Australia’s Population Growth

Edited by Justin Healey

ISSUES IN SOCIETY
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The Spinney Press

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Australia’s Population Growth is Volume 395 in the ‘Issues in Society’ series of educational resource books. The aim of this series is to offer current, diverse information about important issues in our world, from an Australian perspective.

KEY ISSUES IN THIS TOPIC
In recent years there has been recurrent debate in Australia over how big or small the nation’s population should be in the future. Changes in the combination of increased birth rates and net overseas migration can greatly impact on the size and age structure of the population, at a time when more Australians are increasingly living longer. Current trends and policies involving population growth, particularly in relation to immigration intake, will have a major impact on Australia’s future sustainability and quality of life.

This book features the latest statistical projections and analyses for Australia’s population size and examines recent intergenerational findings from government. The book also presents a range of views in the population debate from an economic, environmental and social perspective. Do we want or need a ‘big Australia’? Does size really matter?

SOURCES OF INFORMATION
Titles in the ‘Issues in Society’ series are individual resource books which provide an overview on a specific subject comprised of facts and opinions.

The information in this resource book is not from any single author, publication or organisation. The unique value of the ‘Issues in Society’ series lies in its diversity of content and perspectives.

The content comes from a wide variety of sources and includes:
- Newspaper reports and opinion pieces
- Website fact sheets
- Magazine and journal articles
- Statistics and surveys
- Government reports
- Literature from special interest groups

CRITICAL EVALUATION
As the information reproduced in this book is from a number of different sources, readers should always be aware of the origin of the text and whether or not the source is likely to be expressing a particular bias or agenda.

It is hoped that, as you read about the many aspects of the issues explored in this book, you will critically evaluate the information presented. In some cases, it is important that you decide whether you are being presented with facts or opinions. Does the writer give a biased or an unbiased report? If an opinion is being expressed, do you agree with the writer?

EXPLORING ISSUES
The ‘Exploring issues’ section at the back of this book features a range of ready-to-use worksheets relating to the articles and issues raised in this book. The activities and exercises in these worksheets are suitable for use by students at middle secondary school level and beyond.

FURTHER RESEARCH
This title offers a useful starting point for those who need convenient access to information about the issues involved. However, it is only a starting point. The ‘Web links’ section at the back of this book contains a list of useful websites which you can access for more reading on the topic.
DOES SIZE MATTER?  
– POPULATION PROJECTIONS 20 AND 50 YEARS FROM 2013

An Australian Social Trends feature article from the Australian Bureau of Statistics

Periodically there is debate within Australia as to how big or small our population should be in the future. This sparks interest in what is driving growth, and what would happen to the size and structure of Australia’s population if these drivers were to change.

The elements of population growth are natural increase (total births minus total deaths) and net overseas migration. The combination of these elements and how they change affects both the size and the age structure of the population. That is, if fertility and net overseas migration were high and life expectancy was low, we could expect a younger nation. If fertility rates were low (for a sustained period of time) and life expectancy increased, we could expect an ageing population. These changes have implications – an ageing population, for example, has a higher total dependency ratio (with more older people potentially economically dependent on fewer people of working age). This poses a future challenge for government policy because the public costs associated with the aged tend to be higher than the costs of people at other ages.

The total fertility rate in Australia has been rising since 2000 and now stands at 1.9 babies per woman (around half what it was in the early 1960s). Life expectancy is steadily increasing: in the decade to 2012, life expectancy at birth had gone up by 2.5 years for men (to 79.9 years) and 1.7 years for women (to 84.3 years). While it’s not easy to effect major population change through fertility and life expectancy over just a few decades, sustained net overseas migration can change the relative size of the working-age population in such a period.

This article uses projections to show what would happen to the size and shape of Australia’s population in 20 years time (2033) and 50 years time (2063) if specific assumptions about population growth were to apply. Scenarios include: maintaining recent demographic trends; looking at changes that would lead to a smaller population; and looking at two scenarios that would lead to a bigger population – one where life expectancy, fertility and net overseas migration levels are all high,
and one where net overseas migration is a more dominant driver of growth – that is, where net overseas migration levels are high but fertility levels are low and life expectancy does not change from current levels. The article also looks at what would happen to the population in the (highly improbable) event that net overseas migration was zero.

Population pyramids are used to show the extent of each change, overlaying the 2013 estimated resident population with each projected population. Ultimately, the size and shape of our population reflects over 100 years of births, deaths and migration, influenced by major policy and social changes, two world wars, significant improvements in public health, and the advent of widely available, effective contraception. Therefore, regardless of whether higher or lower assumptions are applied to the population over the next 20 and 50 years, much of the impact of these cumulative longer term historical changes will still be visible in the shape and size of the resulting projected populations.

**Continuing the current trend**

In December 2013, the estimated resident population clocked in at 23.3 million. Around one fifth (19%) of the population was aged less than 15, while 14% of the population was aged over 65 (including around 2% aged over 85). The working-age population (aged 15 to 64) was two thirds of the total population, and there was a total dependency ratio of 50% (that is, there were 50 ‘dependents’ for every 100 ‘workers’, or a ratio of 1:2). Fertility rates were 1.9 births per woman, life expectancy was 79.9 years for men and 84.3 years for women, and net overseas migration was averaging 240,000 migrants per year.

If fertility, net overseas migration and life expectancy rates were to continue in line with recent trends (per the medium series projection), the population pyramid on the previous page shows what Australia’s population would look like in 2033.

Under this scenario, the population would be 31 million in 2033. The proportion of people aged 65 years and over would increase to 19% (from 14%), and the proportion of children (under 15) would decrease slightly to 18%. The working-age population would decrease to 63% of the population, and there would be 59 ‘dependents’ for every 100 ‘workers’. The proportion of people aged 85 and over would increase to 3%.
Fast forward another 30 years to 2063, and the population would have reached 42 million. The proportion of people aged 65 and over would be 23%, while 17% would be aged under 15. The working-age population would decrease to 61% of the population, and the dependency ratio would be 65% (65 ‘dependents’ for every 100 ‘workers’). The proportion of people aged 85 and over would more than double from its 2013 level to 5%.

**Projections for a smaller Australia**

Lower birth rates, the same life expectancy, and sustained lower net overseas migration intake over the next few decades would result in a smaller population than current trends are suggesting. Based on these lower growth rates, Australia’s population would be 30 million in 2033, 1 million less than the 2013 medium series projection for the same year. One fifth (20%) of the population would be over 65, with 3% being 85 and over and 16% of people would be under 15. With just under two thirds of the population being of working age (64%), there would be 57 ‘dependents’ for every 100 ‘workers’.

Fast forward another 30 years to 2063 and the population would have increased to 37 million, 5 million less than the 2013 medium series projection for the same year. The effects of population ageing would be more evident under this scenario, with the proportion of people aged 65 and over in Australia increasing to 25%, and the proportion of children under 15 decreasing to 15%. The working-age population would decrease to 60% and there would be 66 ‘dependents’ for every 100 ‘workers’. Under this scenario, 5% of Australians would be 85 years or over.

**PROJECTIONS FOR A SMALLER AUSTRALIA, 2063**

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<td>0</td>
</tr>
<tr>
<td>Females</td>
<td>0</td>
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**PROJECTIONS FOR A BIGGER AUSTRALIA, 2033**

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<tr>
<td>Females</td>
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**Projections for a bigger Australia**

High birth rates, high life expectancy and high net overseas migration over the next few decades would result in a bigger Australia (with increased needs for amenities such as housing and infrastructure). While this scenario has more people of working age, it also has more children and older people so the overall dependency ratio increases.

Under the demographic trends which would lead to a bigger Australia, the total population would be 33 million in 2033 (2 million more people than the 2013 medium series projection for the same year). The proportion of people aged 65 and over would grow to 19%, and the proportion of people aged less than 15 would remain at 19%. The working-age population would fall to 62%, and the dependency ratio would be 61%. The proportion of people aged 85 and over would increase to 3%.

30 years on, in 2063, the total population would be 49 million, 6 million greater than the 2013 medium series projection for the same year. The proportion of people aged 65 and over would be 23%, although the proportion of those aged less than 15 would have decreased to 18%. The working-age population would drop to 59%, and there would be 70 ‘dependents’ for every 100 ‘workers’. Under this scenario, 6% of Australians would be aged 85 years and over.

**Net overseas migration and growth**

In recent years, net overseas migration has become the major driver of Australia’s population growth, contributing 60% of total population growth in 2013.

**Projections using net overseas migration as the key growth driver, 2033**

- **Age group (years)**
  - 100
  - 95
  - 90
  - 85
  - 80
  - 75
  - 70
  - 65
  - 60
  - 55
  - 50
  - 45
  - 40
  - 35
  - 30
  - 25
  - 20
  - 15
  - 10
  - 5
  - 0

- **Males**
  - 0
  - 5
  - 10
  - 15
  - 20
  - 25
  - 30
  - 35
  - 40
  - 45
  - 50
  - 55
  - 60
  - 65
  - 70
  - 75
  - 80
  - 85
  - 90
  - 95
  - 100

- **Females**
  - 0
  - 5
  - 10
  - 15
  - 20
  - 25
  - 30
  - 35
  - 40
  - 45
  - 50
  - 55
  - 60
  - 65
  - 70
  - 75
  - 80
  - 85
  - 90
  - 95
  - 100

**Source:**
- Australian Demographic Statistics, Dec 2013 (cat. no. 3101.0); and Population Projections, Australia, 2012 (base) to 2101, (cat. no. 3222.0).

