35-44 year old household was only $80,000 richer over the period than was a household of that age eight years earlier (1.7 per cent annual growth). Those aged 25 to 34 on average went backwards in real terms.

These averages may obscure some large differences within age groups. Nevertheless, wealth for the **median** household in each age group shows the same trends as for average wealth. The wealth of the median household over 55 grew strongly (more than 2 per cent annual growth), stagnated for households aged 35-44 (0.3 per cent annual growth) and declined for those aged 25-34 (minus 2.7 per cent growth) (see Appendix A).[12]

Aggregate wealth data based on the national accounts indicates that this generational divergence in wealth accumulation, coupled with population ageing, means that older generations now hold more of the total wealth in Australia. Households aged 65+ held 26 per cent of total wealth in 2003-04. By 2011-12, they owned 30 per cent (Figure 2.2).[13]

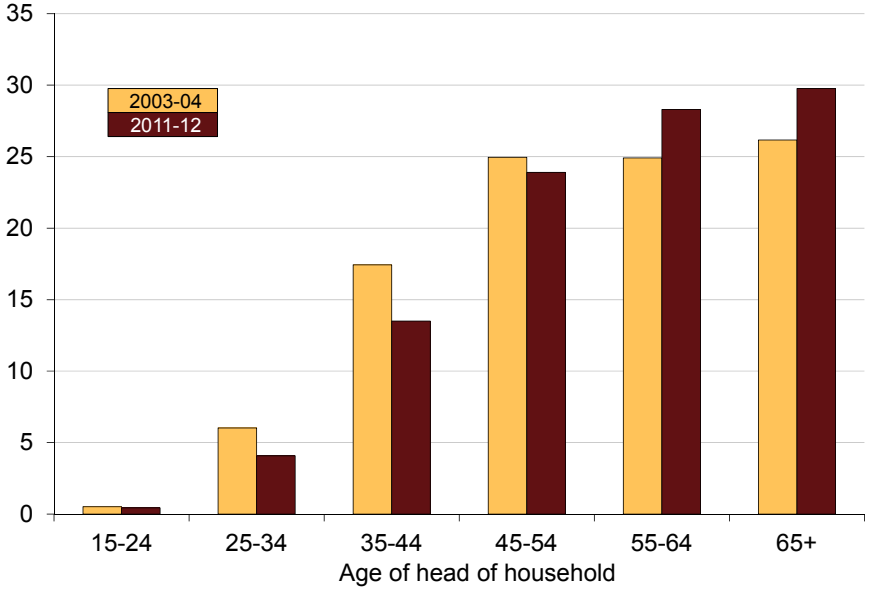
[12] ABS (2013c)
[13] ABS (2014c)

Figure 2.1: Those over 45 became much richer, while the wealth of younger cohorts stagnated
Average wealth by age of head of household, 2012$ '000s



Note: Estimates for households 15-24 and 75+ have high standard errors and should be used with caution. The ABS apportions its household data by age group based on the age of the head of the household ('reference person'). The reference person is chosen by applying the following selection criteria, until a single appropriate reference person is identified: (1) owner without a mortgage, owner with a mortgage, renter, other housing tenure; (2) one of the partners in a registered or de facto marriage, with dependent children, one of the partners in a registered or de facto marriage, without dependent children, a lone parent with dependent children (3) the person with the highest income, (4) the eldest person. See: ABS (Various years-b). The analysis of wealth in this report generally follows the ABS Survey of Income and Housing: ABS (2013c). We also analysed household wealth as reported in the HILDA survey from 2002 and 2010, which generally produced very similar results to those from the ABS survey. As the ABS survey has a larger sample size, we have preferred it to the HILDA survey.
Source: Grattan analysis of ABS (2013c)

Figure 2.2: Households over 65 captured a growing share of total wealth
Percentage of total wealth

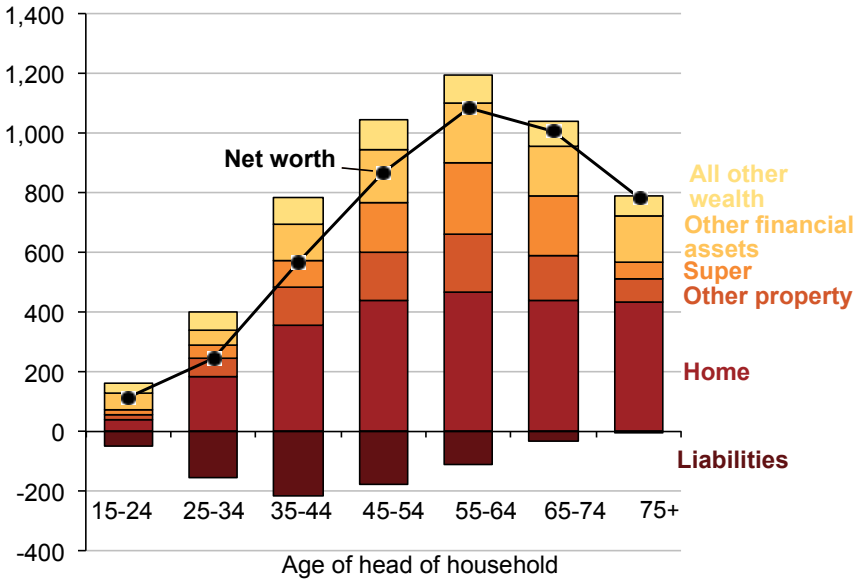


Note: In compiling these estimates, the ABS uses estimates of national wealth from the Australian System of National Accounts ABS (2013a) and distributes these across households by age group using information from the ABS Survey of Income and Housing and ABS Household Expenditure Survey ABS (Various years-b).
Source: Grattan analysis of ABS (2014c).

All age groups hold half or more of their assets in property, and the rest in superannuation, financial assets such as bank accounts and shares, and other wealth, such as house contents, vehicles, and business wealth. Liabilities – primarily mortgages – are significant for younger households, whereas those over 65

have few debts, and typically own their homes outright (Figure 2.3).[14]

Figure 2.3: Over half of household wealth is in property
Average wealth per household by type, 2012$ '000s

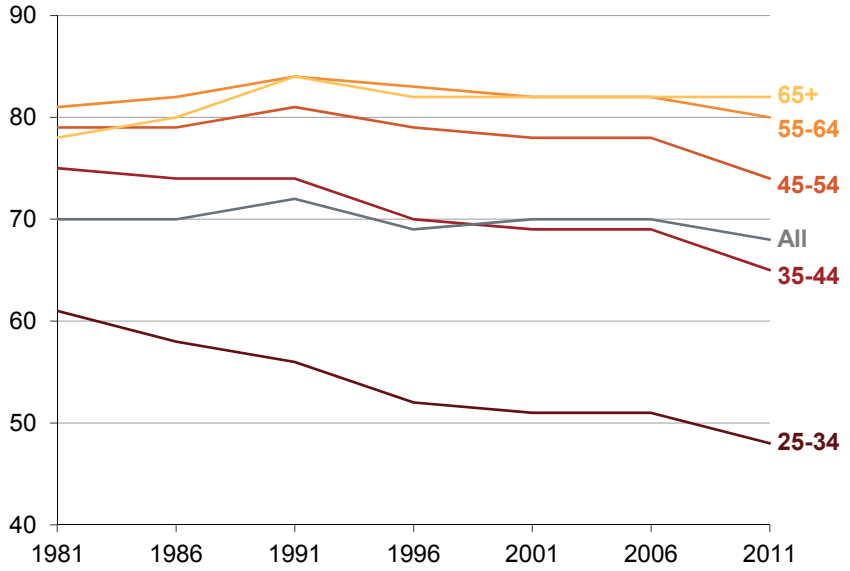


Source: Grattan analysis of ABS (2013c)

2.2 Home ownership is declining, especially among the young

Home ownership rates have fallen over the last two decades for all but the oldest households. While younger age groups have always been less likely to own their home, ownership is increasingly diverging by age.

Figure 2.4: Younger people are less and less likely to own homes
Home ownership rate (per cent) by age group



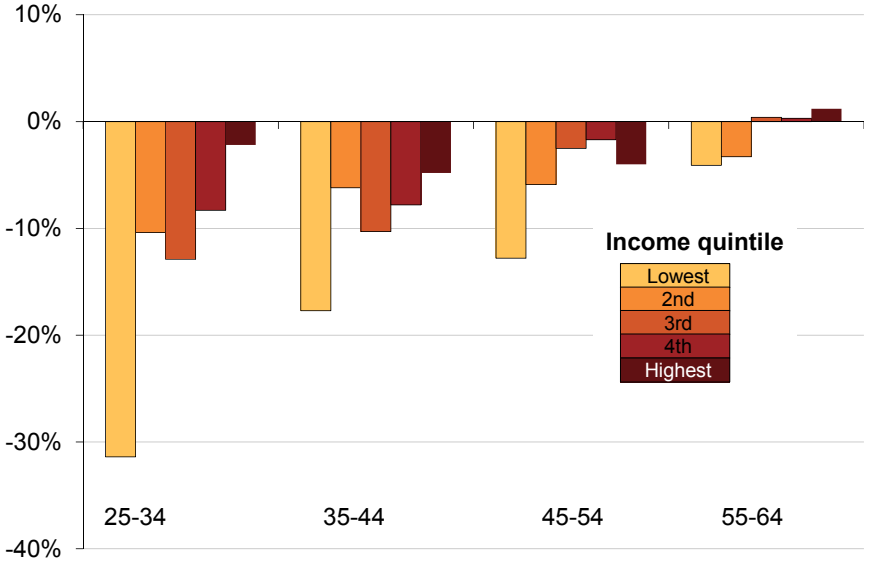
Source: Yates (2011a); see also Burke et al. (2014)

Home ownership has declined most amongst 25 to 44 year olds. In 1981, more than 60 per cent of 25 to 34 year olds owned their

[14] This analysis is consistent with RBA analysis of aggregate assets across the economy. See: RBA (2014a), p. 6.

own home.[15] By 2011 only 48 per cent did so. The decline over the same period was 10 percentage points for those aged 35 to 44 (Figure 2.4). An increasing proportion of those born after 1970 will never get on the property ladder.[16] Alongside rising prices, increasing education debts may also be discouraging younger households from taking out mortgages to purchase a home.

Figure 2.5: Home ownership declined most for the young and poor
Percentage point change in home ownership rates, 1981 to 2011 by age and income quintile



Source: Burke et al. (2014) based on ABS (Various years-a).

[15] Either outright or with a mortgage.
[16] Kelly, *et al.* (2013)

Among younger households, home ownership rates are declining particularly for lower income households, which are likely to be those with lower levels of education (Figure 2.5).

A gap may be emerging between home ownership expectations and reality. Despite falling rates of home ownership, around three quarters of today's 15 to 19 year olds consider home ownership highly important. Just over 70 per cent consider it 'extremely likely' or 'very likely' that they will one day own a home.[17]

2.3 Have the young missed out on the housing boom?

Because younger households are now less likely to own a home, many members of the generation born after 1965 missed out on rising housing wealth as house prices boomed from the mid-1990s. Between 1995 and 2012, real house prices increased by 4.3 per cent a year, considerably faster than the growth in full-time earnings (Figure 2.6).[18]

The housing price boom was a result of increasingly available credit,[19] falling interest rates, and construction of new dwellings not keeping up with population growth in large cities.[20] Other likely causes were growth in household incomes as female workforce participation increased (Section 3.1) and policy settings such as the introduction of the capital gains tax discount in 1999 and

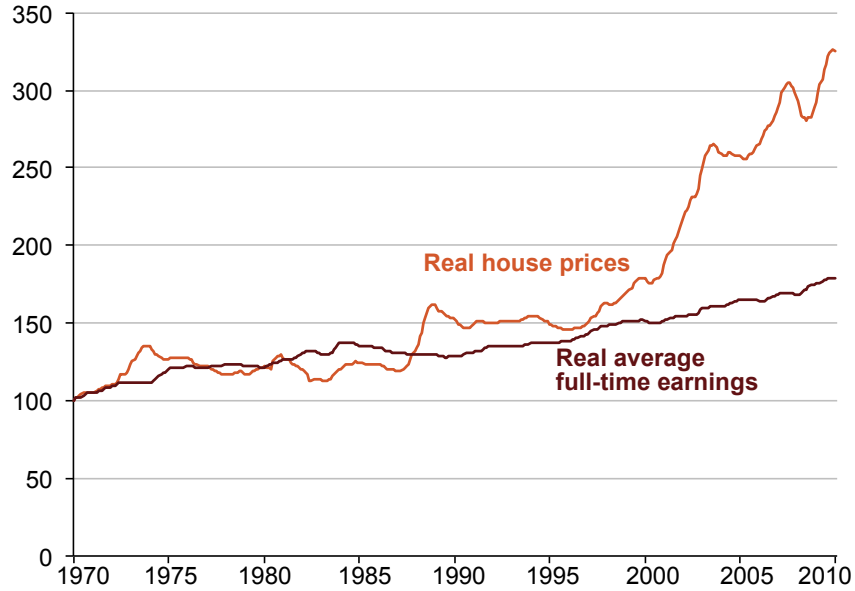
[17] Mission Australia's Survey of 14,000 15-19 year olds. See: Mission Australia (2014)
[18] ABS (2013d). Growth rates are calculated based on median house prices.
[19] Greater competition and product innovation associated with deregulation of the financial sector resulted in cheaper and more accessible finance during the 1990s. See: Ellis (2006); Productivity Commission (2004)
[20] Productivity Commission (2004); Yates (2011b); Eslake (2014)

generous assistance for first home buyers.[21] Because the boom coincided with a record period of uninterrupted economic growth,[22] expectations of future income growth are also likely to have played a role in increasing demand.

The rise in housing prices generated windfall gains for those who owned property before 1995. These could be considered unearned gains – the result of policy and economic factors rather than productive activities or as compensation for taking an investment risk.[23]

At the same time, younger generations are more likely to have purchased their first house or upgraded their house during or after the boom. Households that did not own property before the boom – disproportionately the younger generation – missed out on the windfall boost in wealth from the price rises.[24]

Figure 2.6: Real house prices have outstripped full-time weekly earnings since 1998
Index 1970=100



Note: Earnings are total average weekly (ordinary time) earnings for full time adults deflated by the CPI.
Source: Yates (2011b)

The fundamentals of the real estate market may keep house prices high. Yet the windfall rise in prices is unlikely to be repeated. Many observers believe that future prices are unlikely to grow as quickly as they did over the last 15 years[25] because

[21] Previously capital gains were taxed based on real (inflation adjusted) gains. In September 1999, the arrangements were changed so that nominal gains were taxed but on a discounted basis (50 per cent discount provided the asset was held for more than a year). Strong house price growth and low inflation increased the attractiveness of investing in property under the new regime. The Productivity Commission argued that these policy changes contributed to the housing boom's 'second wind'. See: Productivity Commission (2004), p. XIX.
[22] Battellino (2010)
[23] Returns on housing investments would be expected to include some risk premium. However, the very strong growth in prices over the past 15 years is a significant upside gain. The average return on housing over time is almost certainly in excess of the risk adjusted return required to hold such assets.
[24] Some argue that if people still live in their houses then the wealth gains from higher house prices are notional rather than real. Ultimately if these households choose to pass on their housing wealth rather than consume it, this could mitigate concerns about intergenerational inequality (Chapter 6). But during their lifetimes these households still live in better houses than they could afford if they had bought after the boom.
[25] Eslake (2014); Fox and Tulip (2014), p. 27.

income growth is likely to be slower,[26] and official interest rates are unlikely to fall much further.

Recently, low interest rates have moderated the impact of higher house prices on household budgets. Yet the *expected* repayment burden – based on a longer term interest rate to account for the expectation that variable interest rates will move up over time – is at a 10-year average. In NSW and Victoria, where house prices have grown most strongly, the expected repayment burden is close to a 20-year high.[27]

2.4 Older households saved more because their incomes rose faster

The windfall gains from the housing boom for many older households were compounded as older groups saved substantially more over the last decade.

