Chapter 2
Population

This chapter discusses the current demographic trends for Australia and the implications for its 20 major cities. Australia continues to be more highly urbanised than the majority of the world, but the gap is closing. At present over 3.5 billion of the world’s people live in cities (roughly half), with this projected to rise to 5 billion by 2030 (approximately two-thirds of the world’s projected population) (World Bank, 2014). Australia’s population continues to grow steadily, with the impacts of this growth felt most significantly in our cities.

Australia’s population

Australia’s population in 2015 is approximately 3.5 million more people than a decade earlier, increasing the total population of the country to over 23.6 million (ABS 2015a). Australia’s average annual population growth of approximately 1.4 per cent is substantially higher than the OECD average of approximately 0.5 per cent. An increase of 330,200 people in the last year continues a decade’s strong growth trend, particularly in capital and other major cities (Figure 2.1).

Figure 2.1  Capital cities share of population growth, 1911–2013

Demographic aspects of Australia’s population

In 2013, more than 18 million Australians lived in the 20 major cities. Most of Australia’s recent population growth has occurred in the cities, with the largest 20 all enjoying population growth over the last decade. This has been counterpoised by a marked decline in the proportion of the population living in towns and rural areas – a trend that commenced before 1911 (BITRE 2014).

Australia’s major cities are now home to almost 80 per cent of the Australian population, the result of a process of urbanisation that has been occurring for more than a century. As Figure 2.2a shows, in 2011 almost half of the population lived in the 3 most populous capitals: Sydney, Melbourne and Brisbane.

Figure 2.2a  Population proportion by settlement type, 1911–2011

Source: ABS 2014b.

Approximately 15 per cent of the population lived in cities and towns of between 30,000 and 85,000 with the remainder in rural towns and remote settlements. The latter have experienced uninterrupted decline in the number of people living there since 1911, while the share of the population living in cities and towns of between 30,000 and 85,000 has remained steady since 1991 after a long and slight increase. The decline in the rural population is occurring predominantly in those areas inland and beyond the influence of major city peri-urban processes.

While the largest 3 cities’ and smaller regional cities’ share of the population has remained more or less steady since the 1980s, in a trend that has been ongoing since 1911, the remaining 17 major cities have experienced population increases, notably together they accommodated almost 10 per cent more of Australia’s total population since 1971 as shown in Figure 2.2b.
Figure 2.2b  Population proportion by settlement type, 1971–2011

Source: ABS 2014b.
Population growth in Australia’s cities over the last decade has been substantial and concentrated in the east. Melbourne has seen the greatest growth in absolute terms between 2003 and 2013. Over this period the Victorian capital added approximately 750,000 people, equivalent to more than 200 people per day. Australia’s largest city, Sydney, while adding fewer people than Melbourne over the same period, still grew by almost 600,000 people.
Although in absolute terms Melbourne and Sydney together accommodated over 1.3 million additional people, they were not Australia’s fastest growing cities in percentage terms. The 7 fastest-growing Australian cities added over 1.2 million people between 2003 and 2013.

The capital cities of Perth, Brisbane and Darwin, as well as the regional major cities of Cairns, Gold Coast–Tweed Heads, Townsville and the Sunshine Coast, grew more rapidly than Melbourne and Sydney. Each of these 7 cities grew by at least 20 per cent over the decade. In the case of Perth and Cairns, the decade saw greater than 30 per cent growth.

Five of the 6 cities with the highest rates of population growth were in coastal Queensland, underscoring the ongoing peri-urban trend in Australia.

In contrast, the 6 slowest-growing major cities of Launceston, Hobart, Wollongong, Adelaide, Newcastle and Toowoomba experienced growth of below 1 per cent per year from 2010-14.
Figure 2.4a shows the difference in population growth rates of major cities from 2004-2009 and 2010-2014. Gold Coast-Tweed Heads, Cairns, Townsville and Sunshine Coast experienced reduced growth rates from 2010 to 2014, likely due to fewer jobs resulting from the Global Financial crisis. In part this also reflects a decline in Net Overseas Migration from a peak in 2008. The other factor behind these changes, Net Internal Migration, is playing out differently in each city.

**Figure 2.4b Major city population growth rates, 2004-2009 and 2010-2014**

Australia’s population growth is driven by both natural increase and overseas migration, as illustrated in Figure 2.5, with total population growth closely mirroring the migration component. The natural increase in the population has ranged between 100,000 and 150,000 people per annum over the last 20 to 25 years.