**PROJECTIONS USING NET OVERSEAS MIGRATION AS THE KEY GROWTH DRIVER, 2033**

- **Age group (years)**
  - 100
  - 95
  - 90
  - 85
  - 80
  - 75
  - 70
  - 65
  - 60
  - 55
  - 50
  - 45
  - 40
  - 35
  - 30
  - 25
  - 20
  - 15
  - 10
  - 5
  - 0

- **Males**
  - 0
  - 5
  - 10
  - 15
  - 20
  - 25
  - 30
  - 35
  - 40
  - 45
  - 50
  - 55
  - 60
  - 65
  - 70
  - 75
  - 80
  - 85
  - 90
  - 95
  - 100

- **Females**
  - 0
  - 5
  - 10
  - 15
  - 20
  - 25
  - 30
  - 35
  - 40
  - 45
  - 50
  - 55
  - 60
  - 65
  - 70
  - 75
  - 80
  - 85
  - 90
  - 95
  - 100

**Source:**
- Australian Demographic Statistics, Dec 2013 (cat. no. 3101.0); and Population Projections, Australia, 2012 (base) to 2101, (cat. no. 3222.0).
The effects of an ageing population may be reduced in the short term with higher levels of working-age people migrating to the country. However, while immigrants are often at a younger working age when they migrate to Australia, they also age and contribute to the growth of the older population. So what would happen to the size and shape of Australia over time if net overseas migration was higher than current trends but birth rates were low and life expectancy did not change from current levels?

Under this scenario, Australia’s population would be 32 million in 2033. Around 19% of the population would be over 65 (with 3% being 85 and over), and 17% of people would be under 15. Two thirds of the population would be working age (64%), and there would be 55 ‘dependents’ for every 100 ‘workers’, 4 less than if we were to maintain current trends.

After another 30 years, the total population would increase to 42 million. In 2063, around 23% of the population would be aged 65 and over (with 5% being 85 and over), while those aged under 15 would make up 15%. Three in five people would be of working age (61%), and there would be 63 ‘dependents’ for every 100 ‘workers’, 2 less than if we were to maintain current trends.

What happens with zero net overseas migration?

With zero net overseas migration, that is, the same number of people leaving the country as arriving in it, Australia’s total population would depend solely on natural increase. Under this scenario, the total population would be 25 million in 2033, 6 million less than the 2013 medium series projection for the same year. The proportion of people aged over 65 would increase to 23%, and the proportion of those under 15 would decrease to 16%.

Zero net overseas migration would result in people of working age making up 61% of the population in 2033, while the total dependency ratio would increase to 65 ‘dependents’ for every 100 ‘workers’. At the same time, increasing life expectancy would result in the

![PROJECTIONS USING NET OVERSEAS MIGRATION AS THE KEY GROWTH DRIVER, 2063(a)](image1)

![AUSTRALIA’S POPULATION WITH ZERO NET OVERSEAS MIGRATION, 2033(a)](image2)

\[a.\] 2013 numbers are estimated resident population at December 2013. Projections for 2063 assume a total fertility rate of 1.6 births per woman by 2025-26; life expectancy increasing to reach 85.2 years for men and 88.3 years for women by 2061; and net overseas migration of 280,000.

Source: Australian Demographic Statistics, Dec 2013 (cat. no. 3101.0); and Population Projections, Australia, 2012 (base) to 2101, (cat. no. 3222.0).
DATA SOURCES AND DEFINITIONS

Population projections
The 2013 publication Population Projections, Australia, 2012 (Base) to 2101 (cat. no. 3222.0), shows a range of population projections to 2101 based on current trends and different combinations of assumptions about births, deaths and net overseas migration rates. These projections are not predictions or forecasts. They show what would happen to Australia’s population if a particular set of assumptions about future levels of fertility, mortality, and net overseas migration were to hold for the next 100 years. The assumptions are based on demographic trends, current debate, and possible future scenarios arising from research in Australia and elsewhere.

Projection methodology
This article uses the cohort-component method for producing population projections. In this method, assumptions made about future levels of fertility, mortality, overseas migration and internal migration are applied to a base population (split by sex and single year of age) to obtain a projected population for the following year. The assumptions are then applied to this new (projected) population to obtain a projected population for the next year. This process is repeated until the end of the projection period is reached. From a base of 30 June 2012, the projections span the period 30 June 2013 to 30 June 2063 for Australia. Further details of projection assumptions and methodology can be found in cat. no. 3222.0.

Net overseas migration is the net gain or loss of population through immigration to Australia, and emigration from Australia. Under the current method for estimating final net overseas migration this term is based on a traveller’s actual duration of stay or absence using the ‘12/16 month rule’. Under the ‘12/16 month rule’, incoming overseas travellers (who are not currently counted in the population) must be resident in Australia for a total period of 12 months or more during the 16 month follow-up period to be included in the estimated resident population. Travellers departing Australia (who are currently counted in the population) must be absent from Australia for a total of 12 months or more during the 16 month follow-up period to be subtracted from the estimated resident population. The 12/16 rule takes account of people who may have left Australia briefly and returned, while still being resident for 12 months out of 16. Similarly, it takes account of Australians who live most of the time overseas but periodically return to Australia for short periods.

Total dependency ratio is a measure used to compare the size of the dependent population to the working-age population. It is calculated by combining the youth population (0 to 14 years) and senior population (65 and over), then dividing this by the working-age population (15 to 64 years) and multiplying it by 100. It is expressed as the number of ‘dependents’ for every 100 ‘workers’. While the ratio may over-simplify the implication of ‘dependency’ – for example, many people aged 15 to 64 are not part of the workforce, while people aged 65 or over may be working, or self-funded retirees – it provides another broad measure of the structure of the population.

Total fertility rate (TFR) is the sum of age-specific fertility rates (live births at each age of mother per 1,000 of the female population of that age) divided by 1,000. It represents the number of children a woman would bear during her lifetime if she experienced current age-specific fertility rates at each stage of her reproductive life (ages 15-49).

In this article, ‘life expectancy’ refers to life expectancy at birth, which refers to the average number of years a person might expect to live if the age-specific death rates of the given period continued throughout his or her lifetime.

Estimated resident population (ERP) The official measure of the population of Australia is based on the concept of usual residence. It refers to all people, regardless of nationality, citizenship or legal status, who usually live in Australia, with the exception of foreign diplomatic personnel and their families. It includes usual residents who are overseas for less than 12 months over a 16 month period. It excludes overseas visitors who are in Australia for less than 12 months over a 16 month period. Estimates of the Australian resident population are generated on a quarterly basis by adding natural increase (the excess of births over deaths) and net overseas migration (NOM) occurring during the period to the population at the beginning of each period. This is known as the cohort component method.

ENDNOTES

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Australian historical population statistics

Compared with 100 years ago, Australians today are older, are more likely to live in urban areas, have fewer children and are more likely to be born overseas in countries outside of the British Isles, according to these historical estimates from the Australian Bureau of Statistics.

**POPULATION SIZE AND GROWTH**

Simulated by the gold rushes of the 19th century, Australia’s population had nearly reached 4 million by Federation in 1901. For the first part of the 20th century natural increase was the main contributor to population growth, as better living conditions saw births outnumber deaths. Following the end of World War II in 1945, the total fertility rate grew and Australia actively embarked on an immigration program to boost the population.

The rate of population growth has increased since the mid 2000s. Overseas migration is now the main driver of this, making up about 60% of population growth. In 2011, Australia’s population increased to over 22 million people.

**POPULATION DISTRIBUTION**

In 2011, over 85% of Australians lived in urban areas and nearly 70% lived in our capital cities, making Australia one of the world’s most urbanised countries. In contrast, 100 years ago less than 40% of Australia’s population lived in our capital cities.

At that time, Melbourne was our largest city, with just over 500,000 people. Between 1911 and 1945, Sydney’s population grew by over 800,000 people, to almost 1.5 million, and it became Australia’s most populated capital city. Between 2001 and 2011, Brisbane’s population increased by 27%, making it the fastest growing of all Australia’s capital cities in the 21st century.

**AGE AND SEX STRUCTURE**

Australia’s population today is much older and has a more balanced sex structure than a hundred years ago. At the turn of the 20th century, the median age was 22 years and 4% of the population was aged 65 or over. Men outnumbered women (by around 110 to 100), as the population had been significantly shaped by male-dominated immigration from overseas.

By the late 20th century, low fertility, declining mortality, and the ageing of the large baby boom generation combined to see an increase in the numbers of older people. The median age in 2011 was 37 years, and 14% of the population were aged 65 and over. For every 100 females there were 99 males.

**FERTILITY**

Over the 20th century, Australia’s total fertility rate fell from an average of 3.1 babies per woman of child bearing age in 1921 to 1.9 babies in 2011, although fertility rates fluctuated up and down over the period. During the Great Depression of the 1930s fertility dropped, then reached an all-time high in the baby boom that followed World War II. Social transformations of the 1960s and 70s, including increased female participation in the labour force and greater reproductive control, led to a rapid decline in the average number of babies per Australian woman.

The total fertility rate has been relatively stable over the last three decades, and reflects the tendency for partnering and childbearing to occur at later ages than in the past.

**LIFE EXPECTANCY**

Over the past century, life expectancy at birth in Australia has steadily increased – by around 24 years for males and 25 years for females. These increases are due to declining death rates at all ages, reflecting improving living conditions, resulting from advances in public sanitation, food quality, and better health education, and medical advances such as mass immunisation and antibiotics.

By 2011, a baby boy could expect to live 79.9 years, while a girl could expect to live 84.3 years, ranking Australian life expectancy amongst the highest in the world.

**OVERSEAS-BORN POPULATION**

In 2011, over one in four Australians were born overseas. There have been many historical changes in the source countries of immigrants since Federation, when people from Britain and Ireland made up over three-quarters of all Australia’s overseas born population. Following WWII, Australia accepted large numbers of people from other European countries, particularly Italy, Germany, the Netherlands and Greece.

Since 1973, after the dismantling of the White Australia policy and broadening of Australia’s immigration policies, new groups of migrants have been arriving from all parts of the world (and notably from Asia) increasing the diversity of Australia’s population.