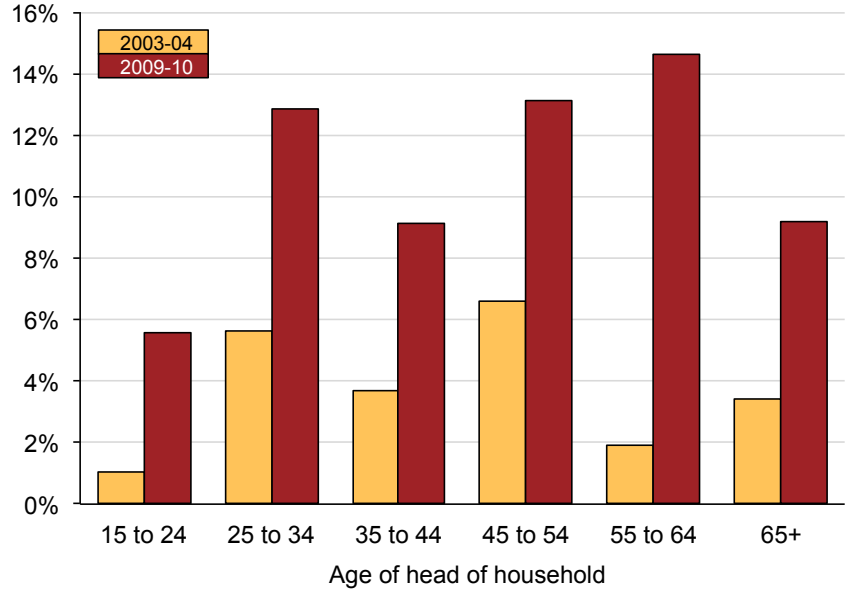
Household wealth can increase either because asset values rise, or because households save more. Savings are particularly important for young households that have few existing assets.

Overall household savings increased markedly over the decade. The savings rate increased from just 0.4 per cent of after-tax income in 2003 to 10 per cent in 2013.[28]

All age groups saved more of their income, but households aged 55-64 increased their savings most (Figure 2.7). Even though their spending increased more than any other age group, their incomes grew even faster (Figure 2.8).

Young households also saved more (Figure 2.7). They did so by containing spending as their disposable incomes increased (Figure 2.8).[29]

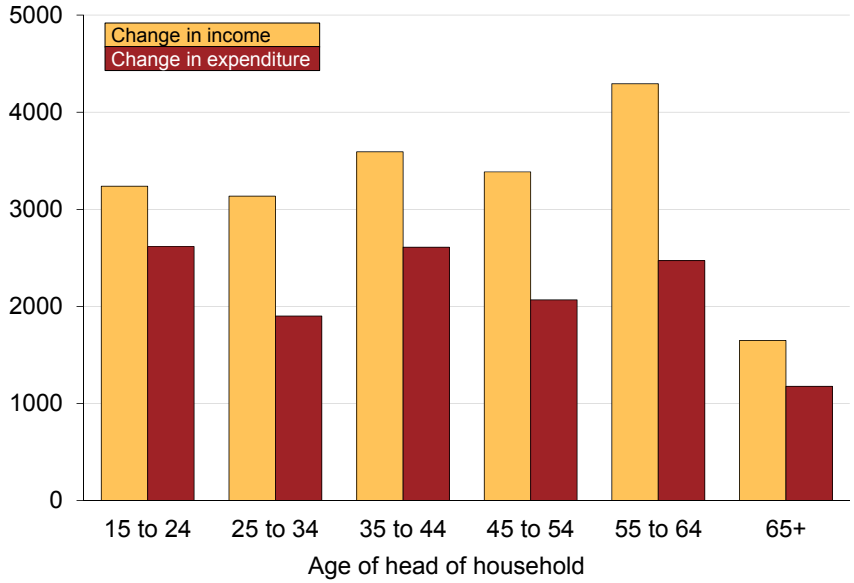
Figure 2.7: Households' savings increased between 2004 and 2010
Savings as a proportion of disposable income (savings rate), per cent



Note: Households' savings rates are positively skewed. To limit the impact of this skew on our analysis, we remove the lowest and highest deciles. Median household savings rates are reported in Appendix A.
Source: ABS Household Expenditure Survey 2003-04 and 2009-10

[26] Gruen and Wilcox (2014)
[27] RBA (2014b)
[28] ABS (2013a)
[29] ABS (2006); ibid.; ABS (2011b)

Figure 2.8: Consumption increased for older households, but their incomes rose even faster
Change in household income and expenditure 2003-04 to 2009-10, 2010$

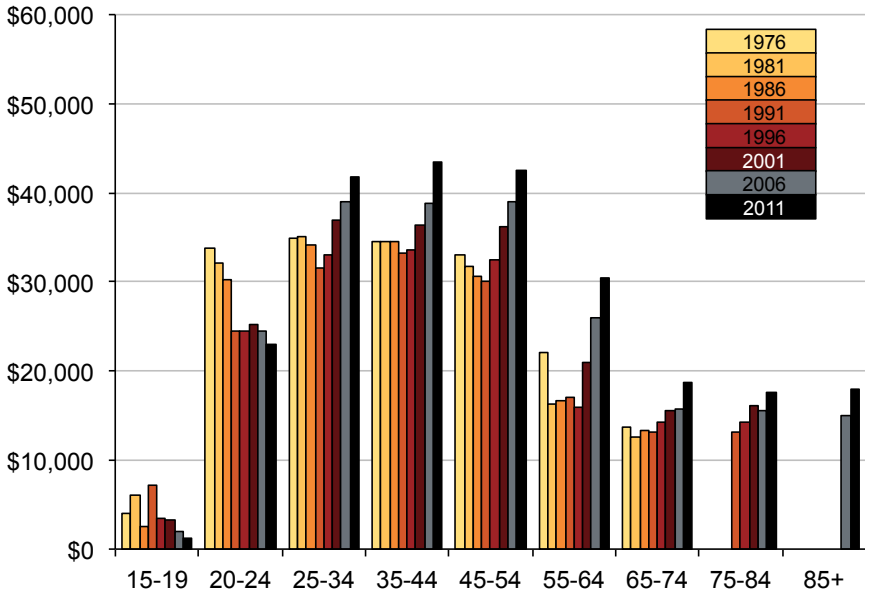


Note: Households' savings rates are positively skewed. To limit the impact of this skew on our analysis, we remove the lowest and highest deciles.
Source: ABS Household Expenditure Survey 2003-04 and 2009-10

2.5 Income trends

These gains in income reflect broader trends. After incomes fell in real terms in the late 1970s and 1980s, median incomes before tax increased over the last two decades for all age groups except the under 25s (Figure 2.9).

Figure 2.9: All those over 25 had higher incomes in 2011 than 1986
Median individual wage and welfare income before tax, 2011$



Note: Incomes are recorded in the Census as the total of wages and salaries, government benefits, pensions, allowances and any other income they usually receive, before deductions for tax, superannuation contributions, health insurance, amounts salary sacrificed, or any other automatic deductions. Because census participants are only asked about regular income, it is likely that most investment income (which can be irregular in nature) is not captured in the Census data. For this reason, the data are not directly comparable to the household income data in Figure 2.10.
Source: Grattan analysis of ABS Census 1976-2011

The income drop for under 25s is not necessarily troubling. Median incomes for the 15-19 and 20-24 age groups fell as more

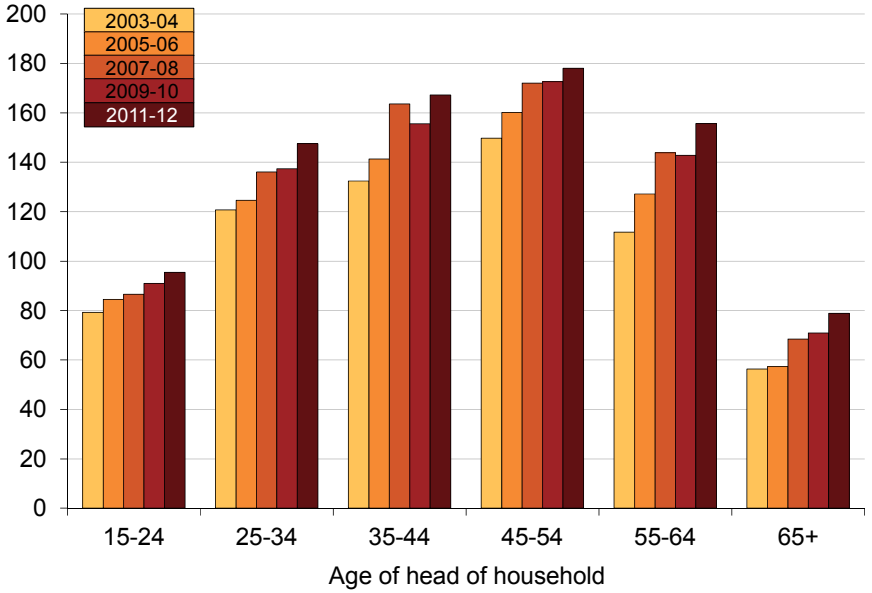
young people studied full-time or combined part-time work and study, and consequently started to work full-time later in life.[30]

Nevertheless, the overall outcomes obscure some big differences. Over the last two decades women and high-income men have earned much more than they used to. On the other hand, men on low incomes today earn little more in real terms than did low income men 30 years ago (Appendix A).[31]

Household incomes have increased even faster. Between 2003-04 and 2011-12 incomes increased for households of all age groups. Wage growth was the major driver. Lower income households (bottom four income deciles) also earned more as female workforce participation increased.[32] Otherwise, changes in household composition and family formation have not significantly affected household incomes in recent years.[33]

Income growth was strongest over the nine years for households headed by people aged 55-64 and 65+ (3.9 percent annual growth), reflecting increasing participation rates. The incomes of households in other age groups grew by less than three per cent annually over the period (Figure 2.10).

Figure 2.10: Household incomes increased for all age groups
Household wage, business and welfare income before tax, 2012$ '000s



Note: These income estimates are based on aggregate estimates of national income from the Australian National Accounts. They are more comprehensive estimates of income than the census estimates in Figure 1. The distribution of incomes by age of household head is determined by the ABS using weights from the suite of ABS publications derived from the ABS Survey of Income and Housing and Household Expenditure Survey.
Source: ABS (2014c).

2.6 Property and savings have driven wealth accumulation

As a result of house price increases and invested savings, the wealth (net of debt) of all age groups over 45 substantially increased over the eight years to 2011-12. Property wealth increased most for 65 to 74 year olds – by $110,000 or 2.9 per cent annual growth – and for those over 75 by $90,000 or 2.6 per

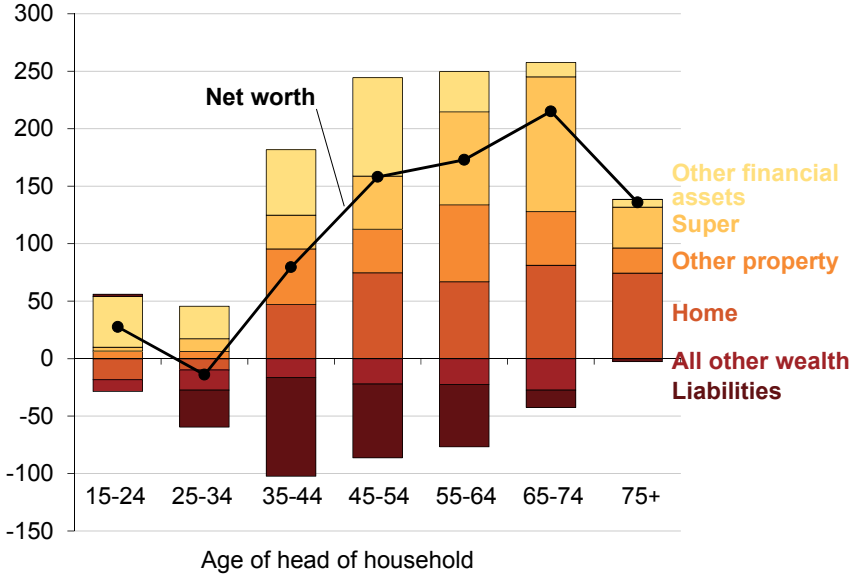
[30] Abhayaratna and Lattimore (2006)
[31] Income trends for high income men are analysed by considering the income for men at the 80th percentile of the earnings distribution over time. Incomes for low income men are assessed at the 20th percentile. Men in this group in the 25-54 age cohorts have median incomes at least 30 per cent lower in real terms than the same group 30 years ago. ABS (Various years-a)
[32] Greenville, *et al.* (2013); ibid.
[33] Ibid.

cent annual growth. For those aged between 55 and 75, higher superannuation balances also contributed to higher wealth (Figure 2.11).

At the same time, the net wealth of younger Australians stagnated. Households headed by those under 35 have less wealth in their home than did the same group eight years ago. And while today's 34-55 year olds own houses that are worth more, they had to borrow more to acquire them. Borrowing more relative to income is one way that younger generations are adapting to declining housing affordability.[34]

Younger age groups today do own more "other financial assets" – including bank deposits and shares – than did their predecessors. Compulsory superannuation should further boost their lifetime savings.

Figure 2.11: Over 35s own property worth more than 8 years ago
Change in mean wealth per household, 2003-04 to 2011-12, 2012$ '000s



Note: A negative change in liabilities denotes an increase in the amount borrowed per household in that age group.
Source: Grattan analysis of ABS (2014c)

[34] Burke, *et al.* (2014)

3 Spending policies increasingly benefit older Australians

As well as benefiting from a housing windfall and increased incomes, older generations over the last decade also benefited disproportionately from Australia's tax and welfare system.

Governments are spending much more on pensions and services, particularly health, for older households. In 2010, governments spent $9400 more on households over 65 than they did six years before. Older Australians pay less in taxes than they receive in benefits, while other age groups are net contributors to the budget. This generational bargain is longstanding,[35] but in the past two decades the size of the transfer has increased per household.

In the past, each generation took out more from the budget over its lifetime than it put in. This part of the generational bargain was sustainable when incomes rose quickly, as they did for 70 years. However, government transfers from younger to older cohorts are now so large that future budgets may not be able to afford them as the population ages. Consequently, the generational bargain is at risk.

Furthermore, budget deficits funded much of the increased spending over the last decade. Future taxpayers will have to repay the debt, dragging further on the prosperity of younger generations.

[35] Barr (2001) argues that in addition to poverty relief, a key function of the welfare state is to act as a "piggy bank", redistributing income over the lifecycle for individual citizens.

3.1 Contribution to the budget by age group

Almost all age groups are net overall contributors to government budgets. In other words, they pay more taxes (income and sales taxes) than they receive in government benefits, including both welfare and government services. The average household moves from being a net contributor to a net drawer on the budget when the head of household turns 58.[36]

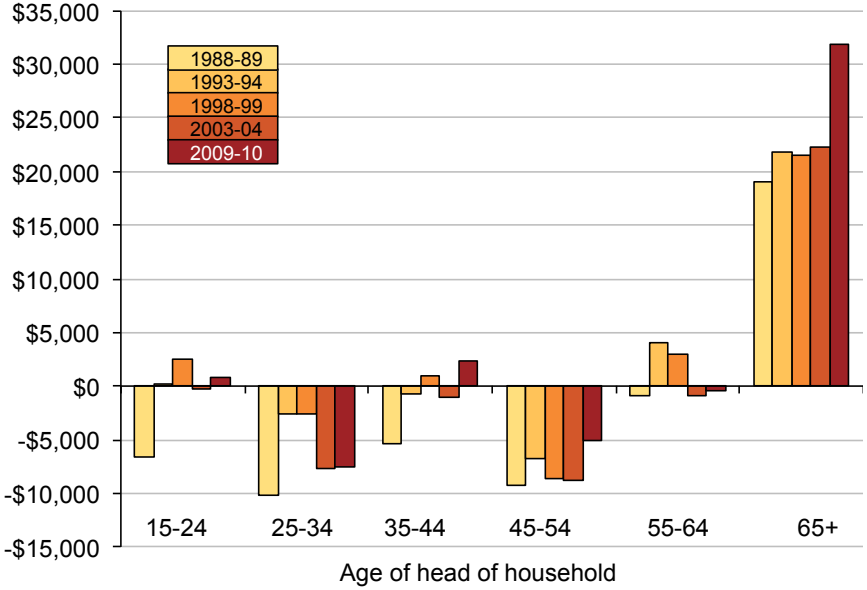
The scale of this transfer to older households is increasing, as Figure 3.1 shows.[37] Most of the increase happened over the last decade. In 2009-10, households 65 and over received $9400 more in real terms per household in net benefits (cash assistance and benefits in kind minus taxes) compared to 2003-04. This jump, much larger than for other households, was primarily a result of increased spending on health and the Age Pension, and relatively small tax increases.

