2 THE SHAPE OF OUR FUTURE ECONOMY

Looking forward 40 years, the New South Wales economy will be much larger and wealthier than it is today. We expect the economy to grow to over 2½ times its current size in real terms; that is, from $507 billion currently to just over $1.3 trillion by 2055-56 (in 2013-14 dollars).

Living standards, as measured by GSP per capita, are projected to be about 1¾ times higher and total employment is projected to be over 5 million. This is an increase of about 1.6 million jobs with most projected to be full-time.

These projections are based on an analysis of population, participation and productivity:[1]

- **Population** and its age composition determine the working age population (WAP), which is made up of people aged 15 and over.
- **Participation** rates of the WAP determine the size of the total labour force (employed and unemployed people), and also the split between full-time and part-time employment. That split, combined with average hours worked, determines total hours worked in the economy.
- **Productivity** is the economic output per hour worked, which together with total hours worked, yields real Gross State Product (GSP).

The NSW economy to grow to

$1.3 trillion

by 2055-56 (in 2013-14 dollars).

Over the next 40 years, the real economy is projected to grow by an average of 2.3 per cent per year, with real GSP per capita growing by 1.3 per cent. This compares to economic growth and GSP per capita growth of around 2.5 and 1.4 per cent, respectively, over the period 1989-90 to 2014-15.[2] The slightly lower projected growth rates reflect the impacts of ageing on workforce participation, and a greater share of people working part-time.

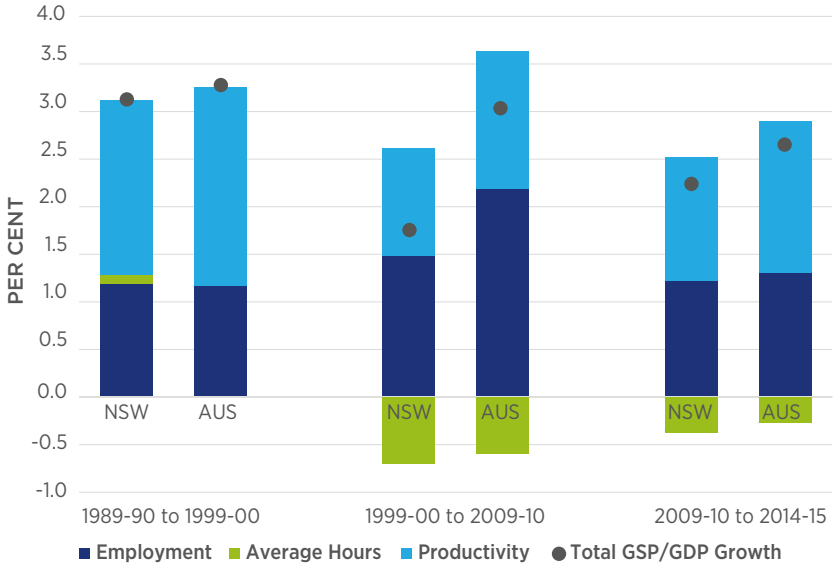
Naturally, these are projections, not predictions. The exact shape of the New South Wales economy in 40 years is impossible to know. The only certainty is that it will be very different from the economy we know today. It might be tempting to think that the economy will be similar to, but bigger than, today, but that view is far too simplistic. This chapter takes a close look at the trends we can measure and the drivers that can support growth.

2.1 Historic economic trends

Growth trends

In the 25 years to 2014-15, NSW economic growth averaged around 2.5 per cent per year, compared to 3.1 per cent nationally. Though growth since 2000 was more moderate than in the 1990s, it has picked up since 2009-10 following a lift in productivity growth and a smaller decline in average hours worked (Chart 2.1).

Chart 2.1 Components of real economic growth (NSW and Australia), 1990 to 2015



Source: ABS cat no. 5220.0 and 6202.0

1 Population projections are discussed in Chapter One

2 Australian Bureau of Statistics, 2015. Australian National Accounts: State Accounts, 2014-15 (cat. no. 5220.0). ABS, Canberra. Note: GSP data is only available from 1989-90

Population trends

NSW population growth has tended to be lower than the national average. In the last 25 years, population growth has averaged 1.1 per cent per year in New South Wales, some 0.3 percentage points less than nationally. The main reason for this has been the outflow of people from New South Wales into other states, as discussed in Chapter One.

Participation and workforce trends

A comparatively low rate of population growth in New South Wales also meant that employment growth over the last 25 years averaged 1.3 per cent per year, compared to the national average of 1.6 per cent. More recently, a lift in economic activity has seen a pick-up in NSW employment growth.

As in the rest of Australia, average weekly hours worked in New South Wales have fallen in the last 15 years. This reflects an ongoing shift towards part-time employment. All up, the growth in hours worked over the past 25 years has averaged 1.0 per cent per year[3], which is lower than employment growth of 1.3 per cent.

Productivity and living standard trends

Economic growth comes from increases in hours worked and improvements in labour productivity. Since 1989-90, annual productivity growth in New South Wales has averaged around 1.5 per cent per year, while real GSP per capita, a measure of average state-wide living standards, has risen by about 1.4 per cent per year. Though living standards (as measured by GSP per capita) have been rising, the benefits have not been evenly distributed (Box 2.1).

The exact shape of the New South Wales economy in 40 years is impossible to know. The only certainty is that it will be very different from the economy we know today.

3 Hours worked is based on Australian Bureau of Statistics Labour Force data (ABS cat. no. 6202.0) rather than National Accounts. Hours worked on a National Accounts basis is not available for New South Wales

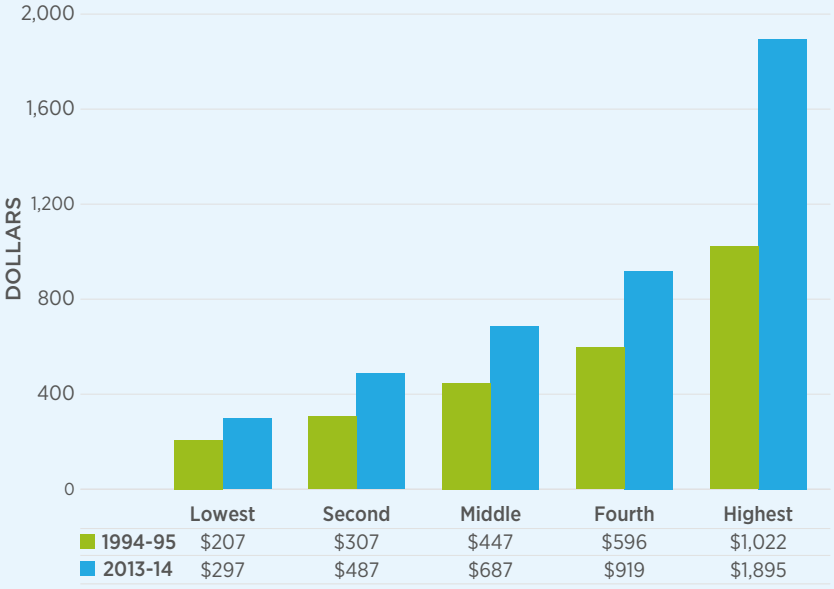
The incomes of all groups have grown over time leaving them better off in absolute terms.

Box 2.1

Income distribution and housing costs[4]

The ABS *Survey of Income and Housing*[5] analyses income growth across different income brackets, adjusted for household size. It shows that the incomes of all groups have grown over time leaving them better off in absolute terms. Nevertheless, the disparate growth in housing costs among different income brackets has meant that the benefits of income growth have been less apparent for people at the lower end (Chart 2.2).

Chart 2.2 NSW disposable household income less housing costs[6]



	Lowest	Second	Middle	Fourth	Highest
1994-95	$207	$307	$447	$596	$1,022
2013-14	$297	$487	$687	$919	$1,895

Source: ABS customised data and NSW Treasury

The distribution of income growth over time has also been uneven over the last 20 years. Adjusting for inflation, income for the top 20 per cent of households rose by 85 per cent between 1994-95 and 2013-14, compared with growth of between 54 and 59 per cent for the middle groups and 43 per cent for the bottom group.

While housing costs have broadly grown in line with disposable income for the middle groups, there have been significant divergences for the top and bottom groups. Those in the top 20 per cent of households experienced income growth of around 3.1 per cent per year between 1994-95 and 2013-14, compared to housing cost growth of 1.7 per cent per year. On the other hand, disposable incomes for the bottom 20 per cent grew by 2.1 per cent, while their housing costs grew by 2.8 per cent.

4 Unless otherwise stated, disposable income excludes the impact of housing costs

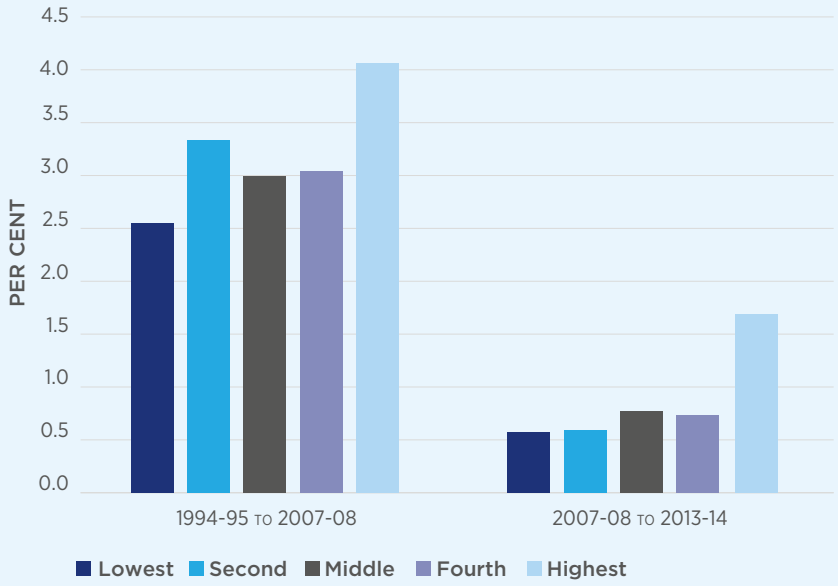
5 Equivalised household disposable income as per Australian Bureau of Statistic (cat no 6523.0) Household Income and Wealth, 2013-14; ABS and customised data prepared by the ABS for NSW Treasury

6 The dollar figures in the chart are defined as weekly income after income taxes, housing costs and any welfare payments. They have been adjusted (equivalised) for household size to recognise the pooling effect that occurs where multiple people live together. The weekly income figures shown therefore represent that of a single person household. Figures for the lowest quintile are as further adjusted by the ABS to better represent low income households. Full details can be found on the ABS website.

As a result, housing cost growth has had much more of an impact on the lowest income group. This is partly due to households in the lowest bracket devoting more of their income to housing (26 per cent compared to the state average of 17 per cent in 2013-14). It also reflects households in the lowest bracket tending to rent rather than have a mortgage. Rental costs in New South Wales rose faster than mortgage servicing costs between 1994-95 and 2013-14 (65 per cent compared to 30 per cent).

Income growth has been lower for all groups in the wake of the Global Financial Crisis (GFC), as illustrated in Chart 2.3. The period following the GFC, from 2007-08 to 2013-14, saw high rental cost growth and lower income growth.

Chart 2.3 NSW household disposable income less housing costs — average growth



Source: ABS customised data and NSW Treasury

2.2 Drivers of future growth

Population

Population growth and demographic trends, discussed in Chapter One, play a key role in determining the future of the New South Wales economy.

Population contributes to economic growth through the working age population (aged 15 and over), which over the period 2014-15 to 2055-56 is expected to grow in line with the total population, at an average rate of 1.0 per cent per annum. Changes in the age structure of the population will also influence economic growth through workforce participation.

Participation

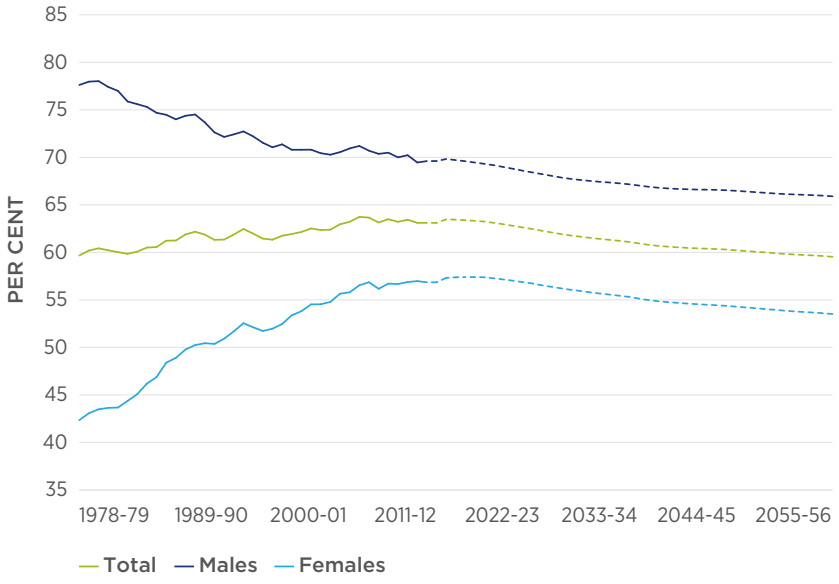
The size of the future NSW labour force depends on the proportion of people aged 15 and over who will choose to participate, by either working or actively looking for work.

Factors such as education, health, fertility, childcare arrangements, workplace flexibility and retirement decisions will influence the size of the future workforce. These factors affect each age group (or cohort) and gender in different ways, resulting in cohort-specific participation rates.

The approach used in this and the last report captures the impact of these factors on age group cohorts.[7] In addition, since the 2011-12 Report, the ABS has made available state-level participation data on full-time and part-time work.

As the population ages, we expect a decline in aggregate participation over the next forty years, as shown in Chart 2.4.

Chart 2.4 NSW participation will trend downward for both women and men

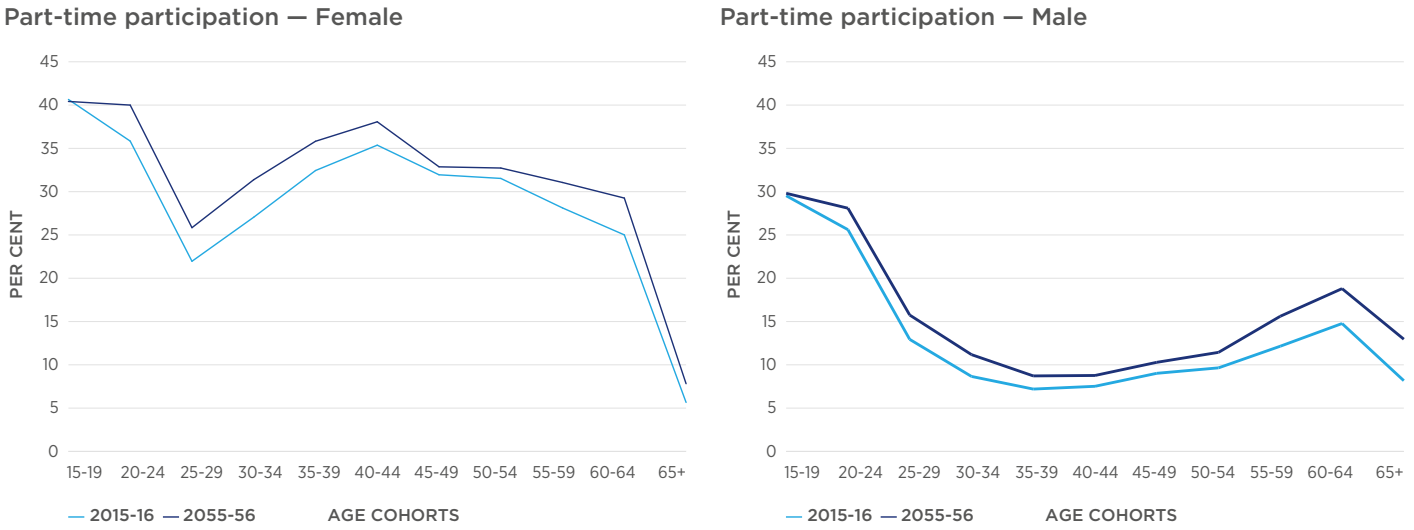


Source: ABS cat no 6291.0.55.001 and NSW Treasury

Although aggregate participation is little changed compared to the 2011-12 Report, new trends have emerged, particularly towards more part-time work (Charts 2.5 and 2.6). The participation rate of males aged 30 and over is likely to increase, driven by part-time work. By contrast, male full-time participation is expected to decline slightly.

7 Details of this approach can be found in Productivity Commission, 2005, Economic Implications of an Ageing Australia, Technical Papers 2 & 3, Research Report. PC Canberra

Chart 2.5 Both women and men will do more part-time work



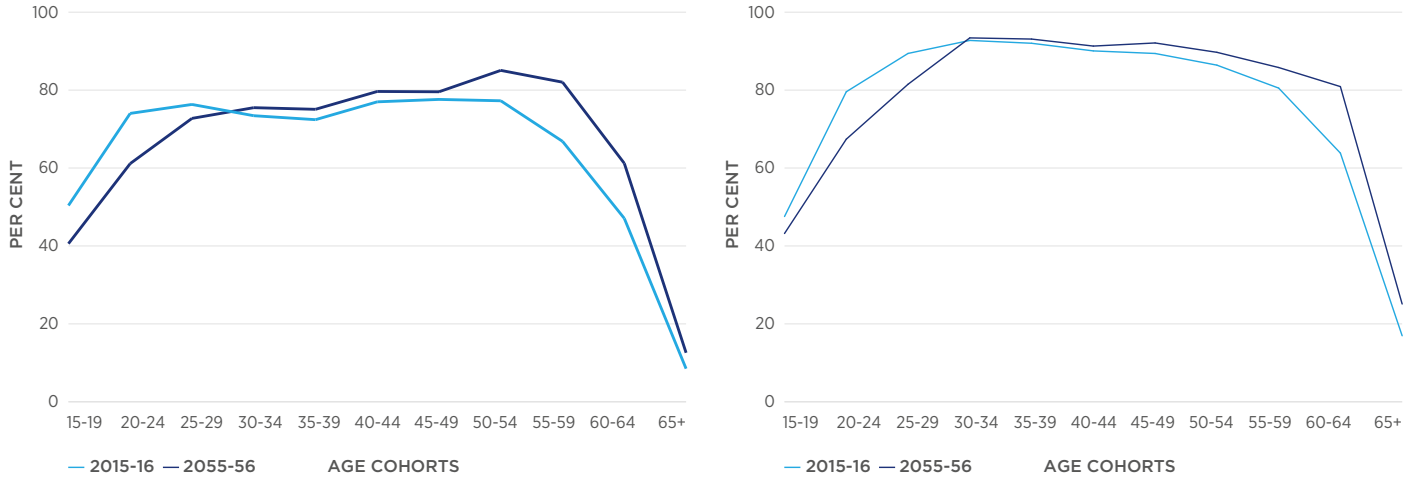
Source: ABS cat. no. 6202.0 and NSW Treasury

The trend towards part-time work features across nearly all cohorts. For males, this increase is concentrated among 25-39 year olds and those over 55; whereas for females the increase is most apparent for the 25-44 and 55-64 year olds. This is consistent with the continuing trends in workplace flexibility whereby people are exercising greater choice in their working arrangements.

The increases in part-time work among the young are consistent with a longer period in education. Among those over 55, the increasing trend suggests that employers are more willing to employ older workers and will become more accommodating of phased retirement through part-time work.

The increases in part-time work among the young are consistent with a longer period in education.

Chart 2.6 Lower participation earlier in life and more in later years



Source: ABS cat. no. 6202.0 and NSW Treasury

THE SHAPE OF OUR FUTURE ECONOMY

Later generations may have to spend more time in the workforce, simply because they are likely to live longer and therefore have a longer retirement to fund.

Chart 2.6 provides a snapshot of participation across age groups and by gender, now and in 40 years. The charts highlight two significant trends. The first is lower participation among younger age cohorts, particularly 15-24 year olds.

This change is consistent with young people continuing to increase their educational attendance, which has been a feature since the late 1980s and has intensified since the GFC.[8] While this suggests people will continue to join the workforce later, it also means that they will be more skilled, which will improve their productivity and attachment to the workforce in the long run.

The second significant trend is increasing participation among older age groups. The projections suggest that between 2014-15 and 2055-56 rates will rise by 11 percentage points for people aged 55-59, by 17 percentage points for those aged 60-64, and by six points for people aged over 65. The strongest increases are expected for females aged 55-59 — rising from 66 per cent today to 82 per cent in 2055-56 — and for males aged 60-64 — rising from 62 per cent today to 81 per cent in 2055-56. By 2055-56 over 18 per cent of all people aged over 65 are expected to still be in the workforce, compared to only 12 per cent today.

People continue working either because they can comfortably do so or because they need to. The former often results from higher education and healthy ageing (reflecting increased longevity and the ongoing trend away from physically demanding work). The need to continue working can result from circumstances like the Commonwealth Government raising the retirement age, or the need to accumulate wealth to retire comfortably.

As the Grattan Institute suggests[9], wealth tends to accumulate at the later stages of life mostly through house values and superannuation. This may explain the lower participation rates among older age cohorts in New South Wales compared to their interstate peers. Higher relative wealth in New South Wales, predominantly due to higher house values, may mean older New South Wales residents have less need to work.

That said, later generations may have to spend more time in the workforce, simply because they are likely to live longer and therefore have a longer retirement to fund. They may also need to work longer because they have carried a larger debt through their working lives due to higher house prices, or have had to pay off tertiary education fees. It seems that the traditional span of working age, 15-64 years, will rise to potentially span a later start in, and retirement from the workforce.

IN NSW OUTPUT PER HOUR WORKED HAS GROWN BY AN AVERAGE

per year in the 25 years since 1989-90.

Productivity

Productivity is the efficiency with which labour and capital are used to produce goods and services. It is the key driver of growth in living standards. While there are a number of measures of productivity, this Report defines labour productivity as output per hour worked.[10] This is consistent with the method used by the Productivity Commission and the Commonwealth Government.

New South Wales output per hour worked has grown by an average 1.5 per cent per year in the 25 years since 1989-90. The expectation is that this long-run trend will continue. This is consistent with the 1.5 per cent national productivity growth parameter in the Commonwealth Government's 2015 Intergenerational Report.

Both nationally and in New South Wales, however, there have been considerable variations during those 25 years. For example, annual growth in New South Wales productivity averaged 1.8 per cent over the 1990s. That period of strong growth was underpinned by the significant economic reforms of the 1980s and 1990s, including trade liberalisation, financial market deregulation, floating of the currency, labour market reforms and product market and competition reforms. Since then, New South Wales annual productivity growth has slowed; averaging only 1.1 per cent in the following decade, and 1.3 per cent over the last five years.

8 ABS data on educational participation is available only from 1986, Australian Bureau of Statistics, February 2016. Labour Force Australia, (cat. no. 6202.0, Table 15). Educational participation is 15-24 year-olds attending full-time education as a proportion of the 15-24 civilian population. A state breakdown is not available.

9 Daley, J., Wood, D., 2014. The wealth of generations. Grattan Institute, Melbourne

10 Hours worked is sourced from the Australian Bureau of Statistics Labour Force Survey (cat. no. 6202.0)

Achieving average annual productivity growth of 1.5 per cent in the future will in all likelihood require further significant micro-economic reform at both the national and state level. Many possible reforms, as outlined in the Harper Competition Policy Review, are in areas where state governments will need to play a prominent role — areas such as government provision of human services, transport and planning.

As set forth in successive budgets, the Government continues to deliver on its plan to enhance the living standards of all New South Wales residents by driving individual opportunity, economic growth, productivity and employment. This is underpinned by the Government's economic strategy which is delivering a stronger NSW economy through investing in infrastructure and initiatives such as Jobs for NSW and the Housing Acceleration Fund. Recent NSW Government initiatives, such as the electricity network lease and Restart NSW and Rebuilding NSW infrastructure programs will help support productivity growth into the future.

Other economic variables

Other assumptions in projecting growth include:

- Consumer Price Index (CPI) growth of 2.5 per cent, consistent with the mid-point of the Reserve Bank of Australia's target range;
- a Non-Accelerating Inflation Rate of Unemployment (NAIRU) of 5 per cent, consistent with the Commonwealth Government's 2015 Intergenerational Report;
- the terms of trade returning to equilibrium by 2019-20, consistent with the Commonwealth Government's assumption;
- Average Weekly Earnings (AWE) growth of 4.0 per cent per year, consistent with inflation and productivity growth; and
- average weekly full-time and part-time hours remaining constant at around current levels of 38.9 and 16.7 hours, respectively, with total hours worked projected on the basis of changes in the share of full-time and part-time employment.

The 2011-12 Report adopted budget and forward estimate forecasts before trending to long-run projections. In this Report, we adopted two years of budget[11] forecasts before assuming the economy transitions to equilibrium over a five year period. This brings the unemployment rate into line with the NAIRU, closing any existing output gaps.

2.3 Economic outlook

The New South Wales economy is projected to grow by an average 2.3 per cent per year over the 40 years to 2055-56 in real terms. This is a little lower than the 2.5 per cent annual average growth rate experienced between 1989-90 and 2014-15, principally because of the impact of population ageing on participation rates and hours worked.

In per capita terms, this equates to 1.3 per cent annual average growth, compared with historical per capita growth of 1.4 per cent per year. Real income per capita will rise from $67,000 today, to $116,000 in 2055-56. Nominal GSP is projected to grow by around 4.7 per cent per year, compared with average annual growth of 5.1 per cent from 1989-90 to 2014-15.

New South Wales' projected growth of 2.3 per cent is somewhat below that for Australia. The difference primarily comes from higher projected national population growth. Relatively slower population growth in New South Wales also means that the State's share of the total Australian economy is likely to decline from around 31 per cent in 2014-15 to about 28 per cent by 2055-56.

Employment in New South Wales is expected to increase by 1.6 million; from 3.6 million currently to 5.2 million over the projection period. The composition of employment by industry is likely to be very different than it is today (Box 2.2).