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The bureau is projecting the population will soar from just under 23 million people to 46 million by 2075.

Western Australia is expected to have the largest rise, while Tasmania is the only state that is expected to see a decline in population.

The bureau’s director of demography Bjorn Jarvis says by 2028 Perth will overtake Brisbane as Australia’s third-biggest city, with 3 million people.

“And then 10 years later, the Australian Capital Territory [will overtake] Tasmania,” he said in a statement.

“Melbourne and Sydney should be neck and neck by 2053, with 7.9 million people each.

“By 2040, Western Australia’s population is projected to almost double in size, from 2.4 million people in 2012 to 4.7 million.

“Queensland will have gone from 4.6 million people to 7.3 million, and the Australian Capital Territory will have grown from 375,000 people to 586,000.”

The Northern Territory’s population will increase by 51 per cent to 360,000, while Victoria’s population will grow by 50 per cent 8.4 million. In New South Wales, the population will climb by 35 per cent to 9.9 million. Tasmania’s population is tipped to level out by 2040, and then begin falling.

Low fertility rates and longer life spans are expected to increase the proportion of older people in Australia’s population.

Average age to rise above 40

Meanwhile, low fertility rates and longer life spans are expected to increase the proportion of older people in Australia’s population.

“In 2012 Australia’s median age was 37 years old, by 2040 it could be 40.5 years,” Mr Jarvis said.

The ABS predicts the number of people aged over 65 will double to 6.8 million people by 2040. The number of people aged over 65 will almost triple to 1.2 million.

“By then, people aged 85 years or over will make up 4 per cent of Australia’s population, compared to only 2 per cent in 2012,” the ABS said.

But Mr Jarvis says Australia’s ageing population is not as big an issue as it is for many European countries and Japan.

“One of the results of having a reasonably robust migration policy is that you tend to have people entering the population that are in their 20s and 30s, so that helps to compensate for the broader ageing of the population,” he said.

“So compared to a lot of other countries, Australia’s ageing population isn’t as much of a cause for concern.”

The ABS has not dismissed the possibility that the national population could hit 46 million much sooner than 2075.

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Australia’s population projections

The main features from a report by the Australian Bureau of Statistics

The population projections presented in this publication cover the period 2012 to 2101 for Australia and 2012 to 2061 for the states and territories, and capital cities and balance of state regions. The projections are not predictions or forecasts, but are simply illustrations of the growth and change in population which would occur if certain assumptions about future levels of fertility, mortality, internal migration and overseas migration were to prevail over the projection period. The assumptions incorporate recent trends which indicate increasing levels of fertility and net overseas migration (NOM) for Australia.

This chapter discusses the projection results, in terms of population size and growth, and the changing age structure and distribution of the population. Three main series of projections (Series A, B and C) have been selected from a possible 24 individual combinations of the various national level assumptions. Series B largely reflects current trends in fertility, life expectancy at birth and NOM, whereas Series A and Series C are based on high and low assumptions for each of these variables respectively.

POPULATION SIZE AND GROWTH

Australia’s estimated resident population (ERP) at 30 June 2012 of 22.7 million people is projected to increase to between 36.8 and 48.3 million people by 2061, and to between 42.4 and 70.1 million people by 2101. Series A projects the highest growth, while Series C projects the lowest growth.

In the 20 years to 30 June 2012, Australia’s population increased by 1.3% per year on average, with just over half of this growth resulting from NOM and just under half from natural increase (the excess of births over deaths). In the last 2 years, Australia’s population has increased by 1.6% per year on average, with the contribution of NOM growing to 56%, and natural increase decreasing to 44%. In the financial year 2011–12, there were 306,000 births and 147,200 deaths in Australia, resulting in natural increase of 158,800 people. During this same period, the contribution of NOM to population growth again increased to 58%, with natural increase decreasing to 42%.

In Series C, a state of natural decrease (deaths outnumbering births) will be reached in 2063. Despite this, Australia’s population continues to increase slowly throughout the projection period, due to the contribution of NOM.

In contrast to the 2004-based set of ABS population projections released in November 2005, no series shows population decline for Australia before the end of the century.

POPULATION AGEING

The ageing of Australia’s population is expected to continue over the period. This is the result of sustained below replacement levels of fertility combined with increasing life expectancy at birth. The of Australia’s population (37.3 years at 30 June 2012) is projected to increase to between 38.6 years and 40.5 years in 2031 (Series A and C respectively) and to between 41.0 years and 44.5 years in 2061 (Series A and C).

Series B

In 2012 people aged 65 years and over made up 14% of Australia’s population. This is projected to increase to 22% in 2061 and to 25% in 2101. The proportion of people aged less than 15 years is projected to decrease from 19% in 2012 to 17% in 2061, and 16% in 2101.

There were 420,300 people aged 85 years and over in Australia in 2012, making up 2% of the population. This group is projected to grow rapidly throughout the projection period, to 5% by 2061 and to 6% by 2101.

MAIN PROJECTION SERIES, AUSTRALIA

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(a) From 2061. (b) From 2026. (c) From 2021.
For the states and territories, further assumptions as to net population gains/losses due to interstate migration are required. Assuming the current trends, Series B projects continuing population growth for all states and territories except Tasmania between 2012 and 2061.

By 2061 the population of New South Wales is projected to reach 11.5 million people, an increase of 4.2 million people (or 57%) from 2012, while Victoria is projected to reach 10.3 million people, an increase of 4.7 million people (or 83%).

Queensland is projected to more than double over the projection period, from 4.6 million in 2012 to 9.3 million by 2061.

Western Australia is projected to experience the largest percentage increase in population between 2012 and 2061, more than doubling the 2012 population of 2.4 million to 6.4 million by 2061.

The Northern Territory’s population is projected to increase by 217,800 people between 2012 and 2061, to 453,000 people. Although a smaller absolute increase than those projected for the larger states, this is a significant increase (93%) relative to the Northern Territory’s population of 235,200 people in 2012.

The population of the Australian Capital Territory is projected to increase by 217,800 people between 2012 and 2061, to 453,000 people. Although a smaller absolute increase than those projected for the larger states, this is a significant increase (93%) relative to the Northern Territory’s population of 235,200 people in 2012.

Sydney and Melbourne

Series C projects Sydney to remain the populous city in Australia, with 8.0 million people in 2061, followed by Melbourne with 7.6 million. However, in Series A and B Melbourne is projected to become the most populous, exceeding Sydney’s population in 2030 and 2053, respectively. In 2061, Melbourne and Sydney are projected to reach a population of 8.6 and 8.5 million respectively (Series B).

Melbourne’s population exceeding Sydney’s in Series A and B is mainly due to larger levels of internal migration losses assumed for Sydney (a net loss of 38,700 and 22,700 people per year from 2015) compared to Melbourne (a net loss of 6,400 and 4,000 people per year from 2015) in the two series.

Other capital cities

In Series B, Perth is projected to experience the highest percentage growth (187%) of Australia’s capital cities, increasing from 1.9 million people at 30 June 2012 to 5.5 million in 2061. The population of Perth is projected to overtake that of Brisbane in around 15 years time, when they both reach 3 million people in 2028. The second highest percentage growth (118%) is projected for Brisbane, increasing from 2.2 million people to 4.8 million people. In 2061 Darwin is projected to increase from 131,900 people in 2012 to 225,900 in 2061 (71%).

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Australia’s population debate should move away from simplistic pro or anti-population growth posturing and towards the question of: “how much is too much?”

**Bipartisan support for high immigration**

The major reason for these larger projected populations is their incorporation of higher levels of net international migration. Reflecting forecasts by the Department of Immigration and Citizenship and ranging from 200,000 to 280,000 per annum, these migration levels are over 33% higher than those the ABS adopted five years earlier, and also significantly above the 180,000 per annum used in IGR3 and the Productivity Commission’s ‘base case’.

The assumption of a constant annual number for net immigration ignores the potential implications of an increasing population for the demand for skilled migrants and family migration.

The high levels of immigration during the Gillard government era were at odds with Gillard’s expressions of opposition to a ‘Big Australia’ made prior to the 2010 election. Then-opposition leader Tony Abbott also expressed reservations about population growth but support for immigration and a larger population.

More recently, Abbott has adopted a pro-population growth stance, while opposition leader Bill Shorten has been clearly supportive of high levels of immigration. There appears little reason to anticipate significant cuts to immigration in the near future.

**Birth rates**

Both the current and the previous ABS projections assume the Total Fertility Rate or TFR will ramp to the same long-run levels of 1.6, 1.8 and 2.0 births per woman. However, the implications of fertility for
The major reason for these larger projected populations is their incorporation of higher levels of net international migration ... these migration levels are over 33% higher than those the ABS adopted five years earlier.

population size are magnified gradually over time by the current projections’ higher immigration levels.

Considering the 2012 TFR is 1.93, the recovery in the TFR since 2001 – and the possibility the proposed new paid parental leave scheme could affect fertility (even if only slightly) – the higher of the three fertility scenarios appears the most plausible.

In his book Battlelines, Tony Abbott concurs with Malcolm Turnbull’s call for fertility to be closer to replacement level. Since 2001, the gap between Australia’s TFR and the replacement level – which would lead to long run zero growth under zero migration and constant mortality – of 2.07 has more than halved with the increase being concentrated in the later reproductive ages.

With each of the successively smaller increases required to further halve the gap to replacement level, the very long-run implication for the size of the Australia-born population of continuation of the annual levels of fertility, mortality and migration more than doubles.

The implication of continuing support for fertility levels to be closer to replacement levels would appear to be that either a future very big Australia would abandon net immigration, or a certainty that there is no long run limit for Australia’s population.

Ageing beyond ‘living longer’

The increasing life expectancy also contributes to the projected growth. The forecast increases in life expectancies the ABS uses for its ‘low’ and ‘medium’ variant projections are considerably lower than those published in the peer-reviewed academic literature and the forecasts used by IGR3 and the Productivity Commission.