This increased transfer to households 65 and over was not funded at the time through higher contributions from other age groups.

[36] Rice, *et al.* (2014), p.12-13

[37] To fully explain changes in spending at the household level, estimates should control for changes in household size. Unfortunately the ABS does not equivalise the data in this way. In an analysis of trends in government health spending by age group, Tapper and Phillimore (2014) consider changes in household size by age group over time. They find small declines in the size of young (14-44 year old) and middle aged (45-64 year old) households and no change in the size of elderly (65+ year old) households. This means that the increases in spending on young and middle aged households will be somewhat understated by the analysis. But the significant increase in spending for older households cannot be explained by changes in household size.

Figure 3.1: The generational bargain transfers substantial resources from younger to older households
Average net benefits per household, 2010$



Note(s): Net benefits are social assistance benefits in cash, plus support in kind, minus income and sales taxes. Age is by age of household reference person – households headed by someone 35-44 receive higher net benefits than other younger households because a greater number have school age children and therefore education spending is higher on these households (Figure 2.11).
Source: Grattan analysis of ABS (2012) (Table 19).

Most age groups experienced a small increase in their net transfers over the same period. Instead, it was funded through budget deficits, as governments swung from substantial surpluses to substantial deficits. The estimated cost of the increased net transfer to 65 and over households was about $22 billion a year. The transfer contributed substantially to Commonwealth Government deficits, which have exceeded $40 billion a year for four of the last five years.[38]

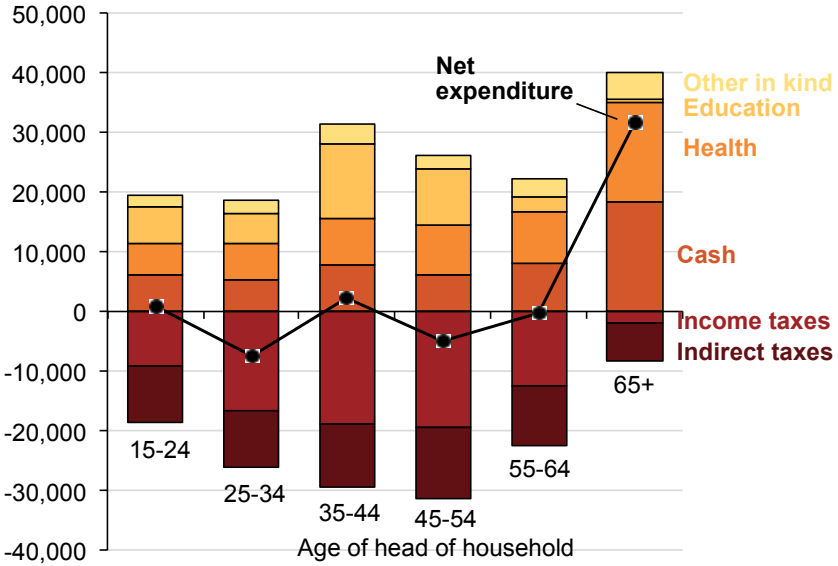
3.2 More spending on older Australians

Australian governments give direct (cash) assistance to support those most in need. They also provide most people with a range of services in kind, including subsidised access to education, health and housing services. Much of this support goes to older Australians. Households over 65 also receive more social assistance benefits, primarily the Age Pension, and more government-funded health services than do other age groups (Figure 3.2).

The cost of these services outweighs the much higher government spending on education for other age groups, particularly on school education for the children of households headed by a person aged between 35 and 54. Meanwhile, because many more of them are retired, people in households over 65 pay far less tax, particularly income tax, than does any other age group.

[38] Treasury (multiple years)

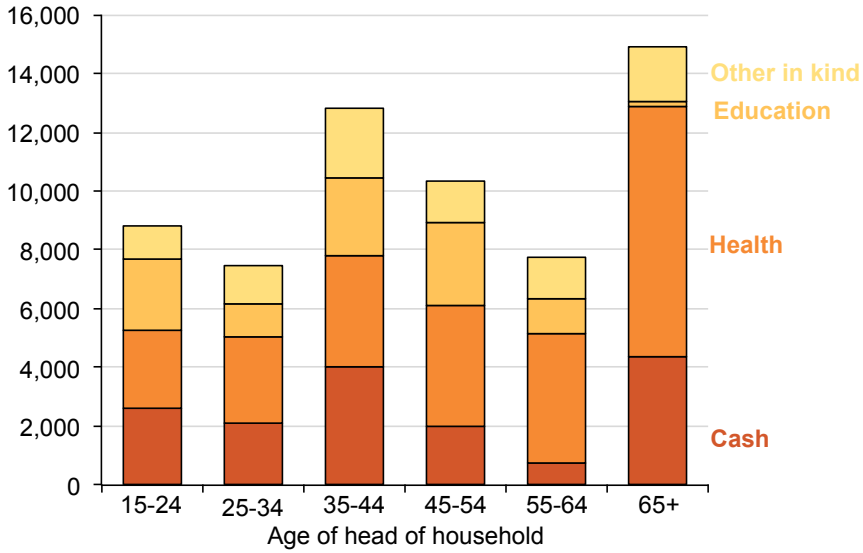
Figure 3.2: Governments spend more on older households due to health, the Age Pension and low taxes
Government spending and taxation per household, 2010$



Notes: Age is by age of household reference person – hence government spending on schools is reflected by much more education spending on 35-44 year old households. Other in kind includes childcare assistance, other social security and welfare benefits, housing benefits and electricity concessions.
Sources: Grattan analysis of ABS (2012) (Table 19).

The skew in assistance for older age groups has increased over the last 20 years. Increases in government spending on health and cash benefits for households over 65 have been larger than the increases in government spending for other age groups (Figure 3.3).

Figure 3.3: Health spending and cash benefits for over 65s have increased significantly
Change in government benefits per household (1988-89 to 2009-10), 2010$



Notes: Other in kind includes childcare assistance, other social security and welfare benefits, housing benefits and electricity concessions.
Sources: Grattan analysis of ABS (2012), Table 19.

3.3 Welfare spending trends by age

Welfare benefits (cash payments) increased more for households over 65 than they did for other age groups (Figure 3.3).

A household headed by someone over 65 today receives $4400 more in real terms in welfare benefits each year than did the equivalent household 20 years ago. Most of this increase reflects

higher Age Pension expenditure. The largest increase ($3100 a year, an increase of more than 20 per cent) occurred between 2003-04 and 2009-10. The underlying policy changes include:[39]

- a reduction in the taper rate for the pension asset test in 2006-07, costing $1 billion a year;[40] and
- an increase of more than 10 per cent in in the base pension rate in 2009 at a cost of about $3 billion a year. [41]

A further increase of 1.7 per cent in the base pension rate was introduced in 2010-11 to compensate for the introduction of the carbon price, but not withdrawn when the carbon price was repealed.[42]

There have been attempts to contain growth in spending on pensions. The Rudd Government increased the Age Pension eligibility age from 65 to 67. Yet this will only be phased in between 2017 to 2023. Other changes, passed by Parliament in 2014, include:

- less favourable treatment of account-based pensions under the means test; and
- ceasing to index the Clean Energy Supplement.[43]

The Abbott Government has proposed a number of other changes that have not yet been passed by Parliament, including:[44]

- lifting the Age Pension qualifying age further, from 67 to 70 by 2035;
- indexing the Age Pension and pension equivalent payments to CPI rather than to growth in average full time weekly earnings;
- suspension of the indexation of income and asset test thresholds for three years from 2017; and
- reduction of deemed income thresholds from 2017.

These measures will save a little in the short term, and much more in the long run. As many of them do not take effect until 2017, the 2014-15 Budget contains little detail about long run savings. [45] The Parliamentary Budget Office has estimated that by 2025 these policy changes will save around $7 billion each year.[46]

[39] Tapper, *et al.* (2013)
[40] Under the revised taper rate, pensioners lost only $1.50 per fortnight (rather than $3) for every $1000 of assets above the threshold. See: Treasury (2007); Treasury (2006)
[41] Includes age, disability and other pension payments. Treasury (2009), Budget Paper No. 2. This increase was over and above the legislated increase in the base pension rate by the growth in average weekly earnings. The Age Pension is indexed twice annually to the greater of the growth in CPI or the Pensioner and Beneficiary Living Cost Index (PBLCI). The new payment rates are then benchmarked against the MTAWE. If the new payment rate is below the benchmark (66.3per cent for couples) payments are increased to this benchmark. See: Klapdor (2014b)
[42] Treasury (2011)
[43] Social Services Amendment Bill No. 6 (2014)
[44] Klapdor (2014a)
[45] Treasury (2014a) and Treasury (2013b)
[46] PBO (2014)

3.4 Health spending trends by age

Over the past 20 years, government health spending per person increased in real terms by about 3.7 per cent a year.[47] Cumulatively, government health spending per person doubled.

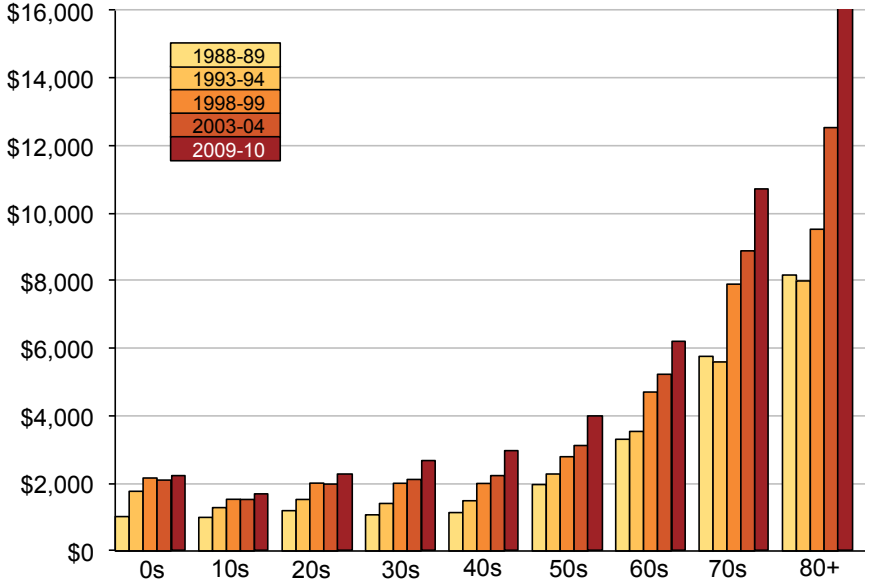
Non-demographic increases in health spending – rather than population ageing – have been the main factor putting pressure on government budgets over the last decade. They may well continue to be more important than population ageing for the next generation of budgets.[48]

All age groups contributed materially to the rising cost of health over this period. Governments spend around $2500 more a year on health for each household under 35 compared to two decades ago. Households headed by someone over 65 receive more than $8500 in additional spending each year (Figure 3.3).

Health spending per person, rather than per household, follows similar patterns. Government health spending per person increased across all age groups (Figure 3.4).[49] While the *growth rate* in spending was similar across people of all ages, the *dollar value* of spending increased most for older people, because of the higher spending base.

Figure 3.4: Government health spending increased the most for the over 70s

Government health spending per person, 2010$



Notes: Caution is advised with the 80+ estimates, especially in 1999 when the highest age category is '75 and over'.
Source: ABS Fiscal Incidence Studies (various years); ABS Cat 3101.0, Table 59; Grattan analysis.

Increased utilisation rather than population ageing has been the main cause of the spending growth. We estimate that only 0.7 percentage points of the 3.7 per cent annual increase in health expenditure per person over the 20 years has been from ageing (Figure 3.7). In part this is because many baby boomers, who represent a distinct bulge in the population profile, have not yet

[47] AIHW (2014b) using the period 1993-94 to 2012-13.
[48] Daley, *et al.* (2014)
[49] Health spending can be analysed more carefully by person, rather than by household. This disaggregated approach means we can analyse how much changes in health spending are the result of demographic and non-demographic factors – which is particularly important in projecting government health spending. As far as we know, spending figures using this approach to disaggregation have not been published before in Australia (Appendix C).

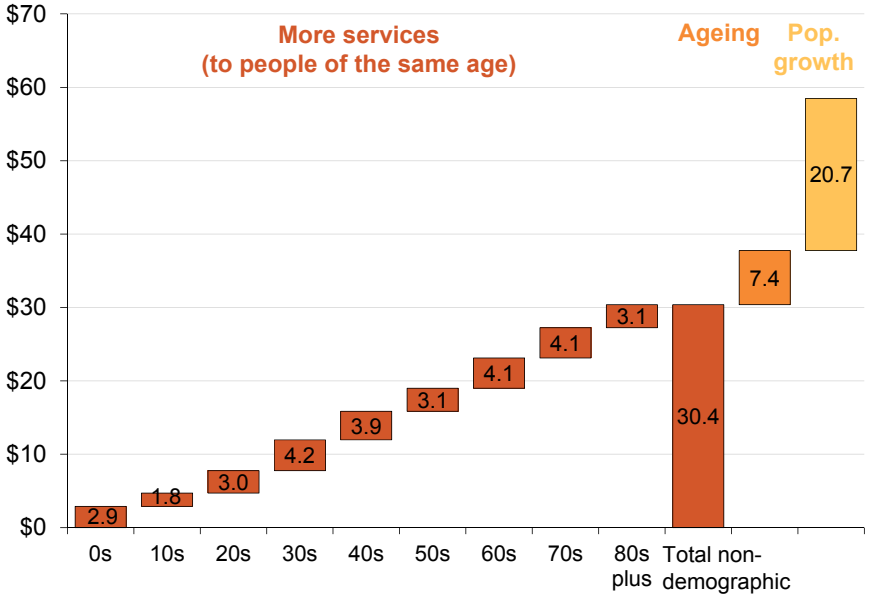
reached these higher spending age groups.[50] The other three per cent annual increase in health expenditure is non-demographic growth: more and better treatments per person being provided to people of a given age.

Each age group's contribution to the total growth in government health spending over the last 20 years is shown in Figure 3.5. The cost of older age groups was similar to the cost of younger groups, which takes into account that there are fewer people in older age groups. However, as the population ages and the number of people in these age groups swells, the relative cost of those aged 60 and over will rise.

The increasing demand for health services for younger and middle-aged people seems to contradict the claim that so-called healthy ageing will postpone age-related increases in health expenditure.[51] Rather, spending patterns are consistent with the proposition that society is prepared to spend proportionately more of its income on health services as incomes rise.[52] Without significant policy changes to contain costs, it seems likely the trend towards increased services for all age cohorts will continue.[53]

Figure 3.5: All age groups contributed to the growth in government health spending

Increase in real government health spending, 1989 to 2010, $ billion



Note: Less reliance ought to be placed on figures for 80+, as sample sizes are small and data categories change across surveys. Spending figures are adjusted to constant prices using the GDP implicit price deflator. Since health prices grew somewhat faster than average price levels, a small proportion of the increase across all categories will reflect this faster price growth.
Source: ABS (Various years-b); ABS (2014a)Table 59; Grattan analysis

Some projections of future government spending assume that the historic growth in government spending on health per person of a given age will slow (Box 2). Yet even if we do see some moderation, increasing per capita spending on older people will magnify the spending pressures from population ageing.

[50] Productivity Commission (2005), p. 128.
[51] The OECD suggest that the effects of an ageing population on health expenditure might be deferred because of 'healthy ageing' – which relies on the assumption that the number of years of life lived in bad health remains constant in the wake of increased longevity (OECD (2006)).
[52] Gruen and Thomson (2007)
[53] A range of studies have looked at ways to reduce service utilisation through preventative health interventions (for example, Vos, *et al.* (2010)) and through reducing use of unnecessary services (for example, Duckett and Breadon (forthcoming), NPS MedicineWise (2014)).