Recently, overseas migration has played a more significant role in national population growth. Net inwards overseas migration has accounted for over 150,000 people per annum since 2006, with a peak of 300,000 in 2009. The Australian Government’s Intergenerational Report 2015 assumes an annual net overseas migration of 215,000 people beyond the current forward estimates (Australian Treasury, 2015).
Chapter 2  Population

Figure 2.5  Components of annual population growth, 1972–2011

The Australian Government’s Intergenerational Report 2015 projects that over the next 40 years, the proportion of the population aged over 65 will more than double. At the same time, growth in the population of traditional workforce age is expected to slow to almost zero, so that the number of people aged between 15 and 64 for every person aged 65 and over will fall to 2.7 by 2054-55 (Australian Treasury, 2015).

Between 1982 and 2013 the life expectancy of Australian women increased from 78.2 years to 84.3 years, while for males during the same period, life expectancy increased from 71.2 years to 80.1 years (ABS 2014e). Fertility rates, although more variable, declined from a peak in 1961 of 3.5 babies per woman, to a low in 2001 of 1.7 babies per woman, before increasing slightly to a rate of 1.9 babies per woman in 2013 (ABS 2014f).

As shown in Figure 2.6, Darwin and particularly the rest of the Northern Territory showed the greatest increase in life expectancy between 2006 and 2012, increasing by more than 2 years. However, both remain below the Australian average (DIRD 2014, table P1.1.1).

Several factors could influence the relatively lower life expectancy experienced in the rest of the Northern Territory and, until recently, Greater Darwin. The most likely factor relates to well-documented lower life expectancy experienced by Indigenous peoples. It is estimated that approximately 30 per cent of the Northern Territory resident population identified as Aboriginal or Torres Strait Islander in 2011 (68,850). In comparison, there are an estimated 208,476 Indigenous persons living in New South Wales and Aboriginal or Torres Strait Islanders represent only 2.9 per cent of the overall population of that state (ABS 2014).
There are minor differences in changes to life expectancy in non-capital major cities which may be a reflection of the shift in the proportion of aged persons. For example, Ballarat residents’ life expectancy increased from 79.9 years in 2006 to 80.7 years in 2012, in Bendigo from 80.6 to 81.2 years and Gold Coast-Tweed Heads from 81.6 to 82.7 years (ABS 2014e). The movement of younger people away from non-capital major cities also results in an increase to the proportion of aged persons.

Australia’s ageing population

The overall result of increased life expectancy and fluctuating fertility rates is that the Australian population is ageing – that is, people are not having children at the same rate as in the past, and people are living longer. This means that the proportion of the Australian population aged over 65 is increasing as a share of the total Australian population.

Over the past half century there have been steady increases in both the number of older people and the proportion of older people in Australia. Between 2001 and 2011 the proportion of people aged 65 years and older increased by 1.5 percentage points from 12.7 per cent of the population in 2001 to 14.2 per cent in 2011 (ABS 2013c).

This proportional increase represents 645,473 more people moving into the older age groups over the decade. As at June 2012, there were an estimated 3.22 million people aged 65 years and over living in Australia (ABS 2013c).

This trend will continue and become more pronounced in coming decades. Latest projections by the ABS (ABS 2013b) show that, within a generation, the proportion of people aged 65 years and over will increase from 14.2 per cent in 2012 to 20 per cent in 2041. Over the same period the proportion of very old people (aged 85 years and over) will double from 1.8 per cent in 2012 to 3.6 per cent in 2041.
Economic implications of an ageing population

An ageing population presents significant social, cultural and economic challenges for governments in Australia. However, there are also benefits for communities, such as increased family child care, healthier old-age workers contributing to the tax base for a longer period of time and increased volunteer numbers (Betts 2014).

An ageing population means that the ratio between the elderly population and the working-age population is rising. This ratio is known as the aged dependency ratio. The Productivity Commission (2005) noted that, even if there were no further improvement in life expectancy and fertility rates, and migration were constant, population ageing would continue. The aged dependency ratio – specifically, the ratio of those aged 65 years and above to those aged 15 to 64 years – would still rise by nearly 16 percentage points from 2003–04 to 2044–45. The Productivity Commission (2013) has concluded that the increase in the aged dependency rate over the next half century will affect labour supply, economic output and infrastructure requirements.

Figure 2.7 shows that the labour force participation rate of Australians aged 55 and over in capital cities has increased from under 25 per cent to 35 per cent over the past 2 decades, with most of the increase occurring since 2000. This trend appears to have levelled off since 2010.