REAL INCOME PER CAPITA WILL RISE FROM $67,000 TODAY TO

Employment in New South Wales is expected to increase by 1.6 million; from 3.6 million currently to 5.4 million in 40 years.

11 2015-16 Half-Yearly Review forecasts

THE SHAPE OF OUR FUTURE ECONOMY

Determining which industries will drive the jobs of the future is difficult, especially given rapid advances in technology and the extent of digital disruption.

Box 2.2

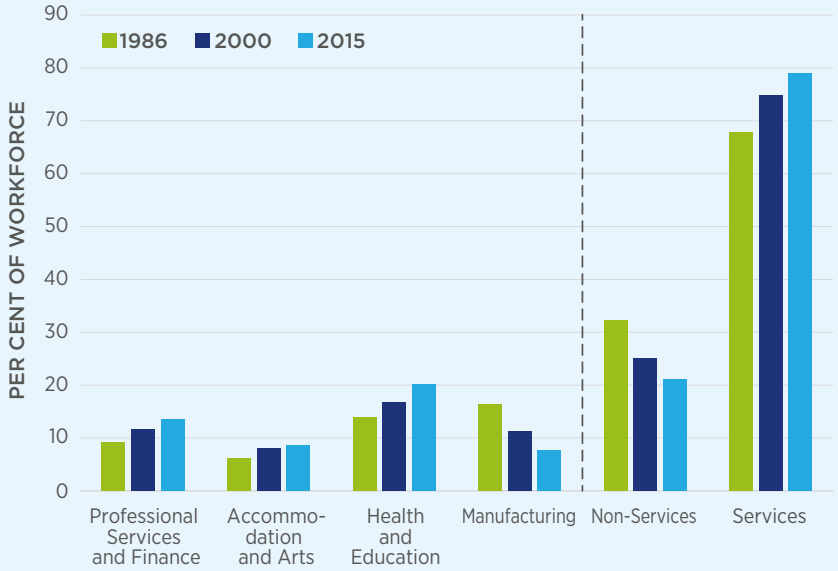
The workplace of the future

The jobs market has changed significantly over the last 40 years and there is a good chance that the changes over the next 40 will be just as profound.

Consider the key industries that people work in now compared to 1976. At that time, manufacturing provided 20 per cent of all jobs, while the producer industries — including manufacturing, construction and agriculture — accounted for about 40 per cent of jobs.[12]

Today, manufacturing makes up barely seven per cent of jobs in New South Wales, while the services sector employs around 80 per cent of the workforce. ABS data shows that in net terms the services sector has accounted for nearly all new jobs created since the mid-late '60s. In particular, New South Wales has seen strong jobs growth in the health and professional services sectors. The latter include occupations such as engineers, computer system designers, accountants, lawyers and scientists.

Chart 2.7 The services sector is driving jobs growth



Source: ABS cat. no. 6291.0.55.003

Determining which industries will drive the jobs of the future is difficult, especially given rapid advances in technology and the extent of digital disruption.

Some expect that advances in robotics, artificial intelligence and automation will lead to significant job losses. A report by the Committee for Economic Development of Australia (CEDA) suggests that five million jobs face a high probability of replacement over the next two decades.[13] This would likely be in areas that involve low levels of social interaction, creativity and mobility. This could include office and administrative tasks and jobs in manufacturing and production.

Yet these very same advances also point to strong growth in a number of other industries, such as health and professional services. Fields such as the arts, engineering, artificial intelligence, robotics, nanotechnology, 3D printing, genetics and biotechnology[14] could well flourish over coming decades and provide an offset to job changes elsewhere. As the CEDA report notes, significant structural changes in the labour market are not unusual and have been happening for centuries.

The expansion of the services industry and a sharp increase in female work participation have coincided with workplace flexibility improvements. In 1976, only 43 per cent of women were active in the labour market and part-time workers (most of whom are female) made up only 15 per cent of the total; today it is closer to 60 per cent and 30 per cent respectively.

12 Data is from the ABS Cat No 1301.0 Year Book Australia, which defines production industries as construction, manufacturing, mining, agriculture, electricity, gas, water and waste

13 Committee for Economic Development of Australia, 2015. Australia's Future Workforce. CEDA

14 World Economic Forum, 2016 The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution

Successive microeconomic reforms such as those following the Hilmer Competition Review have not only helped facilitate such changes, but also enhanced Australia's productivity and living standards.

As we head toward 2056, it is possible that the workplace will be even more flexible than it is today. A recent report by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) points to technological change and the rapid growth of the peer-to-peer and freelance employment market as drivers of this change.[15] Business may increasingly outsource to specialist independent contractors and consultants, who in turn will tend to work from home or embrace co-working facilities in which independent contractors and consultants share office space. Portfolio careers (holding multiple jobs with multiple employers on a part time basis), telecommuting and remote working may become the norm, rather than the exception in some industries.

Box 2.3

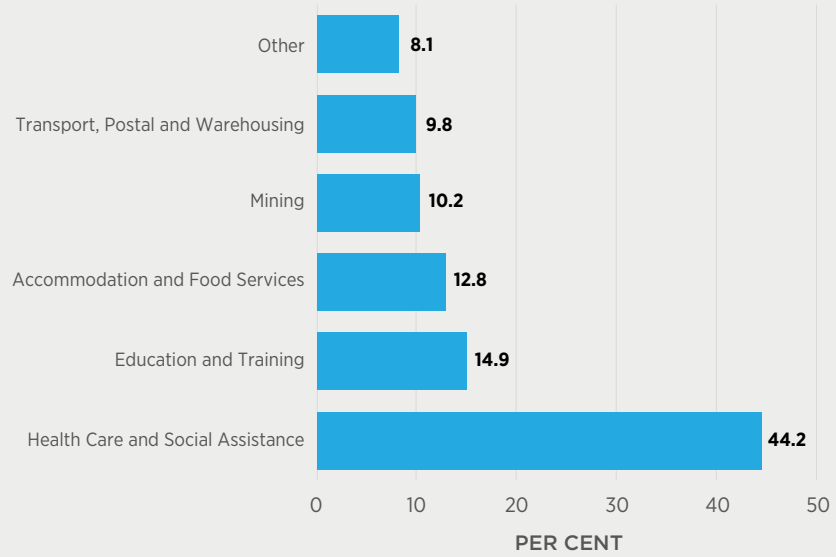
The regions will be a key player in driving employment growth[16]

In 2015, there were around 1.2 million people employed in regional New South Wales accounting for 32.7 per cent of all state employment. It is expected that over the period to 2055-56, more than half a million of the 1.6 million jobs created in New South Wales, will be in the regions.

The bulk of regional employment is in the service industries and that share has grown over the past 10 years to around 73 per cent currently.

According to ABS Labour Force data around 60,000 jobs were added in regional New South Wales in the 12 months to March 2016, accounting for about half of the new jobs state-wide. The industries that have driven regional employment growth in the last decade include health care and social assistance, followed by education and training, accommodation and food services, and mining (Chart 2.8). Regional services sector employment has grown by an average of 1.5 per cent per year over the last decade, more than three times the growth of the non-services sector.

Chart 2.8 Contribution to employment growth between 2005 and 2015 in regional New South Wales, by industry



Source: ABS cat. no. 6291.0

In the last decade health care and social assistance overtook retail trade as the largest employing industry in regional New South Wales and now accounts for one in seven workers (Chart 2.9).

JOBS ADDED IN REGIONAL NEW SOUTH WALES

60,000

in the 12 months to March 2016.

15 Hajkowicz, S., Reeson, A., Rudd, L., Bratanova, A., Hodgers, L., Mason, C., Boughen, N., 2016. Tomorrow's Digitally Enabled Workforce: Megatrends and scenarios for jobs and employment in Australia over the coming twenty years

16 Data in this box are from the Australian Bureau of Statistics cat. no. 6291.0

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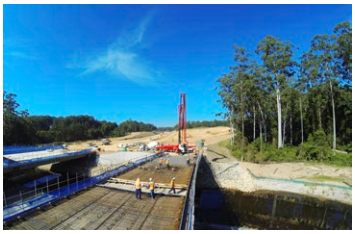
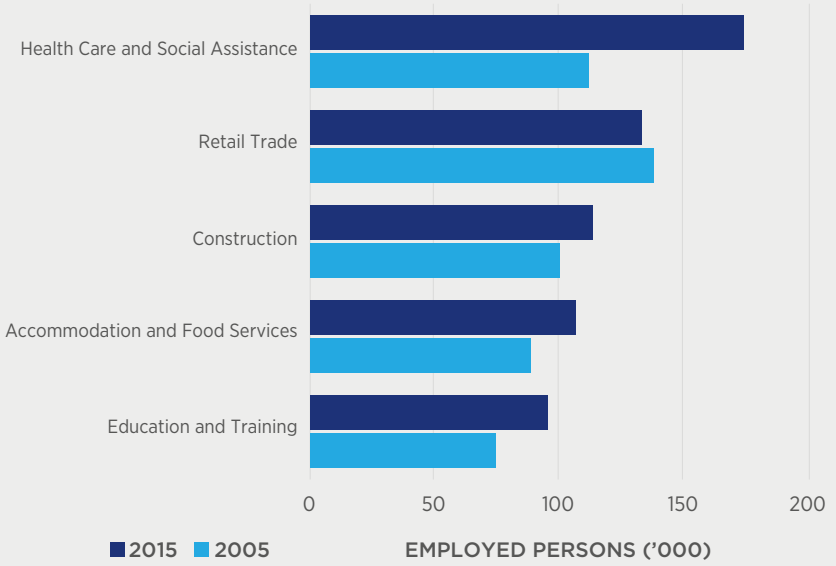


The bulk of regional employment is in the service industries and that share has grown over the past fifteen years to around 73 per cent currently.

Chart 2.9 Five largest industries in regional New South Wales, in order of total employment in 2015

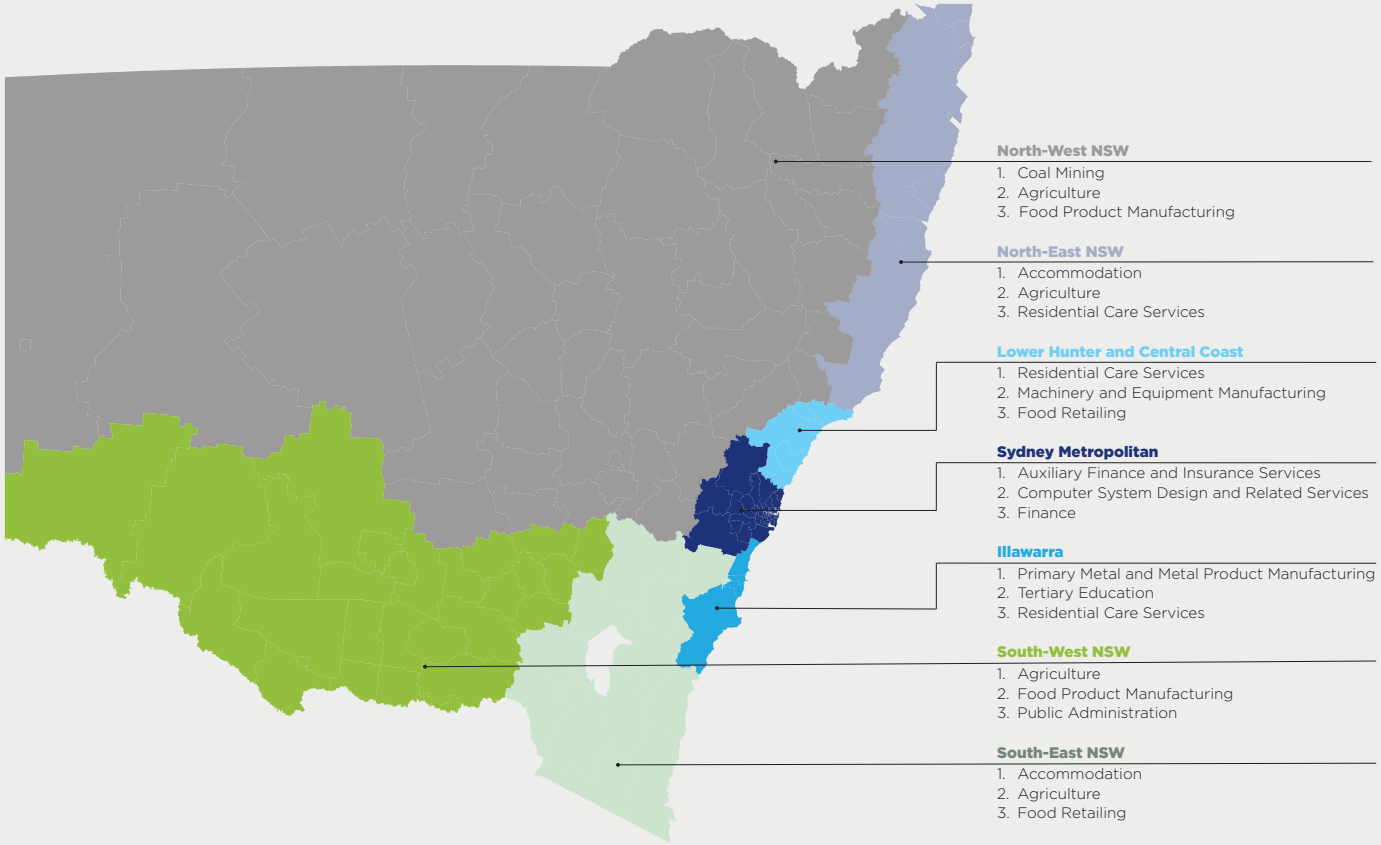


Source: ABS cat. no. 6291.0

Figure 2.1 presents 2011 Census data on industry specialisation by NSW region. It demonstrates a diverse range of industry specialisations across the state; from accommodation and residential care services in the North-East to agriculture and food production in the South-West. These specialisations[17] arise due to a range of factors including geographical accessibility to markets, resource endowment and demographic composition.

17 Industry specialisations are based on location quotients (LQ), which quantifies how concentrated a particular industry is in a region, as compared to nationally

Figure 2.1 Industry specialisation by region



Source: ABS Census 2011 and NSW Department of Industry

In New South Wales, volunteer rates outside the Sydney metropolitan area were estimated at 42 per cent in 2010, markedly higher than Sydney's rate which was estimated at 34 per cent.[18]

Ageing impacts

Population ageing will have a large impact on participation and therefore economic growth. Without the effect of ageing, the total participation rate in 2055-56 is projected to be around 6.2 percentage points higher.[19] Furthermore, as a greater proportion of older cohorts are likely to work part-time, ageing also reduces average hours worked.

As shown in Chart 2.10, the impact of ageing on participation is the dominant driver of the projected slowdown in GSP growth. Ageing is expected to reduce growth by an average of around a quarter of a percentage point each year over the next 40 years. This means that by 2055-56, real GSP per capita is projected to be around nine per cent lower than it would be without ageing.

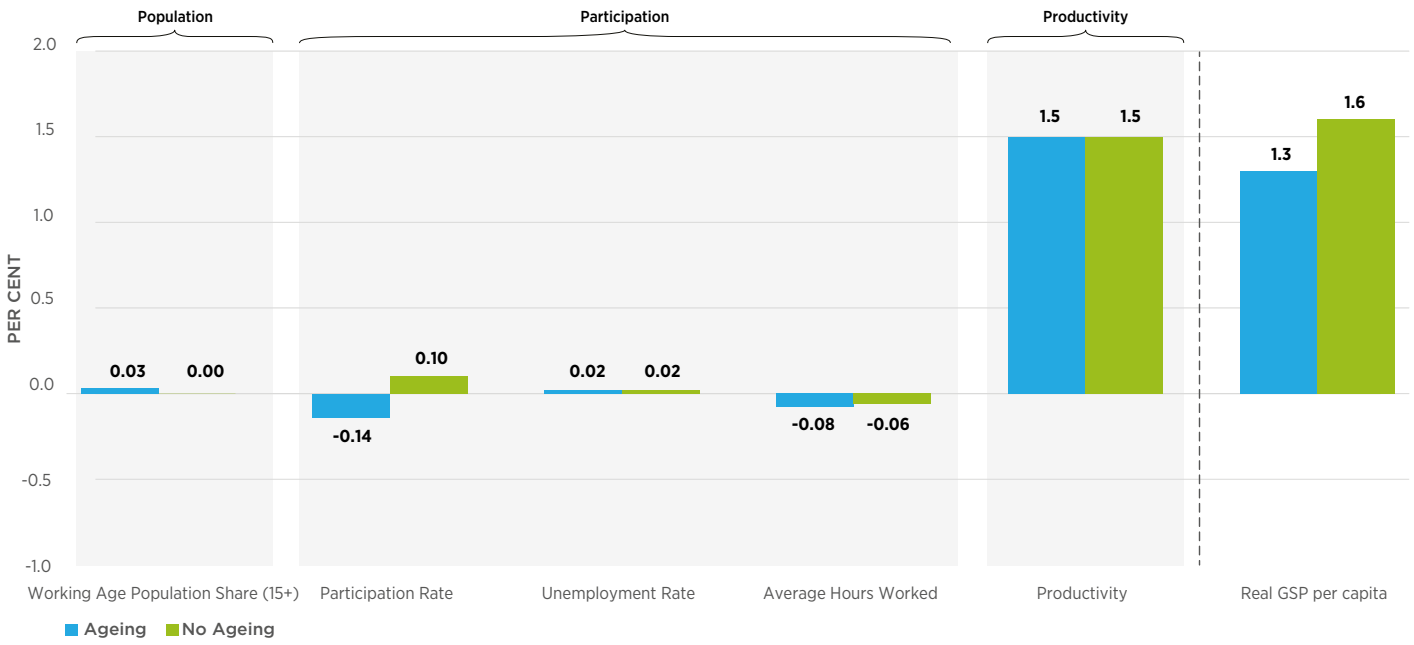
By 2055-56, real GSP per capita is projected to be around nine per cent lower than it would be without ageing.

18 Australian Bureau of Statistics, 2016. Voluntary Work, Australia, (cat. no. 4441.0). Figures are for the year 2010

19 Ageing effects are removed by assuming population age shares stay constant over the projection period

THE SHAPE OF OUR FUTURE ECONOMY

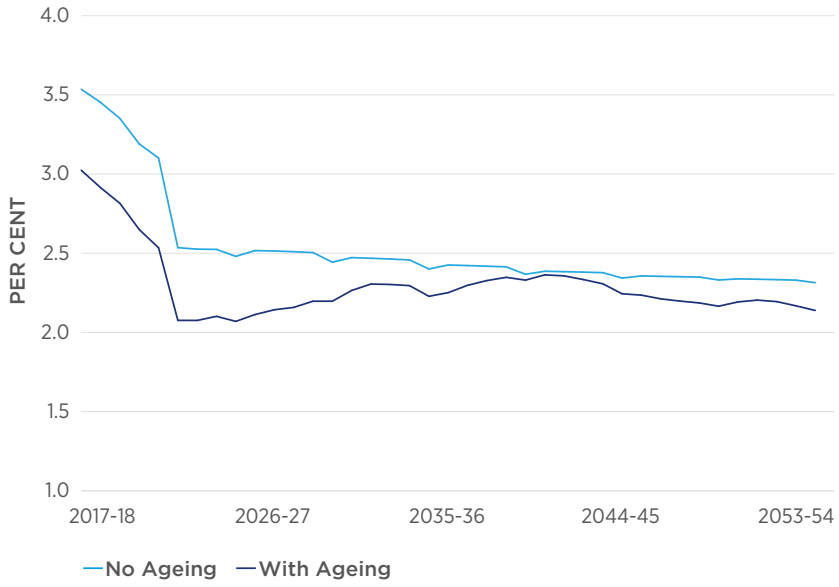
Chart 2.10 Ageing effects on annual per capita GSP growth



Source: NSW Treasury

As Chart 2.11 shows, the impact of ageing on economic growth will not be even over time. The impact ageing has on GSP growth will only start to dissipate as the last of the baby boomers approach retirement in the late 2020s. The impact will continue to ease until around 2040, after which time the ageing of the millennials will start to impact growth again.

Chart 2.11 Impact of ageing on real GSP growth is most profound in next 10-15 years



Source: NSW Treasury

OUR GROWING DEMAND FOR SERVICES

3

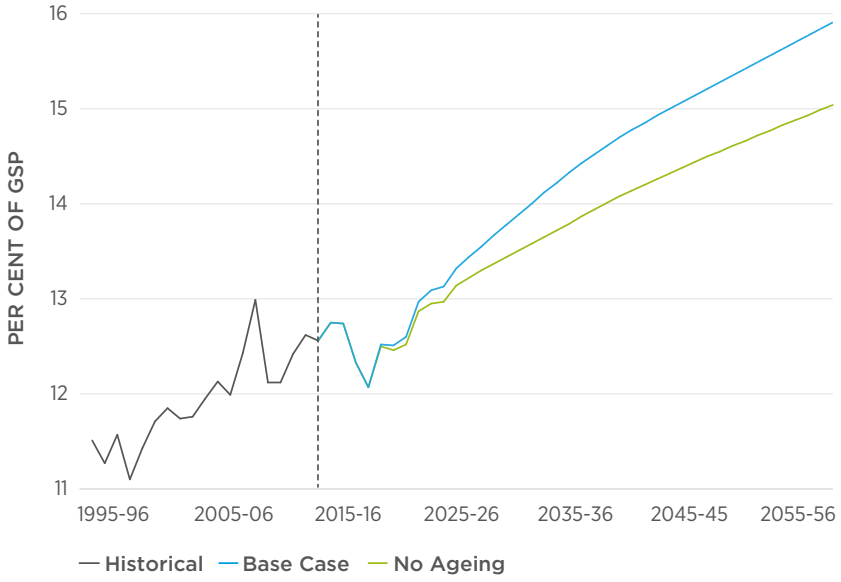
NSW Government services support great outcomes for our community. From high levels of education attainment to longer life expectancy, high quality health, low crime rates and customer satisfaction with public transport, government services contribute to wellbeing in New South Wales.

NSW Government spending on services is now around 12.6 per cent of GSP[1] and supports around 12 per cent of overall State employment (or 440,000 workers).[2] That equates to $64.5 billion[3] worth of schools, hospitals, transport, police, courts, community and other services.

Looking forward 40 years, average expenses are expected to grow by 5.3 per cent a year, faster than NSW's nominal economic growth rate of 4.7 per cent a year. That would mean an annual increase in nominal expenses per person from around $9,000 today to around $50,000 by 2055-56. Government services would rise to around 16 per cent of GSP, much higher than the 12-13 per cent of GSP average of the last 10 years, with ageing contributing a large portion of the increase (Chart 3.1).

Two broad challenges will place pressure on future expense growth. First, ageing of the population is likely to increase expenses as older people access services more frequently. Second, our citizens' expectations of service levels and quality tend to grow as incomes rise. For example, we expect more support for people with a disability, better protection of vulnerable children and more effective health treatments than we did 40 years ago.

Chart 3.1 Expenses are expected to grow to 16 per cent of GSP



Source: NSW Treasury

Ongoing improvements to the level and quality of services are expected by our community. To deliver this, services must be affordable — both today and for future generations. This means either more innovative and efficient service delivery, or increasing our revenues to pay for the level and quality of services demanded. Chapter Seven discusses options for more sustainable expenditure and revenue growth.

1 In 2014-15 expenses reflect the annual cost of providing services (excluding interest) and expenditure is expenses plus net capital expenditure

2 Australian Bureau of Statistics, 2016. Labour Force Australia Detailed (cat. no. 6291.0). ABS, Canberra

3 2014-15, excluding interest expenses

OUR GROWING DEMAND FOR SERVICES

3.1 Expense trends and outlook

Government expenses are projected to grow at an average rate of 5.3 per cent annually for the next 40 years (Table 3.1). This is lower than the average of 6.0 per cent in the decade to 2008-09 (pre GFC). But it is higher than the 3.5 per cent average over the last five years, which was achieved through successful expense control measures including a tighter wages policy, efficiency dividends, procurement savings and program savings.

Government expenses are projected to grow at

5.3% **annually for the next 40 years.**

Expenses are driven by inflation, population, ageing, real per capita GSP growth and other factors.

Table 3.1 Average annual expense growth by service area, 2014-15 to 2055-56

Service area	Expense growth rate		Ageing effect (percentage points)
	Projected (%)	No ageing[1] (%)	
General Public Services	4.9	4.9	–
Public Order and Safety	5.2	5.2	-0.1
Education	5.1	5.3	-0.2
Health	6.0	5.4	0.6
Social Security and Welfare	5.1	5.1	0.1
Housing and Community Amenities	4.4	4.4	–
Recreation and Culture	4.9	4.9	–
Agriculture, Forestry, Fishing and Hunting	3.5	3.5	–
Transport and Communications	5.8	5.8	–
Other	3.5	3.5	–
Total Expenses (excluding interest)	5.3	5.2	0.2[2]

Source: NSW Treasury

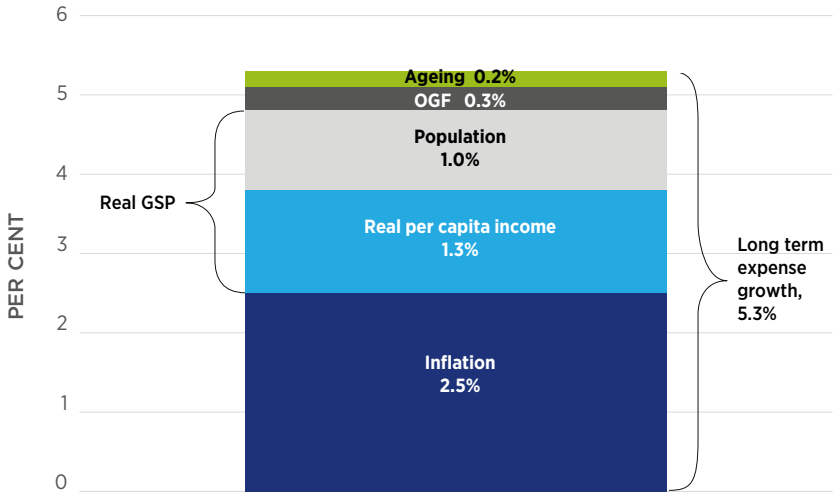
1 Does not exclude the impact of ageing on the real economy, discussed in Chapter Two. Numbers do not add due to rounding.
2 Weighted average

Expenses are driven by inflation, population, ageing, real per capita GSP growth and other factors. The real GSP per capita component reflects that community expectations grow as incomes rise and governments have responded to this with higher service levels. This trend is well established internationally, with many studies showing that expenses tend to grow in line with real incomes in most developed countries. Some studies suggest that government expenses will grow even faster than real income.[4]

The drivers of long-term expense growth projections feature in Chart 3.2. The projected 5.3 per cent expense growth rate includes inflation of 2.5 per cent, real per capita income growth of 1.3 per cent and population growth of 1.0 per cent.