This projection series presents conservative estimates of the population implications of the migration levels they use. Of its main projection series, the ABS ‘high’ variant would appear to be the most plausible for the longer run.

The ABS projections show the inevitability Australia’s population ageing, with the numbers aged over 65 rising to between 20.9% and 22.5% in 2050. Most of the increase would occur even without further improvements in life expectancy, reflecting lower birth rates and the legacy of past improvements in mortality.

Higher immigration partly explains the magnitude of population ageing as being somewhat less under the current ABS projections than under its previous projections.

City limits

Arguably, the most challenging aspects of the projection results are the future sizes of the largest cities. The projected populations in 2050 range between 7.4 and 7.9 million for Sydney and between 7.0 and 8.4 million for Melbourne. One fear is that these larger populations will aggravate traffic congestion.

Recent increases in births will have a flow-on effect on the numbers reaching the driving ages from the latter part of the current decade onwards. With higher levels of immigration adding to numbers on the road, the need to improve transport infrastructure will be all the more pressing.

The tip of the iceberg

The latest ABS projections show the substantial long-run implications which fertility and migration near the current levels and ongoing improvements in life expectancy would have for Australia’s population size over the period to 2101.

The projected growth over this period is just the tip of the iceberg compared to what would result from sustaining such patterns over an even longer period.

Nick Parr is Associate Professor in Demography at Macquarie University.

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Inner city areas have lowest birth rates

Australia’s total birth rate in 2014 was 1.80 babies per woman, down from 1.88 in 2013, according to figures released by the Australian Bureau of Statistics

This rate has been declining since 2008, though not reaching the low recorded in 2001,” said AJ Lanyon from the ABS.

“There was a strong pattern in our major cities where the highest birth rates were in outer suburbs and very low rates in the inner city. These inner city areas had high proportions of younger people, but few babies.”

“A total of 299,700 births were registered in Australia in 2014, down from 308,100 in 2013,” said Ms Lanyon.

“2014 also saw the lowest recorded number of births to teenaged mothers (9,204). The proportion of all births to mothers aged 19 and under was 3.1 per cent, following a steady decline from 10.4 per cent in 1975.”

Age-specific fertility rates generally decreased, except for a small increase amongst 45-49 year olds. Fertility rates for 30-34 year olds remained the highest, followed by 25-29 year olds.

Consistent with previous years, Victoria recorded the lowest total fertility rate (1.73) and Northern Territory the highest (2.10).

In 2014, the total fertility rate for Aboriginal and Torres Strait Islander mothers decreased to 2.20 babies per woman, down from 2.34 in 2013.

There were 17,800 births registered (6 per cent of all births) where at least one parent was an Aboriginal or Torres Strait Islander Australian; the same proportion was recorded in 2013.

More details, including maps of capital cities, and state and sub-state information, can be found in Births, Australia, 2014 (cat. no. 3301.0) available for free download from the ABS website www.abs.gov.au

NOTES

- Population fertility rates measure a community’s actual reproductive outcomes – a concept of adding to the population through live births. Still births are not added to the population and therefore are not counted in this context, however, they are reported in Causes of Death, Australia (cat. no. 3303.0), and previously in Perinatal Deaths, Australia (cat. no. 3304.0).
- The total fertility rate represents the average number of babies that a woman could expect to bear if current fertility rates prevail throughout her reproductive lifetime.
- Temporary processing delays have contributed to the low number of births registered in New South Wales for 2014.
- Maps of capital cities, illustrating the range of fertility rates, are available under Fertility Maps at www.abs.gov.au

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## BIRTHS, SUMMARY STATISTICS

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(a) Includes Other Territories.
(b) Babies per woman. The total fertility rate represents the average number of babies that a woman could expect to bear during her reproductive lifetime if current fertility rates continue.

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Australian Bureau of Statistics (29 October 2015). ‘Inner city areas have lowest birth rates’, 3301.0 – Births, Australia, 2014 (Media release).

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Number of babies born in Australia increases for first time in five years: birth rate report

There has been an increase in the number of babies born in Australia for the first time in five years, reports ABC News

The latest figures from the Australian Institute of Health and Welfare (AIHW) show that over 307,000 mothers gave birth to more than 312,000 babies in Australia in 2012.

Those figures were up 3.4 per cent from 2011 and 21.5 per cent since 2003.

The overall birth rate was 65 per 1,000 women, which is the highest rate in the last decade and similar to the 2007 birth rate of 64.9 per 1,000 women.

AIHW spokeswoman Dr Georgina Chambers said the average age of mothers in Australia had also steadily increased, from 29.5 years in 2003 to 30.1 years in 2012.

"About 42 per cent of women who gave birth in 2012 had their first baby, and the average age for first time mothers was 28.4 years," she said.

"Over the last decade the proportion of older women giving birth continued to rise, while the proportion of teenage births continued to fall.

"Mothers aged 35 years and older made up more than 22.4 per cent of all women giving birth in 2012 compared to 18.8 per cent in 2003.

"Conversely teenage births declined from 4.6 per cent in 2003 to 3.6 per cent in 2012."

Overall, 4 per cent of women who gave birth during 2012 identified as Aboriginal or Torres Strait Islander. Indigenous mothers tended to be an average of five years younger than non-indigenous mothers.

The AIHW figures show smoking during pregnancy was reported by more than 12 per cent of all mothers in 2012 and in almost 35 per cent of teenage mothers.

Almost half of indigenous mothers reported smoking during pregnancy.

Overall, 6 per cent of babies were of low birthweight (less than 2,500 grams) and this doubled among mothers

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<th>Mothers</th>
<th>Births</th>
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<tr>
<td>New South Wales</td>
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<td>99,507</td>
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<td>77,170</td>
<td>78,393</td>
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<td>Queensland</td>
<td>62,650</td>
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<tr>
<td>Western Australia</td>
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<td>South Australia</td>
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<td>Tasmania</td>
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<td>Australian Capital Territory</td>
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<tr>
<td>Northern Territory</td>
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</table>

Source: Australian Institute of Health and Welfare

The overall birth rate was 65 per 1,000 women, which is the highest rate in the last decade and similar to the 2007 birth rate of 64.9 per 1,000 women.
who smoked during pregnancy.

About a third of all babies born in 2012 were delivered by caesarean section.

“Caesarean sections rates ranged from 17.1 per cent for teenage mothers to 49.0 per cent for mothers aged 40 and over,” Dr Chambers said.

An estimated 4 per cent of women who gave birth received assisted reproductive technology.

The perinatal death rate was 9.6 per 1,000 births, with 7.2 stillbirths per 1,000 births and 2.4 neonatal deaths (death of an infant within 28 days of birth) per 1,000 live births.

Tasmania has ‘smallest birth rate increase in the country’

The report shows Tasmania is bucking the trend when it comes to birth rates.

In Tasmania, there was a 4 per cent rise in the number of births in the same period, the smallest increase of any state or territory.

The report’s socio-economic survey of births also revealed more than half the Tasmanian women who gave birth in 2012 lived in the most disadvantaged areas of the state.

This was markedly higher than any other state. Tasmania also had the highest rates of neonatal deaths, at 3.2 per 1,000 live births.

ACT, Victoria have highest average age for mothers

The ACT and Victoria have the highest average age for women giving birth.

In 2012 the average age of women giving birth in the ACT and Victoria was 30.7 years old, compared with the national average age of 30.1 years.

The lowest average age for mothers was in the Northern Territory at 28 years old.

Conversely the ACT had the lowest teen pregnancy rate at just 2.2 per cent, while the NT had the highest rate at 9.7 per cent.

The smoking rate for women in the Territory was also the lowest in the country, with less than 8 per cent of expectant mothers lighting up, compared with a national rate of more than 12 per cent.

Women giving birth in Canberra are also less likely to use pain relief during labour compared to more than 80 per cent of mothers in Western Australia.

The rate of caesareans was significantly higher in Canberra’s private hospitals than in the public ones.

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LABOUR SHORTAGE PREDICTED TO HAMPER AUSTRALIAN ECONOMY

Australia could face a severe labour shortage by the end of next decade reports Pat McGrath for ABC News

Boston Consulting Group has released a report predicting a shortfall of 2.3 million workers by 2030. The firm says Australia’s economic growth risks losing momentum in the years ahead unless the country can find ways to plug the gap.

With Australia’s unemployment rate at an 11 year high of 6 per cent, it may seem like a strange time to be talking about a shortage of people looking for work, but Brad Noakes from Boston Consulting Group says it is a prospect worth taking seriously.

“It is a bit of a surprise and bit counterintuitive given what many people experience today,” he acknowledged.

“One of the primary things we looked at was historical growth rates, and if we look back across the last 10 to 20 years for Australia, look at how we’ve grown – and it’s been between 3 and 3.5 per cent GDP per year – if we project that forward, then Australia is going to be facing a labour shortage, and it’s going to hit pretty badly by 2030.”

Mr Noakes says Australia’s workforce participation rate – the proportion of people working or actively looking for work – is high by international standards.

“But, unfortunately, it’s not enough. One of the challenges is we, for a number years, have had quite a low fertility rate, below replacement rate, and that eventually plays through into the economy in terms of the number of workers that are available,” he said.

That number of workers is also being diminished by Australia’s ageing population, something that the Government is trying to remedy by raising the retirement age to 70 by 2035.

“That would be one of the levers, and it would help to address that,

Suggested strategies

While noting that each particular economy will need to take steps specific to its own problems, the BSG report suggests a number of strategies nations could take to mitigate their workforce needs, for example:

▶ Increase the participation of workers aged over 65
▶ Increase the participation rate of female workers aged 15-64 years
▶ Increase net immigration
▶ Increase workforce demand drivers (e.g. boost labour productivity growth)
▶ Boost productivity through capital investment in infrastructure, innovation, technology, and social and training programs, in order to help underqualified and less-educated working-age people improve their employability.