Even 'conservative' forecasts suggest that government health spending will be an increasing proportion of GDP. The Productivity Commission estimates that State and Commonwealth government health spending will increase from 6.5 per cent of GDP in 2011-12 to almost 11 per cent of GDP in 2059-60.[54] Spending increases of this magnitude will create a sizeable hole in government budgets (see Section 3.6).

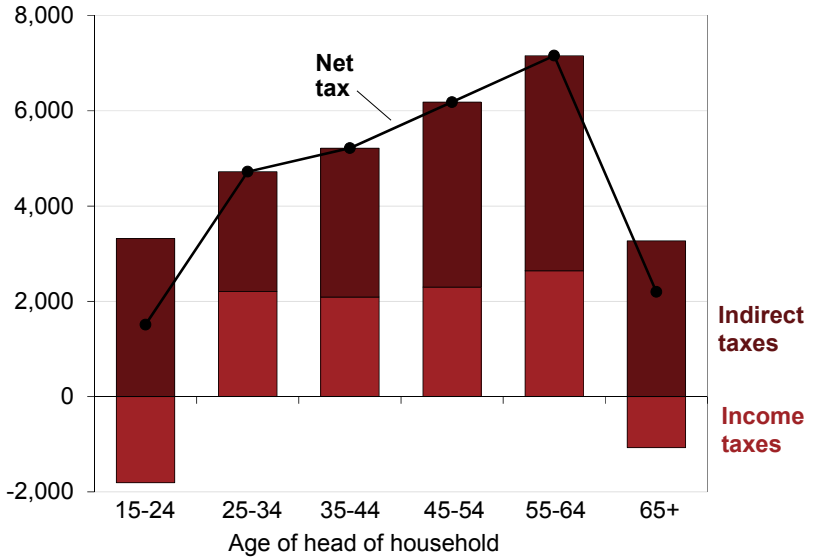
3.5 Taxation trends by age

Households of all ages pay more tax in real dollar terms than 20 years ago.

Income taxes increased most for 55 to 64 year old households, in line with the larger increases in income for this group, at least over the past decade (Figure 3.6). In general, income tax increases broadly reflect the pattern of income growth by age (Figure 2.10). The exception is for households over 65, whose income tax bill declined, despite strong growth in income over the last decade. This may be because concessional superannuation tax arrangements now allow individuals over 60 to materially reduce their income tax liability, by up to $5000 a year, and the Seniors and Pensioners Tax Offset can also reduce tax payable by up to $1600.[55]

All age groups paid more indirect taxes, including older households. This reflects both the increase in indirect taxes with the introduction of the GST in 2000, and all age groups consuming more as their incomes rose in real terms (Section 2.4).

Figure 3.6: Taxes increased less for older households because of the decrease in income tax
Change in taxes per household, 1988-89 to 2009-10, 2010$



Sources: Grattan analysis of ABS (2012), Table 19.

[54] Productivity Commission (2013a), p. 136.
[55] AAP (2013); Daley, *et al.* (2013), p. 33

Box 2: Forecasts of health expenditure growth

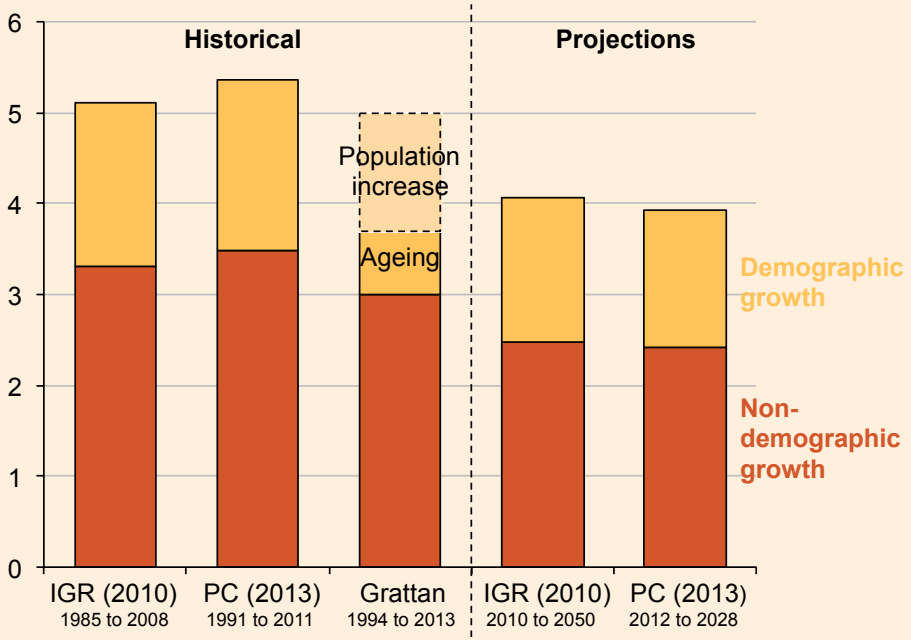
The Treasury and the Productivity Commission have both forecast health expenditure over long time horizons.

Both forecast that governments will spend more on health in real terms over the decades to come as a result of an ageing population. However, both assume that increases in health spending due to demographic factors will be lower than over the last two decades. They expect that increases due to ageing will be offset by slower total population growth.

Both agencies also forecast that non-demographic growth will not be as fast as in the last two decades. For example, the Intergenerational Report 2010 (IGR) implicitly assumes that annual non-demographic growth from 2010 to 2050 will only be 2.6 per cent (Figure 3.7). Given the historic experience, this may be optimistic.

On the other hand they may be right to forecast slower growth in government health spending. Health spending has grown more slowly in almost all OECD countries in recent years (OECD (2013)). In Australia, government spending for people of a given age fell in 2012-13, the first decline in 20 years (AIHW (2014b)). This may have been affected by one-off factors that are unlikely to be repeated, such as a number of 'blockbuster' drugs on the Pharmaceutical Benefits Scheme coming off patent and a decline in private health insurance rebate payments because many people pre-paid their 2012-13 insurance in the previous financial year to avoid the new means test. It may also reflect health costs being shifted onto patients. Once patient costs are included, health expenditure still grew by 1.5 per cent (AIHW (2014a)).

Figure 3.7: IGR assumes slower non-demographic growth in health spending
Annual growth in real government health spending



Notes: All date ranges are based on financial years. IGR estimates are based on spending by the Australian Government only whereas PC and Grattan estimates also include State Governments. All projections of health spending are based on trends in costs of health services per head of population by age, combined with projected changes in the size and age structure of the population. Grattan estimates of demographic growth are separated into ageing and population components. The IGR and PC estimates are both based on component modelling – forecasting separately the individual components of government health spending. For the IGR, component modelling was used for the forecasts up to 2024, taking into account policies that are intended to contain costs. From 2024, the IGR assumes that non-demographic spending would trend upward to reach 3.2 per cent per annum.
Source Treasury (2010b); Productivity Commission (2013a); Grattan analysis.

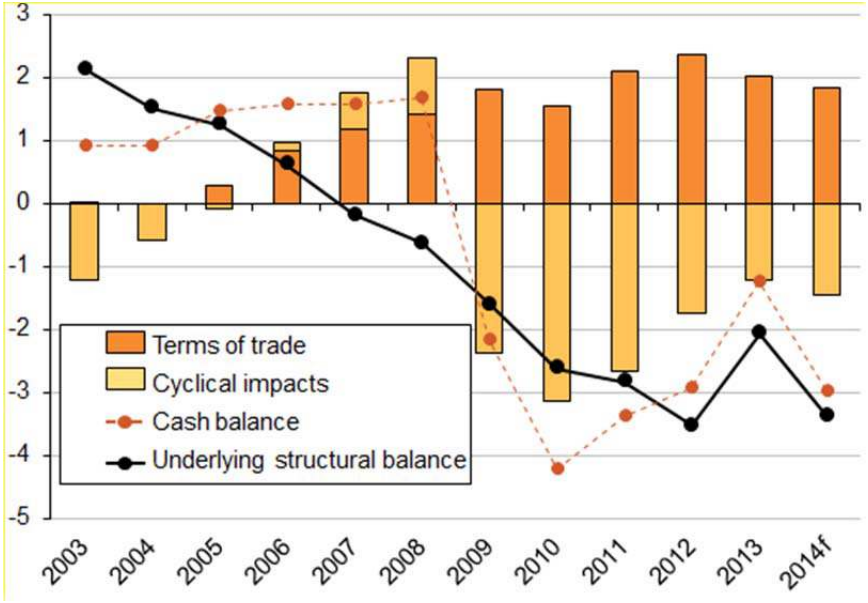
3.6 Budget deficits also transfer resources between generations

Budget deficits borrow from the future. They require future generations of taxpayers to pay for today's spending. There are fundamental issues of intergenerational fairness if future taxpayers are forced to bear the burden of today's spending that they neither have a say in, nor benefit from.

The Commonwealth Government posted headline deficits of more than 2 per cent of GDP in five of the last six years. Cyclical deficits may have helped to maintain income during the economic downturn. But structural deficits are less defensible. The Commonwealth Government had a *structural* budget deficit of more than 2 per cent of GDP for the past five years. As Figure 3.8 shows, the Commonwealth spent more than its income after allowing for fluctuations in prices (particularly the mining boom and the terms of trade), and the business cycle (particularly the Global Financial Crisis).[56]

While deficits are forecast to narrow, the Commonwealth's budget position is not expected to balance within the forward estimates period (to 2017-18).[57] The current plans for budget repair rely on substantial bracket creep and other growth in income tax paid by individuals, and this approach is not likely to be economically or politically sustainable.[58]

Figure 3.8: The Australian Government budget has been in structural deficit for almost a decade
Per cent of nominal GDP



Notes: Cash balance is equal to receipts minus payments, minus Future Fund income (under 0.25 per cent of GDP). Stimulus is allocated to the cyclical; changes in company tax from the decade average due to depreciation are allocated to cyclical. The depreciation rate is assumed to be 15 per cent. Terms of trade baseline is 2002-03.
Source: Minifie et al. (2013); Grattan analysis

Over the long-term, significant new policy initiatives, rising health expenditure, pressure on welfare budgets, and an inevitable fall in the terms of trade could lead to the Commonwealth and State

[56] Daley, *et al.* (2013), p. 7-8
[57] Treasury (2014b)
[58] Daley and Wood (2014)

Governments collectively posting deficits of 4.5 per cent of GDP, or $65 billion in today's terms.[59]

It is arguable that continued deficits are sustainable if they are so small that government debt does not increase as a percentage of GDP. The burden of interest payments transferred to future generations can also be rationalised if the debt funds productive investments that benefit future generations, or if economic growth is greater than the real interest rate.

Yet in practice, relatively little of the increase in spending over the last decade paid for investments that benefit future generations. Most of the big increases in spending were in health and the Age Pension.[60] While this spending is valuable, it is difficult to argue that it benefits future generations much. The substantial increase in infrastructure spending may be more defensible – provided the spending was well targeted. There are reasons to doubt this was always so.[61]

Further, the anticipated slowdown in GDP and income growth (Chapter 4) will increase the proportion of future income that future generations will need to spend to service these deficits.

3.7 Is the transfer sustainable?

The generational bargain transfers income from groups that are income-rich but asset-poor to those that are wealthy but can have limited incomes. The bargain has been sustainable because real per capita incomes have grown consistently and strongly for 70 years. Younger generations have been able to finance the retirement of older generations while also improving their own living standards.

Over the next 25 years the generational bargain may be undermined, as a result of:

- ongoing budget deficits that leave debts for the next generation to repay;
- the growth in net government transfers to older Australians;
- demographic ageing; and
- the significant increase in house prices relative to earnings discussed in Chapter 2.

The outcome depends greatly on future per capita economic growth, discussed in the next Chapter.

[59] Daley, *et al.* (2014)
[60] Ibid.
[61] Productivity Commission (2013b); Daley (2014)

4 Economic growth cannot be relied on to save the day

Strong per capita economic growth almost inevitably makes one generation better off financially than its predecessor. In the past 30 years, average annual growth in real GDP per person of 1.9 per cent and growing resource prices boosted the average real disposable income of Australians from $29,000 in 1983-84 to $53,000 in 2013-14.[62] But continued high levels of growth are not guaranteed. Australia faces considerable economic headwinds, including lower labour force participation, declining terms of trade and perhaps less scope for technologically driven productivity improvements. To rely only on economic growth to address future budget pressures is to transfer the entire risk of lower growth to today's young.

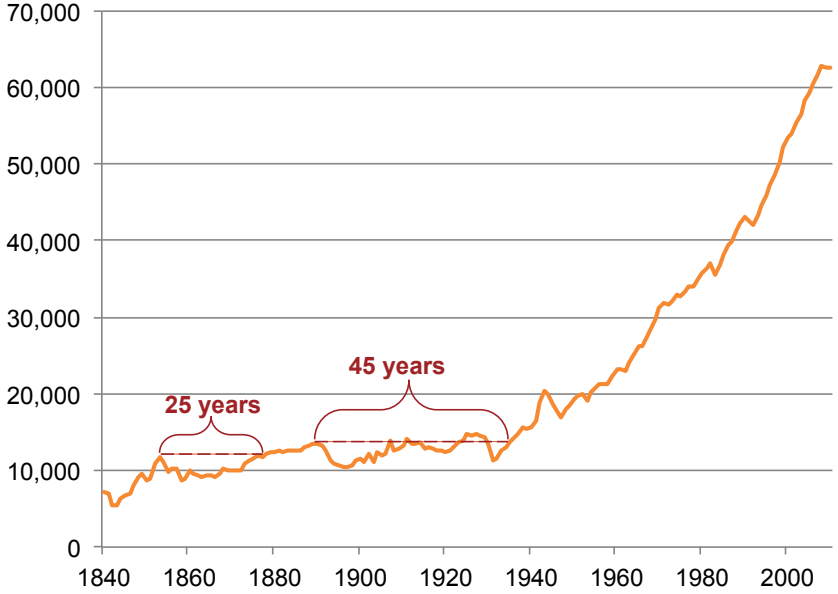
4.1 Economic growth and the generational bargain

Strong per capita economic growth makes a big difference to the generational bargain. Incomes have almost doubled over the past 30 years, the cumulative effect of real per capita incomes growing at 1.9 per cent a year.[63] When a child's annual income (and therefore in many cases their expenditure) is twice that of their parents, it is difficult to have a lower standard of living, no matter what happens to asset values.

Australian per capita GDP has grown consistently for the last 70 years (Figure 4.1), after accounting for inflation. The fall in average incomes between 1976 and 1991 was offset by rapid increases in workforce participation and favourable demographics as the weight of the population moved into age groups with higher earnings. The subsequent income gains across a broad spread of age groups and genders (apart from men on lower incomes)[64] helped to sustain the generational bargain.

Figure 4.1: Historically there have been generation-long periods of stagnant incomes

Real GDP per capita, 2010$



Source: Butlin et al. (2014)

[62] ABS (2014d)

[63] This is the approximate time period between generations. In 1985, the median age for first time mothers was 27.3. In 2013 it was 29.3. See: ABS (2014b)

[64] See above Chapter 2, and Appendix B

4.2 Strong growth is not inevitable

In the past, Australia has had extended periods of slow or no growth (Figure 4.1). Per capita incomes peaked in 1855, and did not regain these levels until 1880. Incomes peaked again in 1890 at the end of the gold rush, and did not regain this level for another 45 years until after the Great Depression.[65]

Thus while the growth of the last 70 years has set expectations, it may have been an anomaly when seen as part of a longer history. Many decades of strongly growing prosperity do not guarantee more of the same into the future. The current economic stagnation across much of Europe and the United States shows how income growth can languish for a decade or more.

4.3 Drag from declining terms of trade and falling participation

Over the next decade, the rate of improvement in Australia's living standards is expected to fall.[66]

Growth in the volume of goods and services produced per person in an economy depends on productivity (average output per hour worked) and participation (the proportion of the population of working age and the average hours worked per person in this group).[67] Growth in national income also depends on the terms of trade (the price of our exports relative to the price of imports – roughly speaking, the number of televisions that can be bought for a tonne of iron ore).