4 Arpaia, A., Turrini, A., 2008. Government expenditure and economic growth in the EU: long-run tendencies and short-term adjustment. Available SSRN 1097286; Zaghini, A., Lamartina, S., 2008. Increasing public expenditures: Wagner's Law in OECD countries

Chart 3.2 Factors contributing to expense growth



Source: NSW Treasury

Ageing drives health expense growth from 5.4 per cent to 6.0 per cent a year.

Two significant factors raise expenses above GSP. The first is ageing, and the second is 'other growth factors' (OGFs). The impact of ageing on expense growth is delivered largely through increased health services expenses (Table 3.1). Ageing drives health expense growth from 5.4 per cent to 6.0 per cent a year. Ageing also increases growth in social security and welfare expenses, although it reduces expense growth in education, which mostly supports services for younger people. In total, ageing adds 0.2 percentage points to expense growth each year over the next 40 years.

OGFs are the residual growth in expenses after taking account of real per capita GSP growth, inflation, population (including ageing) and policy changes. They include service delivery changes, parameter-driven cost increases, cost escalation above CPI and community expectations above real income growth. The OGFs for each service area are determined from analysis of historical expense growth over the last 36 years. They are projected to add 0.3 percentage points to annual expenses growth. Expense control initiatives implemented from 2011 have reduced the total OGF (Table 3.2) by 0.1 percentage point compared to the 2011-12 Report. OGFs and age cost indices by functional area are discussed in the Technical Note.

OUR GROWING DEMAND FOR SERVICES

Table 3.2 Other Growth Factors by service area

Service area	New OGFs (per cent)	OGFs from BP6 2011-12 (per cent)	Change in OGF (percentage points)
General Public Services	—	—	—
Public Order and Safety	0.2	0.2	—
Education	0	0.2	-0.2
Health	0.4	0.5	-0.1
Social Security and Welfare	0.5	1.3	-0.8
Housing and Community	-0.7	-0.6	-0.1
Recreation and Culture	0.1	0.2	-0.2
Agriculture, Forestry, Fishing etc	-1.3	-0.9	-0.4
Transport and Communications	—	—	—
Other	—	—	—
Total	**0.3**	**0.4**	**-0.1**[1]

1 Weighted average.

HEALTH IS EXPECTED TO GROW TO 36% OF TOTAL EXPENSES BY 2055-56

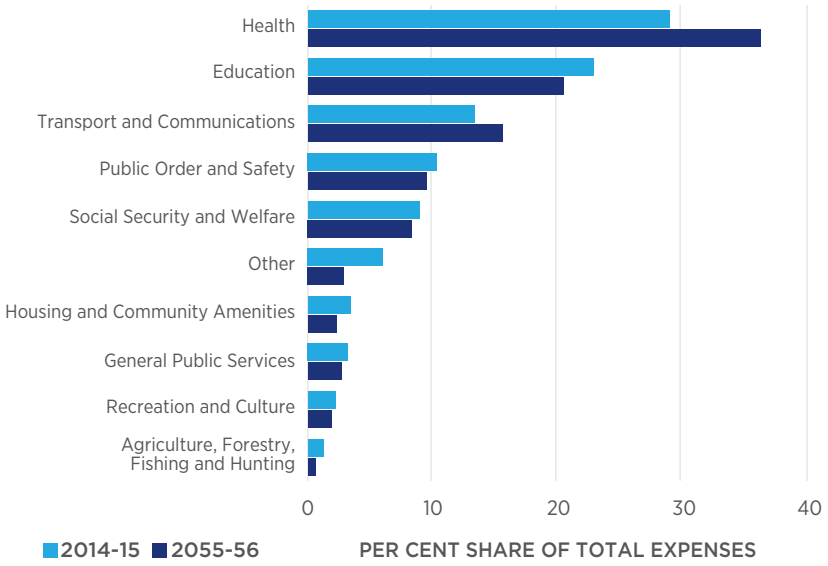
Total expenses are expected to increase to

$543b

in 2055-56.

Health is, and will remain, the largest service expense for the NSW Government. Total expenses are expected to increase from $64.5 billion in 2014-15 to $543 billion in 2055-56, with health expenses rising from 29 to 36 per cent of expenses (Chart 3.3).

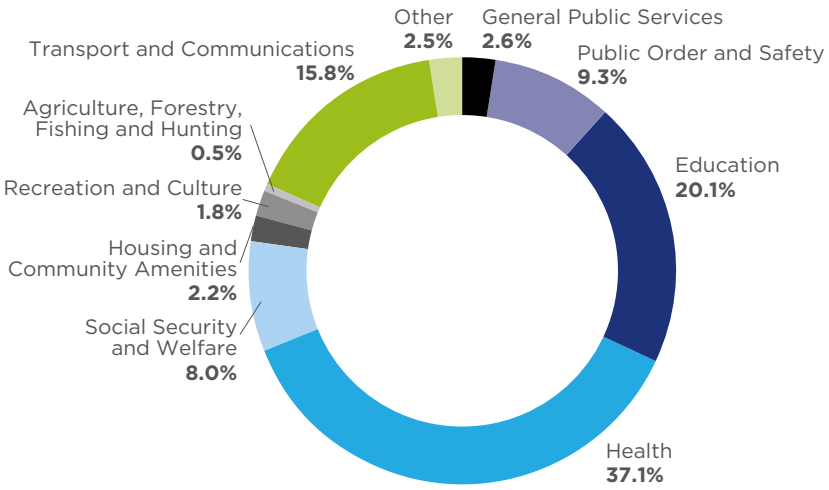
Chart 3.3 Health, education and transport will continue to account for the largest shares of expenses



Source: NSW Treasury

Health is also the largest contributor to overall expense growth over the next 40 years, accounting for 37 per cent of the total increase in expenses. Education is the second largest factor at 20 per cent, then transport and communications (16 per cent), public order and safety (nine per cent) and social security and welfare (eight per cent). The other areas make relatively smaller contributions (Chart 3.4).

Chart 3.4 Health is the largest driver of expense growth (2014-15 to 2055-56)



Source: NSW Treasury

3.2 Major expenses by policy area

Health (37.1 per cent of expense growth to 2055-56)

Health expenses are expected to be the largest contributor to the fiscal gap in 2055-56. Health is projected to grow at an annual average rate of 6.0 per cent a year and account for around 36 per cent of total expenses by 2055-56. In the near term, health expenses are expected to grow even faster at a rate of 6.3 per cent, before ageing pressures abate slightly and population growth slows in the 2030s.

NSW health services are relatively cost-effective.[5] Rates of growth in health expenses have reduced somewhat in recent years, owing to successful efforts to drive efficiency. This is consistent with trends across OECD countries, in which health expense growth is significantly lower since the global financial crisis.[6] Nevertheless, long term trends across the world are for health expenses to outpace GDP growth and this is expected to be the case in New South Wales over the next 40 years.

Increasing health costs arise from higher community expectations, advances in health technology and ageing. Rising expectations of the quality and volume of health services account for the greatest portion of health expense growth. According to the Grattan Institute, around 60 per cent ($27 billion) of the increase in Australia's annual health expense between 2003 and 2013 was due to improved services and new services per person.[7]

Technological advancements and innovative practices are transforming health care and improving patients' quality of life (Box 3.1). They can also provide significant economic benefits. Better health outcomes deliver improvements in workforce participation and productivity, including fewer absences from work and greater longevity.[8] But new technologies come at a cost. In the United States, new or increased use of medical technology is 40-50 per cent of the annual increases in health spending.[9] Health technologies are the main reason for the relatively large health OGF, adding 0.4 percentage points a year to expense growth.

HEALTH CONTRIBUTION TO EXPENSE GROWTH TO 2055-56

▲ 37.1%

Increasing health costs arise from higher community expectations, advances in health technology and ageing. Rising expectations of the quality and volume of health services account for the greatest portion of health expense growth.

5 NSW Bureau of Health Information, 2010. Backgrounder Healthcare in Focus: How NSW compares internationally
6 OECD Health Statistics 2015
7 Daley, J., McGannon, C., Hunter, A., 2014. Budget pressures on Australian governments 2014. Grattan Institute. Available at: www.grattan.edu.au/publications/reports/post/budget-pressures-onaustralian-governments-2014
8 Cutler, D.M., McClellan, M., 2001. Is technological change in medicine worth it? Health Aff. (Millwood) 20, pp. 11–29
9 Callahan, D., 2008. Health Care Costs and Medical Technology, in: Crowley, M. (Ed.), From Birth to Death and Bench to Clinic: The Hastings Center Bioethics Briefing Book for Journalists, Policymakers, and Campaigns. The Hastings Center, Garrison, NY, pp. 79–82

OUR GROWING DEMAND FOR SERVICES

Box 3.1

Advances in health technology

Rapid advances in science and technology are changing healthcare and medicine. Staying healthy in 2056 will be a very different experience from today.

Through technology, healthcare professionals will have access to more and better medical information about their patients. Sensors built into wearable devices or everyday objects like our beds or appliances will be able to provide real time information on the status of our health and warn us and our doctors before we get sick.

Data analysis will allow doctors and researchers to see patterns and make earlier diagnoses. These technologies are already being put into practice. For example, by assembling information in the national hip replacement registry, Australian researchers have been able to quickly compare and identify which products were defective or produced superior outcomes for patients. In the future, analyses such as these will be extended into more aspects of healthcare and doctors will be able to provide better quality care to patients with more accuracy, in shorter timeframes and with less expense.

New technologies are also making health services safer, higher quality and more accessible for patients. Forty years ago, removal of a gallbladder required a five day hospital stay. Today the same procedure involves keyhole surgery in a day. And while HIV used to have a high mortality rate, today antiretroviral drugs mean that people can live close to normal life expectancy. While many such innovations are reducing unit costs, demand for new techniques and services is growing by more, increasing overall costs.

Other new technological advances are more expensive — but with huge gains in quality of life. And frontier technologies, such as 3D printed organs, mind-controlled prosthetics and genomics, offer huge promise. While we cannot predict the medical advancements of the future, they are expected to bring enormous gains to our wellbeing over the next 40 years. They are also a key reason why we can expect health costs to continue to outpace economic growth.

Rising demand and a greater focus on students that experience educational disadvantage are primary drivers of this increase, with increasing community expectations also playing a role.

EDUCATION CONTRIBUTION TO EXPENSE GROWTH TO 2055-56

▲ 20.1%

Population ageing drives around 10 per cent of health expense growth, reflecting that health costs rise with age. For example, average health expenses per person aged over 65 is around three times higher than those under 65 years.[10] While people are remaining healthy for longer, increases in life expectancy are likely to lead to increases in both healthy *and* unhealthy (high cost) years lived. Population ageing is, therefore, expected to increase health expense growth by an average of 0.6 percentage points per annum over the next 40 years.

Health's large contribution to the fiscal gap means that it has the potential to play a key role in driving down expenses over the long term. This can be done by adopting more innovative and efficient ways to deliver services, including preventive strategies to reduce demand, effective and convenient alternatives to high-cost hospital-based treatments, and more efficient delivery of health care based on consistent best practices.

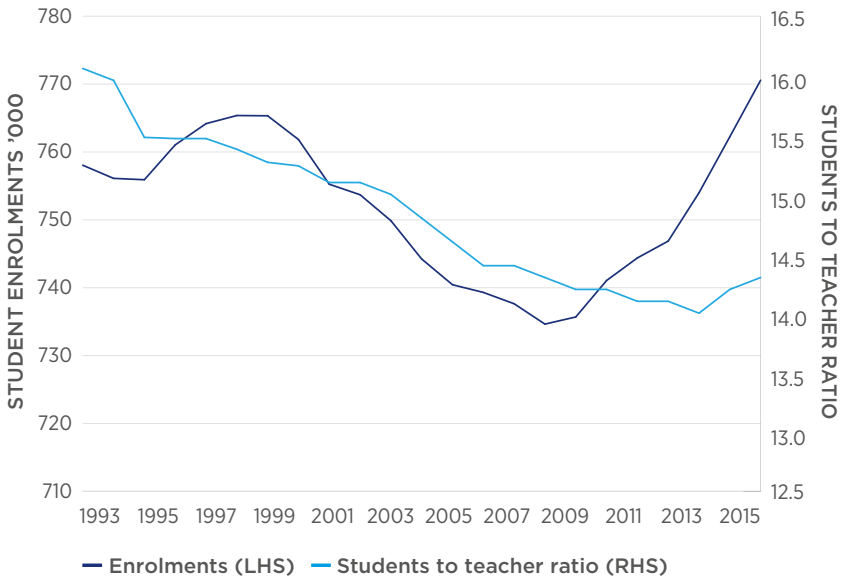
Education (20.1 per cent of expense growth to 2055-56)

Education services cover schools, early childhood, and vocational education and training programs. These expenses tend to be demand driven with costs and usage varying by age. Expenses are expected to increase by 5.1 per cent a year over the next 40 years and represent around 20 per cent of total expenses by 2055-56. Rising demand and a greater focus on students that experience educational disadvantage are primary drivers of this increase, with increasing community expectations also playing a role.

Demand for public schooling is driven by the population of school-age children as well as the share of students choosing to enrol in public schools. After more than a decade of decline, since 2009 enrolments in public schools have begun to grow (Chart 3.5) as the population of school-age children has increased. Prior to 2009, the decline in the share of students attending public schools eased pressure on expenses since the per student funding provided to private schools is close to 25 per cent of the funding provided for public school students.

10 Banks, G., 2008. Health costs and policy in an ageing Australia, p. 8

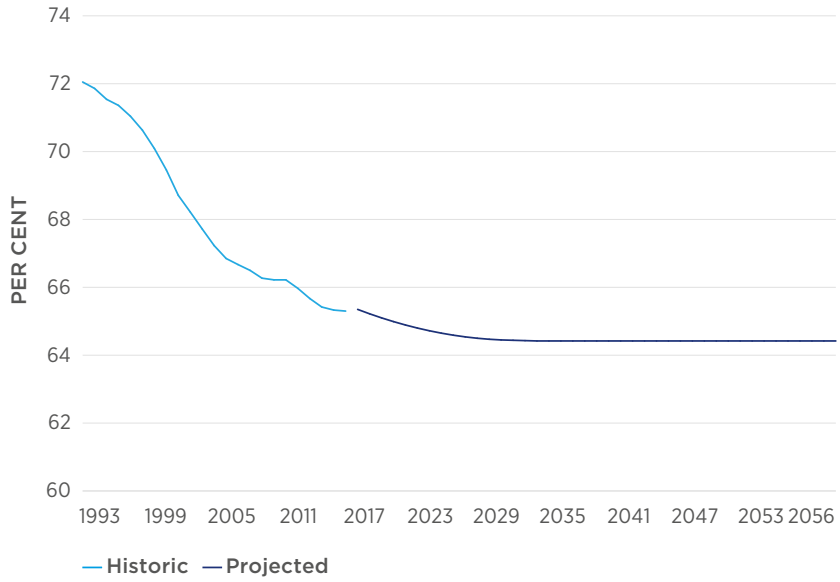
Chart 3.5 Enrolments and students to teacher ratio



Source: ABS cat no. 4221.0

Enrolments are also expected to be influenced by an expected easing in the drift of students away from public schools. The public school student share is projected to fall by around one per cent, from the current level of 65.4 per cent to 64.4 per cent by 2056 (Chart 3.6).

Chart 3.6 Decline in share of students attending public school is expected to level off



Source: ABS cat no. 4221.0 and NSW Treasury

Providing services to students with educational disadvantage is expected to contribute to rising education costs, as society increasingly focuses on the benefits of meeting these needs as discussed in Chapter Seven. The availability of effective early interventions for children can improve their life outcomes. Increases in both the number of students identified as experiencing educational disadvantage and the investment per student are driving the rising cost. In 2015, the share of students with disability averaged 15 per cent of total public school enrolments.[11] Over the period to 2056, the number of students with disability is expected to increase.

11 Defined as students with disability who require integration funding support, specialist support classes and specialist schools (4 per cent) as well as students with low level support needs that are supported through the resource allocation model (11 per cent)

The availability of effective early interventions for children can improve their life outcomes.

OUR GROWING DEMAND FOR SERVICES

Education expense growth is also driven by rising community expectations in other aspects of schooling. Class sizes (ratio of students to teachers) have decreased in NSW public schools between 1993 and 2013 (Chart 3.5), partly because of lower enrolments up to 2009 and also because of government policy. The increased use of technology in classrooms in recent years has also contributed to the cost of education — with smartboards and tablets commonplace now, while a decade ago paper and pens were the norm (Box 3.2).

Box 3.2

Learning with technology

Technology will dramatically change the way students learn in the future, increasing both access to education and its quality. Today a student in Bourke can use an Internet connection to access courses at Harvard or Yale at their own pace. Though mail-based correspondence courses did exist in 1976, today New South Wales is seeing an explosion in the number of online courses offered from within our state, including many by TAFE NSW. By 2056 students may receive the majority of their education virtually, with techniques such as 'flipped' classrooms, where school students listen to lectures at home and 'class' time is used for working on group projects, becoming more common.

Of course, education in 2056 will still likely involve face-to-face interaction, where students can also develop their social skills. Technology will allow education to become more customised, with individual curricula tailored to students' learning styles and interests. Some of these technologies are already being tested. For example, a mathematics program, Dreambox, analyses over 800 data points per student in under one minute about how a student learns, and adapts the pace, difficulty and style of its learning program to a student's needs.

Technology will also give students more quality time with teachers with testing and marking often done through greater automation. For example, programs have been developed that recognise students' unique typing patterns to prevent cheating. The digitisation of education will also give us new data and insight into how each student learns, allowing teachers to better connect with each student.

New South Wales is on the forefront of experimenting with online education. Aurora College (The Virtual Secondary School) allows high school students in remote and rural areas to take personalised courses with a strong mathematics and science focus such as Physics or Mathematics Extension 1 and 2. Students are able to remain local, but access the best of the state's public school curricula and interact with students and teachers from across the state.

Expenses for transport and communications are projected to increase by an annual average of 5.8 per cent over the next 40 years, and represent 16 per cent of total expenses by 2055-56.

TRANSPORT AND COMMUNICATION CONTRIBUTION TO EXPENSE GROWTH TO 2055-56

▲ 15.8%

Transport and communications (15.8 per cent of expense growth to 2055-56)

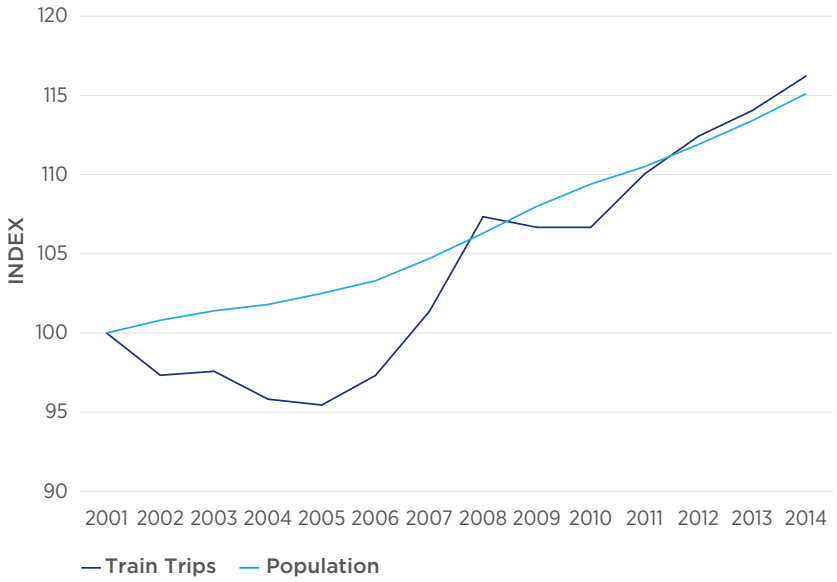
Transport and communications services include road, rail and buses as well as communications services. Transport and communication expenses cover the operations of these services. The associated infrastructure expenditure is covered in Chapter Four. Expenses for transport and communications are projected to increase by an annual average of 5.8 per cent over the next 40 years, and represent 16 per cent of total expenses by 2055-56. These costs are driven by both population and infrastructure expense trends.

Over the decade to July 2014, transport expenses grew at an average rate of 7.5 per cent per annum, compared to average nominal GSP growth of 5.7 per cent per annum. Rail transport accounted for more than 40 per cent of total transport expenses over the decade, increasing at 12 per cent per annum or about 2.3 times the rate of growth in other transport and communications expenses.

The pattern of recent transport expense growth reflects the changes in NSW's population levels and its distribution. Population growth influences transport expenses, as networks expand to cater for population density and spread. Chart 3.7 shows that the number of train trips taken has increased broadly line with population. The NSW Bureau of Transport Statistics[12] expect this trend to continue, resulting in almost a 50 per cent increase in rail use between 2011 to 2046 in the Sydney Metropolitan Area. New technologies are also likely to influence transport expenses, although this is difficult to predict (Box 3.3).

12 Bureau of Transport Statistics, 2014. Travel Forecasts 2011-2046, TransFigures

Chart 3.7 Sydney train use has grown in line with population



Source: Transport for NSW, Bureau of Transport Statistics

The recent transport expense growth reflects the changes in NSW's population levels and its distribution. Population growth influences transport expenses, as networks expand to cater for population density and spread.

Box 3.3

Future transportation in New South Wales

The way we move around New South Wales has changed significantly in the past 40 years, and changes over the next 40 years will likely be even more significant.

New modes of transportation

Vehicles in New South Wales have changed dramatically over the past 40 years and will continue to evolve; just picture the differences between the boxy Holden HX which ruled the roads of New South Wales in 1976 and today's new fuel-efficient hybrids. By 2056, more vehicles are likely to be powered by alternative fuels such as electricity and hydrogen and may be self-driving, completely changing the experience of travelling by car.

The public transportation network has also seen massive change. In 1976, the centre of Sydney was not yet connected to Bondi Junction by rail. Today New South Wales oversees an integrated train and metro rail network that connects all parts of the state. Well before 2056, new metro and light rail connections will speed up trips between the CBD, Western Sydney and Badgerys Creek, all of which will grow into hubs for future jobs and homes in New South Wales.

More efficient networks

Just as the vehicles have changed, traffic flow has become much more efficient in the past 40 years. In 1976, most NSW traffic lights were set on simple interval timers. Today the NSW Transport Management Centre uses a combination of road cameras, 3,400 adaptive traffic signals and a 24-hour Transport Operations Room to optimize traffic flow and respond to incidents throughout the state. By 2056, a combination of technologies and autonomous vehicles may allow vehicles, road systems, traffic controllers and even environmental sensors to seamlessly communicate with one another and automatically coordinate everyone's trips, making them shorter, safer and more environmentally friendly.

These new technologies could be supported by policies that help set incentives for using public transport and mitigate the impacts of congestion. For example, dynamic congestion pricing systems have been tried in cities overseas, and may well provide lessons for the New South Wales of the future.

OUR GROWING DEMAND FOR SERVICES

The NSW Bureau of Transport Statistics projects an increase in demand for rail, light rail and ferry trips of about 85 per cent between 2011 and 2046 in the Sydney Metropolitan Area (or an average growth rate of 1.8 per cent per annum). With more recent shifts towards encouraging greater population density and recent additional major investment in higher frequency rail services, like Sydney Metro Northwest, Sydney Metro City & Southwest, this projected growth rate could be exceeded.

Recent trends in Sydney are reflected across Australia. According to the Commonwealth Department of Infrastructure and Regional Development, public transport use has been increasing in all capital cities since 2004. Currently, one in six people in the capital cities use mass transit for daily commuting. To 2030, the Department estimates that public transport use will grow by 30 per cent — primarily through population growth rather than a major shift in the proportion of people using public transport.

The 2015-16 Budget signalled the Transport Asset Holding Entity (TAHE) as the state's dedicated public transport asset manager. Eventually TAHE will hold all of the state's public transport assets, and procure and manage assets consistent with Government requirements. Capital projects will be funded through equity injections rather than capital grants, and the government will receive dividends and tax-equivalent payments consistent with the Commercial Policy Framework. This arrangement improves the way capital funding is provided and is projected to reduce the fiscal gap by around a quarter of a percentage point of GSP by 2055-56.

PUBLIC ORDER AND SAFETY CONTRIBUTION TO EXPENSE GROWTH TO 2055-56

▲ 9.3%

Public order and safety (9.3 per cent of expense growth to 2055-56)

Public order and safety services include police, law courts and legal services, and corrective services. Overall expenses in this area are projected to grow at an annual average rate of 5.2 per cent over the next 40 years, reaching 9 per cent of total expenses by 2055-56. Some of these services are demographically sensitive.

As with previous reports, police expenses are assumed not to be demographically sensitive. While offender rates are higher among the younger age groups, older groups have a stronger perception of crime and consequently demand a higher level of police protection. The Productivity Commission has suggested that these two factors may offset each other.[13] It is assumed that the ratio of police officers to population remains around current levels, consistent with historical trends.

Corrective services spending is driven largely by inmate numbers and is sensitive to demographic compositional effects as younger males are over-represented in the prison population. However, relative to the 2011–12 Report, the age profile of the prison population has shifted towards the older age groups. The recent increase in the prison population can be attributed to changes in policing practices due to technology advancements.