“If we look back across the last 10 to 20 years for Australia, look at how we’ve grown – and it’s been between 3 and 3.5 per cent GDP per year – if we project that forward, then Australia is going to be facing a labour shortage, and it’s going to hit pretty badly by 2030.”
One of the challenges is we, for a number years, have had quite a low fertility rate, below replacement rate, and that eventually plays through into the economy in terms of the number of workers that are available.” ... That number of workers is also being diminished by Australia's ageing population, something that the Government is trying to remedy by raising the retirement age to 70 by 2035. But it wouldn't fully address the shortfall because there is an interplay between the official retirement age that countries put in place and the effective retirement age – that is the age at which people actually retire,” he responded.

“So it definitely would help, but it wouldn't address the entire shortfall.”

Boston Consulting Group sees a range of solutions to ensure Australia's future economic growth is not threatened by an undersupply of workers.

They include boosting skills training to lift productivity, as well as extending the Government's skilled migration program.

“If immigration was the only lever that you pulled then you would need to increase the rate of net immigration of new workers into the economy to fill that shortfall between now and 2030 – so effectively 2.3 million workers,” he said.

“But that would be spread over you know the 15 or so years between now and 2030.

“So the actual increase in the rate of immigration of workers would be modest over what we are taking into the country today.”

**SKILLS DEVELOPMENT KEY**

However, not everybody is concerned about a shortage of workers in the decades ahead.

University of Canberra labour economist Phil Lewis is not prepared to make any predictions about the state of Australia's labour market 16 years from now.

“I wouldn't be as silly as to do that,” he retorted.

“What I would say is that, I think as long as we can find a solution to these people who are poorly educated, left school before Year 12, if we can get them skilled up to basics, generic skills, people skills, numeracy, literacy et cetera, that will go a long way to reducing unemployment.”

Professor Lewis says Australia is just coming out of a period in which there was an unusually high demand for workers.

“I don't think we really need to bother too much about shortages of labour because we have had a period in the mining boom where there were quite significant labour shortages and we managed to weather that quite well,” he observed.

“I think our major problem is unemployment in Australia, which is not a general problem, it's very specific to a particular group of disadvantaged people.”
THE AGEING OF THE AUSTRALIAN POPULATION: TRIUMPH OR DISASTER?

Executive summary from a report prepared for the Monash Centre for Population and Urban Research by Katharine Betts

Many people are anxious about Australia’s ageing population. Others are optimistic. So is demographic ageing good for Australia or bad for Australia? This paper considers the positive and the negative case under five headings: labour-force participation, baby-boomers (and age-based discrimination), the tax base and social welfare, healthcare costs, and older people’s voluntary work. It also contains a brief note on hyper-ageing, asks whether mass immigration can cure demographic ageing, and then explores the effects of the population growth that such immigration would induce on economic productivity.

The labour force

Australia’s average (median) age increased from 28.9 in 1978 to 37.3 in 2013 but, despite this, the proportion of the population aged 15 plus in the labour force has grown. It rose by 2.5 percentage points from 61.7 per cent to 64.2 per cent in January 2014. (Calculated as a percentage of the total population it rose from 44.7 per cent to 53.6 per cent.)

This increase is partly because Australia is going through a demographic sweet spot, enjoying the demographic dividend of relatively fewer children than in the past and relatively fewer older people than will be the case in future. But it is also because of increased age-specific levels of labour-force participation, especially among women and among older people of both sexes. Consequently levels of dependency of non-participants on those who are in the labour force have fallen.

This section goes on to apply today’s labour-force participation rates to a stable stationary population projection for 2061 (that is, a projection that neither grows nor contracts once its numbers have stabilised). In such a population between 44 and 46 per cent of the total population would be in the labour force. These data also show that a number of countries with older populations than Australia’s (such as Switzerland and the Netherlands) have higher labour-force participation rates than ours.

Baby boomers and age-based discrimination

The baby boomers (aged 51 to 66 in 2012) are a larger cohort than the people aged 67 to 82, but the cohorts younger than them are larger still. Baby boomers do not form a unique bulge in the population pyramid.

In a stable stationary population it will be normal for proportionally more people to be entering the older age-group categories than in the past.

Age-based discrimination in the work place is widespread; indeed 10 per cent of employers are happy to say openly that they practice it. Some opinion makers are also happy to deride baby boomers. This does not help older people cope with discrimination. In a more positive social environment labour-force participation rates for older people would be even higher.

The tax base and social welfare

Fears that dwindling numbers of workers will have to support larger numbers of aged pensioners dominate the ageing debate. Yet labour-force participation rates among older people are rising and the greater part of government revenue (61 per cent) does not come from taxes on paid labour. Currently cash payments for welfare to older people constitute just over a third of government expenditure on such payments.

Concerns about the future capacity of governments to pay for the welfare costs of an ageing population are
belied by the recent liberality of the Commonwealth Government. It has abolished income tax on superannuation payments, increased access to the age pension, and lifted the level of benefits. While the cost of the age pension has grown faster than GDP over the last decade, demographic ageing is not the cause; rising costs have been due to discretionary policy changes.

Even low rates of per capita economic growth should allow governments to continue to pay aged-pension costs, an outcome that would be even more readily achieved if some of the extraordinarily liberal provisions for middle-class retirees were reformed.

Healthcare costs
There are two main theories about the effects of demographic ageing on healthcare costs: the failure of success model and the compression of morbidity thesis. The former maintains that, in developed countries, modern science is keeping more people alive for longer, but in a decrepit state. In contrast the latter maintains that people are living longer because they are healthier and that serious illness (morbidity) is being compressed into the last two years of life. So far the evidence favours this second theory: longitudinal studies in America and Europe show that the physical health of older people is improving and that rates of dementia are falling.

Data on 31 OECD countries also show that there is no statistically significant association between the proportion of the population aged 65 plus and healthcare expenditure as a percentage of GDP.

In Australia disability rates across almost all age-groups fell between 2003 and 2012 and, from 1999 to 2012, the proportion of people aged 65-plus who were in residential care fell in all age group categories. (Overall, in 2012, just five per cent of the population aged 65-plus were in residential care.)

Older people’s voluntary labour, within families and in the community
In 2012, 49 per cent of children receiving childcare were looked after by their grandparents, and in 2003 more than twice as many children lived with their grandparents as lived with foster parents.

Australians aged 65 plus also play a major role in looking after people with disabilities; between 19 and 21 per cent of them act as carers for someone with a disability, usually a family member. This is in comparison to 14 per cent of people aged 18 to 64 who acted as carers. Older people also volunteer in organisations outside the family; in 2010, 33 per cent of those aged 65 plus worked as volunteers as did 12 per cent of those aged 85 plus.

Avoiding hyper-ageing
A total fertility rate (TFR) of 2.0, high life expectancy (and nil net migration) lead to a stable population structure and normal demographic ageing. This would be manageable, even beneficial, for Australia. But if the TFR were allowed to fall to 1.6 the situation could change and the median age would become very high. We can call this hyper-ageing and it is reasonable to consider policies which might prevent it.

Mass immigration as a cure for ageing
Demographic ageing is caused by lower fertility (for example a TFR of 2.0, instead of an average family size of 6.5) and longer life expectancy. High net overseas migration (NOM) makes little difference to the median age but a considerable difference to the size of the population, including the size of the population aged 65 and over.

If we want to avoid the hyper-ageing associated with very low fertility the most cost-effective way to do this is to support the two-child family. Combining low fertility with high NOM is not only extremely costly, it also leads to an older age structure than does a TFR of 2.0 and nil net migration.

Productivity, ageing and population growth
The Productivity Commission report on ageing points out that the infrastructure spending needed to manage population growth over the next 50 years will be five times the total that was needed over the last 50 years. This investment in capital widening must seriously weaken Australia’s capacity to invest in the capital deepening that would boost productivity.

Despite this, Treasury continues to emphasise its ‘three Ps’: population, participation and productivity. While Treasury treats these three variables as if they were independent some commentators argue that population growth has a positive effect on productivity. But there is a contrary argument. Population growth imposes pressures on infrastructure and adds to congestion; in so doing it depresses productivity.

International comparisons show that there is no association between population growth and growth in per capita GDP. This is not surprising as comparative data on 32 OECD countries show no positive association between population growth and growth in labour productivity.

Conclusion
An older age structure has many benefits. Besides, the only way to avoid it on a long-term basis is to have large families and die young. We have tried hard to escape from this way of life and, now that we have, we can reap the benefits. Frantic efforts to make Australia younger by making it bigger are no more rational than a middle-aged person trying to look younger by gaining 40 kilos.

There may be some clouds over our demographic future – no real story has a totally happy ending. But the prospect of long life and stability is far more pleasing than either a return to the nineteenth century or a journey to an overcrowded future blighted by demographic obesity.

An older age structure is no disaster. Like other advances in human wellbeing, it is one of our triumphs.

HOW WILL AUSTRALIA CHANGE OVER THE NEXT 40 YEARS?

AN EXECUTIVE SUMMARY EXTRACT FROM THE ‘2015 INTERGENERATIONAL REPORT: AUSTRALIA IN 2055’, PRODUCED BY THE FEDERAL GOVERNMENT

Over the past 40 years, Australia has enjoyed strong economic performance, underpinned by a growing population and a series of major reforms. This economic success has greatly enhanced our quality of life. Average incomes have doubled in real terms since 1975, with this increased wealth shared broadly across the community.

As a result, Australian families enjoy access to a well-functioning health system, good schools, a strong social safety net and options for recreation and leisure that our grandparents could only dream about. All Australians share aspirations for economic security and an even more prosperous future – a better place for our children and the generations beyond.

But it is not enough that we share this aspiration. We need to make choices today to build a strong and resilient economy and lay the foundation for future prosperity.