In the 2000s, record terms of trade led to incomes rising quickly.[68] Labour productivity growth was somewhat lower than in the 1990s. Productivity growth resulted from a combination of slowly increasing productivity in a number of sectors, reduced productivity in mining and utilities, and a shift of employment to the (highly productive) mining industry.[69]

The terms of trade are expected to drag on future income growth. Minerals prices are likely to fall as the mining industry shifts from an investment phase to a production phase (Figure 4.2).[70] The drag on per capita incomes will be material – over the next decade the annual decline could be about 0.5 percentage points, until the terms of trade return to long-run levels.

Labour force participation may also drag on growth over the next few decades as the baby boomer generation reaches retirement age. Treasury estimates that the labour force participation rate for people aged 15 years and over will fall from 65 per cent in 2010 to

[65] McLean (2012), p. 164.
[66] Treasury (2010a), p. vii.
[67] Treasury (2010b), p. 3.

[68] Carmody (2013)
[69] Borland (2014b) estimates that 1.1 percentage points of the 1.3 per cent per annum growth in labour productivity over the decade was due to changes in industry composition, principally an increase in the share of hours worked in the mining industry. The mining industry generates output worth an average of $317 per hour worked, significantly higher than the output per hour in any other industry. However, productivity in the mining and utilities sectors fell, offsetting small rises in productivity in many other sectors. See: Eslake and Walsh (2011)
[70] Stevens (2013); Minifie, *et al.* (2013)

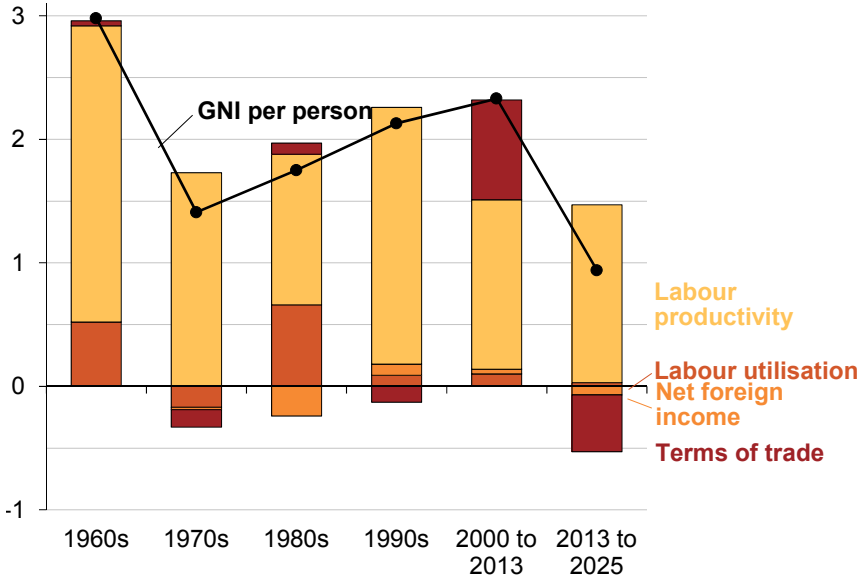
less than 61 per cent by 2049-50, as a smaller proportion of the population will be of traditional working age.[71]

As a result, participation will change from adding to per capita income growth to dragging on growth. After a decade of increases, workforce participation fell in Australia over the last two years, partly because the impact of ageing overwhelmed the increasing participation of older age groups.[72] Over the next 20 years, the annual impact could be a reduction in growth in the order of 0.1 to 0.2 percentage points.[73]

Immigration will not be enough to offset the effects of demographic change on growth. Migration tends to boost participation rates, since migrants are somewhat younger on average than the resident population. However, assuming net migration returns to its 40-year trend, it will moderate but not reverse the fall in the participation rate.[74]

Of course, an increasing participation rate among older age groups may substantially offset the impact of demographic change. Policy reforms along the lines of those identified in Grattan Institute's 2012 report, *Game-changers*, could lead to overall increases in participation rates.[75]

Figure 4.2: Terms of trade added to income growth in the 2000s, but will drag in the next decade
Average percentage growth per year in gross national income per person



Note: Assumes labour productivity for 2013-2025 is similar to that for the last 13 years
Source: Treasury (2014b), Budget Paper No. 1

4.4 Risks to growth from lower productivity

Although the terms of trade and participation rates matter, labour productivity growth will continue to drive living standards in Australia over the decades to come. To maintain historical growth in living standards with decreasing participation and falling terms of trade, labour productivity growth will have to be significantly *above* its long term average.

[71] Treasury (2010b), p. ix.
[72] Daley, *et al.* (2013), p. 54. There was also a cyclical component to the recent decline in labour force participation as discouraged job seekers exited the labour force, the so called 'discouraged worker effect'. See: Christopher Kent (2014).
[73] Unpublished analysis provided by Jeff Borland, University of Melbourne
[74] Treasury (2010b), p. 7-12.
[75] Daley, *et al.* (2013), p. 61.

In the medium term, slower growth of the mining industry poses a significant threat to Australia's productivity growth. A decline in the share of employment in mining will put downward pressure on overall labour productivity because other industries generate much less value per hour worked.[76] On the other hand, productivity within the mining industry will probably rise as the industry shifts from an investment to a production phase, providing a 'productivity dividend' on past investment.[77]

Over the longer-term, technological change is the main cause of labour productivity improvements. But some economists warn that the potential for reduced economic growth over the next few decades means there may be less scope for dramatic technology-driven improvements in living standards similar to those in the past.

United States economist Robert Gordon attributes the growth in the US economy over the last 300 years to three waves of innovation, or "industrial revolutions". The first was steam engines, cotton spinning and rail roads (1750 to 1830); the second electricity, the internal combustion engine and indoor plumbing (1870 to 1900); and the third computers, mobile phones and the internet (1960 to late 1990s).[78] It took about 100 years for the full benefits of the first two waves to be felt throughout the economy. By contrast, the follow up improvements from the third wave percolated more quickly and the growth effects appear short-lived.[79]

Gordon suggests that while ongoing innovation will continue to drive improvements in the standard of living, it will be slower. The more transformative changes in these past revolutions, such as speed of travel and urbanisation, were one-off. He argues that it is difficult to foresee an overarching improvement to technology that could drive an equivalent surge in productivity growth.

Similarly, Tyler Cowen argues that the American economy has reached a "technological plateau" and that the other low-hanging fruit that would promote growth – better educating the brightest, and cultivating unused land – have already been exploited.[80]

Others have a different view. Management professors Erik Bryanjolfsson and Andrew McAfee argue that we are entering a "Second Machine Age" in which digital technologies and intelligent machines will deliver greater innovation and growth.[81]

Yet falling long-run economic growth rates in developed countries provide some support for the 'techno-pessimist' view. On one analysis, long-term labour productivity in G7 countries grew at less than 1 per cent over the last decade, despite the widespread diffusion of digital technology during this period.[82] The results suggest a persistent decline in both productivity and growth over a

[76] Borland (2014b)
[77] Productivity Commission (2014), p. 12.
[78] Gordon (2012)
[79] Ibid., p. 1.
[80] Cowen (2011)
[81] Bryanjolfsson and McAfee (2014)
[82] Antolin-Diaz*, et al.* (2014)

number of decades rather than a downward shock from recent economic turbulence.[83]

Even if the pessimism is only partially justified, given the other headwinds, economic growth is likely to be much slower for all developed economies, including Australia, over the next few decades.[84]

These changes emphasise the importance of policy reform to encourage economic growth. Reform will be increasingly important to raise living standards in a low growth environment.[85] Yet Australian governments have relatively few opportunities for game-changing economic reform. All three of the major reforms identified in our *Game-Changers* report would still only increase growth in GDP by around 5 percentage points, or 0.5 percentage points a year, over a decade.[86] And these reforms would be very difficult to achieve. Major reform is always hard, both to formulate and to implement. The current political climate – particularly the 24-hour news cycle, the lack of crisis to motivate change, and the lack of funds to buy reform – increases the difficulty. [87]

Thus substantially lower per capita income growth in the decades to come is a material possibility, given predictable drags from lower terms of trade and from demographics, and the real risk of sluggish long-term productivity growth.

4.5 Who bears the risk of lower growth?

Lower growth substantially reduces the improvement in living standards from one generation to the next. It also makes capital gains more important. If wages have not grown much, then capital gains (particularly from a one-off increase in house prices) may result in an older generation having more wealth than its children.[88]

This increases both the size and importance of bequests and gifts, as discussed in the next chapter.

[83] Ibid.
[84] Economic growth projections based on long run productivity trends already factor in the baseline impacts of technological improvements in productivity over the past 30 years. So similar improvements in productivity-enhancing innovation would be required just to achieve these baseline projections.
[85] For example, Ross Garnaut has warned that Australian living standards are likely to stagnate unless governments are prepared to tackle productivity enhancing economic reforms See: Garnaut (2013)
[86] Daley, *et al.* (2012), p. 13. For a summary of other reforms, see Banks (2012)
[87] Daley, *et al.* (2012), p. 4.
[88] Of course all those with limited wealth (not just the young) suffer greater disadvantage from slow economic growth. See: Picketty (2013); Cowen (2013)

5 Wealth begets wealth: consumption and inheritance

Wealth is a store of spending power. Income not consumed can be stored as assets, such as bank accounts, shares, dwellings, plant and equipment, that generate additional future income. Assets can also be converted into cash to finance immediate consumption.

Viewed as a store of potential future spending, wealth is an important determinant of future living standards.[89] That is why this report focusses on wealth as well as income in considering the changing economic position of today's young.

But wealth is not always used to finance consumption by the person who accumulated it. Wealth may be passed from one generation to the next through bequests and gifts. If older Australians pass on their wealth to their children then living standards may be higher for today's young (and lower for today's older Australians) than the existing distribution of wealth would suggest.

Transfers of wealth across generations through gifts and inheritances could mitigate concerns about intergenerational inequality. This assumes that:

- older cohorts will save their additional wealth, rather than consuming it; and
- younger generations will inherit wealth at a time in their lives that it will be useful.

On current trends, older cohorts are likely to save more than they consume. It remains to be seen whether this trend will continue when people live for much longer.

In practice, inheritances tend to transmit wealth to children who are already well-off. This has been the pattern internationally for a long time. It is also the pattern over the last decade in Australia (where data on inheritance is relatively scarce). If the patterns continue, then on average the younger generation will ultimately have more resources than its parents, but the wealth will be much less equally shared.

It is also likely that the vast bulk of wealth will be inherited by people when they are over 55. Life expectancy at birth in Australia is now over 80.[90] If bequests are primarily made to children, most people will be over 50 when they inherit. Although the younger generation may ultimately have more wealth in aggregate, its members may live much more of their life with lower resources.

5.1 A lot of wealth will be saved, not spent

On current trends, the wealth of older households will be saved and passed on rather than spent. Analysis from Australia and abroad suggests that older households generally maintain (and even increase) their wealth in retirement.[91]

[89] Treasury (2004)

[90] ABS (2014e)

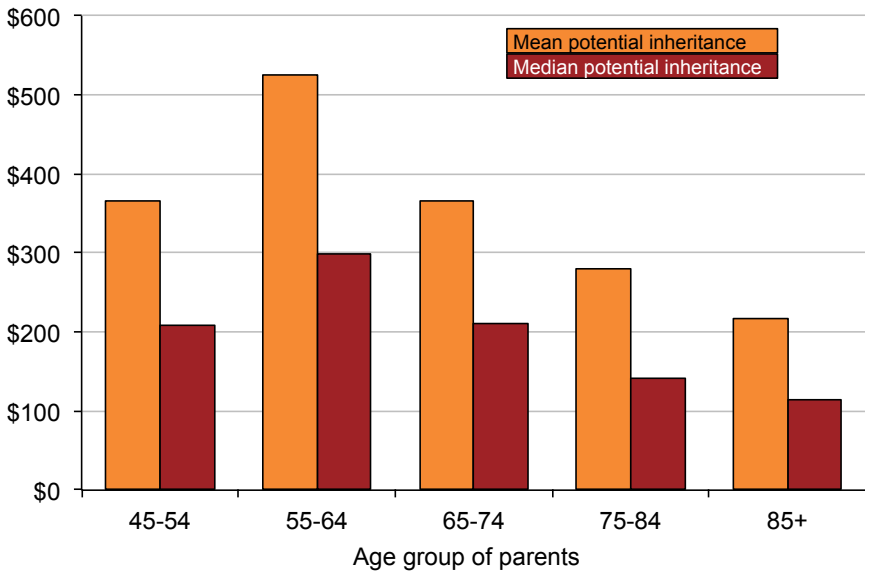
[91] Börsch-Supan (1992); Alessie, *et al.* (1999); Feinstein and Ho (2000); Cho and Sane (2013)

Between 2003-04 and 2009-10 households headed by people 65+ added to their wealth through savings and appreciation in the value of their assets (Figure 1.1). Of course these trends may change as more baby boomers reach their twilight years. There is some indication that the sense of obligation to the next generation is diminishing.[92] Increases in life expectancy could also reduce the amount the boomers have left to pass on. But there is not yet any hard evidence of retirees 'spending the kids' inheritance'.

If current trends continue, then future inheritances may be large. For example, if the wealth of all people aged between 75 and 84 were distributed equally to their children, the mean inheritance per child would be $280,000. The median would be much lower – at $141,000 – reflecting how a small number of households have a disproportionate share of wealth (Figure 5.1).

Large inheritances and bequests have not been common in Australia to date. Of the estimated 13 per cent of people receiving an inheritance between 2002 and 2012, more than three quarters received less than $100,000 and most less than $50,000.[93] Yet, the strong growth in the wealth of today's older generations (Chapter 2), combined with the steady shrinking of the family size from 1960 to 2000,[94] may lead to more and larger inheritances in the future.

Figure 5.1: High wealth per child for older age groups suggests inheritances may be sizeable
Inheritance per child if current wealth distributed today, 2010$ '000s



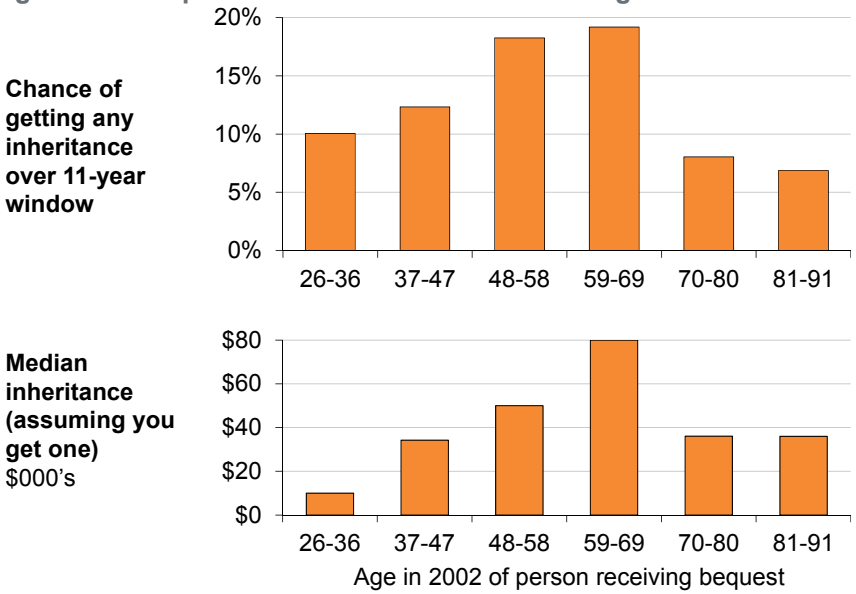
Notes: Estimates are of the value of potential inheritance from parents in each age group assuming that the total value of current wealth is transferred between all children.
Source: Grattan analysis of HILDA (2010)

[92] Lawrence and Goodnow (2011)
[93] Grattan analysis of HILDA (2002 to 2012).
[94] Australia's total fertility rate decreased from 3.6 babies per woman in 1960 to 1.9 babies per woman in 2011. See: ABS (2013b)

5.2 Inheritance concentrates wealth among those that are older and richer

Inheritance could reduce intergenerational inequality by transferring accumulated wealth to younger generations.[95] However, inheritances tend to go to those that are older than average and already wealthy.