SOCIAL SECURITY AND WELFARE CONTRIBUTION TO EXPENSE GROWTH TO 2055-56

▲ 8.0%

This is driven mostly by expenses in family and child welfare services, which are demand-driven and are largely associated with the welfare of minors. Out-of-home care and statutory reporting constitute the major part.

Social security and welfare (8.0 per cent of expense growth to 2055-56)

Social security and welfare services consist of family and child welfare services, and welfare services for the aged and disabled provided by the NSW Government. Another subcategory, 'other social security and welfare,' includes emergency food and clothing, pensioners' council and water rates concessions, and electricity and transport concessions for the aged, including the Gold Opal Card (formerly the pensioner excursion ticket).

Social security and welfare expenses are projected to increase by 5.1 per cent a year and are expected to represent eight per cent of total expenses by 2055-56. This is driven mostly by expenses in family and child welfare services, which are demand-driven and are largely associated with the welfare of minors. Out-of-home care (OOHC) and statutory reporting constitute the major part.

13 For more detail, please see the Productivity Commission's research report, Economic Implications of an Ageing Australia, 2005, pp. 241-242

Expenses in the family and child welfare services have built up from a low base in the early 1980s, growing steadily through the 1990s and then experiencing strong growth over the last decade in response to community demand. Over this period service levels have increased and the growth in the OOHC population has outpaced population growth of children and young people, increasing from 6.2 per 1,000 children and young people in 2005-06 to 9.9 per cent in 2014-15.[14] This increase is reflected in a cost bias towards the 0-4 and 10-14 age cohorts.

Welfare services for the aged and disabled is another service area that has experienced major growth from relatively low levels in the early 1980s. Average annual expense growth has been 8.2 per cent over the last 16 years with significant policy enhancements over this period.

Following the introduction of the National Disability Insurance Scheme (NDIS), from 2018-19 the NSW Government will no longer receive Commonwealth funding and will contribute $3.2 billion a year into the scheme, escalated by 3.5 per cent a year thereafter. This scheme will deliver individualised packages of support for people with disabilities and will focus on client needs using an actuarial assessment of long-term needs.

The change is incorporated in the model by applying a 'welfare for the aged and disabled' age cost index up to 2018-19. From 2018-19, when the NDIS is implemented, $3.2 billion of disabilities expenses will be substituted with a contribution to the NDIS. In the future this payment will be escalated by 3.5 per cent. At the same time the age cost index is changed from one reflective of aged and disabilities services, to the remaining aged services provided by the NSW Government. This index is weighted according to services provided for the aged.

The 'other social security and welfare' area is a combination of age sensitive and non-age sensitive programs and incorporates a range of age-based expenses, such as expenses for some targeted public transport concessions, utilities, rebates and community services.

Housing and community amenities (2.2 per cent of expense growth to 2055-56)

Housing and community amenities include social housing and short-term accommodation for high-need clients through family and community services. It also covers community development, including Aboriginal communities, water supply, environmental protection and other community amenities. Expenses in this area are projected to grow at an annual average of 4.4 per cent over the next 40 years and represent 2.3 per cent of total expenses in 2055-56.

Housing services are broadly focused on people who require extended support, such as the elderly, people living with disabilities and people who are likely to only need short to medium-term assistance, such as the homeless. As the cost of rent in social housing is well below market levels, the demand for social housing will continue to exceed supply. The provision of social housing has therefore been categorised as supply driven and not age-sensitive.

Due to the high demand, the Future Directions for Social Housing in NSW policy aims to provide opportunities, incentives and support for tenants to transition out of social housing while ensuring that a safety net is provided for those in need. Past policy decisions have resulted in better targeting of housing assistance towards the most vulnerable. The client profile and cost structure of housing is likely to change over time as government directs limited resources to the housing needs of the vulnerable in our community, but expense growth will be relatively modest compared to other areas.

Other expenses (4.8 per cent of expense growth to 2055-56)

The remaining 4.8 per cent of expense growth comprise agriculture, forestry, fishing and hunting, recreation and culture and other expenses. These expenses are projected to grow at relatively modest rates and, in aggregate, are projected to constitute around 5.3 per cent of total expenses by 2055-56.

HOUSING AND COMMUNITY AMENITIES CONTRIBUTION TO EXPENSE GROWTH TO 2055-56

▲ 2.2%

Housing services are broadly focused on people who require extended support, such as the elderly, people living with disabilities and people who are likely to only need short to medium-term assistance.

14 Productivity Commission, 2016. Report on Government Services, Chapter 15 Child Protection. PC Canberra

4 HOW WILL WE MEET OUR INFRASTRUCTURE NEEDS?

Economic infrastructure, such as roads, rail lines and ports, generally provides direct and immediate economic benefits in the building and operational stages and productivity benefits in the longer term. Infrastructure enables new housing supply, efficient transportation of goods and services, reliable delivery of essential services and improved travel times. Social infrastructure, such as quality schools and hospitals, allows the delivery of critical services to the people of New South Wales.

The right infrastructure lifts productivity and participation, delivering longer term economic and social benefits.[1]

The general government sector's net capital expenditure is projected to rise at an average annual rate of 5.1 per cent — exceeding average GSP growth — reaching $23.0 billion in 2055-56. While it is a smaller component of expenditure[2], making up less than five per cent of the total in 2014-15, appropriate and adequate infrastructure investment is critical to ensuring that the state achieves its economic potential.

Well designed infrastructure, suitable housing development and employment opportunities together make New South Wales an attractive place to live and work. More housing, as noted in Chapter One, will encourage migration to the State, which boosts the working age population and helps offset the impacts of the ageing population on the economy.

Infrastructure investment is essential for the 1.8 million new homes that are projected to be built over the next 40 years. They will need basic services, such as water, electricity, schools, hospitals and local amenities and also the transport infrastructure that connects homes with employment opportunities. Better transport infrastructure increases the number of residential areas that are within commuting range, and is therefore a key driver of growth and prosperity.

Well designed infrastructure, suitable housing development and employment opportunities together make New South Wales an attractive place to live and work.

4.1 Government infrastructure investment

The general government sector's investments in public infrastructure include ongoing infrastructure spending on schools, hospitals, public transport, and information technology as well as larger, one-off investments in hospitals, rail systems and roads. As at 2014-15 the gross capital expenditure budget is significant, around $9.4 billion, but well below the $64.5 billion in annual recurrent spending (excluding interest expenses).

In this Report, gross capital expenditure is the general government acquisition of non-financial assets, including assets acquired under finance leases. Net capital expenditure[3] is gross capital expenditure less sales of non-financial assets and less depreciation.

General government capital investment has grown strongly over the past 10 years. Over this period, nominal gross capital expenditure more than doubled to around $9.4 billion in 2014-15. As a percentage of GSP it rose from 1.2 per cent to 1.8 per cent. This high level will be maintained for at least the next four years.

1 Productivity Commission, 2015. The role of public infrastructure (PC Productivity Update). PC Canberra
2 Expenditure is expenses (excluding interest) plus net capital expenditure
3 This is equivalent to net acquisition of non-financial assets as used in the Budget. Note that sales of non-financial assets do not include leases or sales of businesses, which are classed as financial asset transactions.

Chart 4.1 Gross nominal capital expenditure to 2055-56

Source: NSW Treasury

General government capital investment has grown strongly over the past 10 years. Over this period, nominal gross capital expenditure more than doubled to around $9.4 billion in 2014-15.

Chart 4.1 presents general government gross nominal capital expenditure projected to 2055-56. Over the projection period, general government gross capital investment is projected to grow at an average rate of 4.1 per cent per annum, reaching $49.2 billion in nominal terms in 2055-56.

Capital expenditure is expected to be high over the next four years, in particular in 2018-19 due to the recognition of around $3.4 billion of Public Private Partnerships — mostly in transport. Beyond the forward estimates it is projected to return to its long-run trend. Capital projects funded through the Rebuilding NSW program, and Restart NSW commitments and reservations, are included in these projections.[4]

Capital expenditure for all areas except Transport is generally modelled by maintaining constant capital to expense ratios,[5] consistent with long-term trends[6] across Australia.[7] Transport is modelled differently because it is highly capital intensive and increases in capital stock tend to drive expenses. Therefore for transport, real capital stock is grown in line with real GSP, consistent with its long term historical tendency to broadly align with growth in the overall economy.

In net terms, general government capital expenditure is projected to rise from around $3.0 billion in 2014-15 to $23.0 billion in 2055-56, or by 5.1 per cent on average over the projection period. This is higher than the average GSP growth rate of 4.7 per cent.

The increase by $20 billion of net capital expenditure in 2055-56, compared to 2014-15, contrasts with an increase of nearly half a trillion dollars in recurrent expenses over the same period. Given the relative sizes of the increase, total expenditure (recurrent expenses and net capital expenditure, excluding interest) is expected to grow at an average rate of 5.3 per cent over the projection period.

4 Projects in Rebuilding NSW and Restart NSW reservations are included in the projections as they are committed government policies. However, these are not all reflected in the budget. Capital projects to be funded through Rebuilding NSW will not be reflected in the Budget until the electricity leases are finalised and they are approved; similarly Restart NSW reservations are included in the Budget only when they are approved.

5 This is consistent with a constant capital to output ratio assumption, modelled by maintaining a constant real capital stock to real expense ratio

6 Over the past fifteen years, the ratio of real capital stock to real expenses across all Australian state and territory and local governments has stabilised following a period of steep decline since the 1960s. See Technical Note for further details.

7 For the first 10 years to 2024-25, capital expenditure for each area of government activity is based on 10 year capital plans, smoothed to minimise year-on-year volatility in its transition to the long-run projections

HOW WILL WE MEET OUR INFRASTRUCTURE NEEDS?

GENERAL GOVERNMENT NET CAPITAL EXPENDITURE IS PROJECTED TO RISE TO

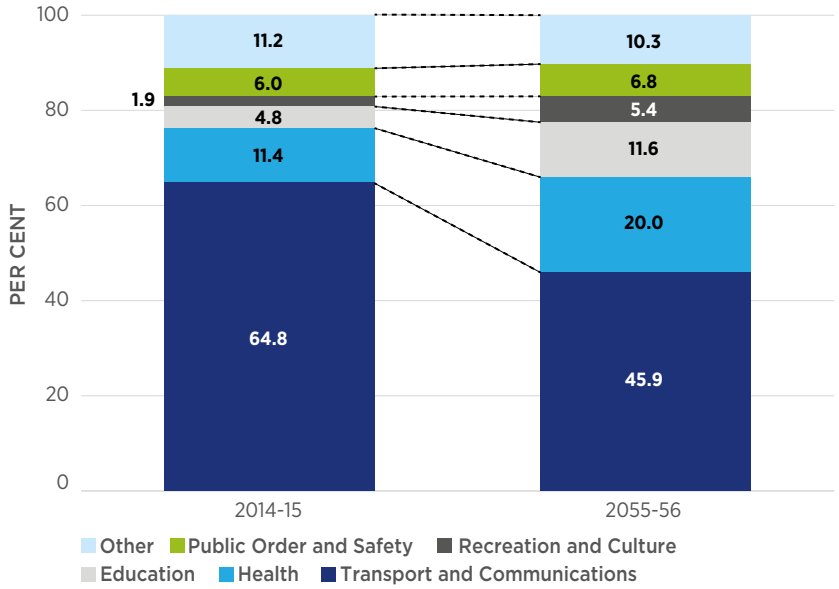
▲ $23b

in 2055-56.

Composition of infrastructure spending

The largest component of infrastructure spending in 2014-15 was Transport and Communications, at 65 per cent (Chart 4.2). After transport, education and health together make up the next biggest infrastructure categories and are expected to nearly double their share of total capital expenditure by 2055-56. The faster growth in health and education infrastructure spending compared to transport is driven by the growing demand for health and education services that is expected over the next 40 years, as discussed in Chapter Three.

Chart 4.2 The health and education share of gross capital expenditure will increase



Source: NSW Treasury

4.2 Housing

Trends and outlook

Despite a clear uplift in actual residential construction since 2012, New South Wales has an estimated accumulated housing undersupply of around 100,000.[8] This is the result of housing construction not keeping pace with strong population growth (Chart 4.3).

Source: ABS Census, ABS cat no. 3101.0 and NSW Treasury

The short-term outlook for housing construction is strong, with annual dwelling approvals reaching over 70,000 in 2015, the highest since data collection began in 1970 (Chart 4.4). While over the last four years approvals for both houses and attached dwellings have significantly increased, the strongest growth has been in apartments, especially apartment complexes of four storeys or more.

The strong short-term outlook for housing construction suggests that within the next few years we can expect new supply to meet additional annual demand, after which we expect to see inroads made into the accumulated undersupply. The rate at which this gap is closed will, however, depend on future housing construction, population growth and household formation preferences.

Over the long-term we expect housing supply growth averaging 45,000 a year to 2030-31 — and 43,500 to 2055-56 — which would result in the construction of around 1.8 million new homes over the next 40 years, closing the undersupply gap over time.

In the 20 years to the mid-2000s, peak housing completions were around 50,000 while troughs were in the 30-40,000s (Chart 4.5). Cycles lasted around five to six years from peak to peak, and completions averaged over 42,000 per year.

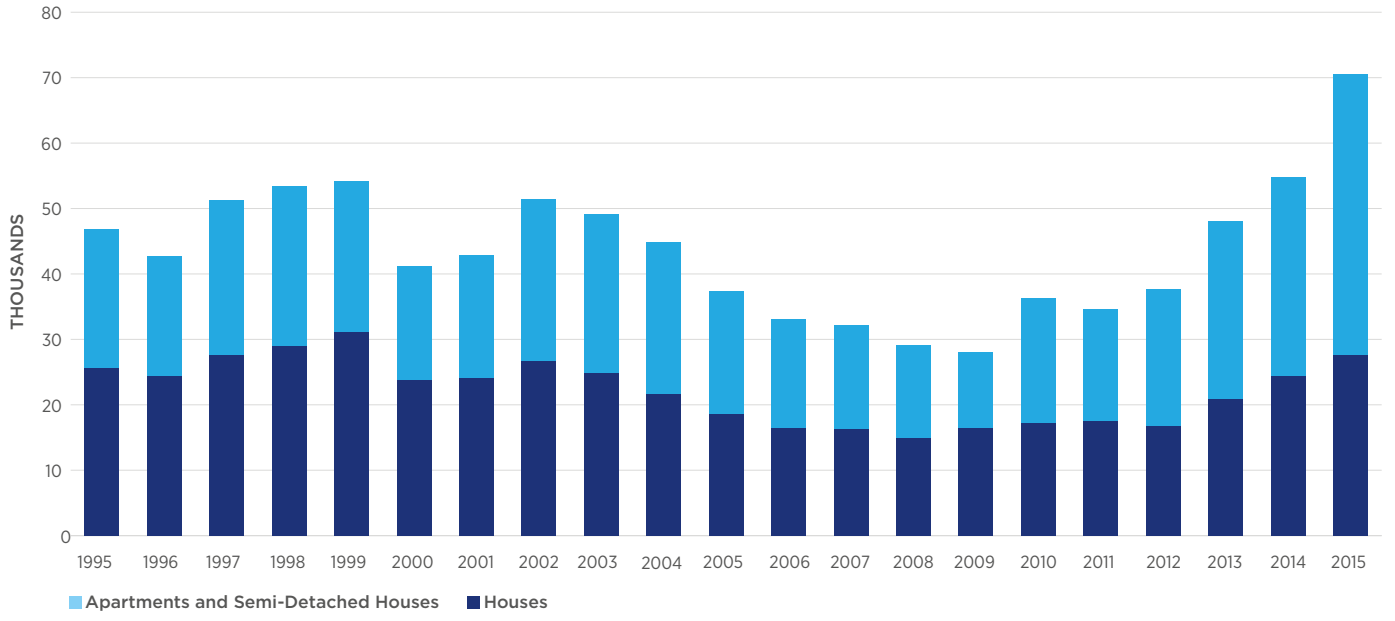
In the seven years from 2005, however, housing completions averaged just under 30,000 per year. While there has been a significant recovery in activity in the last few years, the seven years of low activity combined with strong population growth, have created a pent up demand for housing in New South Wales (particularly in Sydney).

Despite a clear uplift in actual residential construction since 2012, New South Wales has an estimated accumulated housing undersupply.

8 See Technical Note for methodological details. This estimate is comparable to recent private sector estimates, such as the current undersupply estimate of 90,000 by ANZ. NSW Treasury analysis in the 2014-15 Budget suggested an undersupply of around 120,000 dwellings in 2014. More detailed work for this Report provides the updated estimate of just over 100,000 in 2015

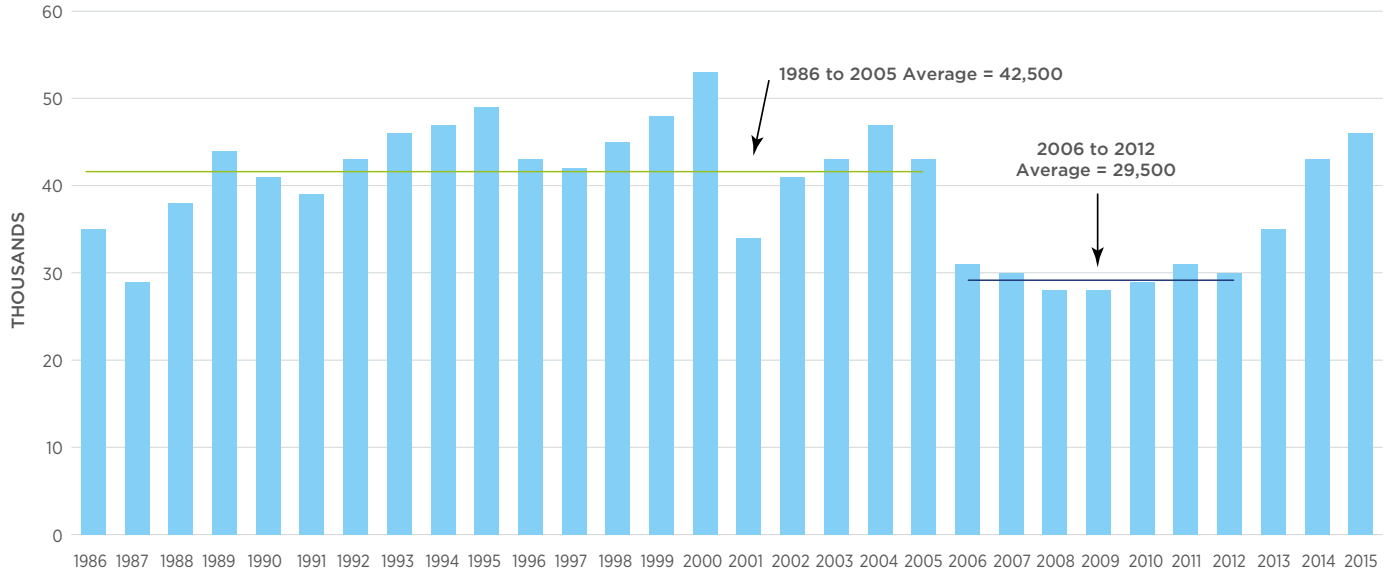
HOW WILL WE MEET OUR INFRASTRUCTURE NEEDS?

Chart 4.4 NSW dwelling approvals reached record highs in 2015 at just over 70,000



Source: ABS cat no. 8731.0

Chart 4.5 NSW housing completions are recovering from a seven year slump[9]



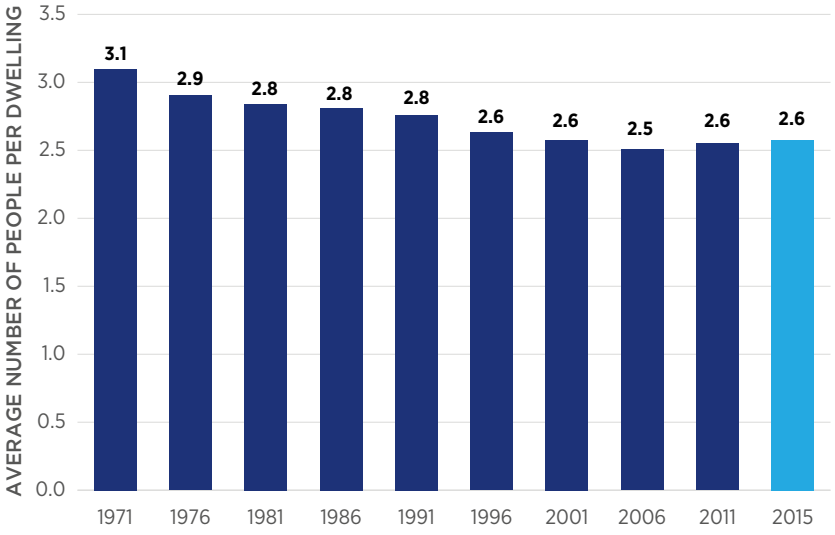
Source: ABS cat no. 8752.0

The terms 'housing undersupply' and 'housing oversupply' do not refer to a strict mismatch between supply and demand. Prices adjust to balance supply and demand. Rather, undersupply refers to supply being lower than the level of demand indicated by an analysis of long-run household formation trends.

9 Note that the difference between completions in this chart and annual production in Chart 4.3 is demolitions

Over the past decades, improvements in wealth, lower fertility rates, higher divorce rates and greater longevity have driven a long-run trend towards fewer people per household.[10] Chart 4.6 shows the average number of people per dwelling declining from 3.1 in the 1971 Census to a low of 2.5 in 2006. In 2011, the number of people per dwelling increased to 2.6, where it has remained.

Chart 4.6 Number of people per dwelling has declined since 1971, until recently



Source: ABS Census data to 2011; 2015 estimates from ABS cat no. 3101.0 and 6416.0

Those groups most strongly responsible for the 2011 up-tick in people per dwelling were those in their mid-to-late 20s and early 30s, who tended to live longer with their parents or in group households. At the same time, the long-run trend towards more single-parent families has reversed, which is consistent with recent declines in divorce rates. There has also been an increase in multi-family households.

What is unclear is the extent to which these changes represent a permanent shift in behaviour — and thus the demand for housing — or whether the undersupply of housing and an associated decline in housing affordability has driven an increase in the number of people per household.

Looking forward, ageing is likely to see underlying pressures towards smaller households continue to build. For example, as the population ages, there will be a higher share of couples with no children at home, and one-person households.

Overall the projections are for housing supply to grow by an average of around 45,000 dwellings each year through to 2031. This is consistent with *A Plan for Growing Sydney (2014)*[11], and differences in population growth between Sydney and the rest of the state. Over the next 40 years, the housing production profile corresponds to an average annual increase in the NSW housing stock of around 43,500, consistent with a projected gradual easing in demand pressures.

Housing prices and migration flows

As mentioned in Chapter One, for the first time, this Report incorporates modelling of the linkages between overseas and interstate migration into New South Wales, housing prices and housing supply, and employment opportunities. Migration responds to employment opportunities, and to housing prices. Conversely, population growth, in particular migration, also affects housing prices, since this affects underlying demand.[12]

Looking forward, ageing is likely to see underlying pressures towards smaller households continue to build. For example, as the population ages, there will be a higher share of couples with no children at home, and one-person households.

Migration responds to employment opportunities, and to housing prices. Conversely, population growth, in particular migration, also affects housing prices, since this affects underlying demand.

10 In the 35 year period to the mid-2000s
11 NSW Department of Planning and Environment, A Plan for Growing Sydney, 2014
12 See Technical Note for details

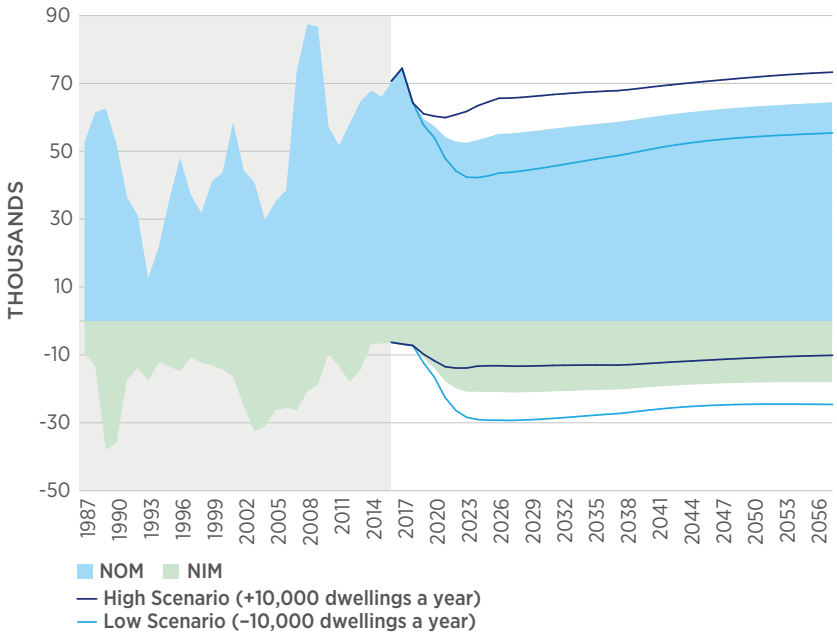
HOW WILL WE MEET OUR INFRASTRUCTURE NEEDS?

An extra 10,000 dwellings per annum would reduce housing price growth in the near term, leading to improvements in affordability.

Including these relationships means that the modelling captures the trade-offs between housing supply, migration flows, labour market strength, economic performance and the fiscal gap. For example, if housing supply is changed relative to the central scenario, population and ageing also change, with implications for the fiscal gap. An extra 10,000 dwellings per year, with no response from other states, would boost both overseas and interstate migration to New South Wales (Chart 4.7) and increase the traditional working age population by over 600,000 by the mid 2050s. This in turn reduces the impact of ageing (Chart 4.8) and generates stronger economic growth.[13] A younger population and stronger economy will bring more employment opportunities and associated fiscal improvements further detailed in Chapter Six.