Many factors are likely to have influenced the increase in labour force participation for this age group over that period: for example, changes to superannuation taxation arrangements, a desire by some people to have greater financial security in retirement, continued increases in work force participation by females and macro-economic factors (for example, the Global Financial Crisis) potentially affecting retirement savings.

**Figure 2.7  Labour force participation of people aged 55 years and over in capital cities, 1978–2014**

Source: ABS 2014c.
Note: Greater Capital City Statistical Areas.
Demographic aspects of ageing for major cities

As noted earlier, the ageing population presents a number of challenges for Australia’s future. The significant ageing of the population that is occurring nationally varies considerably across regions and within cities. This has significant implications for a range of planning and design activities, from housing and transport, to delivery of human services and the size of local workforces.

Net overseas migration is also one of a number of factors that create regional variations in age profiles, with a majority (81 per cent) of new settlers to Australia since the mid-2000s being younger than 40 years of age (ABS 2013b). Similarly, net internal migration – the movement of people between regions – influences the age structure of regions.

Figure 2.8 illustrates the age structure of Australia’s 20 major cities. The proportion of population aged over 65 years is more pronounced in some regional cities. The Sunshine Coast has the highest proportion of population over 65 years of age, followed by Wollongong, Geelong, Launceston, Newcastle – Maitland, Bendigo and Gold Coast – Tweed Heads. Of Australia’s capital cities, Adelaide and Hobart have the highest proportion of population aged over 65, and Darwin the highest proportion of population aged 25–64.

However, for the most part, Australia’s capital cities have proportionately younger populations, with almost 3-quarters (73 per cent) of people aged 25 to 29 years residing in Australia’s capital cities – the highest proportion of any 5-year age group (ABS 2013a).

Figure 2.8  Age structure for 20 most populous cities, 2012

Nevertheless, ABS population projections suggest that all of our capital cities will have an increasing proportion of older people over the next half century. Figure 2.9 shows the 2012 projections for the proportion of people aged 65 years and over in the capital cities.
Figure 2.9  Proportion of people aged 65 years and over in capital cities, 2012, 2031 and 2056

Source: ABS 2013b.

Changes in the proportion of older people within populations can mask substantial differences in the absolute increase in the number of older people within cities and regions. As shown in Figure 2.10, between 2012 and 2031 the largest increases in the proportion of older people within capital city populations are projected to occur in Hobart (7.5 per cent), Darwin (5.1 per cent), Adelaide (5.0 per cent) and Canberra (ACT) (4.2 per cent). While proportional growth is important, it is also important to look at actual number increases. In real terms, the proportions in Hobart and Darwin equate to 23,312 and 11,276 people respectively.

However, absolute growth in the number of people aged 65 years is projected to be much larger in the other capital cities, with Sydney and Melbourne each projected to have more than 400,000 people aged over 65 years in 2031 when compared with present.

Overall the number of older people living in the capital cities by 2031 is projected to increase by over 1.5 million people, as shown by Figure 2.10.
In general, it is in Australia’s non-capital cities where the ageing population is more pronounced, albeit on smaller population bases. Regional cities and their surrounding rural hinterland and townships have a high proportion of young people moving away from them and also have a high proportion of older people moving into them. Young people may be relocating to larger towns or cities to undertake educational or employment opportunities that may not necessarily be available in their local area.

This means that regional cities will face significant age related challenges around their infrastructure and transport systems in the future. The regional non-capital cities affected will include Sunshine Coast, Wollongong, Geelong, Launceston, Newcastle - Maitland, Bendigo and Gold Coast–Tweed Heads, which have the highest proportion of their population aged over 65 years.

As Map 2.2 shows, for 2011 at ABS geographic level classification Statistical Area Level 2 (SA2), the regions with the highest proportions (above 21 per cent) of people aged over 65 years are found in a relatively narrow belt of east coast towns and in a chain stretching from the New South Wales/Victorian border to the Queensland Sunshine Coast.
Map 2.2 People aged 65 years and over by East coast Statistical Area Level 2 (SA2) geographic area, 30 June 2012

Source: ABS 2013f
State of Australian Cities 2013 online maps highlighted the areas in 18 of Australia’s major cities in which the proportion of people over 65 years old had increased between 2001 and 2011.

The general pattern identified for most major cities was an increased proportion of older people in some outer and middle suburbs and a decline in the proportion of older people in the inner city areas. Such spatial patterns present challenges, particularly for transport and service delivery.