Figure 5.2: People in their 50s and 60s receive larger inheritances



Source: Grattan analysis of HILDA (2002); (2012)

People aged between 48 and 70 have the highest chance of receiving an inheritance of any age group. This group also receives larger inheritances than other age groups (Figure 5.2). Inheritances are not evenly distributed. People who are already wealthy are more likely to receive an inheritance than are less wealthy people of a similar age (Figure 5.3).[96]

Thus older people are more likely to inherit, and any inheritance is more likely to be large. For people of a given age, the wealthy are more likely to inherit more. And as Figure 5.3 shows, older people are also more likely to be wealthy already. Combining these trends, the wealthiest 20 per cent of Australians are four times more likely to receive a sizeable inheritance than is the median Australian, and 37 times more likely to receive a sizeable inheritance than are those in the bottom 20 per cent of the wealth distribution (Figure 5.4).

If inheritances primarily transfer capital to older wealthy people, they will not address concerns about intergenerational inequality for most of the population. For those most likely to be in need – younger people with relatively low incomes – inheritance will not do much to reduce the additional taxation burden (or lower levels of government support) that may result from unsustainable transfers between age groups and increasing deficits. An increasing volume of inheritances raises other issues. Sizeable inheritances can perpetuate inequality. They reinforce the tendency for children of the wealthy to have more and better

[95] In particular, in cases where older Australians pass on more in inheritance to their children than they received themselves then this would mitigate against the possibility of their children being worse off over their lifetime.

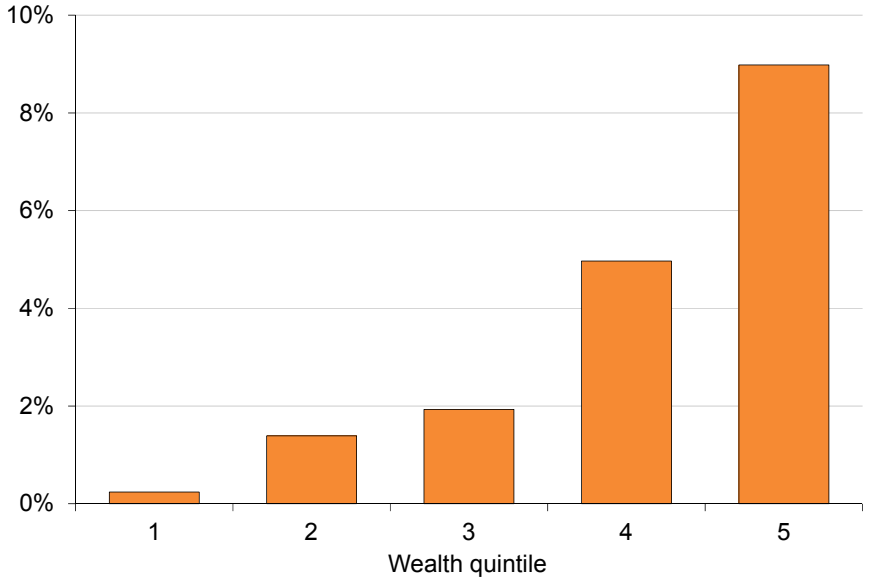
[96] This is similar to the US where the wealthiest 5 per cent of people are more than three times as likely to receive an inheritance than the poorest 50 per cent. However, the average age of receiving an inheritance is considerably lower in the United States (40) than Australia. See: Yellen (2014).

schooling, for example.[97] And if inheritances rather than lifetime earnings are the dominant route to wealth, there is less incentive for talented Australians to get ahead through individual endeavour – what Thomas Piketty described as the "Jane Austen world".[98]

Figure 5.3: Wealthy people of a given age are more likely to receive larger inheritances
Size of inheritance for those who did receive a bequest between 2002 and 2012, by age and wealth percentile

Note: Wealth quintiles are based on relative wealth in 2002 and therefore do not include the effect of inheritances received after this time.
Source:Grattan Analysis of HILDA (2002); (2012)

Figure 5.4: Inheritances greater than $100,000 tend to go to the already wealthy
Percentage of all individuals receiving an inheritance of more than $100,000 between 2002 and 2012 (by wealth quintile)



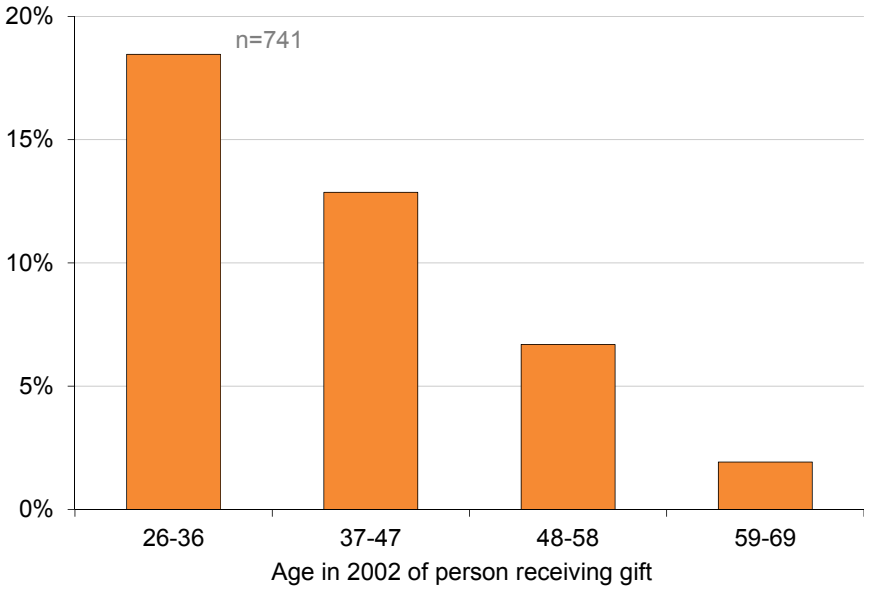
Note: Wealth quintiles are based on relative wealth in 2002 and therefore do not include the effect of inheritances received after this time.
Source: Grattan Analysis of HILDA (2002); (2012)

[97] Bowles, S. and Gintis, H. (2002), The Inheritance of Inequality, *Journal of Economic Perspectives*, 16 (3) 3-30.
[98] Picketty (2013)

5.3 Gifts to younger generations tend to be small

Of course inheritances are not the only way that wealth is transferred across generations. Parents might help their children save for a house deposit or contribute to their university fees. Unlike inheritances, financial gifts are more likely to be received by younger cohorts (Figure 5.5).

Figure 5.5: Young people are most likely to receive a financial gift from their parents
Percentage receiving a gift, 2002 to 2012

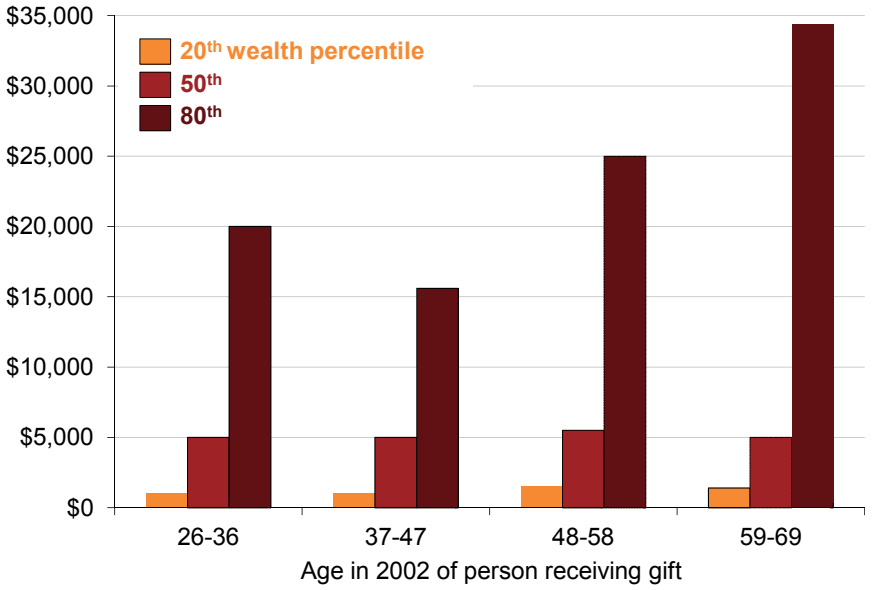


Notes: People over 70 are not included because there are too few instances of gifts.
Source: Grattan Analysis of HILDA (2002); (2012)

Yet gifts also tend to be relatively modest (most are $5000 or less) and therefore are unlikely to alter the substantial patterns of intergenerational transfers outlined in this report (Figure 5.6).

As with inheritances, gifts are larger for those who already have relatively more wealth.

Figure 5.6: The median value of gifts received was small
Size of gift for those who received one between 2002 and 2012, by age and wealth percentile



Notes: People over 70 are not included because there are too few instances of gifts for this group. Wealth quintiles are based on relative wealth in 2002 and therefore do not include the effect of gifts received after this time.
Source: Grattan Analysis of HILDA (2002); (2012)

6 International experience highlights the risk of lower growth

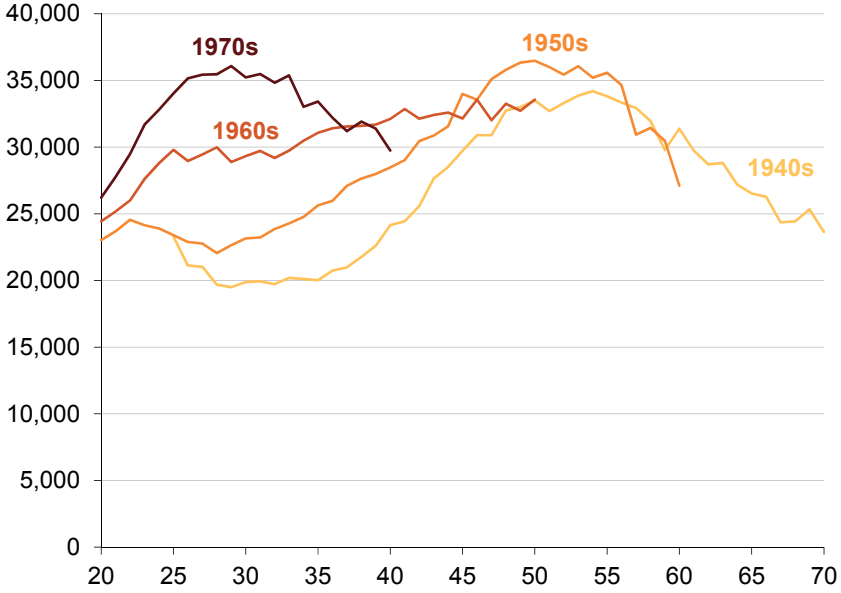
In both the US and the UK, there are already signs of a fall in the fortunes of younger generations, so that the current generation of young adults may have less wealth, income and spending than their parents. As in Australia, shifts in government spending and windfall gains in asset prices that favoured older cohorts are part of the story. But the impact of the Great Recession also disproportionately affected the young. The experience in these countries demonstrates how lower growth, whether cyclical or secular, can depress earnings for an extended period. For those in their formative years in the workforce, the result is a significant hit to lifetime earnings.

6.1 Stagnant income growth and declining home ownership: the UK experience

In the UK, relatively strong income growth after World War Two enabled each generation to earn more than its predecessors at the same age. Yet this expectation of ever-rising living standards ended with stagnant income growth in the 2000s. Median income grew in real terms by less than 0.1 per cent a year over the 10 years between 2001-02 and 2011, compared to an average of 1.5 per cent a year over the previous 25 years.[99]

As a result, for the last five years most birth cohorts have had lower incomes than previous birth cohorts at the same age (Figure 6.1). For example, on reaching 40 today, households born in the 1970s have lower median incomes than have those born in the 1960s when they turned 40.

Figure 6.1: Younger cohorts have lower incomes than their predecessors at the same age
Real equivalised median annual household income by age and birth year, 2012£



Notes: Cohorts refer to birth cohorts. So for example, the 1970s cohort includes all people born in the 1970s. Calculated using the UK Family Expenditure Survey, various years. Based on equivalised median household income, adjusted for change in household size and composition. Incomes are measured before deducting housing costs.
Source: Hood, A and Joyce, R (2013), p. 8.

[99] Hood and Joyce (2013), p. 7.

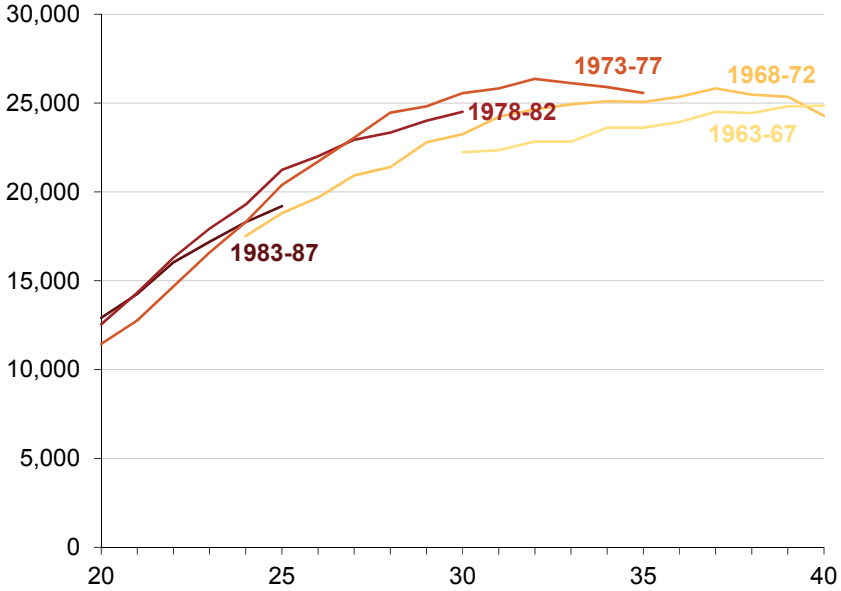
Those who fared worst after the Great Recession of 2008 to 2009[100] were young adults in their formative years in the workforce. In 2013, 25 year olds in employment were paid less than people at the same age both five and ten years earlier (Figure 6.2). The younger generation were also more likely to be unemployed than their predecessors at the same age.[101]

The total income of young households suffered as a result. In the five years to 2012-13, the median household income of 22-30 year olds fell by 13 per cent. But it only fell by 7 per cent for workers aged 31 to 59.[102] Earnings fell among the younger cohorts even though they are much more educated: 31 per cent of 25 year olds in 2008-12 had a degree, compared to only 16 per cent of 25 year olds 15 years earlier.[103]

At a minimum, the extended period of low incomes will put a dent in the lifetime earnings of younger cohorts. This will be magnified if younger cohorts are not able to catch up to the income levels of their predecessors as the economy improves.

Figure 6.2: Despite higher education levels, younger cohorts have lower wages at a given age

Gross annual wages of individuals, by age and birth year, 2013£



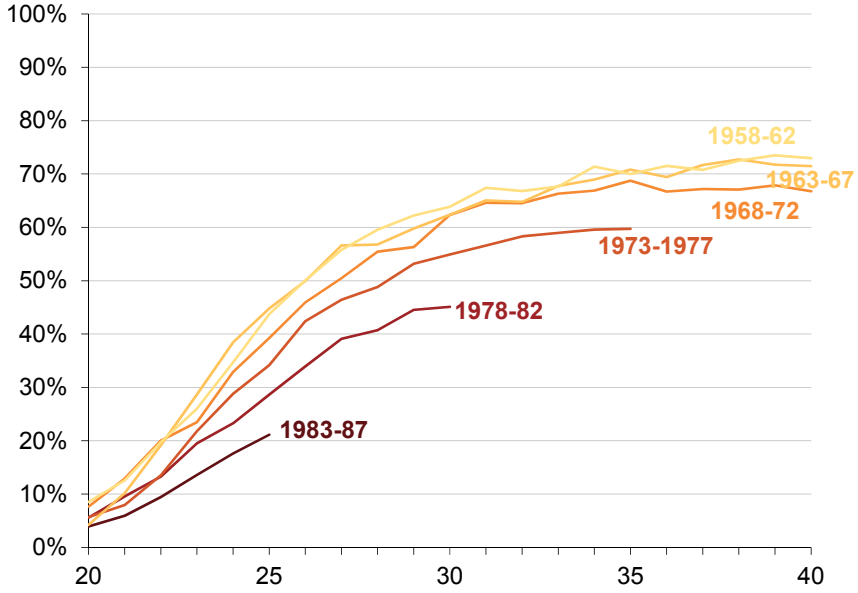
Source: Belfield et al. (2014), p. 105.