An extra 10,000 dwellings per annum would also reduce housing price growth in the near term, leading to improvements in affordability. This would encourage additional inward migration, which would gradually absorb the additional supply, and all else being equal this downward pressure on price growth would ease over time. However, the longer term result would depend on a range of other factors in the economy, including the behaviour of other states. If, for example, other states also increased their housing supply, then this would result in a larger and more sustained improvement in housing affordability in New South Wales (and in those other states).

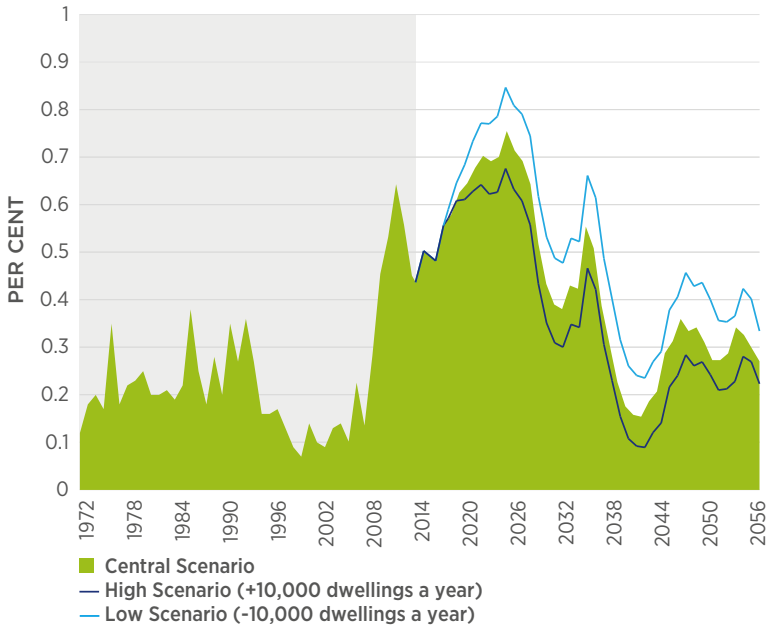
Chart 4.7 NSW Net Overseas Migration (NOM) and Net Interstate Migration (NIM) under different housing scenarios



Source: ABS cat no. 3101.0 and NSW Treasury

13 The projected response does depend upon the response (if any) of other jurisdictions. The assumption adopted for the Rest of Australia (RoA) is for housing stock per capita to remain unchanged from the central scenario. This means that as additional housing construction in New South Wales draws in extra migration to the State (by reducing relative house prices), housing construction in the RoA is assumed to decline in proportion to the loss of population from the RoA to New South Wales. As a consequence, from an Australia-wide perspective, the additional New South Wales housing construction each year is gradually offset by weaker construction elsewhere, so that this scenario corresponds to only a moderate cumulative shock to Australia's aggregate housing supply

Chart 4.8 Annual increase in NSW aged dependency ratio under different housing scenarios



Source: ABS cat no. 3101.0 and NSW Treasury

The housing challenge

The base case envisages the NSW housing stock increasing by 45,000 dwellings a year over the next 15 years. However, there may be some challenges with meeting this rate of supply.

To begin with, while there are still some greenfield development opportunities within reasonable commuting distance to key job growth centres, there are now fewer than in past decades. This constraint is increasingly acute in Sydney, exacerbated by its particular geography — bounded by the sea, national parks and the Great Dividing Range. In other parts of New South Wales this is less of an issue, although concerns about protecting farmland and the environmental issues associated with coastal development do present challenges.

As a result, new housing supply will increasingly need to come from either a redevelopment of brownfields land or greater density in existing residential areas. Technology or additional infrastructure may make this easier to achieve. For instance, new technologies may reduce the costs of safely remediating contamination on old industrial sites.

New transport infrastructure is improving access to employment opportunities in Sydney's Central Business District (CBD), or along the so-called Global Economic Corridor from the CBD north to Macquarie Park and south to Sydney Airport.

These issues highlight the complementary role that infrastructure investment, including local infrastructure, will have in enabling significant population growth in both Sydney and regional New South Wales, without compromising productivity or amenity for both existing and new residents.

Governments have opportunities to make planning choices and rigorous investments that encourage migration and focus on improving living standards, participation and productivity.

HOW WILL WE MEET OUR INFRASTRUCTURE NEEDS?

4.3 Investing in housing and infrastructure for the future

Investments in the right productivity-enhancing infrastructure can stimulate economic growth and, in turn, improve living standards.

Few would dispute that individuals should be able to access affordable homes close to services, such as hospitals and schools, in the areas where they can find work and want to live. The increasing population of New South Wales means that the following are critical to ensuring that New South Wales remains an attractive place to live and work: an expanded housing supply in the right locations; transport investments that improve connectivity of housing and jobs; and adequate supporting infrastructure that accommodates both population growth and ageing.

Apart from housing, essential infrastructure investments include schools and hospitals, public transport and roads, sewerage and electricity networks. They also include more localised amenities like shopping centres, parks, cycle lanes and parking, which contribute to overall wellbeing. Such supporting infrastructure is typically provided by local and state governments and the private sector, and can help in building and maintaining community support for increased residential development.

A gradual movement towards smaller high-rise housing within commuting distance of employment centres that are increasingly clustered around the Global Economic Corridor (GEC).

A clear trend that has emerged in Sydney is a gradual movement towards smaller high-rise housing within commuting distance of employment centres that are increasingly clustered around the Global Economic Corridor (GEC) (Box 4.1). Those areas that already have well-developed connectivity to employment need continued investment to keep up with the population growth and remain 'liveable'. Equally important is that new housing developments have access to services and transport infrastructure, to allow access to areas with high economic activity. This not only includes improvements to public transport, but also improvements that reduce traffic congestion.

As an illustration of the economic costs associated with urban road traffic congestion, the Bureau of Infrastructure, Transport and Regional Economics has estimated national metropolitan congestion costs for the 2015-16 year at approximately $16.5 billion (in 2010 dollars). This reflects the cost of personal and business time, vehicle operating costs and the costs of air pollution damage.[14] Managing demand to spread peak periods can go some way to managing the additional road and public transport demands, but, over the longer term, an increase in capacity is inevitable.

Proper coordination of planning policies and investments in supporting infrastructure is vital. Development of new housing requires integration between land use planning and infrastructure provision to align the delivery of essential services, including water supply, sewerage, electricity, communications, health and education facilities, transport that facilitates access to employment and other opportunities, and other amenities.

Frequently, this infrastructure is provided by a range of state, local government and private sector entities, each of which may have different priorities. A particular challenge can be local infrastructure such as regional roads, which may be used by multiple local government areas. It will also be important to continue to develop comprehensive evidence identifying the extent to which housing development in different areas is being constrained by land use regulations or infrastructure capacity.

14 Bureau of Infrastructure, Transport and Regional Economics, 2015. Traffic and congestion cost trends for Australian capital cities, Department of Infrastructure and Regional Development

Box 4.1

The economic benefits of agglomeration in urban centres

In 2014, the Grattan Institute noted that urban areas with relatively high levels of economic activity and employment tend to be more productive (per working hour).[15] This higher productivity means that Sydney's Global Economic Corridor now generates 39 per cent of NSW GSP and houses 16 per cent of its population.[16]

The Grattan Institute also found that the distribution of economic activity in Sydney has shifted over the last decade. In the decade to 2015,[17] the number of jobs located in inner Sydney areas grew by 22 per cent. This compares to 15 per cent in other parts of Greater Sydney.[18] Additionally, there has been an underlying change in the composition of employment towards high-skilled, 'knowledge-intensive' jobs. For example, employment in professional, scientific and technical service jobs grew by 55 per cent between 2000 and 2015. Indeed most of this growth occurred in locations within or close to Sydney's GEC.[19]

These statistics partly reflect the benefits from firms and workers clustering together in cities (also known as agglomeration). This includes reduced transport costs, labour market pooling and the greater opportunities to share knowledge between people and firms.[20]

Therefore, without 'picking winners', planning and related policies have opportunities to enable strong commercial centres in locations where firms want to establish and grow. This will retain highly productive and potentially mobile workers, maximise productivity and efficiency and support growth.

Housing and infrastructure investments also need to accommodate broader societal needs. For example, appropriate housing will be required for older and retired Australians wishing to downsize in their local suburb or the so called 'seachangers' or 'treechangers' who move away from employment centres after retirement (Box 4.2). This will not only free up existing housing stock but also provide for the desired lifestyle changes and contribute to wellbeing. Infrastructure such as hospitals and transport is needed to accommodate the location choices of an ever growing population of older Australians.

Infrastructure investments into regional New South Wales, and between regional and metropolitan areas, will support continued growth and enhance connectivity to employment centres and retirement options.

This is especially the case given that regional New South Wales is home to over one third of the State's population. Adequate investment in regional infrastructure will assist in ensuring the competitiveness of our regional communities and connectivity to global markets. Accordingly, around 30 per cent of Rebuilding NSW and Restart NSW is allocated to regional infrastructure. This includes the $4.1 billion allocated to regional transport as part of Rebuilding NSW.

Advances in technology can also be an important enabler of connectivity for the regions. Improved connectivity, via practices such as teleworking, are expected to change the way people work, and even the distribution of the workforce, by increasing the attractiveness of regional New South Wales as a place to live and work. As a result, investments will need to be responsive to these changes. For example, the Mobile Black Spot Programme that is currently underway recognises this and aims to improve mobile phone coverage and competition in regional and remote Australia. Investments should also meet the needs of older Australians who live regionally, for example by ensuring adequate access to health facilities.

15 Kelly, J.-F., Donegan, P., 2014. Mapping Australia's Economy. Grattan Institute

16 Infrastructure NSW 2014, Rebuilding NSW State Infrastructure Strategy Update 2014 — Recommendations to the NSW Government, Sydney

17 Australian Bureau of Statistics, 2015. Labour Force, Australia (cat. no. 6291). ABS, Canberra

18 ABS cat no. 6291. "Inner Sydney" is defined as including City & Inner South, Eastern Suburbs, Inner South West, Inner West and North Sydney & Hornsby and "other parts of Greater Sydney" comprises Baulkham Hills & Hawkesbury, Blacktown, Northern Beaches, Outer South West, Outer West & Blue Mountains, Parramatta, Ryde, South West and Sutherland. These regions are defined by the ABS Statistical Area Level 4

19 Australian Bureau of Statistics, 2015. Labour Force, Australia (cat. no. 6291). ABS, Canberra

20 Ellison, G., Glaeser, E.L., Kerr, W., 2007. What causes industry agglomeration? Evidence from coagglomeration patterns. National Bureau of Economic Research

HOW WILL WE MEET OUR INFRASTRUCTURE NEEDS?

Regional New South Wales is home to over one third of the state's population. Adequate investment in regional infrastructure will assist in ensuring the competitiveness of our regional communities and connectivity to global markets.

Box 4.2

The impact of ageing on housing and infrastructure demand

The ABS 2006-11 Australian Census Longitudinal Dataset explored the housing transitions which occurred between the 2006 Census and 2011 Census, of selected Australians who were aged 65 years and older in 2006. The Dataset showed that older Australians affect the housing market through their decisions to downsize, move away from urban areas or move into specifically designed dwellings.[21]

The data also showed that the elderly were more likely to move if they did not own their home, if they did not have young or adult children living with them, or if they were living alone. Older people living outside of capital cities were more likely to have moved than those living in capital cities.

Older Australians who required care and assistance with core activities were more likely to move, compared to older people who did not need care and assistance. Of the elderly who reported a requirement for care and assistance in 2011, but not in 2006, around 25 per cent moved, of whom just under half moved into nursing homes or equivalent.

Different parts of the state will be affected by population ageing to varying extents. The parts most affected will be those that currently have a proportionately larger share of people aged 45-65, therefore in 20 years' time they can be expected to have a larger proportion of people aged 65 and over. Many of these areas are also popular retirement destinations for those older people that choose to move, which will further accelerate the local rate of ageing. The Government's population projections show that in some local government areas, more than 40 per cent of the population is projected to be aged 65 and over in 2031. Areas where the population is expected to age most rapidly are likely to experience an increase in demand for services such as health care and home care and therefore require public social infrastructure investments.

Unless there is adequate and appropriate housing supply and supporting infrastructure, we risk unwinding the potential economic boost from population growth. Adequate supply of dwellings will help moderate house prices and accommodate the population growth that will continue to drive the NSW economy.

21 Australian Bureau of Statistics, 2015. Australians' journeys through life: Stories from the Australian Census Longitudinal Dataset, 2006-2011 (cat. no. 2081.0). ABS, Canberra

HOW WILL WE FUND OUR SERVICES?

5

Over the next 40 years, the people of New South Wales will need services and infrastructure to support their longer lives and growing standard of living. To fund these, the NSW Government must establish a stable and sustainable revenue base that anticipates changing conditions and growing demands.

We expect revenue growth to slow. Over the next 40 years it is projected to average 4.7 per cent a year, in line with projected GSP growth.[1] This is, however, lower than average annual revenue growth since 1996-97 of 5.7 per cent.[2]

The composition of revenue is also expected to change over the next 40 years. Growth in Commonwealth grants (including GST payments) is expected to average only 4.2 per cent a year, below nominal GSP growth. This will see a decline in Commonwealth payments from 41 per cent of state revenue in 2014-15, to 32 per cent by 2055-56.

There is a subsequent proportional rise in state taxes, which are expected to grow at 5.4 per cent a year. They are projected to reach 48 per cent of total state revenue in 2055-56. That is up from 38 per cent in 2014-15.

With this compositional change, we expect New South Wales' total revenue to be more volatile, making state budgeting more challenging.

Ageing contributes to lower revenue growth. Without ageing, average revenue growth would be 5.2 per cent a year. The ageing population affects revenue growth by lowering transfer duty, land tax and payroll tax revenues. Ageing reduces house price growth and participation because of a smaller traditional working age population share.[3]

In this Report, the budget and forward estimates from the 2015-16 Half-Yearly Review inform the first four years of the revenue projections. Beyond 2018-19, we project forward on a 'no policy change' basis. This means current policy settings, such as tax rates, thresholds and indexation arrangements are assumed to continue throughout the projection period. The long-run equilibrium projections 'look through' the inevitable property and other economic cycles that will occur over the next 40 years.

To be able to fund services over the next 40 years, the NSW Government must establish a stable and sustainable revenue base that anticipates changing conditions and growing demands.

Ageing reduces house price growth and participation because of a smaller working age population share.

1 Unless stated otherwise, 'revenue' refers to general government revenue, excluding interest, consistent with the definition of the fiscal gap in Chapter Six

2 1996-97 was the first year that the NSW Budget adopted accrual accounting

3 Guest, R., Swift, R., 2010. Population ageing and house prices in Australia. Australian Economic Review. vol. 43, pp. 240–253

HOW WILL WE FUND OUR SERVICES?

FOR THE PERIOD 2014-15 TO 2055-56, REVENUE IS EXPECTED TO GROW BY

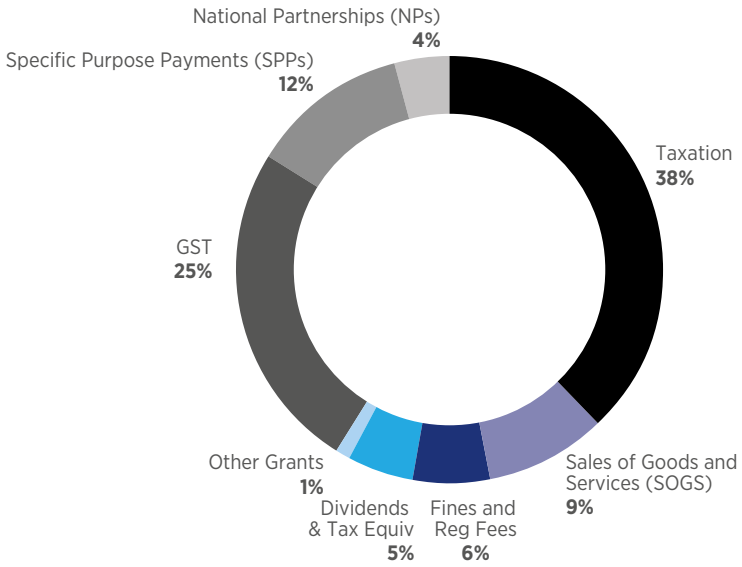
4.7%

in line with growth in nominal GSP.

5.1 Revenue trends and outlook

In 2014-15, general government revenue, excluding interest, was $69 billion. State taxation accounted for $26 billion, with GST and other Commonwealth payments adding another $28 billion (Chart 5.1).

Chart 5.1 Revenue sources in 2014-15 (share of total revenue)

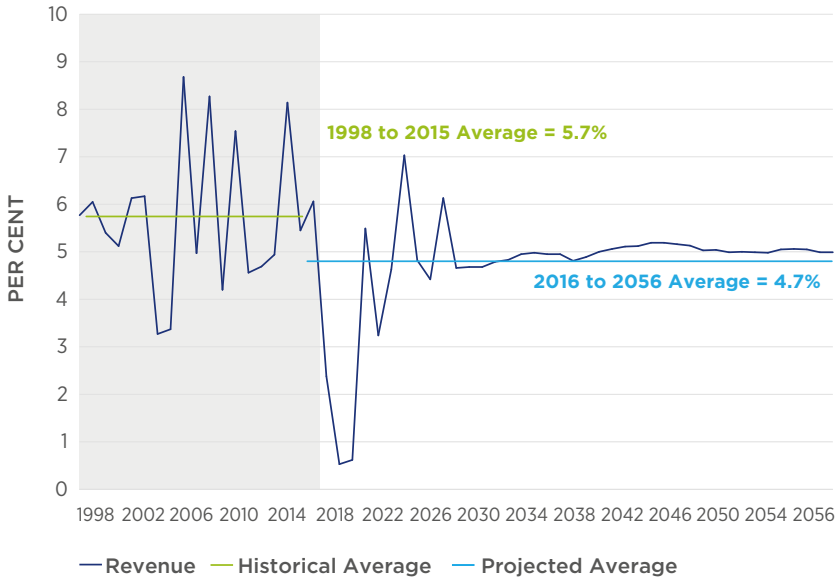


Source: NSW Treasury

Revenue growth is expected to be lower than the historical average. From 1996-97 to 2014-15, revenue rose by an average of 5.7 per cent each year (Chart 5.2). That is 0.4 percentage points above the 5.3 per cent average growth in nominal GSP over that period. But as set out in the 2015-16 Half Yearly Review, state revenue growth over the four years to 2018-19 is projected to average 2.6 per cent a year. After this initial sharp decline, growth is expected to recover somewhat.

For the period 2019-20 to 2055-56, revenue is expected to grow by 5.0 per cent a year, which is 0.2 percentage points above the 4.8 per cent average growth in nominal GSP.

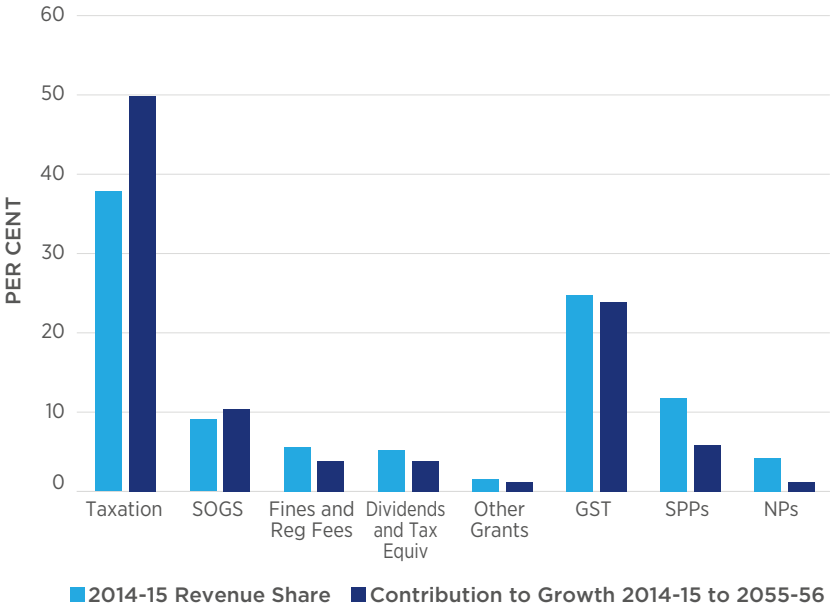
Chart 5.2 Revenue growth is expected to average 4.7 per cent a year over the projection period[4]



Source: NSW Treasury

The average revenue growth of 4.7 per cent a year over the projection period reflects a combination of faster growth in states taxes and slower growth in Commonwealth payments. Payments from the Commonwealth are expected to grow at an average of 4.2 per cent a year. In contrast, state taxation revenues are expected to grow by around 5.4 per cent per year, mainly reflecting strong growth in transfer duties and payroll tax (Chart 5.3).

Chart 5.3 Revenue shares and contribution to growth by source



Source: NSW Treasury

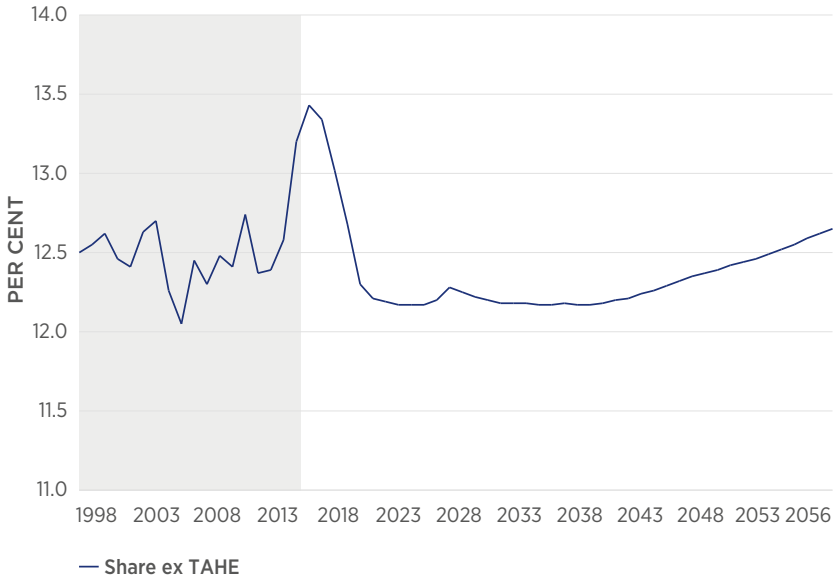
4 Adjustments have been made to exclude the impact of Commonwealth fiscal stimulus over the years 2009 to 2013

HOW WILL WE FUND OUR SERVICES?

Ageing contributes to the slowing of revenue growth through its impact on workforce participation and hence economic growth. Without ageing, revenue growth would be 5.2 per cent a year over the projection period, which is higher than nominal GSP growth, consistent with past trends.

Historically, revenue as a share of GSP has averaged around 12.5 per cent, with a cyclical peak in 2014-15 driven by strong GST and transfer duty revenue growth. Chart 5.4 shows that revenue as a share of GSP is expected to fall below the historical average in the short-term. This is because of lower growth in GST payments and transfer duty, expiring Commonwealth National Partnerships, and changes in dividends following the long-term lease of the electricity networks. Over the long-term, ageing and Commonwealth funding arrangements will act as a restraint on revenue growth, with strong state taxation growth expected to gradually increase revenues as a share of GSP in the latter half of the projection period.

Chart 5.4 Revenue as a share of GSP[5]

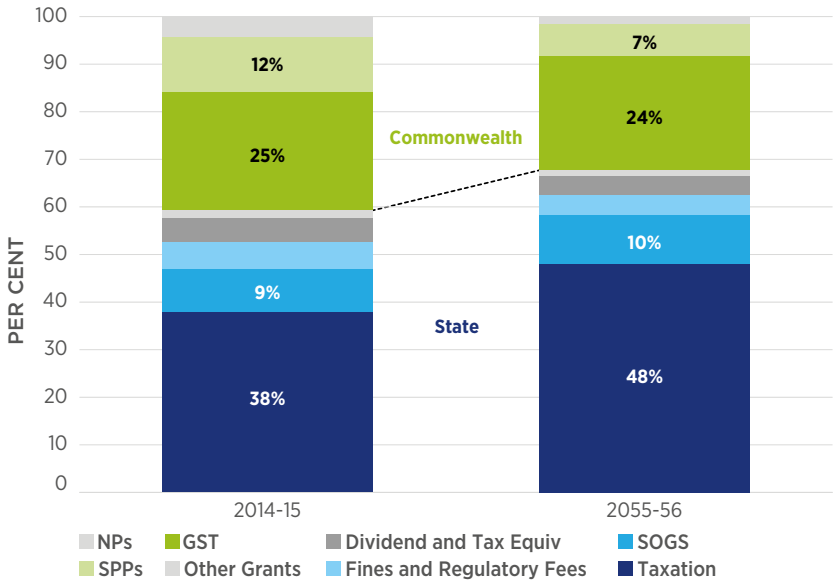


Source: NSW Treasury

Chart 5.5 shows how the composition of New South Wales' revenue base changes over time. The share of revenue sourced from the Commonwealth is projected to fall from 41 per cent in 2014-15 to 32 per cent in 2055-56, offset by an increasing reliance on state taxation.

5 To enable a comparison with historical data, Chart 5.4 excludes fee for service payments made under the TAHE

Chart 5.5 New South Wales will become increasingly reliant on state taxation



Source: NSW Treasury

5.2 State taxation

State tax revenue comes from several sources, each of which are subject to different pressures, some of which are more volatile than others.

