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Chapter 3

Australian population futures

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Australia stands at a turning point in its demographic development. It is crucial at this time that a vision of our future population is developed that takes full account of the best scientific knowledge and policy thinking and includes the wishes and opinions of all Australians. Public debate about population and immigration in Australia has too often been dominated by interest groups and has focused on extreme positions. On the one hand are those who believe Australia should increase its population as rapidly as possible and strive to double the current population. On the other hand are some extreme environmentalists who argue for an immediate cessation of population growth. It is my argument in this chapter that both of these extreme positions would have negative consequences for Australia and most Australians. Both positions oversimplify the population issue and see population policy as a silver bullet to deliver either economic prosperity, in the case of the 'growth at all costs' lobby or environmental sustainability by the 'zero growth' lobby. However, the relationships between population and economic growth, environmental sustainability, equity and liveability are much more complex than these simplistic positions suggest. Population policies must take full account of these complexities.

1 The contemporary population

The growth rate of Australia's population has been an issue of considerable recent public discussion. The rate of 2.2 % in 2008–09 was almost twice as fast as that of the global population as a whole as well as being almost 20% higher than growth in less-developed nations and more than five times higher than that of high-income countries. This represents the fastest annual rate of population increase since 1960. Although most recent data (for the year ended 30 September 2010¹ show that the rate has fallen to 1.6%, Australia still has the fastest growing population of any contemporary high-income nation.

To understand this growth requires that the overall rate is disaggregated into the demographic processes that contribute to population change—natural increase (births minus deaths) and net migration (the excess of incoming migrants over outgoing migrants).

Firstly, with respect to the mortality component of natural increase there has been an increase of 13.1 years in life expectancy at birth for males and 13.3 years for females since World War II. Even more striking, however, has been the change that has occurred in the life expectancy of older Australians. For men aged 50, 8.7 years of extra life have been added since 1971 and for women 7.0 years. More and more Australians are reaching retirement age and when they get there they are surviving much longer than earlier generations. (The main exception to this outcome has been the experience of Indigenous Australians, and there is much to be done to close that gap.)

These increases in life expectancy represent a major achievement but they also present a challenge. This challenge is not only because there are many more Australians surviving to old age than in previous generations, but also because it may well be that on average they are sicker than earlier generations. While there is some disagreement regarding this, it would seem that many of the Australians who are surviving through to old age do not do so as fully healthy individuals. In earlier times they would have died, but have been 'rescued from death' by such developments as intensive care units and open heart surgery. In short, Australia's mortality trends while a resounding achievement deliver a double whammy to the health system—there will be more older Australians than was anticipated and, on average, each will make greater demands on the health system. To this picture must be added consideration of obesity. The obesity epidemic in Australia (and elsewhere) has been well documented and represents one of the nation's major challenges. The national discourse on obesity has understandably focused on

1 The national population stood at 22.407 million at that time [6]

children and young people, but in fact it is Australian baby boomers who have the highest incidence of obesity.

The trajectory of *fertility* has a much greater impact on Australia's future population size and age composition than international migration [1] does, but it is accorded too little attention in discussions on Australia's future population. Elsewhere very low fertility rates are posing substantial challenges such as precipitous declines in working-age population and unfavourable ratios between working and non-working population for several European nations and a number of East and South-east Asian countries such as Japan, Singapore and, in the future, China: maintaining fertility at or near replacement can bring significant economic dividends for a nation.

Changes in Australian fertility over the past century can be summarised as follows:

- a steep decline in fertility from around 6 babies per woman in the 1870s to 2.1 in the 1930s Great Depression
- a steep increase in fertility following World War II which saw the total fertility rate (TFR) increase to almost 4 and which continued for around 20 years
- a precipitous fall in fertility in the early 1960s which bottoms out at around 1.9 in the late 1970s
- stability in fertility for a period of around 20 years from the mid-1970s to the early 2000s followed by a small recent increase.

If Australia is able to maintain a TFR of around 2 it will facilitate the eventual transition toward a demographically stable population in which each couple will replace itself, there will be a balance between those entering the workforce ages and those leaving them and there will be low levels of overall growth.