This extract from Chapter 1 of the Intergenerational Report outlines projections of the three long-run drivers of economic growth in Australia: our population, participation in the workforce and improved productivity. Understanding how these drivers of economic growth are likely to change over the next 40 years will inform the action governments must take to build jobs, growth and opportunity.

POPULATION

Australia’s population is projected to change and grow over the next 40 years. The changing size and structure of our population is important as it influences how quickly our economy and our incomes grow, and therefore the rate at which our future living standards will increase.

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A greater proportion of the population will be aged 65 and over. The number of Australians in this age group is projected to more than double by 2054-55 compared with today. Both the number and proportion of Australians aged 85 and over will grow rapidly. In 1974-75, this age group represented less than 1 per cent of the population, or around 80,000 people. In 2054-55, it is projected that 4.9 per cent of the population, or nearly 2 million Australians, will be aged 85 and over.

There will be fewer people of traditional working age compared with the very young and the elderly. This trend is already visible, with the number of people aged between 15 and 64 for every person aged 65 and over having fallen from 7.3 people in 1974-75 to an estimated 4.5 people today. By 2054-55, this is projected to nearly halve again to 2.7 people.

Fertility is assumed to remain at around the 2013 rate of 1.9 births per woman. The total fertility rate has remained relatively steady since the late 1970s.

Based on patterns of migration, fertility and life expectancy (mortality), Australia’s population is projected to grow at 1.3 per cent per year, which is slightly below the average growth rate of the past 40 years. If this were to occur, the population would reach 39.7 million in 2054-55, up from 23.9 million today.

Net overseas migration has a significant impact on population projections. Net overseas migration is mainly comprised of permanent migration (including skilled and family) and temporary migration (including temporary skilled and students). The central assumption of this report is that net overseas migration will be 215,000 people a year beyond the current forward estimates, which is based on current permanent migration intake settings.

The permanent migration intake, which was increased significantly during the mining boom, is reviewed each year in the context of the budget to reflect evolving economic and social circumstances. Temporary migration (including temporary skilled and students) has also been an important driver of increases in net overseas migration over the past decade.
PARTICIPATION

Participation refers to the proportion of the population of people aged 15 years and over who are actively engaged in the workforce.

The community and economy will benefit from opportunities to support older Australians who want to work, as well as boosting opportunities for women, young people, parents and people with disability to participate in the workforce. This can be achieved through policies that support people who choose to stay in the workforce for longer, or re-enter it sooner after a temporary absence.

Over the next 40 years, the proportion of the population participating in the workforce is expected to decline as a result of population ageing. A lower proportion of Australians working will mean lower economic growth over the projection period.

By 2054-55, the participation rate for Australians aged 15 years and over is projected to fall to 62.4 per cent in 2054-55, compared with 64.6 per cent in 2014-15. That said, female employment is projected to continue to increase, following on from strong growth over the past 40 years. In 1975, only 46 per cent of women aged 15 to 64 had a job. Today around 66 per cent of women aged 15 to 64 are employed. By 2054-55, female employment is projected to increase to around 70 per cent.

Nonetheless, Australia’s female participation rates remain lower than some other advanced economies such as Canada and New Zealand, and more can be done to encourage women to enter and stay in the workforce. Policies that help to continue to boost female participation will help Australia achieve an even higher level of future prosperity.

As Australians live longer and do so in better health, more Australians will continue to lead an active lifestyle and participate in the workforce after they reach traditional retirement age. Participation rates among those aged 65 and over are projected to increase strongly, from 12.9 per cent in 2014-15 to 17.3 per cent in 2054-55. This represents a significant opportunity for Australia to benefit more from the wisdom and experience of people aged over 65.

PRODUCTIVITY

Of the three key drivers of economic growth, productivity has historically been the most important to Australia’s economic performance. Put simply, productivity is about working more efficiently or producing more or better quality goods and services with the same level of resources.

Australia has enjoyed periods of high productivity growth, which have contributed to growth in incomes and high living standards. For every hour average Australians work today, they produce twice as many goods and services as they did in the early 1970s. It is no coincidence that average income per person has also broadly doubled in this period.

Technology is changing the way we interact with each other and how we live our lives. It is changing the face of business, markets, governments and social engagement. In the 1970s, the internet, mobile phones and social media did not exist as we know them today. Now they are integral parts of our lives and IT-related industries employ nearly as many people in Australia as the mining industry.

Technological advances, such as advanced robotics, 3D printing and self-navigating vehicles have the potential to unlock quality of life improvements. Harnessing future opportunities to support innovation, adopt new technologies, facilitate foreign trade and investment and foster competition can boost future productivity growth and living standards.

Government policy settings will be very important to helping individuals, businesses and governments take full advantage of opportunities from technological developments so that productivity growth is

CHART 1: COMPONENTS OF REAL GDP GROWTH PER PERSON

Source: ABS cat. no. 5206.0, 6202.0 and Treasury projections.
Australia’s productivity growth was especially high, with an estimated average of 2.2 percent growth per year. This has been widely attributed to economic reforms during the 1980s and 1990s. These reforms created more competitive and flexible markets in which businesses became more efficient and innovative, and new and improved technologies were adopted. More recently, our productivity growth has slowed, with an average of 1.5 percent growth per year observed through the 2000s.

This report takes historical productivity growth as a guide, and assumes that average annual labour productivity growth over the next 40 years will be 1.5 percent. Reforms to enhance productivity over the next 40 years will be crucial if we are to achieve the growth in living standards we have enjoyed since the mid-1970s.

ECONOMIC PROJECTIONS

Taken together, population, participation and productivity drive the economic growth projections in this report. With an ageing population, economic growth is projected to be slightly slower over the next 40 years than over the past 40 years. Slower growth is due to slightly lower projected population growth and declining participation rates.

However, it is important to acknowledge that the past 40 years include an unprecedented 23-year stretch of unbroken economic growth that is continuing. This has only been matched by one other advanced country, the Netherlands, which experienced close to a 27-year stretch of unbroken economic growth between 1981 and 2008.

It is also important to keep in mind that the long-term projections look through business cycles and assume a smooth growth path through to 2054-55. In reality, it is almost certain that any economy will go through such cycles over a 40 year time period. However, the outlook to 2054-55 will not be driven by these cycles, but by the underlying trends in population, participation and productivity.

The average annual growth of real GDP is projected to be 2.8 percent over the next 40 years compared with 3.1 percent over the past 40 years. Average annual growth in real GDP per person is projected to be 1.5 percent over the next 40 years compared with 1.7 percent over the past 40 years.

National income growth is expected to slow more markedly than real GDP growth as the decline in the terms of trade takes place during the current decade and the construction phase of the mining boom ends. Real gross national income (GNI) per person is the measure of how much we earn, not just what we produce. Real GNI per person is projected to grow at 1.4 percent over the next 40 years, compared with 1.9 percent over the past 40 years. If this level of growth is achieved over the next 40 years, the average annual Australian income will increase from $66,400 today to $117,300 in 2054-55 in today’s dollars.

Over the next 40 years, changes in the share of population aged 15 and over are projected to make a small positive contribution (0.1 percentage points) to average annual GDP growth per person. This is less than its contribution over the past 40 years.

Increasing participation rates contributed 0.2 percentage points to average growth over the past 40 years. Over the next 40 years declining participation is projected to detract 0.1 percentage points from average growth.

This report illustrates why, over the next 40 years, ongoing improvements in Australian living standards will remain primarily contingent upon continually improving our productivity, and require us to take every opportunity to increase participation rates.

ENVIRONMENT

The environmental changes that unfold over the next 40 years will affect Australians’ quality of life across a range of dimensions.

It is difficult for individual governments to control or affect the collective and cumulative impact of human activity globally, but there is a role for the Australian Government to continue in its efforts in leading and coordinating domestic environmental policies to drive better environmental management and economic growth for the generations to come.

Economic growth and strong environmental outcomes are complementary objectives. Policies that create strong economic growth and a sustainable budget will mean that governments are better placed to invest in environmental protection. Additionally, protecting the environment can also contribute to economic growth, particularly in sectors such as tourism.

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Australia must encourage older Australians and women to enter and stay in the workforce in order to increase productivity and protect future prosperity, according to the Intergenerational Report released by Treasurer Joe Hockey.

The government is projecting growth in the population of 1.3% over the next 40 years, however workforce participation to fall to 62.4%, compared to 64.6% in 2014-15. Real growth in GDP is expected to slow, compared with the previous 40 years, to 2.8% per annum, due to the ageing population and gradual decline in the participation rate.

Hockey said the country must look to two ‘armies’ – the ‘grey army’ of older Australians, and women returning to the workforce, to deliver prosperity in Australia’s future.

“That is where there is going to be a lot of structural effort over the next few years,” Hockey said.

Other measures he proposed to improve productivity include investment in new capital and infrastructure, innovation and technology, and more entrepreneurship and competition.

We asked experts for their response.

**Martin O’Brien, Senior Lecturer of Economics, University of Wollongong**

As with previous intergenerational reports, encouraging older Australians to work longer is being pushed as the key message to combating fiscal pressures associated with our ageing population. Based upon Treasury’s projections, nearly one in five Australians will remain in the workforce over the age of 65 by 2055, which doesn’t sound like much. After all, we increased the participation rate of those aged 55-64 by close to 20% over the last 30 years or so. However, the simple projections quoted in the report hide a number of complex and competing trends for older workers.

First, there is a big divide by gender. Labour force participation rates for all male age groups over 55 have been stagnant since the global financial crisis. There is no evidence to suggest older men have returned to the labour force for financial reasons to recoup their losses from the GFC as touted by many elsewhere. In addition, welfare and pension reforms heralded by the government as the effective solution to our early retirement phenomenon appear to have stopped working. The only increase in older labour force participation we have experienced in Australia in the last 5 years or so has come from females, and even these trends look like they are plateauing.