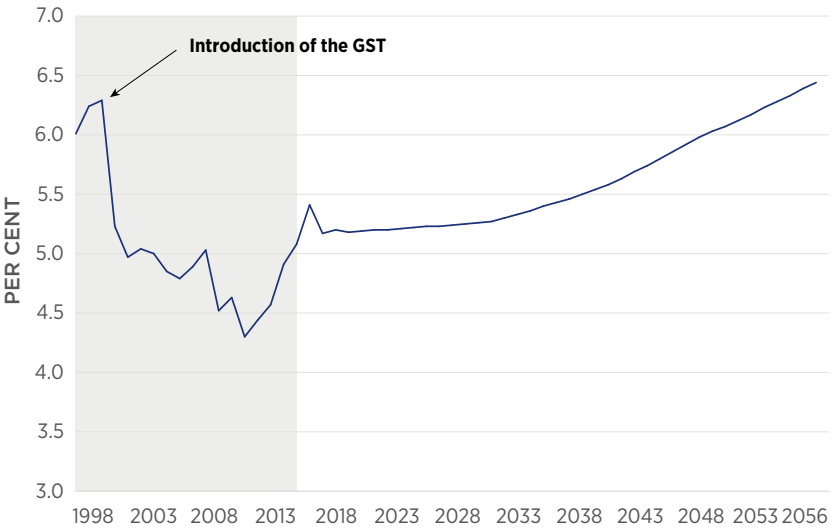
Overall, state taxation revenue is projected to increase by an average of 5.4 per cent a year to 2055-56. This leads to state taxes increasing from $26 billion to $221 billion in nominal terms, and $26 billion to $85.5 billion in real terms. State taxation fell from over 6.0 per cent of GSP in the late 1990s, to a low of 4.3 per cent in 2010-11 (Chart 5.6). This decline was largely due to the introduction of the GST in 2000, which coincided with the abolition of certain state taxes.

Strong tax revenue growth over the last four years has lifted the state taxation share to 5.4 per cent of GSP in 2015-16. State taxation as a percentage of GSP is then projected to rise gradually over the projection period.

STATE TAXATION REVENUE IS PROJECTED TO INCREASE BY AN AVERAGE OF

5.4%

Chart 5.6 State taxation as a share of GSP



Source: NSW Treasury

The growing reliance on state taxation for revenue means that the way the state levies its taxes will be increasingly important, for both revenue and economic growth (see Box 5.1).

Box 5.1

The efficiency of the NSW tax base[6]

NSW tax revenue is projected to become increasingly reliant on what are relatively inefficient transaction taxes, in particular property transfer duty.

Taxes can impose economic costs on New South Wales if they change the decisions of firms and consumers. Taxes imposed on transactions, such as transfer duty or insurance taxes, are relatively inefficient, because people react to them by moving home less often and buying less insurance. Over and above the revenue generated, the state-wide economic cost for every million dollars of transfer duty revenue is estimated to be around $800,000.

Taxes whose economic burden falls primarily on labour, such as payroll tax, have intermediate efficiency. While individual firms' demand for labour is relatively responsive to real wages, most people in the workforce do not change the hours that they work as real wages change. The economic cost of payroll tax is estimated to be around $350,000 for every extra one million dollars of revenue it generates.

Taxes on unimproved land values are more efficient, because the quantity of land does not change in response to the taxes. They also provide no disincentive to make improvements to the land. The economic cost of NSW land tax is estimated to be around $90,000 for every million dollars of revenue it generates.

Without policy change, rising house prices will result in effective rates of transfer duty increasing over time. This will lead to a higher share of NSW tax revenue from transfer duty.

Land-based taxation

Land-based taxation, which includes transfer duty, land tax and insurance duty, grew on average by 8.2 per cent a year over the last 10 years. Its share of total revenue has increased from 12.8 per cent in 2005-06 to 15.6 per cent in 2014-15.

We are becoming increasingly dependent on transfer duty, which is expected to grow at 6.4 per cent a year over the projection period, compared to total land taxes, which grow at 6.3 per cent. But the high average growth rate will not be steady. Year-on-year growth in transfer duty revenue, which depends largely on property transactions, has varied between negative 32 per cent and positive 39 per cent over the last 10 years. As well as being volatile, transfer duty is also relatively inefficient, and its growth as a share of the economy may affect economic growth.

Land tax is expected to grow in line with housing prices and population, averaging 6.3 per cent growth annually over the projection period. Insurance duty grows with the value of housing and vehicle stocks. It is projected to grow by 4.8 per cent a year.

The NSW Government plans to bring the state into line with other mainland states and abolish the current Emergency Services Levy (ESL). The introduction of a property-based levy will provide a fairer and simpler way to fund fire and emergency services, as well as improving the affordability of property insurance. Commencing on 1 July 2017, an Emergency Services Property Levy (ESPL) will replace the existing levy.

6 All estimates from NSW Treasury

Income-based taxes

Income-based taxes include payroll, motor vehicle, gambling and private health insurance taxes. They are driven by income levels, although other factors can also play a role. Revenue from this group of taxes is expected to grow by 4.7 per cent a year to 2055-56. The ageing population has a negative impact on the growth of income-based tax revenue over the projection period, as the share of the traditional working age population falls.

Payroll tax is the largest component of tax revenue, at 11 per cent of total revenue. It is currently collected from employers whose payrolls exceed $750,000 a year and is projected to grow in line with total wages paid at 5.0 per cent a year.

Motor vehicle and vehicle weight taxes are assumed to grow broadly in line with overall economic activity. Combined, these revenues are expected to grow at an annual average rate of 4.6 per cent to 2055-56.

Hotel and club gaming revenue is projected to grow more slowly than it has previously. Growth in gaming slowed since the GFC. This decline appears to be structural. Moreover, recent innovations in gambling and betting — with internet gaming now making cross-jurisdictional betting possible — may further erode these revenues[7]. As a result, long-term projections have declined to 3.3 per cent a year on average, below previous projections.

The Health Insurance Levy is applied to private health insurance policies. It is expected to grow by an average of 4.4 per cent a year over the projection period. The two drivers of this revenue are demographic factors, including ageing, and insurance coverage. As the population moves through life stages, health insurance take-up increases. People are most likely to hold health insurance in their late 50s and early 60s, as the likelihood of making a claim increases. Looking ahead, health insurance coverage rates are anticipated to rise slightly, from 36 to 38 per cent, because we expect that people taking up private health insurance now are less likely to give it up as they age.

Other taxes

Other taxes are relatively small and include the Parking Space Levy, pollution control licences and the Waste and Environment Levy. We generally assume these will increase with consumer price inflation.

Hotel and club gaming revenue is projected to grow more slowly than it has previously. Growth in gaming slowed since the GFC.

7 Productivity Commission, 2010. Gambling (Report no. 50). PC Canberra

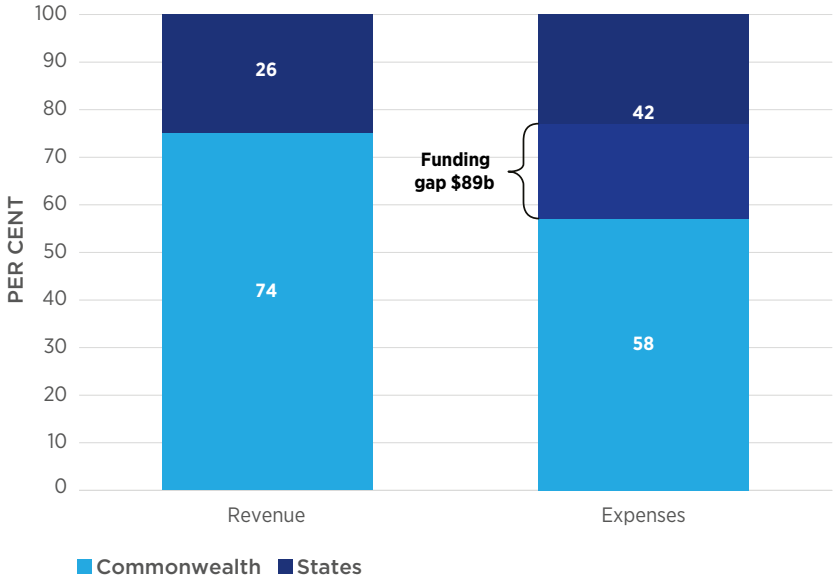
HOW WILL WE FUND OUR SERVICES?

5.3 Revenue from the Commonwealth

The revenue New South Wales receives from the Commonwealth Government is the State's largest source of funds, marginally higher than state taxes. In 2014-15, it was $28 billion, equal to 41 per cent of revenue. That figure includes $17 billion from GST and $11 billion for payments tied to certain state-delivered services. The most significant of the latter group is health, at $5 billion.

These revenue payments are necessary because there is a mismatch between the Commonwealth's capacity to raise revenue and the responsibility of states and territories to deliver services and infrastructure. The resulting funding gap totalled $89 billion for all states in 2014-15 (Chart 5.7).

Chart 5.7 Federal-State funding and expenditure gap, 2014-15



Source: ABS Government Finance Statistics, cat no. 5512.0, 2016, Canberra

Distributing the GST

While GST is a Commonwealth tax, the revenue is distributed to states and territories to use as they see fit. The distribution of these funds among the states is not based on population alone. Rather, it is determined by the Commonwealth Government, which takes into account each state's ability to raise revenue and deliver a nationally average standard of service and infrastructure.[8]

NSW's GST revenue is projected to grow more slowly than the growth in the national GST pool, averaging around 4.7 per cent annually over the projection period.

Historically, the GST revenue collected in New South Wales has exceeded the revenue returned by the Commonwealth, with the difference being provided to the other states and territories. How much GST revenue New South Wales will receive in the future depends on size of the GST pool, NSW's population share and the per capita share the Commonwealth decides to provide to New South Wales citizens.

As set out in the 2015 Commonwealth Intergenerational Report, the GST is projected to grow by around 5.2 per cent a year on average to 2055-56. That is in line with nominal GDP growth. However, NSW's share of the national GST pool is expected to decline. This is partly because our population growth is projected to be below the national average (Chapter One), but more importantly because our per person funding ratio is expected to decline to 2019-20.

8 This is termed 'relativity' and is calculated by the Commonwealth Grants Commission

Historically, NSW's per person GST funding has averaged around 90 cents per dollar in the national GST pool. This rate peaked at 98 cents in 2014-15 as Western Australia and Queensland experienced strong mineral royalty revenue growth from the mining boom. That drove their ratio down to historically low levels — to 30 cents in the dollar for Western Australia. The fading mining boom and the recent strong transfer duty growth, mean NSW's per person funding is projected to fall to around 80 cents in the dollar of the national pool by 2019-20. After that, it is expected to gradually rise to its long-run average — of around 90 cents — by 2024-25, and then to remain constant.

As a result, NSW's GST revenue is projected to grow more slowly than the growth in the national GST pool, averaging around 4.7 per cent annually over the projection period. If, however, the GST were to change structurally over the next 40 years — as it did during the GFC — lowering both consumption and GST revenues, then these projections could change significantly.

Other Commonwealth Payments: Specific Purpose Payments (SPPs) and National Partnerships (NPs)

New South Wales currently receives around 16 per cent of its revenue from other Commonwealth payments, through Specific Purpose Payments (12 per cent) and National Partnerships (4 per cent). SPPs fund essential services such as hospitals and schools, while NPs are tied to specific programs or projects, such as the delivery of essential vaccines or the upgrade of the Pacific Highway. The share of revenue from these programs is expected to fall to around 8 per cent in 2055-56, primarily driven by the expiry of NPs and relatively low indexation rates for Commonwealth health and education funding.

Specific Purpose Payments

Specific Purpose Payments (SPPs) make up the greatest share of other Commonwealth funding, and are projected to grow by an average of around 3.3 per cent a year to 2055-56. This results in SPPs falling as a share of total revenue from 12 per cent in 2014-15, to 7 per cent in 2055-56. The slower growth in SPPs results from the escalation formulae set out in Commonwealth agreements. It also includes the recent 2016 COAG health funding agreement.

The annual average growth rates in individual SPPs over the projection period are as follows:

- **Health**: 3.8 per cent
- **Education**: 3.7 per cent
- **Skills and workforce development**: 1.0 per cent
- **Housing**: 0.9 per cent

Health is the largest SPP, representing 60 per cent of SPP revenue in 2014-15. The 2014-15 Commonwealth Budget signalled that from 2017-18 the indexation of health funding for hospitals would no longer keep up with actual increases in hospital expenses, which are expected to increase by 6.2 per cent on average over the projection period. That decision would have meant that from 2017-18, Commonwealth health funding increases would be limited to growth in population and consumer price inflation — averaging around 3.5 per cent a year — leading to a long-term decline in the Commonwealth share of the state's health funding.

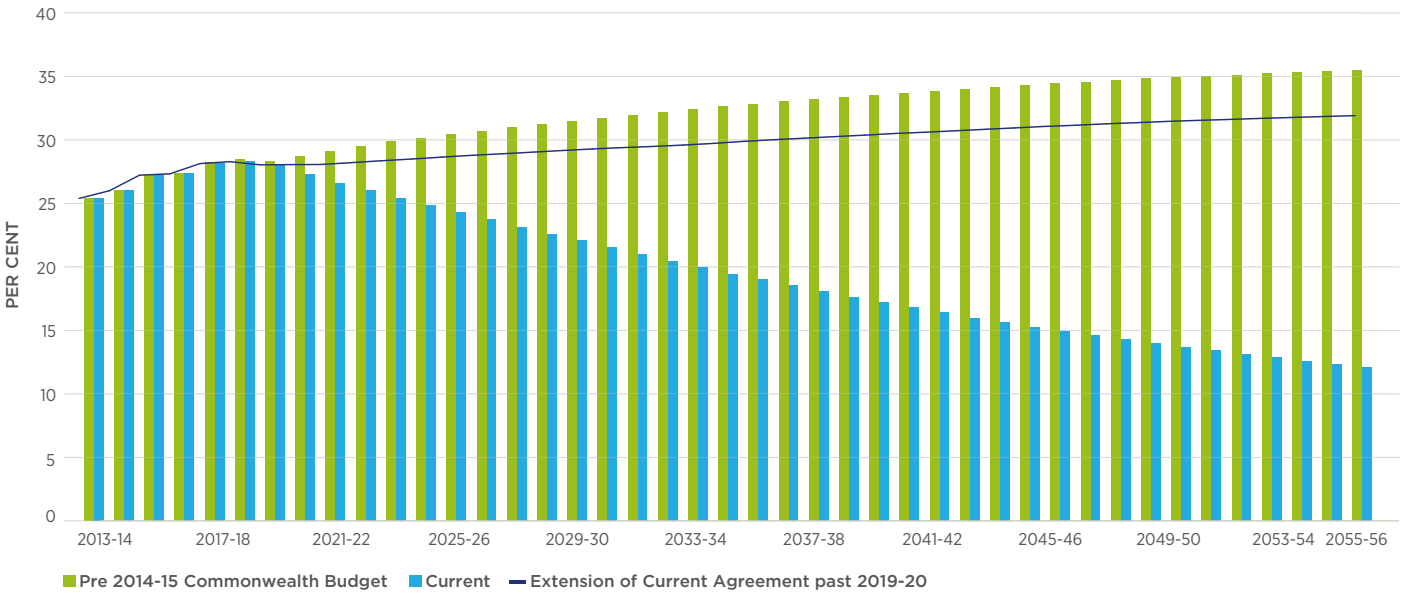
The recent agreement between the Commonwealth and the states has temporarily increased funding for the three years to 2019-20, bringing it back in line with growth in hospital expenses. Our projections are based on existing Commonwealth policy, so that after 2019-20, Commonwealth health funding is again expected to grow, in line with population and consumer price inflation. NSW's share of the health budget is therefore projected to increase from 74 per cent in 2014-15 to 88 per cent by 2055-56 (Chart 5.8), with a commensurate decline in the Commonwealth share. Should the current three year agreement be extended beyond 2019-20, the Commonwealth share of health funding is projected to reach 32 per cent by 2055-56, just below pre-2014-15 Commonwealth Budget funding projections.

Health is the largest SPP, representing 60 per cent of SPP revenue in 2014-15.

The recent agreement between the Commonwealth and the states has temporarily increased funding for the three years to 2019-20, bringing it back in line with growth in hospital expenses.

HOW WILL WE FUND OUR SERVICES?

Chart 5.8 Declining Commonwealth health funding share



Source: NSW Treasury

Education represents 20 per cent of SPP funding. The indexation arrangements for the education SPP have also recently changed. From 2019-20, education SPP funding will grow by the projected rate of growth of the NSW student population plus consumer price inflation. This change from the previous Gonski formula means indexation is expected to fall from 5.3 per cent to 3.7 per cent a year.

National Partnerships

National Partnerships (NPs) are time-limited Commonwealth grants that are tied to specific programs outside the SPP framework. Examples include transport infrastructure projects, universal access to early childhood education and essential vaccines.

While most NP programs are time-limited, some are ongoing. Of those, the most significant is that on Land Transport Infrastructure Projects, which relate to road projects, like the Pacific Highway upgrade. We have assumed that this particular NP will follow historical trends and grow proportionally in line with the NSW transport capital budget. Actual future allocations will, however, be sensitive to future Commonwealth decisions.

The remaining ongoing NPs are projected to either remain flat or grow with consumer price inflation in line with historical trends. Where the Commonwealth has not yet made decisions about expiring NPs, the modelling assumes they will end. This results in NPs growing by only 2.3 per cent per year over the projection period.

5.4 Other revenue

States levy mineral royalties on the extraction of a mineral resource. Currently, 87 per cent of this is thermal coal. Mineral volumes are projected to grow by 1.2 per cent a year in the long term, in line with estimates from the Commonwealth Department of Industry, Innovation and Science.[9]

With the thermal coal price assumed to grow with the consumer price inflation minus any change in the terms of trade, royalty revenue is expected to increase at an annual average of 4.2 per cent over the projection period.

Dividends and tax-equivalent payments from the NSW public trading enterprise (PTE) sector are based on business data to 2020-21 and then escalated in line with nominal GSP. The projections reflect the effects due to the long-term lease of the electricity assets. Average growth in dividends and tax equivalent payments is projected to be 4.1 per cent a year.

Sales of Goods and Services (SOGS) include rents, entry fees, tolls and hospital patient fees. In the past, governments have increased the government services that attract charges and some existing fees have been escalated at rates above CPI. As a result, SOGS revenue has grown by around 6 per cent a year since 1996-97.

Consistent with the 'no policy change' assumption, we have escalated SOGS revenue by CPI and population growth. In some cases however, we have used a more appropriate volume or price escalator. For example, patient fees are escalated with private health insurance coverage and health inflation. In total, SOGS revenue is expected to grow at an average rate of 5.0 per cent a year over the projection period. The slower projected growth compared to historical rates reduces the overall rate of revenue growth by 0.1 percentage points over the next 40 years.

SALES OF GOODS AND SERVICES

▲ 5%

a year on average over the projected period.

9 Office of the Chief Economist, 2014. Australian Energy Projections 2049-50

6 OUR FISCAL CHALLENGE

Without corrective action, the fiscal gap is projected to be 3.4 per cent of GSP in 2055-56.

This gap comes about because expenditure growth (excluding interest) averages 5.3 per cent per year, while revenue growth (excluding interest) averages 4.7 per cent, for the reasons set out in previous chapters.

Expenditure growth exceeding revenue growth by 0.6 percentage points a year means debt would mount, as borrowing would be required to fund the expenditure. The accumulation of debt would be so large that in 2055-56 around 20 per cent of revenue would have to be diverted from services to fund interest payments. This is not sustainable.

Our ageing population is a key driver of the fiscal gap as, unlike other factors, it acts on both revenues and expenses but in opposite directions. Ageing drives higher expenses in health — partially offset by lower education costs — and reduces revenues.

Of course good and sensible government, reinforced by the provisions of the *Fiscal Responsibility Act 2012 (FRA)*, requires that we ensure the sustainability of the State's finances, so that future generations do not have to pay for the services provided to previous generations. Therefore it is critical not only to understand the magnitude of the gap but also to examine ways to reduce it.

Sensitivity analysis shows that the long-term fiscal gap would fall if housing supply increased, the efficiency and effectiveness of government service delivery improved, state revenue improved, and state-wide labour productivity and workforce participation increased. Policy options that could support these outcomes are further discussed in Chapter Seven.

The modelling shows that reducing the impact of ageing, through a strong jobs market and increasing housing supply to attract migrants to New South Wales, is central to addressing the fiscal gap. Loosening the historic connection between economic growth and the demand for government services is also important.

A fiscal gap of 3.4 per cent of GSP is projected in 2055-56 if no action is taken.

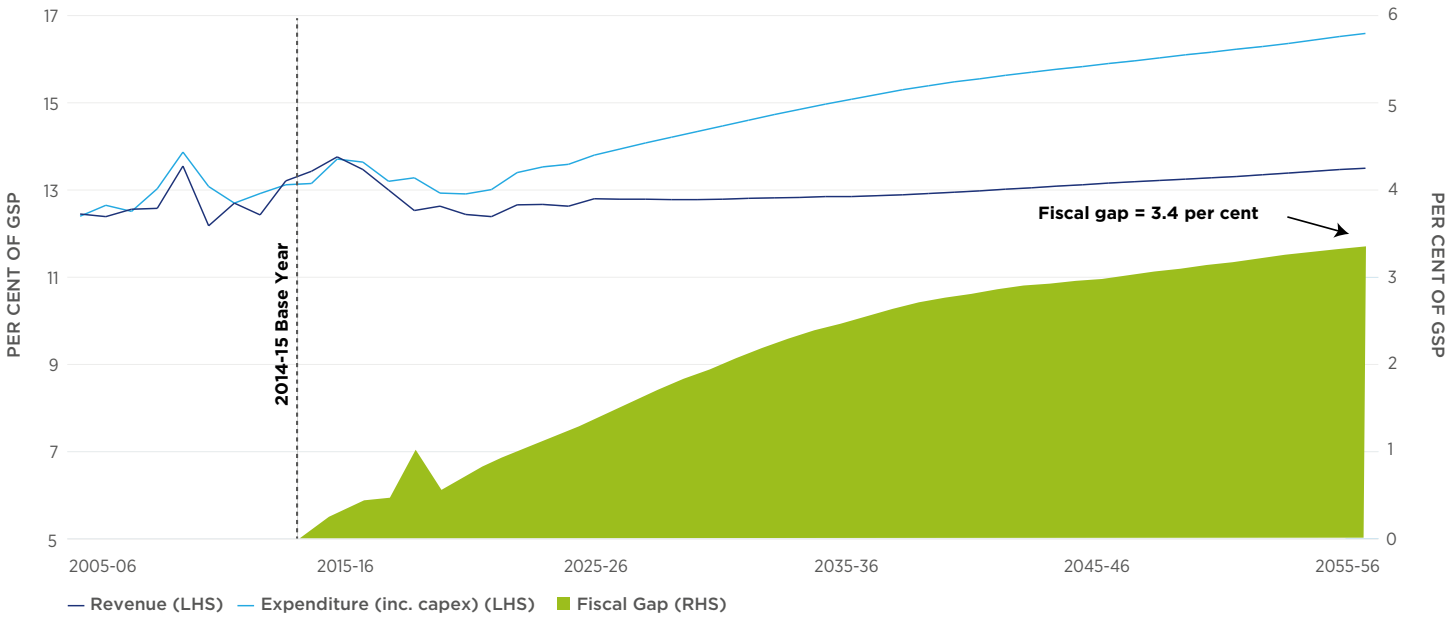
The fiscal gap is not solely within the control of the Government. A number of factors influence the size and growth of the gap, including general economic conditions in the Australian and NSW economies, as well as policy decisions by the Commonwealth Government.

6.1 The fiscal gap

The long-term fiscal gap estimates how fiscal outcomes could evolve over the next 40 years. The fiscal gap is the projected change in revenues less expenditures — including net capital expenditure, but excluding interest transactions — as a percentage of GSP. The change is measured between the base year 2014-15 and the end of the projection period in 2055-56.

The fiscal gap, which is projected to be 3.4 per cent in 2055-56, occurs because over the next 40 years, revenue (excluding interest) is expected to grow at an average of 4.7 per cent a year, while expenditure (excluding interest) grows at 5.3 per cent. This is illustrated in Chart 6.1, which shows revenue, expenditure — including net capital expenditure — and the fiscal gap, as shares of GSP, from 2005-06 to 2055-56.

Chart 6.1 Fiscal gap will be 3.4 per cent of GSP by 2055-56



Source: NSW Treasury

Note. The fiscal gap in 2018-19 is high due to around $3.4 billion of Public Private Partnerships recognised in that year, mostly in transport assets.

The successful implementation of savings measures and a disciplined approach to spending has maintained expense growth below revenue growth since the 2011-12 Report. Consistent with the 2015-16 Half-Yearly Review,[1] revenue and expenditure are expected to remain in relative balance through the forward estimates.

Through the 2020s long-term pressures are expected to increase as revenue fails to keep up with expenditure and the fiscal gap grows through the projection period. In 2055-56 the fiscal gap reaches $17.3 billion (in terms of today's GSP) and accounts for more than 20 per cent of the State's expenditure.

In 2055-56 the fiscal gap reaches $17.3 billion (in terms of today's GSP) and accounts for more than 20 per cent of the State's expenditure.

The fiscal gap is a measure of fiscal pressure, rather than fiscal sustainability, as it does not include accumulated debt and the consequent interest costs. In reality, future operating deficits would be amplified by a build-up of debt and interest payments.

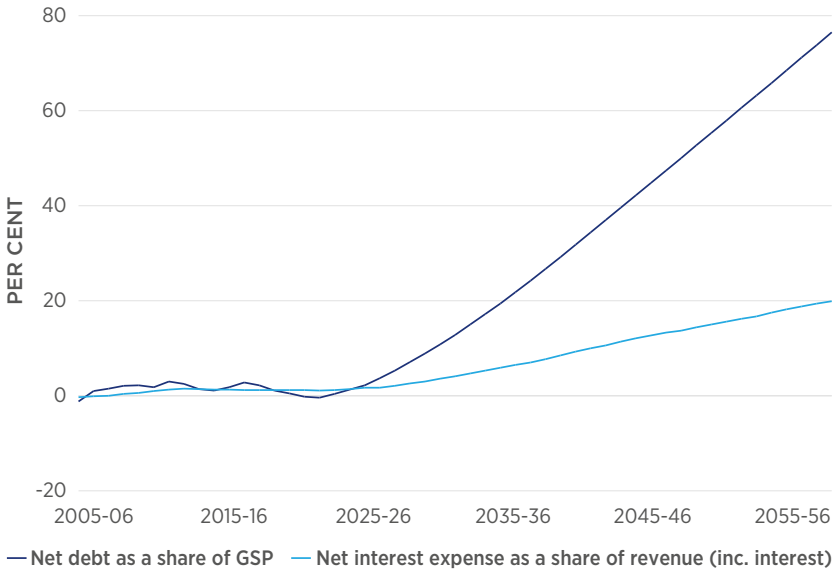
The long-term fiscal gap of 3.4 per cent of GSP is not sustainable, as is illustrated in Chart 6.2, which shows the build-up of debt and interest implied by the fiscal gap. Debt levels are projected to remain at modest levels into the 2020s as the substantial infrastructure program is funded by the Government's asset recycling strategy, rather than debt.