International migration has a larger influence on Australia's population than on any other medium-sized or large country in the world: around a half of Australia's population at any one time are migrants or the Australia-born children of migrants. Australia's international migration has undergone a major paradigm shift since the mid-1990s. The major changes that have occurred are as follows:

- Prior to the mid-1990s Australia largely eschewed temporary migration and the focus of immigration policy was entirely on permanent settlement. However, since the mid-1990s there has been a substantial increase in temporary immigration of people with the right to work in Australia, including students, temporary skilled migrant workers (457 visa) and working holiday-makers.

- There is an increasing focus on skilled migration and, in recent years, on employer nomination so that migration is increasingly being driven by employment demand.
- There has been a substantial increase in the diversity of the migrant intake adding to Australia's increasing multicultural diversity.
- Since the mid-1990s the State Specific and Regional Migration Scheme has channelled an increasing number of immigrants to settle outside of the major gateways of the mainland capitals (except Adelaide).
- Although Australia is emphatically a nation of immigrants, it also records substantial emigration. It is estimated that the Australian diaspora numbers around 1 million and is selective of young, skilled, well-educated Australians.
- Asylum seekers arriving by boat have increased in number but are still relatively few compared with the flows moving into Europe.
- New Zealanders are the largest single birthplace group among migrants to Australia and have ready access to Australia through the Trans-Tasman Agreement.

Ageing is widely acknowledged as not only the most significant demographic challenge facing high-income nations but also their major economic challenge. The series of Intergenerational Reports produced by the Department of Treasury underline the fact that this also applies to Australia [2]. Figure 1 shows the current Australian age structure, and the significance of the baby boom generation is apparent. Baby boomers make up 27.5% of the Australian population and 41.8% of the labour force. They began to pass the 65-year threshold in 2011 and already are beginning to leave the workforce in significant numbers. At the same time, it is interesting to observe in Figure 1 that there is a hollowing in the age pyramid between the ages 5 and 18. Hence the numbers entering the workforce ages will decline over the next decade or so before the recent increase in fertility will see the numbers begin to increase again.

Australia's population distribution is distinctive, being one of the most mobile and spatially concentrated of any country. Currently, 87% of the national population live in urban centres (clusters of more than 1000 people), 63.7% live in the capital cities and more than four out of five live within 50 km of the coastline. Australians move house more than any other national population, with 16.8% moving each year and 41.4% at least once every five years. Paradoxically, given this mobility, the structure of the national population distribution has changed very little over the last 150 years. While the basic structure of Australia's population distribution has been fixed for a long period, there has been a great

deal of dynamism within that structure. Some have argued, for example [3], that there is an increasing dichotomy within non-metropolitan Australia between growing coastal populations and declining inland populations.

Australia: Age-Sex Structure of the Population, June 2009

Source: ABS Estimated Resident Population data

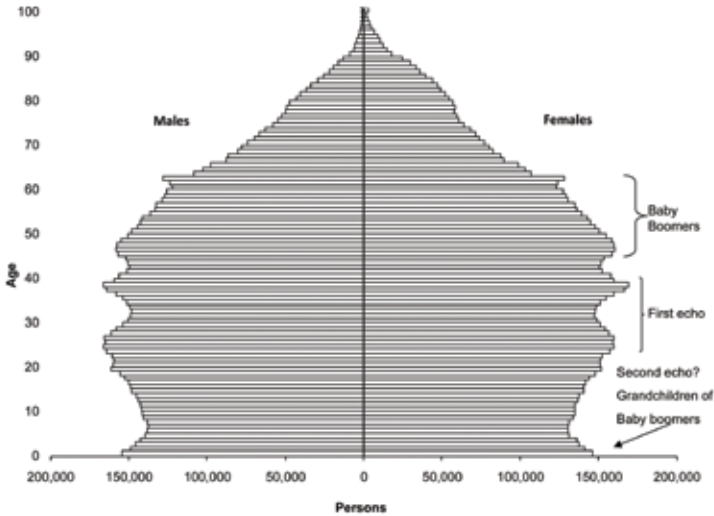


Figure 1: Australia: Age-sex structure of the population, June 2009 (Source: ABS estimated resident population data).