Second, using the term ‘over 65’ years hides another aspect of the story. We have experienced increases in participation of both males and females in the age group 65-69 over the last decade, however, at present we only have approximately 30% of males and 20% of females in the labour force. After this point less than 10% of males and 5% of females over 70 years remain employed. Of greater importance is the fact that the growth in the 65-69 group looks like it is starting to trend downward if anything. There was much fanfare in Treasurer Hockey’s announcement last year to increase the pension age to 70 and the purported effectiveness of this policy is referred to a number of times in the report. But the simple truth of the matter is that not many people will be in the labour force by this age and it will have little impact, especially if trends in the last 5 years continue.

As usual, concentrating only on the supply side of the economy leaves out half the story. The stalling economy and slackness in the labour market since the GFC (i.e. lacklustre demand) is the reason older worker participation rates are stagnant. Participation rates will not increase simply because there are more older Australians.

**Stephen Duckett, Director, Health Program at Grattan Institute**

Treasurer Joe Hockey suggested readers would fall off their chairs when they saw what was in his Intergenerational Report. Falls are a health risk and luckily the Intergenerational Report doesn’t reveal as dire a future as we might have been led to expect.

The report is an overtly political document – highlighting the wondrous benefits which would accrue if the government’s 2014 Budget had passed and the horrendous situation we’ll be in if it isn’t. The picture
The government is projecting growth in the population of 1.3% over the next 40 years, however workforce participation to fall to 62.4%, compared to 64.6% in 2014-15. Where to now?

The Minister for Social Services has picked up the necessary and constructive imperative to enable people to work longer (for the many who can and choose to work). The Age Discrimination Commissioner is leading the attack to dismantle the systemic ageism that undermines the dignity and contributions of older people. Government seems to have lost the message on the value of promoting continuing health and independence through the life span. There is strong evidence that older people can be part of the solution.

The IGR and the government also come close to blaming older people for rising costs of government, many of which are not intrinsically related to ageing. Accusing baby boomers of ‘intergenerational theft’ runs contrary to our research on the deep intergenerational solidarity in Australia and the evidence that real incomes are projected to grow in the IGR. The major inequalities are found between those who are advantaged and those who are disadvantaged over their entire lives. Action here requires investment in human capital as well as attention to levels of government revenue and tax expenditure for privileged groups that remain invisible in the IGR.

John Buchanan, Director, Workplace Research Centre at The University of Sydney

I want to know where the jobs are coming from. Labour demand at that end of the life course is very limited. For many years they’ve been flogging the supply side of this, but Australia has a labour underutilisation rate of about 15%. There’s a lot of older workers who want to work, but can’t.

The second problem is there’s no need to panic. We’re getting older because we’re getting better at doing things. The problem is not a productivity shortfall.

(Economist) Thomas Piketty showed the disproportionate amount of productivity gain has gone to the top 5%. Unless you have serious policy intervention, that dynamic of the rich pulling ahead of everyone else is what’s causing instability in the system.

The moral panic is looking tired – solving all our economic problems by making everyone work until they die. But it keeps people’s attention away from the distributional issue and focused on productivity.

Ian Lowe, Emeritus Professor, School of Science at Griffith University

As with previous reports in this series, there is a narrow focus on economic aspects of our future. Business-as-usual is assumed, despite the warnings of the World Economic Forum. The ideological

Hal Kendig, Professor of Ageing and Public Policy, Australian National University

The 2015 Intergenerational Report (IGR) is a strong political statement that more than ever places population ageing and older people centre stage in public and political debate. It provides Treasury’s technical projections (albeit based on questionable assumptions) wrapped in the Treasurer’s political interpretation (aimed at Senate budget debate). One has to unpick the political message for today from the projections to mid century. The fundamental IGR message is that actions beginning today could be turning points towards a better long-term future.

To put matters into perspective, Australia is experiencing relatively slower population ageing in an overall encouraging economic outlook compared to Europe, which is already managing with levels of population ageing that we will not reach for decades. Notwithstanding recent speculation about living to 150, it is encouraging to see the government beginning to celebrate the social achievements of more years of healthy living well into our 80s and beyond.
obession with growth and the discredited trickle-down theory leads to the conclusion that we must continue to be a low-tax society with very generous treatment of corporations and those on high incomes.

There is no sign the government even recognises the most serious threats to future generations: liquid fuel security, climate change, water shortages, loss of productive land and loss of biodiversity. These issues require planning and commitment of resources now.

The report also takes rapid population growth as given, when it is a direct result of government policies. The main driving force of population growth is the government’s migration quota; it is especially questionable to import hundreds of thousands of potential workers each year when we have high levels of unemployment and under-employment.

We also provide financial incentives for having children when the annual ‘natural increase’ – births minus deaths – is about 150,000. These policies give us a rate of population growth more like a poor Third World economy than a modern industrial nation.

**Alan Pears, Sustainable Energy and Climate Researcher at RMIT University**

Any intergenerational report needs to review the way we evaluate new infrastructure projects and policy on long-lived private assets such as buildings: much lower discount rates must be applied (for example, as proposed by Ross Garnaut in his original climate review) that place some value on the long-term impacts and benefits of public and private investment.

For example, if the cost-benefit analysis for building energy regulations applied a lower discount rate, much higher efficiency standards than today’s 6-star rating would be very cost-effective.

Our rapidly accelerating energy revolution must also be considered. Global demand for our fossil fuel exports will collapse, while other energy solutions will grow. At the same time, energy consumption for production of materials and delivery of many services will decline as industry and our overall economy is transformed. Low carbon growth industries will include health, recycling/reprocessing, IT and telecommunications (including ‘virtual transport’), decentralised manufacturing (e.g. 3D printing), manufactured housing, etc.

These transformations will impact adversely on many people’s retirement funds unless fund managers act fast to shift funds from fossil fuel and conventional centralised energy systems to emerging energy alternatives and low carbon businesses.

The limited coverage of climate change in the full report is weak, and essentially says government will fund research and allocate funds as necessary to deal with it. If this had been written 20 years ago it would have been reasonable. But in today’s context it is a serious failure in framing our ‘intergenerational compact’. The next generation will not thank us.

**Richard Norman, Senior Research Fellow in Health Economics at Curtin University and Rosalie Viney, Professor of Health Economics at the University of Technology, Sydney**

The IGR predicts federal health expenditure to increase from 4.2% of GDP to 5.5% in 2054/55 under the government’s ‘proposed policy’ scenario.

A notable feature of the Intergenerational Report’s projections on health spending is that growth in pharmaceutical expenditure is conservative compared with Medicare Benefits Schedule (MBS) expenditure. The MBS is the list of services subsidised by the government through Medicare. Much of this is driven by the decision to change the assumed growth model for MBS spending to an exponential one while retaining linear growth models for pharmaceuticals.

In fact, Australia’s ageing population and increasing prevalence of chronic conditions are significant potential drivers of pharmaceutical expenditure. The overall expenditure projections remain relatively stable under the proposed policy scenario because MBS expenditure increases are counterbalanced by assumed stability in Australian government public hospital and private health insurance expenditure.

The basis for this is that proposed policy links this expenditure to CPI and population growth only. But the drivers of MBS expenditure are the same drivers of public and private hospital expenditure. So the upshot is increase and arguably unsustainable pressure on private health insurance costs and state public hospital expenditure.

Overall, the figures demonstrate the likelihood that health spending will increase relative to GDP. But to argue this represents the unsustainability of the system requires additional logical steps, particularly since Australia sits towards the lower end of the OECD in this measure.

More broadly, while long-term predictions are valuable, uncertainty in these estimates is important. If a similar report had been commissioned in 1975 predicting health expenditure today, significant changes would have been omitted, including the growth and development of Medicare and e-health, for instance, rapidly changing patterns of immigration and the early impact of genomics, among other things.

So while these figures have merit, we must keep the uncertainty around them in mind when they’re used to justify policy.

**Real growth in GDP is expected to slow, compared with the previous 40 years, to 2.8% per annum, due to the ageing population and gradual decline in the participation rate.**

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Intergenerational reports serve the important purpose of putting economic sustainability and demographic change on the policy agenda. The fourth Intergenerational Report, released late last week, projected Australia’s population to be growing – to 39.7 million – and ageing, with the above-65 age group rising to 22.5% by 2054-55.

But how appropriate are the report’s demographic assumptions? How would some of the economic outcomes differ under alternative demographic assumptions and over a longer timeframe? And should greater attention be paid to the potential consequences of population growth?

The demographic assumptions
The population projections underpinning the report illustrate the population trajectory that would result under constant annual net international migration of 215,000, a total fertility rate of 1.9 births per woman, and forecast male and female cohort life expectancies at birth increasing from 91.5 and 93.6 years in 2015 to 95.1 and 96.6 respectively in 2055.

The projected population for 2050 is 1.9 million larger than the 35.9 million projected by the third Intergenerational Report. This sparked the ‘Big Australia’ debate.

The difference is primarily due to the fourth report’s higher assumed net international migration.

Are the population growth projections too conservative?
The assessment of prospective population growth in the fourth report is too conservative, mainly because its immigration assumption is too low. The report assumes immigration will be lower than recent departmental forecasts.

Even though it assumes the unemployment rate will fall, the report does not allow for future immigration to be affected by a tighter jobs market or by the increasing numbers of baby boomer retirements and the larger population it projects.

The report assumes fertility will continue to be around its post-2010 level. Following the global financial crisis, fertility declined not only in Australia, but also in much of Europe and the US. Australia’s post-2010 fall in birth rates is due to reduced fertility below age 30. This may reflect a postponement of births, as research suggests is the case in Europe.

A small recovery in fertility could be in prospect as previously postponed births eventuate – especially if, as the report assumes, the economy strengthens.