On the whole, OECD research shows that older people who drive will prefer to continue to do so for as long as possible. However, there may be an increase in the number of older Australians who cannot, or choose not to drive and require increased public transport options.

Older Australians will expect to have access to transport modes that meet their individual needs, especially as they approach 80 years of age.

Future transport systems and services will play an essential role in supporting independent, healthy ageing (OECD 2001), but dispersed aged populations combined with inadequate planning that necessitates travel to access services have the potential to create significant challenges.

Ageing in place

Ageing in place means being able to continue to live independently in the community but not necessarily in the family home. It can also mean living in a downsized home, a rented home (public housing or privately rented) or in alternative accommodation such as a caravan park or boarding house. The desire to ‘stay put’ depends more upon attachment to location rather than emotional attachment to the family home (Olsberg and Winters 2005).

Along with the economic implications of ageing and the spatial distribution of an ageing population, there are challenges around ageing in place. Older people generally have a strong desire to continue to live independently in the community – to retain their personal autonomy, flexibility and lifestyle choices for as long as possible (Olsberg and Winters 2005).

It is recognised that there is a need for governments at all levels to consider their approach to land use planning if ageing in place is to be a major strategy for managing the mobility and safety needs of older people. In particular, there are challenges around developing local services and facilities appropriate to an ageing community and supported by sufficient transport services (OECD 2001).

Population Projections

Population projections need to be used with caution considering they are only an estimate of future population, its characteristics and its distribution. Projections are only possible by making a number of assumptions about future fertility rates, life expectancy, net overseas migration, interstate migration and intrastate migration. Assumptions are informed by past trends and analysis of current population. While projections, particularly those made over the long term, may ultimately prove to be inaccurate, they provide the best picture of the future given the constrained information available in the present. Table 2.1 shows ABS projections of Australia’s population in 2031 and 2061.

The population projections presented are not predictions or forecasts. They are an assessment of what would happen to Australia’s population if the assumed levels of the components of population change – births, deaths and migration – were to occur over approximately the next 50 years.

<table>
<thead>
<tr>
<th>Table 2.1 Population growth projections, 2031 and 2061</th>
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<tbody>
<tr>
<td><strong>ABS population projections – Australia</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Series A</td>
</tr>
<tr>
<td>Series B</td>
</tr>
<tr>
<td>Series C</td>
</tr>
</tbody>
</table>

Source: ABS 2013b.
Based on the ABS medium level projection, Australia’s population is anticipated to grow to 30.5 million at June 2031, and approximately 41.5 million by 2061. These projections assume high rates of net overseas migration as well as higher life expectancy.

The Progress in Australian Regions – Yearbook 2014 (Table C.1.1.2) has used the same ABS data to forecast population projections by region, but has not gone beyond 2026 projections.

### Cities population projections

The ABS produces population projections for Australia, each state and territory and each capital city out to 2061 (Table 2.2). In addition, each state and territory produces its own set of projections for their respective jurisdiction, often using slightly different assumptions to those used by the ABS.

#### Table 2.2 Population projections by capital cities, 2031 and 2061

<table>
<thead>
<tr>
<th>ABS population projections – B series</th>
<th>2012 base population</th>
<th>2031 population</th>
<th>Growth to 2031</th>
<th>2061 population</th>
<th>Growth to 2061</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>Greater Sydney</td>
<td>4,672,619</td>
<td>6,206,843</td>
<td>1,534,224</td>
<td>33</td>
<td>8,493,740</td>
</tr>
<tr>
<td>Greater Melbourne</td>
<td>4,248,344</td>
<td>5,984,219</td>
<td>1,735,875</td>
<td>41</td>
<td>8,580,556</td>
</tr>
<tr>
<td>Greater Brisbane</td>
<td>2,192,065</td>
<td>3,190,129</td>
<td>998,064</td>
<td>46</td>
<td>4,787,996</td>
</tr>
<tr>
<td>Greater Adelaide</td>
<td>1,278,432</td>
<td>1,566,929</td>
<td>288,497</td>
<td>23</td>
<td>1,920,727</td>
</tr>
<tr>
<td>Greater Perth</td>
<td>1,899,999</td>
<td>3,248,550</td>
<td>1,348,551</td>
<td>71</td>
<td>5,451,406</td>
</tr>
<tr>
<td>Greater Hobart</td>
<td>216,981</td>
<td>247,320</td>
<td>30,339</td>
<td>14</td>
<td>270,655</td>
</tr>
<tr>
<td>Greater Darwin</td>
<td>131,938</td>
<td>170,153</td>
<td>38,215</td>
<td>29</td>
<td>225,873</td>
</tr>
<tr>
<td>ACT (Canberra)</td>
<td>375,076</td>
<td>520,412</td>
<td>145,336</td>
<td>39</td>
<td>740,903</td>
</tr>
<tr>
<td><strong>Total Capital cities</strong></td>
<td><strong>15,015,454</strong></td>
<td><strong>21,134,555</strong></td>
<td><strong>6,119,101</strong></td>
<td><strong>41</strong></td>
<td><strong>30,471,856</strong></td>
</tr>
</tbody>
</table>