1 For comparison, in the 2015-16 NSW Half Yearly Review, the opening position in the fiscal gap chart is net lending less net interest expenses—interest revenues less interest expenses—as published in the general government sector operating statement.

OUR FISCAL CHALLENGE

The *Fiscal Responsibility Act 2012* requires governments to contain expense growth to below long-run revenue growth, and to maintain the State's triple-A credit rating.

Chart 6.2 Net interest expense expected to climb to 20 per cent of revenue by 2055-2056



Source: NSW Treasury

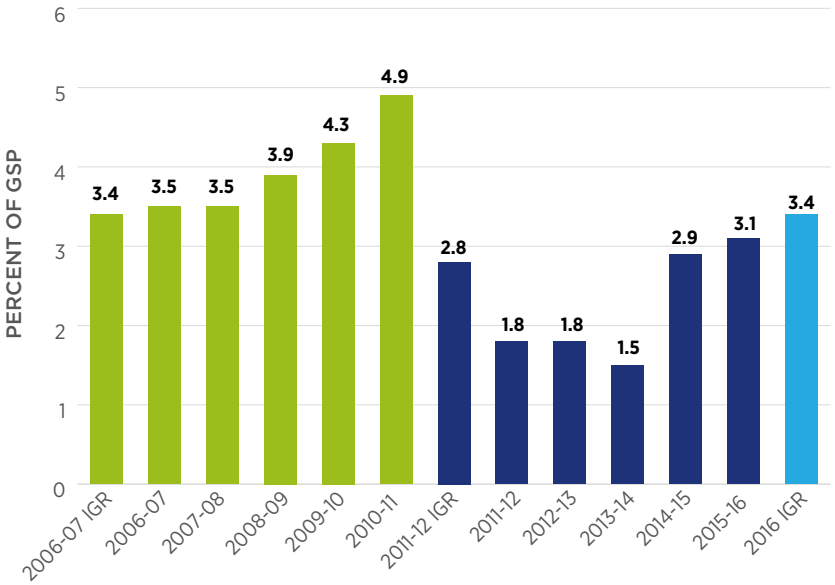
A fiscal gap of 3.4 per cent, if allowed to eventuate, would mean net debt would reach around 75 per cent of GSP and net interest payments would make up nearly 20 per cent of total revenues. In this scenario, over time the government's revenues would increasingly be consumed by interest payments, leaving less for services or infrastructure.

Such a scenario would, in practice, not be allowed to happen. Governments would have to respond with corrective measures well before this outcome materialised. The *FRA* requires governments to contain expense growth below long-run revenue growth, and to maintain the State's triple-A credit rating. As such, this Report measures the fiscal gap to present an indication of the magnitude of the task we face, and is not in any way an attempt to predict budgets up to 40 years in the future.

6.2 How the long-term fiscal gap has evolved

The *FRA* requires an update to the long-term fiscal gap every year in response to government policy decisions and changes in the demographic, economic and fiscal outlook. The evolution of the fiscal gap since 2006-07 is set out in Chart 6.3.

Chart 6.3 History of the long-term fiscal gap



Source: 2006-07 NSW Long-Term Fiscal Pressures Report, 2011-12 NSW Long-Term Fiscal Pressures Report, NSW 2006-07 to 2015-16 Budgets

The first report, published in 2006-07, projected a fiscal gap of 3.4 per cent of GSP in 2043-44. Driving this was the ageing population, declines in workplace participation, slowing economic growth and increasing expense growth — particularly in health. Subsequent policy decisions caused the fiscal gap to widen to 4.9 per cent by the time of the 2010-11 Budget.

The projected fiscal gap was recalibrated to 2.8 per cent of GSP in the 2011-12 Report. This change reflected more up-to-date migration and fertility assumptions, which reduced ageing pressures. Improved data on the age sensitivity of health expenses resulted in lower, but still large, ageing-related health pressures.

The 2011-12 Budget saw a further reduction in the fiscal gap of 1.0 percentage points, due to the National Health Reform Agreement reached with the Commonwealth Government in 2010-11 (0.6 percentage points) and savings measures taken in the 2011-12 Budget, including wages policy, efficiency dividends, program savings and procurement reform (0.4 percentage points).

Cumulative changes over the five years since the last report increased the fiscal gap estimate to 3.1 per cent as set out in the 2015-16 Budget. Over this time most of the larger movements in the fiscal gap — both on the upside and the downside — were the result of Commonwealth funding decisions. The Commonwealth Government's 2014-15 Budget decision to abolish health funding guarantees and change indexation arrangements increased the fiscal gap by 1.3 percentage points.[2] In contrast, the Commonwealth agreement on the National Disability Insurance Scheme in 2012-13 reduced the fiscal gap by around 0.4 percentage points.

The fiscal gap estimate in this Report is higher than in the 2015-16 Budget, mainly as a result of updated demographic assumptions and the newly modelled impact of housing constraints on migration flows.

2 In the 2014-15 Budget, the Commonwealth announced it would limit indexation of state and territory health funding to growth in population and the CPI, rather than actual health cost growth, which is significantly larger

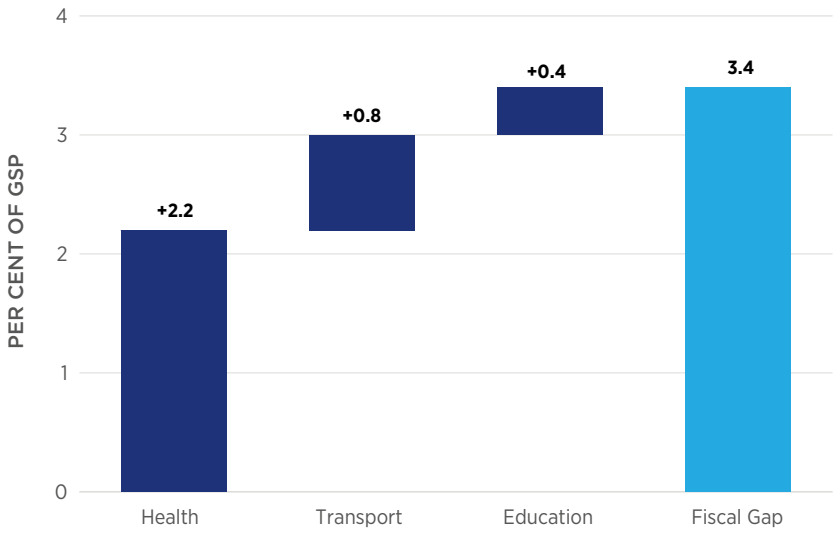
OUR FISCAL CHALLENGE

Ageing contributes 2.2 percentage points or 65 per cent of the fiscal gap.

6.3 The composition of the fiscal gap

Chart 6.4 shows that health expenses make-up around 60 per cent of the long-term fiscal gap. Transport and education expenses make up the rest. The impact of the other expense categories and net capital expenditure are negligible and broadly offset each other.

Chart 6.4 Fiscal gap driven by increasing health, education and transport expenses



Source: NSW Treasury

The size of each sector's contribution to the fiscal gap depends both on the sector's absolute size and the extent to which its expense growth rate exceeds GSP growth. The largest component of the fiscal gap is health — contributing 2.2 percentage points, which is the largest share of NSW expenditure and has the fastest projected growth rate. Transport, which grows almost as fast as health, only contributes 0.8 percentage points as it represents a smaller share of expenditure. While education grows more slowly than either health or transport, it accounts for the second largest share of expenditure and therefore contributes 0.4 percentage points to the fiscal gap.

Health expenses make-up around 60 per cent of the fiscal gap. Transport and education expenses make up the rest.

6.4 The impact of ageing on the fiscal gap

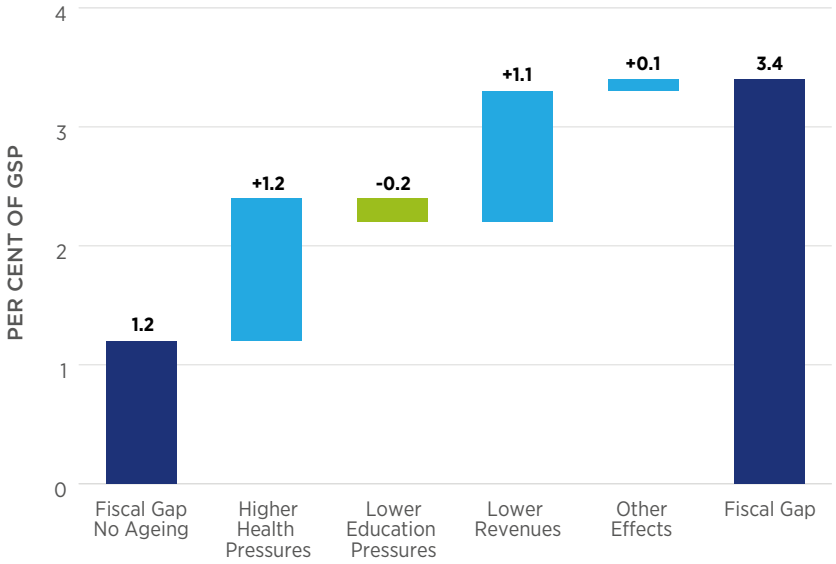
Ageing is different to major drivers of revenues and expenses in that it acts on both revenues and expenses, but in the opposite directions. Ageing reduces revenues and increases expenses and this compounds its impact on the fiscal gap.

An increase in real GSP per capita, inflation or population will increase both revenue growth and expenditure growth. An increase in revenue can at least partially offset the impact of increased expenditure. Any impact on the fiscal gap from factors like GSP, inflation and population is therefore moderated.

To show the significance of the ageing effect we have run a scenario where the population as a whole does not age. The 'no ageing' scenario is projected by keeping the current age structure of the NSW population constant into the future — that is, current population shares represented by each age-group remain unchanged.

Without ageing the projected fiscal gap would be much less, reaching 1.2 per cent of GSP by 2055-56. This suggests that ageing is a significant driver of the fiscal gap, contributing 2.2 percentage points or roughly 65 per cent. In a scenario where the population as a whole does not age, expenses, particularly in health, would be lower and revenues would be higher.

Chart 6.5 Ageing contributes to the fiscal gap by increasing health services and lowering revenues



Source: NSW Treasury

Chart 6.5 presents the key changes in the fiscal gap between the no-ageing and ageing scenarios. These are the differences between each area's contribution to the fiscal gap with, and without, ageing.

The 2.2 percentage point increase in the fiscal gap due to population ageing comes from higher growth in health expenses (+1.2 percentage points) — partially offset by lower growth in education (-0.2 percentage points) — and slower growth in revenues (+1.1 percentage points). The slower revenue growth is primarily due to lower transfer duty, land tax and payroll tax revenues. Housing price and payroll tax growth decline with a smaller traditional working-age population share.

An older population will increase relative demands for health services, while reducing relative demand for education.

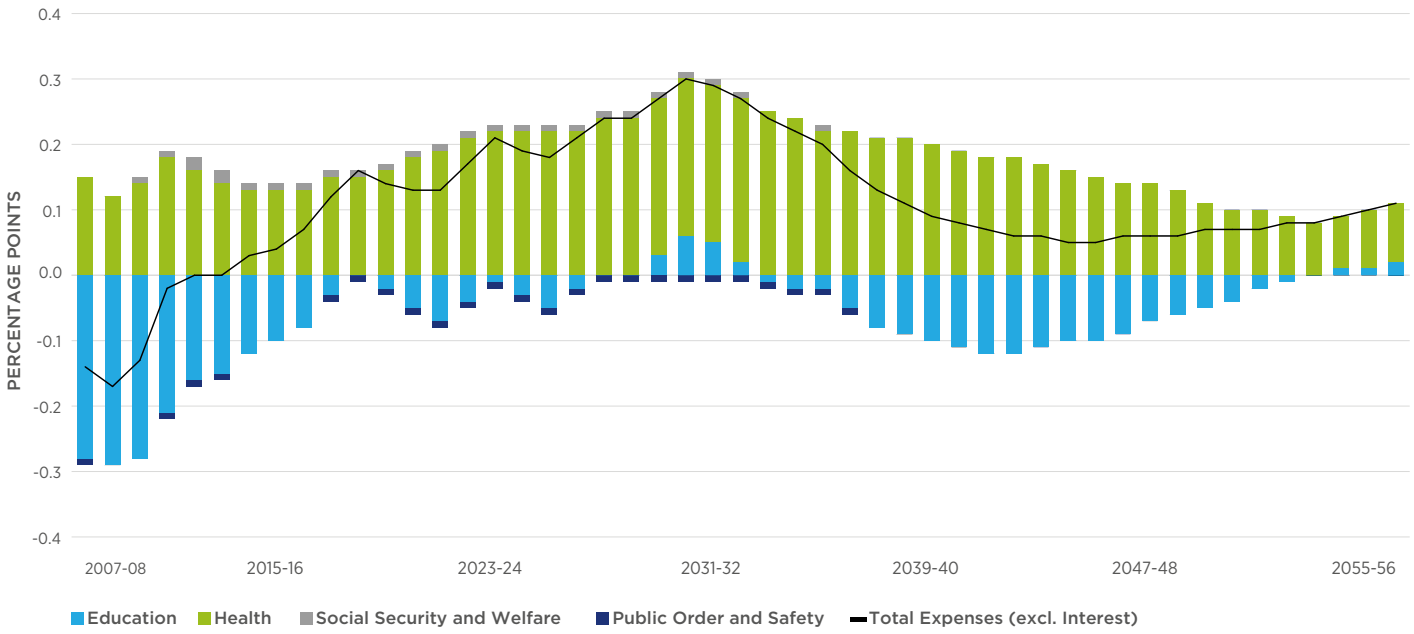
6.5 The impact of ageing over time

Chart 6.6 shows the relative contributions of ageing-related expense growth from various expense categories over time. It illustrates that, on average, higher ageing-related expense pressures in health are partially offset by relatively lower pressures in education.

Net ageing expense pressures (black line in Chart 6.6) are projected to increase annual expense growth by an average of 0.2 percentage points over the next 40 years, but are uneven in their impact over time. These pressures build up over the next 16 years as the baby boomers age and will be most intense through the 2020s. Ageing pressures are expected to peak in 2029-30, around the time when an uplift in educational cost pressures will begin to ease, after which growth in ageing pressures is projected to decline to more modest levels.

OUR FISCAL CHALLENGE

Chart 6.6 Contribution of ageing to expense growth by service area



Source: NSW Treasury

Migrants tend to be of prime working age and increasingly educated. Greater migration therefore tends to reduce the aged dependency ratio, moderating health expense pressures, without imposing additional educational pressures. Increases in migration also tend to boost revenue, through a larger traditional working age population share and consequently higher economic growth.

As discussed in Chapter Three, an older population will increase relative demands for health services, while reducing relative demand for education. To a lesser extent, social security and welfare costs will also increase as a result of ageing, as demand for services for the aged increase. Public order and safety expenses pressures will be slightly lower due to the tendency for the prison population to be skewed towards younger people.

6.6 Sensitivity analysis

Central to closing the fiscal gap is an understanding of the extent of the influence of the factors driving it. This is perhaps more important than the size of the gap, because it gives us a sense of the nature and extent of the measures required to address it. This section presents the sensitivity of the fiscal gap to key parameters including: population, housing supply, house price growth, participation, productivity, and government revenues and expenses.

In a departure from previous reports, in this sensitivity analysis improvements or deteriorations in GSP per capita growth are not directly flowed into modelled expenses. The results presented in this section therefore illustrate how sensitive the fiscal gap is to improvements in economic growth, when the connection between real income growth and demand for government services is loosened.

The policies that influence the extent to which the demand for government services is automatically linked to economic growth are discussed in Chapter Seven. Choosing to implement these policies will mean that a boost to the economy will be more effective in addressing the fiscal gap.

Population — fertility rate and migration levels

The population projections are driven by assumptions about fertility, the national level of net overseas migration (NOM) and life expectancy. The central scenario assumes 1.95 births per female, 215,000 inward migrants to Australia a year, and life expectancy of 88.6 years for males and 91.4 years for females by 2056.

Table 6.1 presents the projected fiscal gap if the fertility rate and Australian NOM assumptions are altered. Life expectancy is not tested in this sensitivity analysis because, unlike migration and fertility, life expectancies can be projected more accurately; do not have a large impact on the results; and are not as directly influenced by government policy decisions as fertility and migration.

Table 6.1 Impact of fertility and net overseas migration on the fiscal gap

		Fertility rate (births per female)				
		1.65	1.80	1.95	2.10	2.25
Annual Australian Net Overseas Migration ('000)	190	3.7	3.6	3.6	3.6	3.5
	215	3.4	3.4	3.4	3.3	3.3
	240	3.2	3.2	3.1	3.1	3.0

Source: NSW Treasury

The fiscal gap only changes modestly when the fertility rate changes. This is because while higher fertility will increase the share of younger people and therefore ameliorate ageing; relatively higher education expenses partially offset health savings.

The fiscal gap is, however, more sensitive to changes in the Australian NOM. The fiscal gap improves by 0.1 percentage points for every 25,000 additional migrants to Australia a year, of which New South Wales would receive an average of around 7,000. Increased migration reduces the fiscal gap because it ameliorates population ageing and therefore increases participation.

Migrants tend to be of prime working age and increasingly educated. Greater migration therefore tends to reduce the aged dependency ratio, moderating health expense pressures, without imposing additional educational pressures. Increases in migration also tend to boost revenue, through a larger traditional working age population share and consequently higher economic growth.

An increase in the housing supply of 10,000 a year increases annual growth in both population and traditional working age population by 0.1 and 0.2 percentage points respectively.

Housing supply

While the level of Australian NOM is largely a policy decision of the Commonwealth Government, the NSW Government can influence the state NOM share and NSW net interstate migration (NIM) in indirect ways. These include providing services and infrastructure to enable a larger housing supply, and therefore a larger population.

In Chapter Four we set out the relationships between housing supply, infrastructure and population. House prices and job opportunities are key determinants of a migrant's decision about where they will live. Table 6.2 below summarises the modelled demographic, economic and fiscal impacts of increased housing.

Table 6.2 Projected outcomes under different housing supply scenarios

	Average Annual New Dwelling Construction				
	53,500	48,500	43,500	38,500	33,500
Fiscal gap (per cent of GSP)	3.2	3.3	3.4	3.5	3.6
Aged Dependency Ratio (at 2055-56)	39.0	40.3	41.6	43.1	44.8
Compound annual average growth rate (2014-15 to 2055-56):					
– NSW population	1.1	1.1	1.0	0.9	0.8
– Traditional working age population (ages 15-64)	0.9	0.8	0.7	0.6	0.4

Source: NSW Treasury

The construction of 43,500 new dwellings in New South Wales each year over the next 40 years is consistent with current policy. Table 6.2 shows that an increase in the housing supply of 10,000 a year increases annual growth in both population and traditional working age population by 0.1 and 0.2 percentage points respectively. This translates to an increase in total population of around 834,000 people by 2056 and a reduction in the aged dependency ratio of 2.6 percentage points. This would result in an improvement in the fiscal gap of around 0.2 percentage points.

The sensitivity results suggest that even if the increase in housing supply was halved to an additional 5,000 per annum, the improvements would still be significant.

Participation rate

The participation rate drives labour force growth and hours worked and therefore the economy's output. Changes in the participation rate therefore impact on the fiscal gap. Table 6.3 lays out the degree of those sensitivities.

Table 6.3 Sensitivity of the fiscal gap to the participation rate

	Participation rate by 2055-56 (per cent)				
	55.5	57.5	59.5	61.5	63.5
Fiscal gap (per cent of GSP)	4.1	3.8	3.4	3.0	2.7

Source: NSW Treasury

Table 6.3 shows that, for every 2.0 percentage point improvement in participation over the years to 2055-56, the fiscal gap falls by around 0.3 percentage points. This result confirms that policies aimed at encouraging participation are an important element in addressing the fiscal challenge.

Productivity growth

Labour productivity is the principal driver of GSP, real income and living standards. Sensitivities around the underlying productivity growth assumption are set out in Table 6.4. If the annual productivity growth rate increases by 0.2 percentage points a year, the fiscal gap declines by around 1.0 percentage points.

Table 6.4 Sensitivity of the fiscal gap to productivity growth

	NSW annual productivity growth rate (per cent)				
	1.1	1.3	1.5	1.7	1.9
Fiscal gap (per cent of GSP)	5.4	4.4	3.4	2.4	1.6

Source: NSW Treasury

Government productivity and efficiency

Table 6.5 shows the sensitivity of the fiscal gap to changes in government productivity. This assumes improved efficiency will commensurately reduce expense growth, while maintaining services.

If government productivity growth increased by 0.2 percentage points a year, this would reduce the fiscal gap by 1.4 percentage points. An increase of just over 0.5 percentage points in government productivity per year would close the fiscal gap.

Table 6.5 Sensitivity of the fiscal gap to government productivity

	Percentage point change in service delivery efficiency (government productivity)				
	-0.4	-0.2	0.0	0.2	0.4
Fiscal gap (per cent of GSP)	6.6	4.9	3.4	2.0	0.7

Source: NSW Treasury

Such a result is indicative of the significance of productivity in the public sector and highlights the importance of policies aimed at improving service delivery efficiency, outlined in Chapter Seven.

Revenue growth

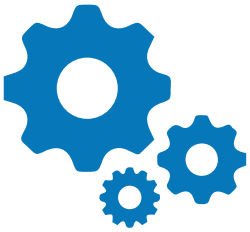
The fiscal gap emerges because projected annual revenue growth rate of 4.7 per cent is lower than the projected annual expenditure growth rate of 5.3 per cent. Table 6.6 shows how changes in the average annual revenue growth will affect the fiscal gap, if expenditure growth is kept constant at 5.3 per cent.

Table 6.6 Sensitivity of the fiscal gap to the average annual rate of revenue growth

	Percentage point change in average revenue growth 2014-15 to 2055-56				
	-0.2	-0.1	0.0	0.1	0.2
Fiscal gap (per cent of GSP)	4.4	3.9	3.4	2.9	2.3

Source: NSW Treasury

7 OPPORTUNITIES AND CHOICES



We can close the fiscal gap by strengthening our economy, delivering better services and infrastructure and building a more sustainable revenue base.

The analysis in this Report outlines how, if current policies and programs remain as they are, New South Wales is projected to have a fiscal gap in 40 years. The key question therefore is what can we do to prepare for the future?

This chapter outlines the opportunities and choices we face as a community to shape our future in a more sustainable way. These options are not policy prescriptions; rather they describe the choices available to us.

Our findings point to three broad areas for attention now and into the future:

- strengthening the NSW economy by focusing on population, participation and productivity;
- improving the way we deliver services and infrastructure; and
- improving the sustainability of our revenue base.

First, governments will need to consider how they regulate both the private and public sectors to enable more innovation and greater productivity particularly for new and emerging sectors of the economy. Investments in assets and in people will need to encourage migration, improve workforce participation and increase productivity.

Second, government services and infrastructure delivery will need to be as efficient and effective as possible. Improved services that are consumer-centric and outcomes focused, leveraging the digital age, innovative delivery models and dedicating resources to where they are needed most all offer great potential to improve services at lower cost.

Third, while we know that these opportunities can deliver benefits on the expenditure side of the budget, considering our revenue base and how we pay for services are options that governments can consider to place New South Wales on a more sustainable financial footing.

New South Wales is part of a federal system of government. Working on options with the Commonwealth can improve our fiscal sustainability and deliver the best outcomes for NSW citizens. For example, more cost-effective care for patients with chronic disease can be achieved through the Commonwealth Government's primary care programs and the State's hospital systems working better together.

In many cases, we have already begun the task of developing the opportunities and choices presented in this chapter, but it is likely that this development will need to be accelerated over the coming years if we are to change our projected fiscal path.

7.1 Strengthening the economy

Enabling and growing opportunity does not simply mean lifting economic growth. It also means lifting living standards by improving the environment, social outcomes and income distribution. A strong and flexible economy can support these objectives. It will also allow us to deal with global changes, such as technological change, the impact of climate change and the economic rise of Asia.

The NSW Government can strengthen the economy by regulating and investing with an eye to making New South Wales an attractive place to live and work by ensuring that:

- competition and innovation flourish across the economy;
- investments in our people improve productivity and workforce participation; and
- investments in infrastructure support a growing and ageing population and improve productivity.

Enabling competition and innovation

Sustaining a strong economy depends on a competitive and innovative private sector. In New South Wales, more than 85 per cent of employees work in the private sector.[1] In some cases, they are volunteers rather than paid employees.

With rapidly advancing technology and an ever changing external economic environment, governments will need to continually reassess how they regulate and interact with markets to support the innovation and productivity that delivers better goods and services to our community.

Regulating with a 'light touch' can encourage firms and non-government organisations to be more responsive to consumer needs. It can support the market to produce innovative goods and services and deliver better quality and more consumer choice. This also means reconsidering the regulation of existing markets and the government's role of market stewardship, so that innovative technologies and practices do not disadvantage new entrants in a given market.

Regulating with a 'light touch' can encourage firms and non-government organisations to be more responsive to consumer needs.

A recent example of this is the legalisation of point-to-point ride sharing services. These changes involved the repeal of more than 50 regulations governing taxis and hire cars, and opened up the market to increased competition.

Governments will also need to be flexible in regulating to allow for new technologies and industries that may not yet exist. For example, Opal electronic ticketing is an 'open system,' which means it could be scaled up to allow customers to use it on their credit cards or mobile phones.