2 Population projections

Anticipating changes in Australia’s population is an important element in planning. The Australian Bureau of Statistics (ABS) [4] projections of national population provide a useful basis for considering the range of potential population scenarios that face Australia. It is important to stress that these are projections, not predictions. They reflect a set of assumptions about future fertility, mortality and net migration. The sensitivity of these projections to changes in assumptions is well illustrated in Table 1, which shows the median projections made by the ABS in the 2005 and 2008 rounds of projections. The 2008 projections employed higher fertility and migration assumptions than the 2005 series because of an upswing in those in the second half of the decade. It will be noted that it results in a difference of more than 6 million people by 2051.

	Australia ABS 2005 Series B	ABS 2008
2006 actual	20.7	20.7
2007 actual	21.0	21.0
2021 projected	23.9	25.6
2031 projected	25.8	28.8
2051 projected	28.0	34.2

Table 1: ABS projections of the population of Australia, 2005 and 2008

Source: ABS estimated resident population data and projections 2005 and 2008.

The substantial differences in numbers in each age cohort and the age-specific impacts of fertility, mortality and migration mean that different age groups in the population grow at different rates. Table 2 shows how the median 2008-based projections see the growth patterns of the 0–4, 15–64 and 65+ age groups over the next four decades, and striking differences are in evidence. Even under these relatively high assumptions of fertility and mortality, the growth rate of the 65+ group is three times that of the workforce-age population in the period up to 2031 and twice as fast in the next 20 years.

Year	0–14		15–64		65+	
	Number	% growth p.a.	Number	% growth p.a.	Number	% growth p.a.
2006	4 050 445		13 954 776		2 692 659	
2021	4 693 727	0.99	16 527 365	1.13	4 395 453	3.32
2031	5 050 849	0.74	18 003 557	0.86	5 732 080	2.69
2041	5 335 328	0.55	19 514 934	0.81	6 759 002	1.66
2051	5 697 740	0.66	20 886 759	0.68	7 628 748	1.22

Table 2: Australia: projected growth of the population by age, 2006–51

Source: ABS 2008 Projections, Series B

It is important to stress the robust projections for the growth of Australia's older population up to 2051. Almost all of the older Australians over this period are already in Australia but most are still of working age. This provides a substantial opportunity to put in place policies to better prepare those groups yet to move into the older age groups. The United Nations [5], in summarising evidence and experience in coping with ageing populations, has made three observations of particular relevance to Australia: no single action by government can adequately address this issue. There are no silver bullets. Instead, policy adjustments should be carried out by effecting relatively small changes in many different policy domains. Making the necessary adjustments early is easier than delaying things until there is a crisis.

The Australian Government's Intergenerational Report has argued that counteracting the effects of the shift in age structure will require interventions in the three 'Ps'—population, participation and productivity. The report's authors particularly stress the significance of enhancing productivity per person as having the greatest potential to counterbalance the deteriorating balance between working age and older populations. Enhancing the growth of the working-age population through maintaining fertility close to replacement level and migration has a smaller role. Since migration is selective of young workers it can have a small ameliorating effect on the spread of ageing in the short-to-medium term, but this amelioration cannot be sustained indefinitely since migrants themselves also age.

There is a significant opportunity to increase workforce participation. Increases in the age at retirement are already in evidence. Policies regarding increasing the retirement age need to be carefully implemented to ensure equity, as physical workers are less able to continue working than sedentary workers. The policies must also be accompanied by sustained effects to facilitate changes in career, retraining, phasing from full-time to part-time work and reduction in discrimination against older workers. Increasing participation within the traditional working ages also has considerable potential and offers an opportunity to progress the government's social inclusion goals. A tighter labour market can provide the opportunity to engage groups in the paid workforce who have thus-far been excluded—Indigenous groups, culturally and linguistically diverse (CALD) groups, people with disabilities and those who live in areas of low accessibility and low socioeconomic status.