Source: ABS 2013b.

Based on these projections Australia’s capital cities will increase their share of national population from 66.0 per cent in 2012 to 69.3 per cent in 2031 and 73.4 per cent in 2061.

The majority of Australia’s future population growth is expected to occur in and around its capital cities. The projections suggest that over 75 per cent of Australia’s future population growth to 2031 will occur in its 8 capital cities, rising to over 80 per cent of growth to 2061.

Based on the ABS medium projection, the population of Australia’s capital cities is estimated to grow by approximately 6.1 million between 2012 and 2031 and by 15.5 million between 2012 and 2061. This means the projected growth in the population of capital cities to 2061 is more than the total current population of these capital cities – if realised, Australia’s population living in capital cities will more than double by 2061.

Australia’s capital cities are not all projected to grow at the same rate, with projections indicating that the current population hierarchy of Australia’s major cities will be altered in the coming decades. As shown in Figure 2.11, by 2061 the population of Perth is anticipated to surpass that of Brisbane, which will make it Australia’s third most populous city. The population of Melbourne is also projected to surpass that of Sydney.
Figure 2.11  Actual and projected number of persons by capital cities, 2003–2061

Source: ABS 2013b, 2014d.
Note: The population projections presented are not predictions or forecasts; they are an assessment of what would happen to Australia’s population if the assumed levels of the components of population change – births, deaths and migration – were to occur over the next 50 to 100 years. This figures are based on ABS Series B assumptions.

These projections are consistent with actual population growth exhibited over the past decade. Even under low series projections, Australia’s population will increase by 6.5 million (more than the current populations of Melbourne and Brisbane combined) by 2031. A large majority of these additional people will be located in Australia’s cities.

Population projections are affected by the rise and fall of overseas migration rates. The overwhelming majority of overseas immigrants settle in major cities, with a large proportion locating to the outer suburbs. In Perth the greatest number of overseas-born recent arrivals can be found in the north-west and south-east.

In Queensland, the majority of new arrivals settle on the Gold Coast–Tweed Heads or in Southern Brisbane. In Victoria they settle in the south-east and west of Melbourne (DIRD 2014, table C 1.1.4).

Movement between cities and states also impacts on population growth. New South Wales attracts over 60,000 of Australia’s annual overseas migrants, but on average it loses around 20,000 people annually to interstate migration. By contrast, Queensland attracts around 25,000 domestic migrants in addition to approximately 45,000 overseas migrants who move to the state annually.
Conclusion

Australia’s population continues to grow strongly. The population has risen by an estimated 400,000 people since 2013, increasing the total population of the country to over 23.5 million.

Australians are predominately urban-dwelling people. As cities continue to grow and age, there will be significant challenges, including in infrastructure and transport planning, for all levels of government. The 7 fastest-growing Australian major cities – Perth, Brisbane and Darwin, Cairns, Gold Coast–Tweed Heads, Townsville and Sunshine Coast – increased in total population by over 1.2 million between 2003 and 2013. That growth in population, as detailed in the Settlement chapter largely in detached housing at the edges of these cities, inevitably causes increased transport demand and issues around access to employment and services.

In addition, Australia’s population is ageing. Over the past half century there has been a steady increase in the number and proportion of older people in Australia. This will lead to future challenges, including increased costs to governments for health and aged care. Future projected population increases, including new migrants, and changing demographics of an aging population will also offer challenges. Governments will need to find ways to manage the additional burden on transport systems and the costs associated with new infrastructure.

Australia’s current population and the projected growth of our major cities have implications for the country’s economy and the productivity of our cities. In addition, the spatial aspects of population change and growth cannot be considered purely numerically in a strict supply and demand manner without focusing on settlement patterns. These matters are discussed in the following chapter.
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