Governments can also encourage competition and innovation through competition policy. In the 1990s, an in-depth review of competition policy (Hilmer Report) enabled Australian governments to collectively improve the economic performance of every state and territory. The Productivity Commission found that the productivity improvements and price reductions that followed raised Australia's GDP by 2.5 per cent.[2]

A recent review of national competition policy (the Harper Review) has called for acceleration in competition policy at all levels of government either collectively or individually. The changes to the point-to-point transport market and retail trading hours are NSW examples of first steps in this process. The Harper Review also identified human services, planning and transport as state government activities for future attention.

Investing in our skills

Training and education are investments in our individual and collective future. They improve our employment prospects, make us more productive and increase our earning capacity. They enhance our quality of life and help us take advantage of future work opportunities.

Training and education will give us the opportunity and ability to respond to the evolving NSW economy.

Our collective level of education is also vital to the prosperity of the economy. The Organisation for Economic Co-operation and Development (OECD) reports that the quality of schooling in a country is a powerful predictor of long-term national wealth.[3]

Over the next 40 years, while we may not know how we will work in the future, we do know that the jobs of the future will likely be very different from today. Continuous and flexible education and training will therefore give us the opportunity and ability to respond to the evolving NSW economy. Improving educational outcomes from preschool through all stages of a student's life (see Box 7.1) will be an important part of a long-term strategy to improve living standards.

Beyond school, the Vocational Education and Training (VET) sector builds human capital, drives productivity and encourages workforce participation. VET enhances occupational choices and increases the capacity for individuals to pursue a fulfilling career.

1 Australian Bureau of Statistics, 2016. Labour Force Australia Detailed (cat no. 6291.0). ABS, Canberra
2 Productivity Commission, 2005. Review of National Competition Policy Reforms. Inq. Rep. PC, Canberra
3 Ludger, W., 2015. Universal Basic Skills What Countries Stand to Gain: What Countries Stand to Gain. OECD Publishing

The right infrastructure investments will ensure that New South Wales remains an attractive place to live and work.

Over the next 40 years, the challenge will be to ensure the VET sector is nimble, adaptable and responsive to the changing demands of business for skilled workers, particularly where skills shortages exist. At the same time, it needs to adapt to students' preferred training delivery modes. Reforms to the VET sector, such as the NSW Smart and Skilled reform, are opportunities to increase student choice and produce a more responsive training sector.

Lifting our skills and therefore participation and productivity go beyond just investing in our education system and includes creating workplaces that are family friendly and generationally diverse. While national workforce participation is largely influenced by Commonwealth policy, the NSW Government can encourage flexible and diverse workplaces and work arrangements. The State can also consider how the public health system supports people to get into, stay in and fully utilise their capabilities in the workforce throughout their longer lives.

Investing in the right infrastructure

In 2014-15 the public and private sectors invested $109.5 billion of capital in New South Wales, which was 21 per cent of GSP.[4] As discussed in Chapter Four, investing in infrastructure has a key role to play in making New South Wales an attractive place to live and work and improving productivity across the economy. Capital deepening, that is, the increase in capital per worker, contributed almost 60 per cent of the growth in national labour productivity in 2013-14.[5] In New South Wales, the Government's Rebuilding NSW program is set to deliver a real increase of 3.6 per cent in GSP by 2035-36.[6]

Governments will need to respond to long-term demographic and economic conditions. While we may not know for certain what infrastructure projects are required in the next 40 years, the government can control the way the NSW planning system works and the investment projects it selects. It can make planning choices and investments that focus on improving living standards, workforce participation and productivity. It also means making choices and investments that encourage migration to boost the working age population and help offset the impacts of an ageing population.

According to the Productivity Commission, returns from investment in infrastructure are not guaranteed and depend on how successful investment decisions are and how efficiently infrastructure is used.[7] As such, rigorous assessment and streamlined delivery processes will therefore be integral to a long-term strategic approach to capital investment.

As the first state government to set up an independent statutory authority, Infrastructure NSW, to review and advise on infrastructure projects, New South Wales is in a good position to continue to improve the way we deliver high quality and efficient public infrastructure projects. For example, one of the recommendations in the Productivity Commission's *Inquiry into Public Infrastructure* is to improve the use of rigorous and transparent pre-evaluation and assessment tools (such as cost-benefit analysis) in project prioritisation and selection.[8]

4 Australian Bureau of Statistics, 2015. Australian National Accounts: State Accounts, 2014-15 (no. cat. no. 5220.0). ABS, Canberra.
5 Productivity Commission, 2015. PC Productivity Update, 2015. PC, Canberra, p. 33
6 Deloitte Access Economics, 2014. Economic Impact of State Infrastructure Strategy — Rebuilding NSW, p. i
7 Productivity Commission, 2015. PC Productivity Update. PC, Canberra, p. 10
8 Productivity Commission, 2014. Inquiry into Public Infrastructure. PC, Canberra

7.2 Delivering better services and infrastructure

In 2014-15, government services and infrastructure made up 13.1 per cent of the NSW economy. While this is smaller than the private sector, government services are central to our quality of life, especially where the services are addressing market failure.

The fiscal gap requires us to think strategically about how the government can prioritise and deliver high quality services more effectively and efficiently. International and Australian experience demonstrates that policies can help achieve this when they focus on:

- consumer-centric services that focus on long-term outcomes;
- leveraging the digital age;
- using innovative funding models; and
- improving efficiency across the public service.

Consumer-centric services provide more choice and control to the individual and can place people on better life pathways.

Consumer-centric services that focus on long term outcomes

Placing the consumer at the centre when delivering services can improve outcomes for individuals in two ways. Consumers have more choice and control in what they receive, and services better meet their individual needs, which can place them on better life pathways.

First, the Productivity Commission's *Disability Care and Support Inquiry* and the *Competition Policy Review Panel* both recommended the adoption of greater choice in public service provision. This is based on important findings that:[9]

- there is rightfully a social expectation that people should be able to run most aspects of their lives and that they are a better judge of their own needs than policymakers;
- individuals have different and changing preferences about what matters in their lives; and
- a lack of choice can result in poorer quality, expensive services and less diversity and service innovation.

A key example of this approach is the National Disability Insurance Scheme (NDIS), which will enable people with disability to exercise choice and control, both in the pursuit of their goals and the planning and delivery of their supports.

It is important to be mindful that within a framework of greater user choice, governments retain an ongoing market stewardship function. This means that governments retain responsibility for overseeing the impact of policies on users and facilitating a well-functioning market.

Second, investing in consumer centric services that are targeted and outcomes focused can have profound positive impacts on satisfaction and long-term wellbeing. Such an approach to targeting investment can improve lifetime outcomes across the community and prevent longer term dependence on often costly services.

For example, Australian and international studies have found that good quality early childhood education and schooling can place at risk individuals on positive pathways (Box 7.1). Other opportunities include early and targeted services to reduce childhood obesity that can reduce the likelihood of infants and children developing chronic diseases in adulthood.[10]

9 Productivity Commission, 2011. Disability Care and Support Report Vol.1. PC, Canberra, pp. 355-357

10 World Health Organization, 2016. Report of the Commission on Ending Childhood Obesity. WHO. p. 7

Home monitoring technology improves the detection of acute episodes, reduces the rate of hospital admissions and length of stay at hospital — ultimately improving outcomes for the individual and reducing costs to government.

Box 7.1

Investing in education delivers long-term results

International and Australian experience shows that programs that channel education funding to students from disadvantaged backgrounds can improve students' education attainment and later-life outcomes. For example, Jackson, Johnson and Persico (2015) found that a 22.7 per cent increase in spending on appropriate school programs for low-income children can eliminate the education gap between children from low-income and wealthier families.[11]

In New South Wales, the Department of Education's Schools Resource Allocation Model, explicitly directs funding to schools based on need. This includes socio-economic disadvantage, Aboriginality and student disability. In 2016, $860 million was invested in NSW public schools to reduce the gap in outcomes between students from advantaged and disadvantaged backgrounds.[12] Economic modelling by the Department indicates that closing the performance gap between the most and least advantaged students may add $406 billion to the NSW economy over the working life of those students.[13]

Short and long-term positive effects of early childhood education have been shown in Australia and internationally. For example, Victorian analysis using the Longitudinal Survey of Australian Children (LSAC) shows a significant positive association between pre-school attendance and Year 3 NAPLAN outcomes.[14] Findings from international longitudinal studies, such as the US Perry Preschool Program study and UK EPPE/EPPSE study, show long-term benefits such as higher educational attainment, higher future earnings and reduced crime for specific student groups. [15] [16]

These examples show that the right investment in education, particularly for students from disadvantaged backgrounds can place them on improved socio-economic pathways.

Leveraging the digital age

Over the next 40 years there will be opportunities to make better use of data and technology in providing inclusive, customer centric and efficient services.

A good example of this is the use of technology enabled schooling that has given students, particularly in regional and remote New South Wales, access to a range of quality learning experiences regardless of their location. The virtual secondary school, Aurora College, has increased the opportunity for regional and remote schools to extend the learning of gifted and talented students, offer specialist courses with small enrolments and increase the collaboration between students across schools.

Telehealth is another example where technology has improved outcomes for citizens, particularly in the management of chronic disease. Australian and international trials have shown that home monitoring technology improves the detection of acute episodes, reduces the rate of hospital admissions and length of stay at hospital — ultimately improving outcomes for the individual and reducing costs to government.[17]

11 Jackson, C.K., Johnson, R.C., Persico, C., 2015. The effects of school spending on educational and economic outcomes: Evidence from school finance reforms. National Bureau of Economic Research

12 NSW Department of Education and Communities

13 Ibid; in 2014-15 dollars

14 Victorian Department of Education and Early Childhood Development, University of Melbourne, 2014. Early Bird Catches the Worm: The Causal impact of pre-school participation and teacher qualifications on year 3 NAPLAN outcomes. Victorian Government, Melbourne

15 Heckman, J.J., Moon, S.H., Pinto, R., Savelyev, P.A., Yavitz, A., 2010. The rate of return to the HighScope Perry Preschool Program, Journal of Public Economics, vol. 94, pp. 114–128

16 Cattan, S., Crawford, C., Dearden, L., 2014. The economic effects of pre-school education and quality. IFS Reports, Institute for Fiscal Studies

17 Celler, B.G., Sparks, R., Nepal, S., Alem, L., Varnfield, M., Li, J., Jang-Jaccard, J., McBride, S.J., Jayasena, R., 2014. Design of a multi-site multi-state clinical trial of home monitoring of chronic disease in the community in Australia. BMC Public Health 14, 1. Other examples include the UK's Whole System Demonstrator Program and the USA's Department of Veterans Affairs Telehealth Program

The digital age will also provide opportunities to use powerful data analytics (Box 7.2) to deliver more efficient and effective public services. For example, the NSW Data Analytics Centre (DAC) has been established to facilitate data sharing between agencies across the NSW Government to inform more strategic, efficient and whole-of-government based decision making. The DAC works within the NSW privacy and security landscape, and leverages world class data collection tools and applies best practice analytics, providing the opportunity to overcome silos and duplication across government agencies.

Another way we can leverage the digital age is to manage demand for services and the use of infrastructure. An efficient system that has the capacity to spread peak demand can delay the need for additional capital investments to increase capacity. For example, off-peak discounts are available on trains via the Opal electronic ticketing system to encourage trips outside commuter peaks and promote an efficient use of the public transport system.

Box 7.2

The future of government services

As governments embrace digital technology, citizens can expect to enjoy quicker, more convenient and better integrated services than ever before.

Unique digital IDs and single 'gateways' to interact with government online mean that citizens will only have to enter information once to access a host of government services under one account. Streamlining these processes will also reduce opportunities for error and fraud, as well as lower the cost of delivering services.

Though New South Wales is already well down this path, some other countries are taking steps toward the future. Estonians, for example, can go online to register their business within seconds, e-sign documents, access their medical prescriptions, vote for parliament, and receive tax returns within two days of filing — all reflecting high quality and efficient government service delivery.

Greater use of technology for government services can also better cater for citizens varying needs and preferences. Those who want simple services such as basic registrations, renewals and payments will have more self-service and automated options. This means access to government services wherever and whenever they need them, including on their smart phones during their daily commute. Meanwhile, citizens with more complex needs such as disability or homelessness will increasingly benefit from a range of customized services which take into account individual needs and orchestrate the delivery of needed services from different areas of government and non-government providers.

A host of new technologies will allow the secure sharing of data, to enable seamless interactions within and across government agencies, and with non-government partners.

New South Wales is moving into the future with integrated government services through Service NSW for many transactional and information services. In the social services sector, the introduction of Patchwork, a smart, secure web application, provides front line family and community workers and other practitioners across agencies with contact information to connect with one another. This allows for a more comprehensive view of a person's care, more coordinated and earlier interventions, and better relationships between the different parts of a person's service network.

Leveraging the digital age will enable governments to provide more inclusive, consumer-centric and efficient services.

We will have more opportunities to use powerful data analytics to deliver more efficient and effective public services.

Innovative delivery models

There are other opportunities to improve the way we deliver services and infrastructure, by firstly determining who is best placed to deliver those services and secondly, developing innovative ways to fund them.

First, citizens are placing a higher value on the quality of service they receive and are becoming less concerned about the source of service. Increasingly governments have the opportunity to shift away from a 'one size fits all' approach to delivering services, and instead evaluate who is best placed to deliver services and then design the best system for accountably meeting those needs. This may be the government, the community sector or the private sector.

For example, the Auditor General has recently recognised that franchising services on the Sydney Ferries Network has resulted in cost savings, good service performance and effective risk transfer from the government to the private sector.[18]

Second, other ways we can improve how we deliver services and infrastructure is by reconsidering the way we fund them through partnerships with private and non-government sectors. For example, social impact investment brings together capital and expertise from the public, private and not-for-profit sectors to tackle a range of social issues. These partnerships can generate social impact and financial return (Box 7.3).

Another innovative example is the operator-led delivery model that will be used to deliver the Northern Beaches Hospital at Frenchs Forest in Sydney. The NSW Government is partnering with Healthscope to design, build, finance, operate and maintain the new hospital for 20 years. The integrated hospital will be a state-of-the-art facility for both public and private patients, delivering innovative and efficient services to the community.

Other innovative funding strategies like asset recycling are additional opportunities that governments can use to improve the way it delivers infrastructure. Asset recycling strategies release public capital locked up in physical assets. This capital can then be reinvested in the infrastructure needed to promote long-term growth. Asset recycling eliminates the need for government to underwrite the borrowing needs of divested businesses. The State's exposure to risky commercial revenue streams is also reduced, and consumers benefit from private sector led efficiency. Asset recycling has enabled the NSW Government to implement an ambitious infrastructure agenda. It has also helped New South Wales maintain its triple A credit rating.

Box 7.3

Examples of innovative financing for services

Managing expense growth into the future will require a long-term investment approach to services, or understanding how a dollar today can change customer outcomes in the future. Today, powerful data analytics tools are enabling a better understanding of consumer costs and how these change depending on which services they access, and when in their lifetime. These data can also be used to underpin innovative, incentive and results based financing arrangements.

For example, until recently, there has been little data on the life pathways of young people leaving Out-Of-Home-Care (OOHC). To better understand the pathways of these children, the NSW Government's Office of Social Impact Investment commissioned a model of the financial and social benefits of interventions to assist young people who are or have been in OOHC. Preliminary results show that young people who leave OOHC risk poor social outcomes later in life and likely require costly government interventions later in life.

18 NSW Auditor General, 2016. Franchising of Sydney Ferries Network Services

Chart 7.1 Average cost each year for Aboriginal and Torres Strait Islander males since OOHC exit

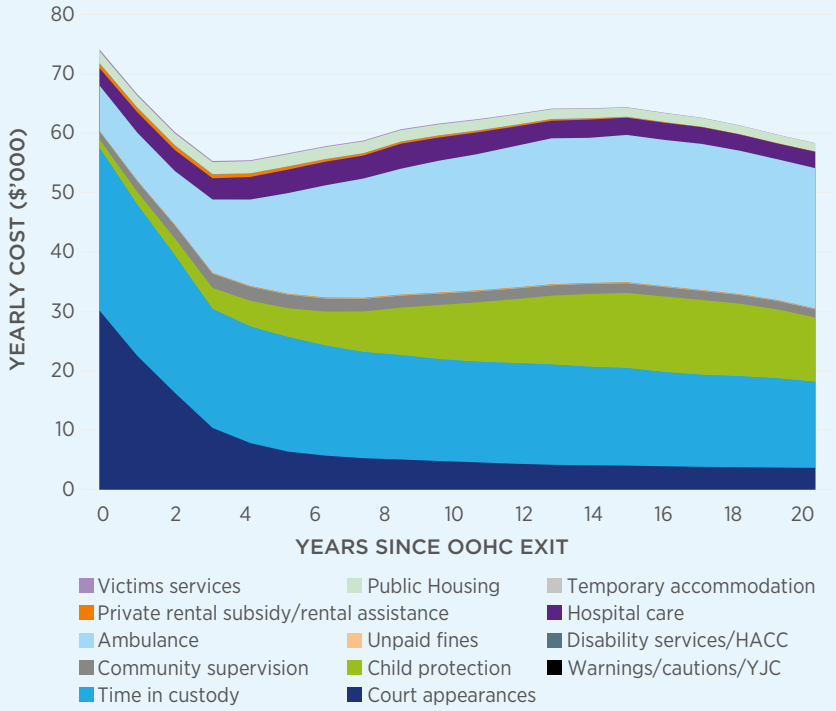
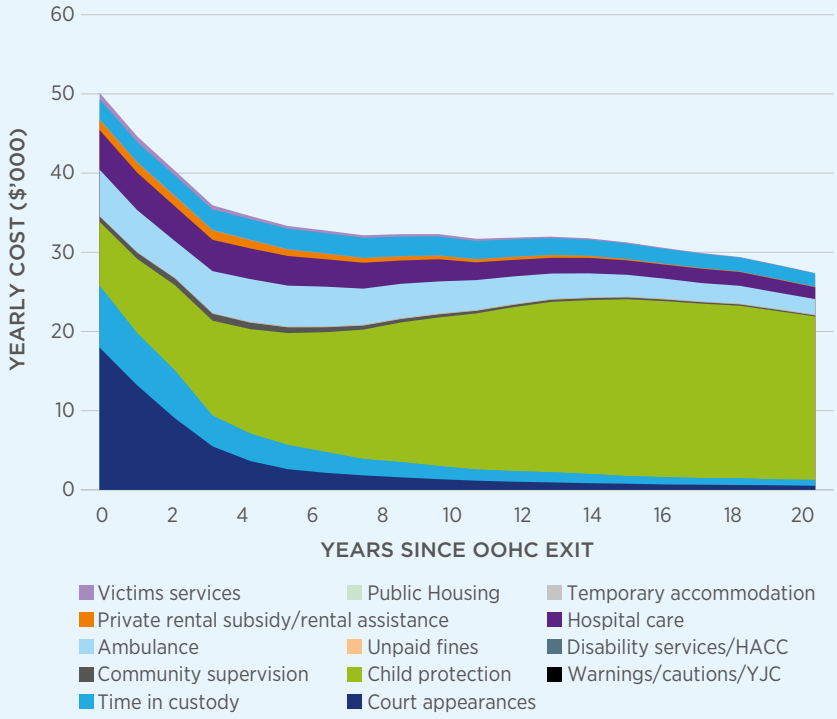


Chart 7.2 Average cost each year for Aboriginal and Torres Strait Islander females since OOHC exit



Source: NSW Treasury model commissioned from Taylor Fry based on service data received from NSW Government agencies including the Department of Family and Community Services, Bureau of Crime Statistics and Research, Ministry of Health and the Department of Finance, Services and Innovation.

Promoting an efficient public service means that resources are dedicated to where they are needed most.

Actuarial analysis as demonstrated above can be used to underpin innovative, 'payment by results' arrangements such as social benefit bonds (SBBs). SBBs are financial instruments that pay a return based on achieving agreed social outcomes and private investors provide up-front funding to service providers to deliver improved social outcomes. These innovative funding models are not about the government agency or service. Rather, they incentivise consumer-driven services that deliver the outcome.

An example of a recent SBB is the Newpin pilot, which funds an intensive support service delivered by UnitingCare Burnside to safely reunite children in OOHC with their families. Encouragingly, the scope to expand innovative pay-by-results funding models is large and can be applied across many government portfolios.

Improving efficiency in the public service

Promoting an efficient public service means that resources are dedicated to where they are needed most. Improving efficiency in the public service not only means that 'less can be more', but it can improve outcomes for NSW citizens and close the fiscal gap as discussed in Chapter Six.

Initiatives to streamline government agencies, like the Government's eliminating duplication project, are ways to improve efficiency across the public service. An independent panel has been tasked to review all public sector departments and agencies, boards and committees. The intention of this reform is to streamline administration and governance arrangements and consolidate government agencies, bodies, boards and committees.

7.3 Building a sustainable revenue base

The two main revenue sources for the NSW Government are payments from the Commonwealth Government (including the GST) and state taxation. A third, currently smaller, revenue source is charges for services and property rights like mineral royalties.

The revenue New South Wales receives from the Commonwealth is our largest source of revenue comprising of the GST and funding for state managed services, the most significant of which is for hospitals.

These payments are necessary given the mismatch between the Commonwealth Government's stronger capacity to raise revenue and states and territories' responsibility for services and infrastructure. As highlighted in Chapter Five, this mismatch totalled $89 billion for all states and territories in 2014-15. Funding decisions by the Commonwealth can significantly impact on NSW services and its long-term fiscal position.

In the absence of nationally agreed reforms like those in disability, state and territory governments are likely to remain best-placed to identify and manage the service and infrastructure needs of their citizens. Modernising Australia's federation arrangements by aligning accountability for service spending with authority for revenue raising would allow states and territories to ensure they have the funds to deliver the services and infrastructure taxpayers expect. A collective agreement on tax policy reform and expenditure responsibilities will ensure states are able to address the fiscal gap directly.

There are opportunities to consider reforms to state revenues that can enhance efficiency, fairness and financial sustainability. For example, the government has announced plans to abolish the Emergency Services Levy. The introduction of a property-based levy will provide a more fair and simple way to fund fire and emergency services, as well as improving the affordability of property insurance in New South Wales.

As a state, we have opportunities to place ourselves in a more sustainable position to manage whatever unfolds in the future. This will mean making choices about how we strengthen the economy, choices about how we deliver services and infrastructure, and choices about our revenue base.

By thinking about these choices now, we place ourselves in a strong position to ensure that for New South Wales, the future is bright.

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APPENDIX

Projections Summary

	2014-15	2025-26	2035-36	2045-46	2055-56	AAGR[a]
Economic projections (%)						
Nominal GSP growth	3.6	4.7	4.8	4.8	4.7	4.7
Real GSP growth	2.4	2.1	2.2	2.2	2.1	2.3
Labour productivity growth	1.2	1.5	1.5	1.5	1.5	1.5
Population growth	1.4	1.0	0.9	0.8	0.8	1.0
Employment growth	1.2	0.8	0.7	0.7	0.7	0.9
Participation rate	63.1	62.3	61.0	60.2	59.5	-0.1
Real GSP per capita growth	0.9	1.1	1.3	1.4	1.3	1.3
NSW Population						
Assumptions						
Fertility (%)	1.85	1.95	1.95	1.95	1.95	—
Female life expectancy (yrs)	85.2	87.2	88.8	90.2	91.4	—
Male life expectancy (yrs)	81.0	83.5	85.4	87.1	88.6	—
Housing construction ('000)	39.8	45.6	43.4	42.9	40.9	43.5[b]
Net migration ('000)	59.4	34.2	38.0	43.6	46.2	41.1[b]
Net overseas migration ('000)	66.1	55.1	58.3	62.1	64.2	59.6[b]
Net interstate migration ('000)	-6.6	-20.9	-20.3	-18.5	-18.0	-18.5[b]
Projections ('000)						
Total population	7,566	8,647	9,504	10,346	11,240	1.0
Under 65	6,388	7,007	7,457	7,974	8,518	0.7
65 and over	1,178	1,641	2,047	2,371	2,722	2.1
Dependency ratios (%)						
Aged dependency ratio	23.7	30.5	35.8	38.5	41.6	—
Youth dependency ratio	28.6	30.2	30.3	29.4	30.3	—
Total dependency ratio	52.3	60.6	66.0	67.9	71.9	—
Fiscal parameters (% of GSP)						
Aggregates						
Revenue	13.4	12.8	12.9	13.2	13.5	4.7
Total expenditure	13.1	13.9	15.1	15.9	16.6	5.3
Expenses	12.6	13.3	14.4	15.2	15.9	5.3
Net capital expenditure	0.6	0.6	0.7	0.7	0.7	5.1
Primary balance	0.3	-1.0	-2.2	-2.7	-3.1	—
Expenditure by area						
General public services	0.4	0.4	0.4	0.4	0.4	4.9
Public order and safety	1.3	1.4	1.4	1.5	1.5	5.2
Education	2.8	3.3	3.3	3.2	3.2	5.1
Health	3.6	4.3	4.8	5.3	5.8	6.0
Social security and welfare	1.1	1.2	1.2	1.2	1.3	5.1
Housing and community amenities	0.4	0.4	0.4	0.4	0.4	4.4
Recreation and culture	0.3	0.3	0.3	0.3	0.3	4.9
Agriculture, forestry, fishing	0.2	0.1	0.1	0.1	0.1	3.5
Transport and communications	1.6	2.2	2.3	2.4	2.5	5.8
Other	0.7	0.6	0.5	0.5	0.5	3.5

(a) AAGR: Average annual growth rate in the levels for the projection period 2014-15 to 2055-56
(b) Arithmetic average over 40 years: 2016-17 to 2055-56

CHARTS AND TABLES

NOTES

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Images courtesy of:

NSW Department of Family and Community Services

NSW Police

NSW Health

Sydney Metro, Transport for NSW

Transport for NSW

Infrastructure NSW

www.treasury.nsw.gov.au/intergenerational-report