What is more, Britons born in the 1970s and 1980s are less likely to own their home than those born in the 1950s and 1960s were at the same age. There is no evidence of younger cohorts catching up on home ownership (Figure 6.3). On current trends, home ownership rates of those born in the mid-1980s may be less than half of those born in the late 1950s.

[100] The UK experienced six consecutive quarters of negative growth across 2008 and 2009 (Allen (2010)). Growth stagnated in the intervening period and GDP did not return to its 2008 peak until the second quarter of 2014. See: Taylor and Wales (2014)
[101] Belfield, *et al.* (2014)
[102] Ibid., p. 90.
[103] Ibid., p. 105.

Figure 6.3: Younger cohorts in the UK are much less likely to own their homes

Percentage of individuals who own their own home by age



Source: Belfield et al. (2014), p. 52.

Even if younger cohorts do close the ownership gap, their real wealth may be significantly behind that of older people. In the past 15 years house prices have more than doubled.[104] To the extent that these were one-off or windfall gains, they accrued to those who held housing stock during this period, substantially more of whom are in older cohorts.

It is also forecast that younger Britons will be net losers from the tax and transfer system. Generational Accounting estimates each generation's net contribution to the government budget over its lifetime assuming that current policies remain in place. It assumes that taxes and expenditures beyond the projection years rise in line with trend growth of real income per capita. Estimates suggest that a 65 year old UK citizen will take out £220,000 more from the budget than he or she puts in. If the government is to meet its budget constraint over the long run, younger generations will have to pay a net contribution. It is estimated that a 25 year old today will contribute £120,000 more in taxes to the Exchequer than they take out in benefits (cash payments and benefits in kind such as health and education).[105]

These trends may partially reflect the fact that younger Britons are a less important voting bloc than are their older counterparts. In 2010, 52 per cent of 18 to 24 year olds voted in the general election compared to 75 per cent of those 62 or older.[106]

It is quite possible, therefore that Britons born in the 1980s will be worse off in material terms than were their parents born in the

[104] Hood and Joyce (2013), p. 44.

[105] McCarthy, *et al.* (2011), p. 15. Generational Accounting is a widely used tool for analysing fiscal policies. But it is not without criticism. One is that it excludes the benefits derived from government spending so if the benefits from some current spending (eg, infrastructure spending) accrue later, then the estimates do not accurately reflect each generation's treatment under current policies. Another is the sensitivity of the estimates to particular assumptions, particularly around the discount rate. See: Williamson and Rhodes (2011). However, estimates of the tax adjustments needed to close intergenerational fiscal gaps are less sensitive to the discount rate. In the UK, estimates suggest that taxes would need to rise by 16.3 per cent to restore the intergenerational budget balance. See: McCarthy, *et al.* (2011).

[106] Dar (2013)

1950s. Whether they will be able to catch up on ground lost during the Great Recession is unclear. Despite being more educated, they may have lower incomes and pay more in taxes from the age of 25. They will almost certainly benefit less from rising house prices than did their parents.[107]

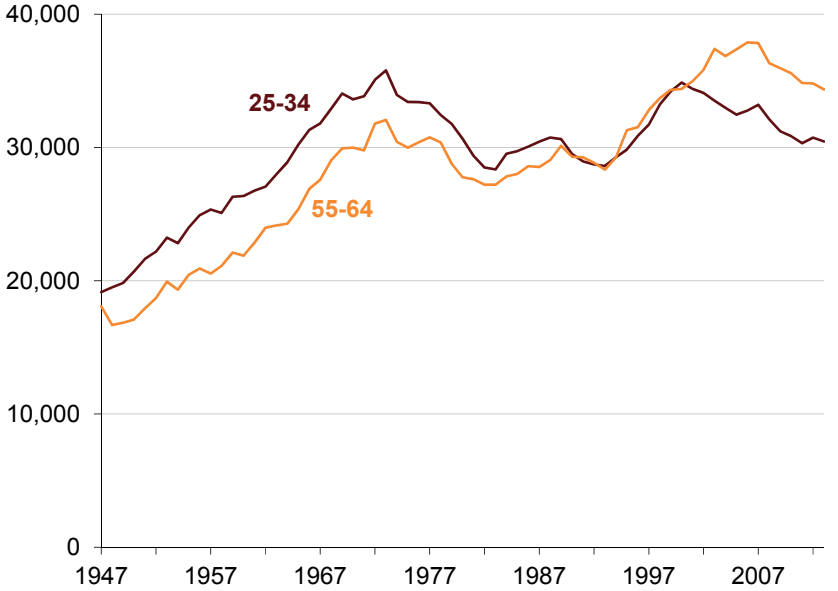
6.2 Declines in income, wealth and increasing debt burden: intergenerational transfers in the US

In the US, income growth has been stagnant for more than a decade.[108] The incomes of younger people fell in this period, both in absolute terms and relative to older workers. Figure 6.4 highlights the fall in median income for those aged 25 to 34.

Younger workers now typically earn less than those aged 55 to 64. The cumulative effect of these trends is that today's 25 to 34 year olds earn about as much as 25 to 34 year olds in 1965. By contrast, 55 to 64 year olds today earn about 40 per cent more than did 55 to 64 year olds in 1965.

Figure 6.4: Incomes of people aged 24 to 34 have declined relative to older workers

Median income by age group, 2011US$



Source: US Department of Commerce (2013) (Table 8).

Younger age groups also accumulated much less wealth than did older groups. While the wealth of those aged between 20 and 46 remained about the same over the last two decades, the real wealth of older cohorts rose quickly (Figure 6.5).

Significant government debt and unfunded liabilities make younger cohorts even more vulnerable. Generational Accounting estimates suggest all American generations born before about

[107] A PWC report compares income and wealth for two otherwise similar individuals born in 1963 (baby boom generation) and 1993 (baby bust generation). Based on the assumption that income growth will continue at its 30 year average, it finds that the baby buster will be better off in absolute terms (ie, will have higher lifetime wealth and spending). However, their spending and wealth will be lower than the rest of the society (which some studies suggest is more important than absolute wealth in determining happiness). However, even in absolute terms, the non-housing wealth of the baby buster will not surpass that of the older generation until aged 62 because of higher student debt and the assumption of lower returns to equities and savings. See: PWC (2011)

[108] Both median and mean household incomes have declined somewhat over the past ten years. Median household incomes have been stagnant over an even longer (15 year) period as income inequality became more pronounced. See: United States Census Bureau (2014); Economic Policy Institute (2014)

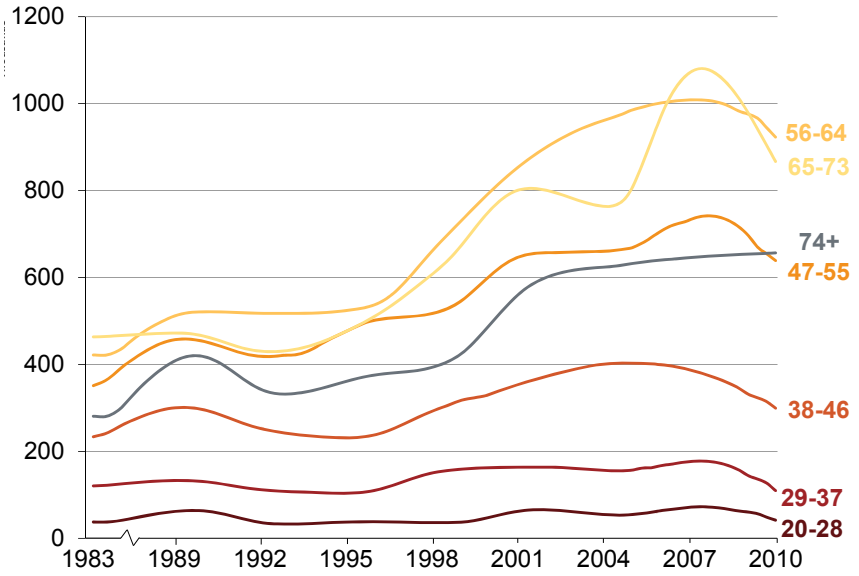
1980 will receive a net benefit from the government[109] – they will pay less in taxes than they receive in benefits. Yet those born after 1980, currently aged between 20 and 35, will be net contributors to government budgets over their lifetimes.

The accumulated debt and ongoing deficits in the US will take a long time to reduce and repay. Without policy changes, younger generations will inherit significant debts. To eliminate the 'fiscal gap' – the present value difference between the government's future receipts and future expenditures, including servicing its outstanding official debt – it is estimated that they would need to pay taxes over their lifetime of about 60 cents in every dollar earned.[110]

These growing government transfers from younger to older Americans mirror the electoral incentives of politicians. Younger Americans are much less likely to vote than are those in other age groups. In the 2012 presidential elections, voter turnout was 38 per cent amongst 18 to 24 year olds but almost 70 per cent for those 65 and older.[111]

Figure 6.5: Older households became wealthier over the last two decades

Average net household wealth by age group, 2011US$ '000s



Notes: Data from Survey of Consumer Finances, various years.
Sources: Steuerle et al. (2013)

[109] This assumes no changes in the policy settings for those currently alive, and calculates what future generations will need to pay in taxes net of transfer payments assuming that they are left on their own to close the fiscal gap.
[110] Kotlikoff (2013), p. 1 5.
[111] File (2014), p. 2.

7 What governments should do

Despite growing incomes in Australia over the last two decades, the wealth of younger Australians has stagnated. Younger generations are less likely to own property than were their parents at the same age. The strong growth in prices of the last two decades will make it difficult to catch up on home ownership.

At the same time, government transfers to older Australians are growing. If current policy settings for access to superannuation tax concessions and the Age Pension are maintained, and if non-demographic health spending continues to grow at historical rates, future budgets will be under significant pressure.

To date, these pressures have been financed through budget deficits rather than by increasing taxes or reducing benefits for other age groups. As the population ages, budget pressures caused by large and increasing transfers to older age groups will intensify.[112]

The sizeable forecast deficits and growing debt will require governments to either tax younger cohorts more, or to reduce the benefits and services they provide.[113]

The pressures are exacerbated because economic growth may do less than in the past to assist the incomes of younger cohorts and governments. An ageing population and falling terms of trade will drag on growth. Some also predict much slower growth in productivity.

These pressures will only worsen the already lacklustre economic position of the younger cohorts, and today's young adults know it. Less than a third of those responding to a survey considered that their lives would be better than those of their parents.[114]

Another group is vulnerable. Less wealthy older Australians may be particularly affected if governments are ultimately forced to cut spending, as is already foreshadowed with proposals to limit the growth in the rate of the full Age Pension. Generally, retirees on the full Age Pension who do not own their home have relatively few resources. It is likely that large savings could be made if owner-occupied housing were included in the means test for the Age Pension, along with a government sponsored home equity release scheme for those who are asset rich but cash poor.[115] This reform would most affect those hoping to inherit. If it allowed the rate of the Age Pension to continue to increase, the biggest winners would be the most vulnerable retirees.

Will these trends lead to a generation worse off than its parents? They certainly won't help, but the outcome depends on future economic growth, the size of budget deficits, and how much

[112] Daley, *et al.* (2014)
[113] Previous accumulated government debt, particularly in Victoria and the Commonwealth, was largely repaid through asset sales. The remaining sellable assets are much smaller, and arguably less 'sellable', and so accumulated debts will now have to be repaid largely through recurrent surpluses. See Daley, *et al.* (2013), p. 78-79.
[114] Only thirty percent of young Australians (29 or younger) responding to an IPSOS MORI poll considered that they would have a better life than their parents. See: Ipsos MORI (2014)
[115] As proposed, for example in Daley, *et al.* (2013)

governments transfer between generations through taxes, welfare and spending on services.

Our next report will estimate how these policies, ongoing deficits and the growing debts of Australian governments will affect different generations under various economic growth scenarios. It will try to understand how different generations and budget outcomes would be affected by policies that more tightly target Age Pension, asset taxation (particularly for land), and superannuation tax concessions. Previous Grattan work has identified these as some of the most attractive opportunities for budget repair.[116]

Research underway will also consider the total contribution of each generation. The generational bargain has traditionally allowed each generation to take more from government than it contributed in taxes. With rapidly growing incomes, this was sustainable. Yet with slower economic growth and significant intergenerational wealth transfers through housing, both the UK and the US expect to have generations that will contribute more to government in taxes than they will ever receive in services. Whether Australia follows the same path will depend on both economic growth and government policy.

If government expenditures on health, pensions and superannuation concessions are ultimately cut because budgets cannot sustain them, then younger Australians will be even more disadvantaged. Younger generations, on the wrong side of the drawbridge after the policies change, lose because they pay for these benefits for others but do not receive them themselves.

This strengthens the case for reform sooner rather than later.

Yet immediate reform will be hard. Older Australian are a significant voting bloc. In the 2013 federal election, almost half of people enrolled to vote were 50 and over.[117] This group's voting share was probably above 50 per cent because of lower voting rates by young adults.[118] Voters at or near retirement are likely to strongly resist policies that reduce superannuation and pension entitlements. But many undoubtedly care about the welfare of the next generation. Older voters may be persuaded that change is necessary if the dividend for younger Australians is clear.

The generational bargain has served Australia well. Yet it will be undermined if some generations are asked to do more than their fair share. We hope this report, and subsequent analysis, can contribute to ensuring the sustainability and fairness of the tax and transfer system, so that our children and grandchildren can enjoy the fruits of Australia's prosperity as much as their parents have.

[116] Ibid.

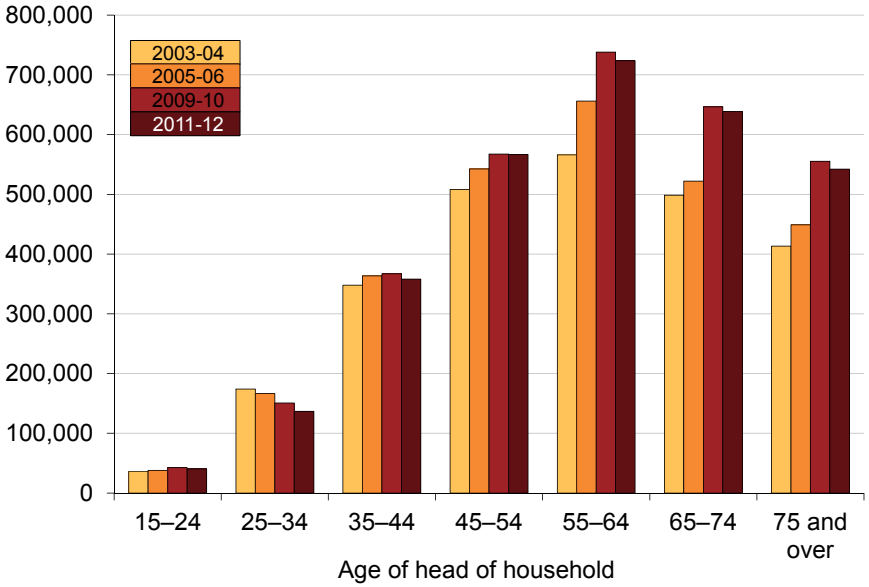
[117] Just over 47 per cent of voters were 50 and over at the Close of Rolls on 12 August 2013. See: AEC (2013)

[118] Tiffen (2013)

Appendix A: Changes in median wealth and saving by age group

Chapter 2 presents data on average wealth and savings rates by age groups. Because of the significant variation in wealth and savings within age groups we also present data on the median for these groups.