As important as the three Ps are in developing policy to facilitate Australia's coping with an ageing population, there are some additional considerations. There is a key fourth 'P'—preparation. Preparation for ageing is critical at all levels—for individuals and their families, the community and all three levels of government. Successful ageing at individual and societal levels requires

preparation. Part of the preparation involves putting in place policies relating to the three Ps now rather than in the 2020s when the tsunami of baby boomer retirement reaches full force. It means analysing the baby boom generation to not only prepare them, but the society, so that baby boomers have productive and fulfilling retirements. It means not only considering policies to cope with the ageing population but identifying and enhancing the development opportunities which it can offer.

In discussions of Australia's future population the emphasis has strongly been on its economic consequences [2]. However, it is important to also briefly consider some of the social consequences. Australian families will continue to become more diverse and smaller on average as a result of ageing. There will be greater ethnic diversity as net migration becomes a larger proportion of national population increase. There are concerns for income distribution, social inclusion and poverty. With ageing there are real dangers that groups who have been unable to accumulate significant resources and assets during their working lives to support them in old age will fall into poverty. On the other hand, anticipated labour shortages may result in groups that have previously been excluded from the workforce—the disabled, the Aboriginal population, CALD communities, women etc.—becoming more engaged. The Indigenous population currently numbers 563 101 [6], making up around 2.5 % of the national population, and this proportion will increase somewhat over the next couple of decades. Projections of the Aboriginal population show that the number of Indigenous population will reach 1 million by 2040 [7]. The extent to which they are able to move out of their current disadvantaged position remains a key national issue.

3 Looking to the future

People are important. Australia's greatest resource is its population, and population growth, composition and distribution will play a major role in the extent to which the nation can achieve the goals of greater prosperity, sustainability, security and inclusion that it has set for the next two decades.

Australia will face a population dilemma over the next two decades. On the one hand there is a need for more workers, which will involve some population growth. Access Economics [8] has projected that over this period economic growth will result in a net growth in the number of jobs of between 0.9 and 2.5% per annum. The 2011–12 budget anticipated that there would be a net increase in jobs in Australia of over 200 000. McDonald [9] has shown that over the decade from 2000 to 2010 the Australian workforce increased by 2.1% per annum (compared with 1.5% for the population) and of this more than half was

contributed by migration. If, as seems likely, a continuation of a net gain of jobs of around 200 000 per annum is continued over the next decade, how will they be filled?

In this context it is relevant to look at the numbers in individual age groups entering the retirement years and to match them with the cohort entering the workforce ages at the same time. Table 3 attempts this using 2008-based population projections and shows that in 2010 the number of people aged 20–24 significantly outnumber those aged 60–64. However, it must be remembered that these included over 200 000 overseas students on temporary visas (the total foreign tertiary student population in 2010 was 469 619, half of whom were aged 20–24). Since many of these students will leave Australia upon completion of their studies, the excess of entrants to the workforce relative to likely exits is not as great as appears in Table 3. The important point, however, is that with the next five-year age group the difference between older and equivalent younger groups decreases and in the following ages, in fact, the numbers in the older cohorts are greater. The message is clear then that it will not be possible to meet the likely net increase in the demand for workers without some migration. The key question is how much migration?

Age group	Persons	Age group	Persons	Difference
60–64	1 211 785	20–24	1 648 245	436 460
55–59	1 325 024	15–19	1 500 354	175 330
50–54	1 469 314	10–14	1 403 729	65 585
45–49	1 574 540	5–9	1 365 719	208 821
40–44	1 551 437	0–4	1 460 757	90 680

Table 3: Australia: differences between age groups at 30 June 2010 Source: ABS [6]

In this respect, recent modelling by the Department of Immigration and Citizenship [10] is shown in Table 4. The modelling indicates that growth in GDP of around 3.25% requires an annual net growth in employment of around 0.8% per annum. However, the growth of the labour force without migration would only be 0.5%. The differences would need to be made up by net overseas migration which would be around 188 700 per annum over the next decade.