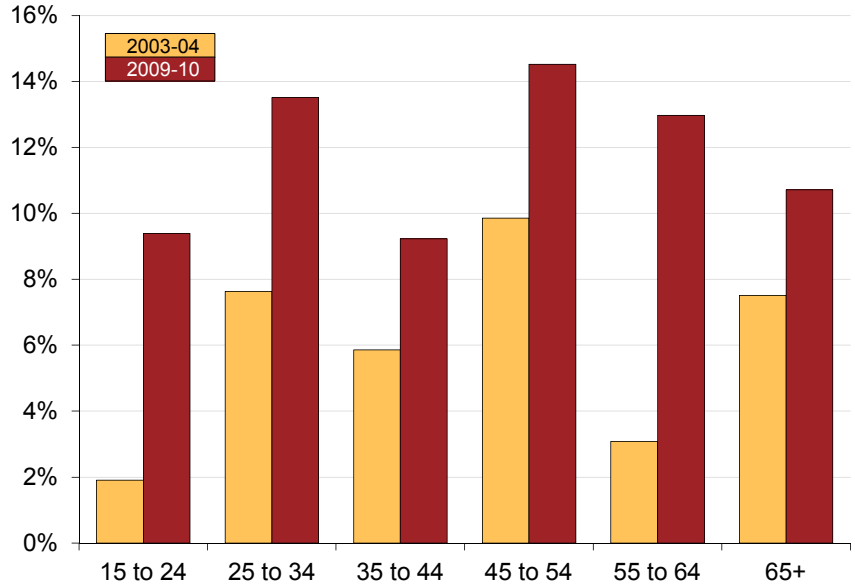
Figure A.1: Median wealth by age group
2012$



Source: Grattan analysis of ABS (2013c)

Unsurprisingly median wealth is significantly lower than the mean, as a smaller number of households account for a disproportionate share of wealth. But the trend remains the same: older households grew their wealth faster than younger households.

Figure A.2: Median savings rate by year and age group
Savings as a proportion of disposable income (savings rate), per cent



Source: ABS Household Expenditure Survey 2003-04 and 2009-10

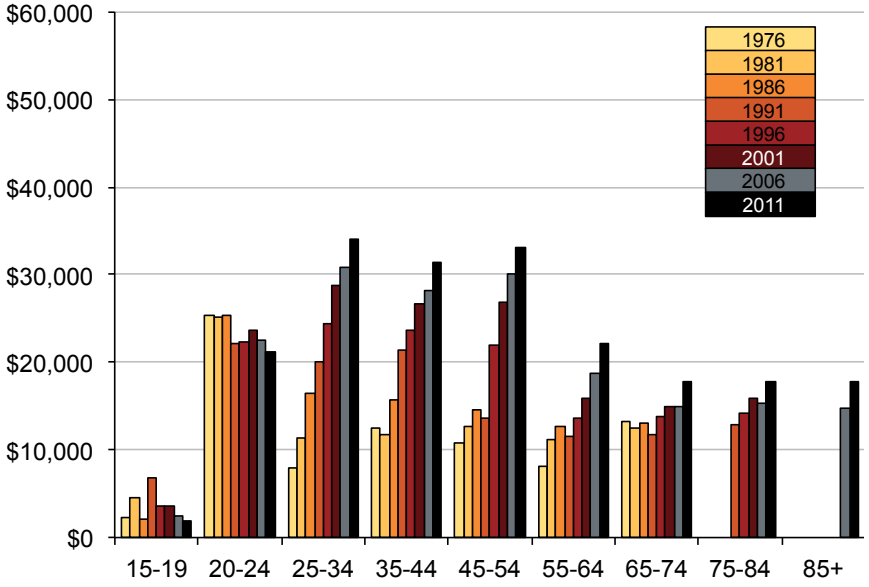
Median savings rates are very similar to the mean. This is because we removed the lowest and highest deciles in our earlier analysis.

Appendix B: Variations in income growth by gender and income level

Median incomes have increased over the last two decades for all age groups except the under 25s (Chapter 2). However, this obscures significant differences by gender and income level.

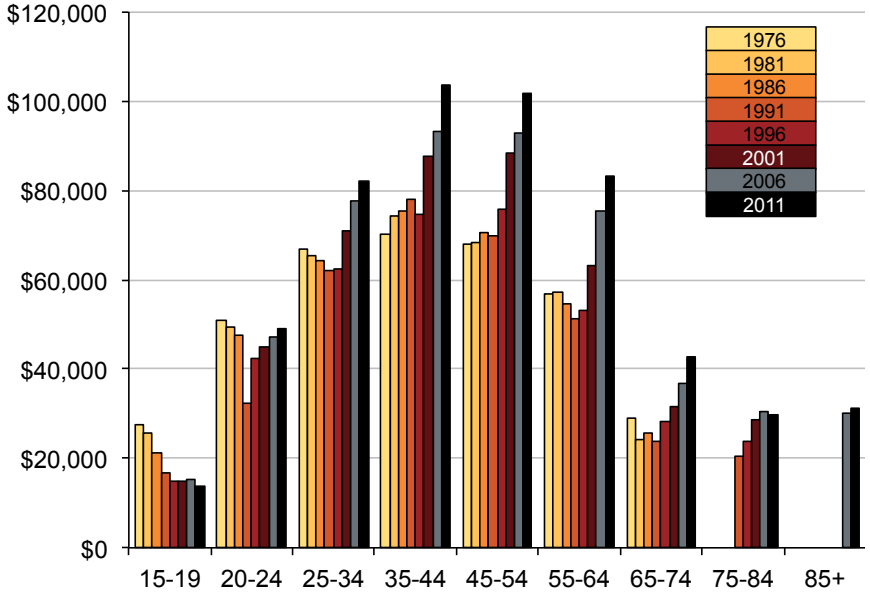
Among those over 25, the income of women and men with high incomes increased significantly over the last two decades (Figure B.1 and Figure B.2).

Figure B.1: Annual incomes for women (gross)
Wage, business and welfare income before tax, 50th percentile, 2011$



Notes: Between 1976 and 1986 the highest age bracket in the Census was 65+.The 75-84 bracket was introduced in 1991 and 85+ bracket introduced in 2011. Assumes uniform distribution of income within age and income brackets.
Source: ABS (Various years-a)

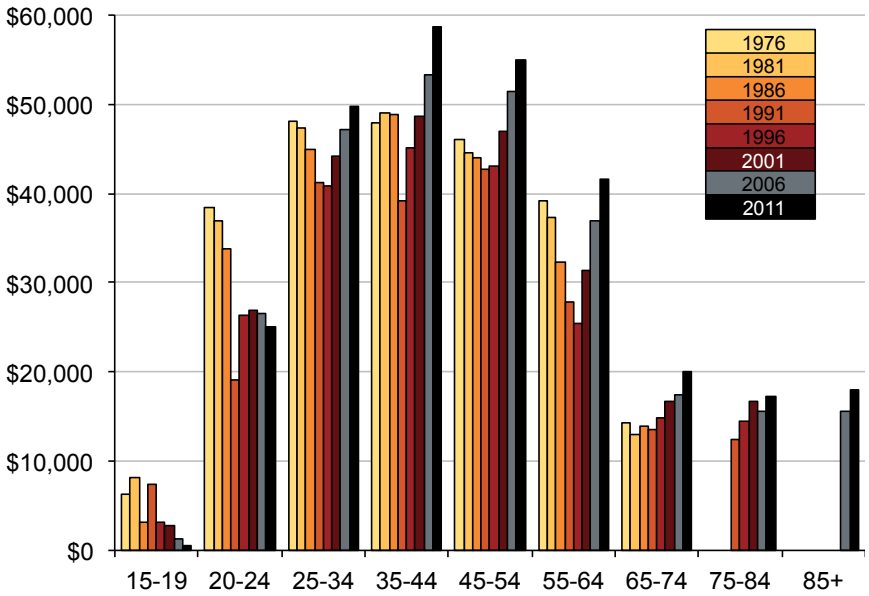
Figure B.2: Annual incomes for men with high incomes (gross)
Wage, business and welfare income before tax, 80th percentile, 2011$



Notes: Between 1976 and 1986 the highest age bracket in the Census was 65.+The 75-84 bracket was introduced in 1991 and 85+ bracket introduced in 2011. Assumes uniform distribution of income within age and income brackets.
Source: ABS (Various years-a)

The incomes of men on medium incomes also grew over the period, although only for men aged over 35 (Figure B.3)

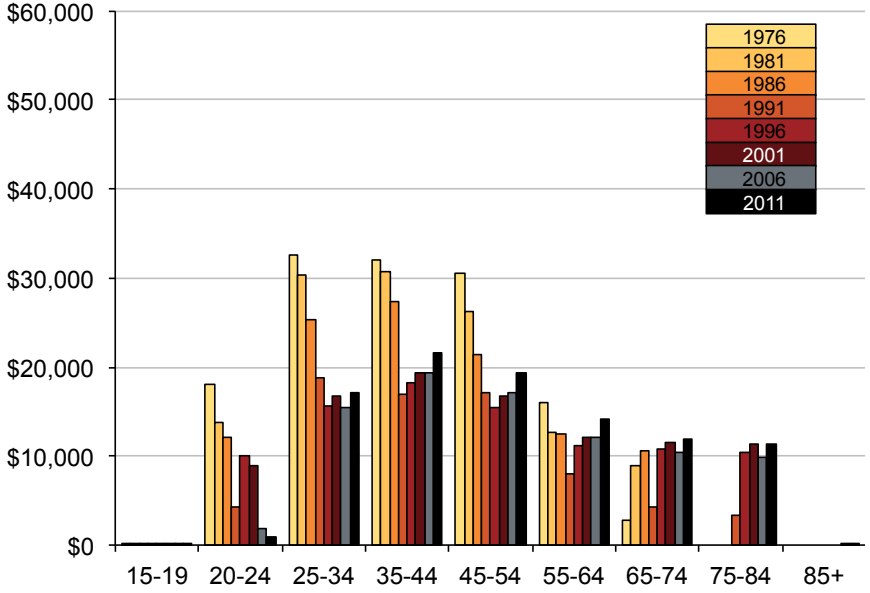
Figure B.3: Annual incomes for men on medium incomes (gross)
Wage, business and welfare income before tax, 50th percentile (2011$)



Notes: Between 1976 and 1986 the highest age bracket in the Census was 65.+The 75-84 bracket was introduced in 1991 and 85+ bracket introduced in 2011. Assumes uniform distribution of income within age and income brackets.
Source: ABS (Various years-a)

On the other hand the incomes of low income men of working age have not yet regained levels of the 1970s (Figure B.4).

Figure B.4: Annual incomes for men on low incomes (gross)
Wage, business and welfare income before tax, 20th percentile (2011$)



Notes: Between 1976 and 1986 the highest age bracket in the Census was 65.+The 75-84 bracket was introduced in 1991 and 85+ bracket introduced in 2011. Assumes uniform distribution of income within age and income brackets.
Source: ABS (Various years-a)

Appendix C: Methodology for decomposing health spending

In this appendix we set out the technical detail of how we calculate:

1. per-person public health costs, by age-decade
2. the split between demographic and non-demographic cost growth (from 1988-89 to 2009-10)

Calculating "per-person costs" by age decade

We set out in Figure 3.4 on p.15 our estimates of per person health spending over time by age group.

The source data come from the ABS Fiscal Incidence Studies (FIS). These studies have been conducted roughly every five years in conjunction with the Household Expenditure Survey, since 1984.[119] The aim of each FIS is to understand the impact that taxes and government expenditure have on *household* finances.[120] The variable of interest here is the ABS's estimate of the value of health services provided to each family (called 'UHLTOT', and defined as 'household total social transfers in kind for health').

There are two main challenges with turning these data into per-person figures.

The first is that people under the age of 15 are not specifically identified in the 'person' file of the FIS (i.e. they don't have a record). Happily, the presence of children in a household is documented, so we add a record for each child. In years like 2009-10 when the age of each child isn't provided, we estimate it. We use data on the age of the eldest and youngest child in each household, and then fill in the gaps for households in which there are 3 or more children with a simple linear interpolation.

By enumerating the data in terms of people rather than households (and by adding on children under 15) we're left with a complete set of individuals, along with their ages and the ABS's estimate of the how much each individual's household received in health spending (for individual i, we call this value C_i). The challenge now is to apportion C among a household's members. To do this, we use an algorithm that proceeds as follows[121]:

A. First, we calculate the mean of C, by age. The mean cost associated with someone who is j years old is:

$$w_j = \frac{\sum_{i=1}^{J} C_i J}{J}$$

where 1, ,J is defined as the set of individuals aged j

[119] Note that the 1984 FIS is not available in unit-record form, which is required for our calculation of spending by age.
[120] See Cat 6357.0 (various years), for a full description; e.g. http://www.abs.gov.au/ausstats/abs@.nsf/mf/6537.0

[121] This is a better approach than a regression (see http://www.un.org/en/development/desa/population/publications/pdf/development/NTA_Manual_04Sept2013.pdf, p. 100).

B. These values are calculated for each individual, where w_{ij} is the weight associated with person i (of age j). w_{ij} can be conceptualised as *weights*. The weighted mean of C for each age j, then becomes our estimate of per-person health spending by age:

$$estimate_j = \sum_{i=1}^{J} \frac{c_i w_{ij}}{\sum_{i=1}^{J} w_{ij}}$$

where once again, 1, ,J is defined as the set of individuals aged j.

C. For each individual, we now substitute the value of w_i with the estimate of per-person spending (*estimate$_j$*).

D. Steps B and C are iterated.

E. We stop iterating when estimated per-person spending deviates by no more than a threshold *d* for any individual.[122]

We now have estimates of per-person costs for each age-group reported in the FIS. To get a profile of spending by single-year-of-age we:

- Smooth the estimates using Friedman's supersmoother package in R
- Set all values above the age of 85 equal to the estimate of per-person spending for 85 year-olds (as the age-groups in the FIS rarely distinguish ages above this threshold)

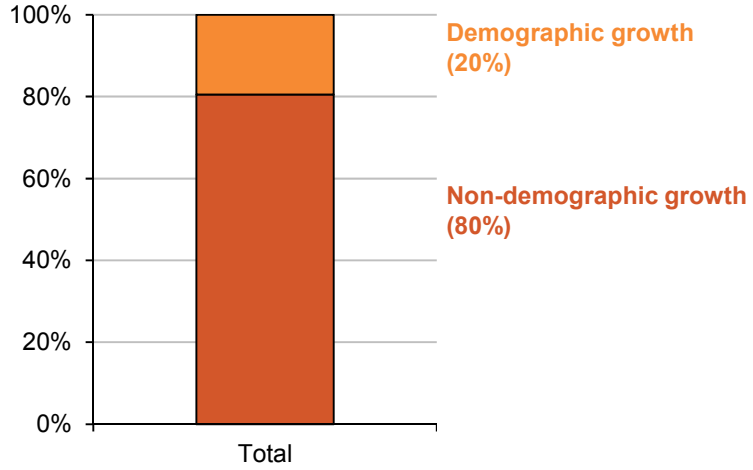
[122] We define *d* as 50 cents per person, per week.

To turn these single-year-of-age figures into an estimate of the average per-person cost for age decades, we weight the single-year-of-age estimates with population distribution data in ABS Cat 3101.0.[123]

Finally, we convert to real dollars, by the Chain Price Index from ABS Cat. 5206.0.

Splitting demographic and non-demographic cost growth

Figure C.1: Split of demographic and non-demographic growth
FY1989 to FY2010



To split health cost growth between demographic and non-demographic factors, we first took real per-person spending by

[123] See Table 59: http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Mar%202014?OpenDocument

single-year-of-age in 1989 ($COST_{1989}$) and multiplied these figures by the proportion of the Australian population by age (POP_{1989}). This gave the weighted-average cost per person (WAC):

$WAC_{COST89\_POP89} = COST_{1989} * POP_{1989} = \$1730$

We then did a similar thing for FY2010.

Next, we calculated the weighted average cost for 2010, assuming there'd been no ageing (i.e. that the age-structure from 1989 still applied):

$WAC_{COST89\_\mathbf{POP2010}} = COST_{1989} * POP_{\mathbf{2010}} = \$3537$

The difference represents demographic cost growth:

Non.Demographic Growth = $3537 - $1730 = $1807

The demographic growth can then be calculated as a remainder, such that:

$WAC_{COST2010\_POP2010} - WAC_{COST89\_POP89}$ = Demographic Growth + Non.Demographic Growth

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