Employment growth to meet GDP target	0.8% p.a.
Employment growth with zero net migration	0.5% p.a.
Average annual net migration to meet GDP target	188 700 p.a.
Assumptions GDP target growth	3.25% p.a.
Labour productivity growth	1.6%
Average working hours	Constant

Table 4: Labour demand over the 2010–20 period Source: Hoffmann [10]

It is likely then that labour demand will continue to grow in Australia, at least over the next decade and a half. However, currently 42% of the Australian labour force are baby boomers and most of them will leave the workforce over the next two decades. On the other hand, it is increasingly apparent that there are substantial environmental constraints on population growth, especially relating to water.

The introduction of water restrictions in Australia’s major cities during the last few years has vividly brought home two things. The water resources of the continent are limited and our use of them has been profligate. The pressures that rapid population growth have placed on infrastructure and environment and resources in hot spot areas such as South-east Queensland, coastal New South Wales, Sydney and Melbourne are well known. Moreover, climate change will exacerbate these pressures. CSIRO and the Australian Bureau of Meteorology [11] have recently demonstrated conclusively that there is a long-term trend of rainfall decline in south-eastern Australia which currently is home to more than 80% of Australia’s population. There is a substantial mismatch between the distribution of run-off and that of population, with less than 15% of Australians living in areas experiencing an increase in rainfall.

Too often the solution to environmental challenges such as water shortages in the Murray–Darling Basin is seen to be stopping population growth. In fact, population numbers are only one of the elements creating pressure on the environment. Levels of consumption per capita and the way in which the resources are exploited are also very important elements in creating environmental degradation. Australia suffered massive environmental degradation in the 19th century when its population was only a fraction of the present size. Clearly there is a need for us to change the way in which we harness, store and use our water resources. Certainly population growth places pressure on such resources but there is a need for us to capture, store and use our water more effectively. Stopping population growth alone is unlikely to be sufficient.

Indeed some would argue that the economic impact of such a policy would have undesirable environmental outcomes because it would reduce the resources that would be available to move toward more sustainable processes.

It is not only issues of population size that are important, but also those of population distribution. Australia's population growth is likely to remain mainly in capital cities. However, in considering the development of Australia's population policy, issues of potential change in Australia's settlement system need to be fully considered. This doesn't mean major shifts of existing population but it could have significant implications for where future investment is directed. There are a number of issues which need to be considered:

- several of the fastest developing sectors in the Australian economy have a strong non-metropolitan orientation—e.g. mining and tourism
- already there is net outmigration of the Australia-born from some of our largest cities, such as Sydney
- the retirement of baby boomers is likely to lead to an increase in the numbers of retirees living outside of cities, creating demand for services
- the escalating costs of continued growth of major metropolitan areas
- environmental constraints and the effect of climate change in south-east Australia.

It may be that there is some scope for encouragement of growth outside of capital cities but this must be the subject of detailed study. It is not enough to say that such efforts failed in the 1950s and 1970s. The world is very different in the 2010s, especially in relation to the structure of the economy and networks of transport and communication. The bottom line in regional development is that it only should be encouraged in regions with the resources for sustainable economic growth.

So what is needed? On the one hand we have the manifest need articulated in the Intergenerational Report of Treasury [2] to grow the population. On the other are environmental constraints that are likely to be exacerbated by climate change. Too often the policy alternatives that have been discussed emphasise one or the other of these issues to the detriment of the other. What Australia needs is a population (and immigration) policy that takes full account of both of these elements. It will require trade-offs and compromises but should be informed by the best science and not the lobbying of interest groups. It requires a coming together of physical and social sciences to chart out a range of potential population futures. No single academic discipline has hegemony here. This should be the task of the new Ministry of Population.

Population policy should not be seen as a stand-alone policy. Good population policy should support and facilitate beneficial outcomes in the key areas of national interest—economic development and growth, environmental sustainability, social inclusion and being a responsible global and regional citizen. Population policy does need to consider the best science and research available across all relevant disciplines. However, it also should take into account the views of all Australians about the vision for our future. Migration and population growth will continue to be significant in Australia over the next few decades in all of the realistic scenarios of the future. However, that growth must be environmentally sustainable. Population growth and distribution must be informed not only by labour force demand but also by environmental considerations. Growth with sustainability needs to be the objective, at least over the next two decades.

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