The report’s forecast life expectancies are consistent with recent research. Despite its high and rapidly increasing life expectancies, Australia’s population is likely to remain one of the youngest in the OECD.

The benefits of a youthful migrant intake
In theory, ‘best policy’ should be assessed relative to the entire future, as opposed to just the 40 years considered by the Intergenerational Report. Demographic changes that affect reproduction will have flow-on effects over the entire future. Under higher migration levels,
per capita living standards would be higher in 2055. The percentages of GDP spent on health, aged care and pensions would be lower compared to under lower migration, according to the report. Higher immigration creates a more economically favourable proportionate population age structure than lower immigration due to the high concentration of newly arrived migrants in the younger working ages.

Beyond 2055, the annual benefits from the age structure-related effects of higher immigration are likely to diminish. Between 2015 and 2055, the vast majority of the additional population which would result from higher immigration will still be below the retirement age. Beyond 2055, progressively larger shares of migrants and their descendants will enter older age. My research with Ross Guest shows the benefit of higher immigration to the employment-to-population ratio starts to diminish after 43 years.

One for the country?
The report projects a lower GDP per capita would result in 2055 under higher fertility than under lower fertility. This appears at odds with former treasurer Peter Costello’s playful urging to Australians in 2004:

You should have one [child] for the father, one for the mother and one for the country. If you want to fix the ageing demographic, that’s what you do.

As shown by my research, the negative effect of higher fertility on GDP per capita is likely to diminish over time, as the additional population resulting from the higher birth rates increasingly spreads beyond the child ages.

If, instead of a per capita basis, denominators that reflect the greater health and other needs of older age groups relative to the young are considered, my research shows the age structure-related effect of higher fertility could become positive in the longer run. The Intergenerational Report’s projected benefit to GDP per capita from the age-structure-related consequences of higher immigration would have been diminished, and the cost of higher fertility increased, by the trend towards a later pattern of workforce participation and the measures to reduce ageing-related costs which it illustrates.

Towards a ‘Huge Australia’?
The modest age-structure-related benefits of higher immigration need to be weighed against its substantial long-run population size consequences.

If net immigration and fertility were to continue indefinitely at the report’s assumed annual levels of 215,000 and 1.9 births per woman respectively, and (just) the current (period) life expectancy were to prevail, then over the very long run Australia’s population would grow, ever more gradually, towards roughly 143 million. Clearly, such growth would transform the life conditions of future generations.

Future reports should incorporate more discussion of the challenges posed by the population size trajectories they project, how best to accommodate growth and the desirability and feasibility of changing the course of population growth.

Nick Parr is Associate Professor in Demography at Macquarie University.
THE TENUOUS LINK BETWEEN POPULATION AND PROSPERITY

While the population will be growing briskly, the welfare of individuals will not be keeping pace with that of the economy as a whole, observes Katharine Betts

The Intergenerational Report released last week by Treasurer Joe Hockey proposes extremely high rates of immigration, adding nearly 13 million people by 2054-55 above the numbers foreshadowed by natural increase.

The report claims such an increase will offset demographic ageing and boost economic growth, but neither claim is borne out by the evidence. The effects on ageing are both trivial and transient and, when economic growth is considered in per capita terms (and in terms of real welfare), the increase will certainly be detrimental.

The narrative of the Intergenerational Report is that the population will be growing (though this, it transpires, has little to do with ageing) and the larger population will need more services. This will put pressure on the budget. So how are we to build “a strong and resilient economy” and lay “the foundations for future prosperity”?

It is no surprise to readers of this report’s three predecessors that the answer lies in the odd trifecta of population growth, productivity and participation.

The scenario that the report focuses on is one where the total fertility rate remains at around 1.9, life expectancy is in the mid 90s and net overseas migration (NOM) is held at 215,000 per annum. The report is careful not to make too much of its immigration assumption, presenting the increase in percentage terms. If the absolute number for net migration remains constant, this percentage measure will always show an unthreatening decline year-on-year, because the base population on which it is calculated will have grown. (After all, the second person to step ashore from the First Fleet in 1788 increased the European population by 100%, and the 11th by only 10%.)

The report links migration with economic growth in a curiously indirect fashion:

“Lower levels of net overseas migration would lead to lower population growth rates over time and, therefore, lower economic growth.”

This is another way of asserting that high migration will increase aggregate GDP. Yes it will, but this has little to do with individual welfare. Here per capita GDP is the relevant measure.

GDP AND WELLBEING

The report projects a growth in aggregate GDP of 2.8% per annum over the next 40 years, but that of per capita GDP is projected at only 1.5%. So while the population will grow, per capita GDP remains relatively stagnant.
be growing briskly, the welfare of individuals will not be keeping pace with that of the economy as a whole. This may not concern the minority who profit from larger markets, but it will impact on voters.

Moreover the deep shortcomings of GDP as a measure of wellbeing are now all too well known; for example the misery that commuters experience stuck in traffic shows up as a positive for GDP (more petrol consumed, more costly wear and tear on vehicles), and the GDP takes no count at all of the drag that the congestion imposes on productivity. In contrast the State of Australian Cities report predicts traffic congestion in the major cities will cost Australians A$20.4 billion a year by 2020 and stories of its ill effects on productivity are commonplace.

The report also says, quite modestly, that migration “has an impact on the age distribution of the population” (because migrants tend to be younger when they arrive). Other authoritative government reports find little support for the argument that high migration cures demographic ageing so a modest statement is prudent. But the scenario the authors have adopted is one of historically high migration (the first Intergenerational Report assumed NOM of 90,000). Their subsequent justifications for their NOM of 215,000 in fact turn both on that of growth in aggregate GDP and the anti-ageing theme. (Yes, high migration will reduce the median age by around five years – temporarily.)

The report’s scenario leads to a population growing from 23.9 million in 2015 to 39.7 million in June 2055. Were we to follow a similar scenario but with nil net migration the population in June 2055 would be 26.9 million.

The report proposes a population increase of 12.8 million above and beyond where natural increase would take us. To what end? In June 2014 the total population of Sydney, Melbourne, Brisbane and Adelaide was 12.6 million. The report does not explain how building the equivalent of all these cities again in just 40 years will enhance our productivity.

Given the infrastructure demands, it is not surprising that data from 32 OECD countries show no statistically significant association between productivity and population growth.

Better that the trifecta of the three Ps were reduced to a duo of productivity and participation. High immigration may have no effect on productivity, as the figure above shows, or as the Australian experience suggests, may reduce it. And it can be irrelevant to participation.

The report projects that, as the population ages, labour-force participation rates will fall from their current levels of 64.6% to 62.4% in 2054-55. But in the
Youthful and prosperous 1960s rates were much lower: 59.9%, for example, in August 1966. This shows that labour-force participation can vary without necessarily affecting economic wellbeing and that it can be shaped by a range of factors other than demographics – for example, accessible childcare, employers' willingness to hire women and older people, and cities that permit workers to get to work in a reasonable fashion.

It is therefore not surprising that evidence from comparable OECD countries shows no statistically significant association between the proportion of people aged 15 plus in the labour force and the proportion aged 65 plus.

Too much emphasis can be placed on the crude demographic measure of the proportion of a population of so-called working age: 15 to 64. Equally, too little can be made of the social, economic and policy factors that help or hinder labour-force participation.

As the figure above demonstrates, quite a few people aged 65-plus are in the labour force and many of those aged 15 to 64 are not.

The figure also highlights the dependence of children and young people. No one under the age of 15 is in the labour force, and many of those aged 15 to 24 are full-time students not in paid work.

Indeed it is only in childhood that chronological age inevitably means dependence on others. Now that we are emancipated from the hyper-youthful populations of the past, more adults are freed from the unavoidable labour of caring for the young. They are freed for work, for caring and for building strong communities.

Katharine Betts is Adjunct Associate Professor of Sociology at Swinburne University of Technology.

**The Conversation**

FOUR WAYS TO COPE WITH AUSTRALIA’S AGEING POPULATION

Australians are living longer, which presents a significant financial problem for the current pension system. Per Capita research fellow Emily Millane looks at four things the government could do to cope.

Work Until You Drop”. That was the headline on the front page of The Daily Telegraph on November 22, in response to the Productivity Commission’s recent report, An Ageing Australia, which recommended raising the pension age to 70. Sensationalism aside, is it a good idea to encourage Australians to work longer?

The Productivity Commission has added its voice to growing chorus of concern about the inability of our social structures to cope with the twin demographic trends of an ageing society and increasing life expectancies. The entrants in this debate come at the issues from different angles, with different agendas and value sets, but they are united in an attempt to grapple with the policy solutions presented by life expectancy rising by more than 25 years since the turn of the 20th century. The Productivity Commission has warned that the demands of an ageing population will add an extra 6% of GDP to government budgets if not dealt with – in today’s terms that represents around $90 billion.

Distilled down, there are four options on the table that might enable us to cope with the pressures presented by more of us being older for longer. But we must act soon. As Per Capita has argued in its recent report, Still Kicking. Longevity and Ageing: The Demographic Change of our Time, delaying intervention could mean that future adjustments to rein in the fiscal impact of ageing would need to be done over a shorter period of time, making the impact of future policy measures more keenly felt.

The first option is for people to continue working further into old age, mandated by a rise in the pension age and/or a rise in the superannuation preservation age. This option has the twin benefits of individuals accumulating further private savings and those same individuals not drawing down as much on the aged pension at the same time. But is this practical – or fair to older Australia?

As some unions and other seniors advocacy groups have pointed out, not everyone can work for longer, especially in jobs that are physically demanding. Furthermore, the ability of older Australians to retain work or re-enter the workforce has its limitations. Nearly three-quarters of people over 65 who are discouraged from seeking work say employers think they are too old.

The second option is to raise the revenue base in order to fund more people on the aged pension for longer.

One suggestion in the Grattan Institute’s latest report, Balancing Budgets – Tough Choices We Need, was to extend the GST to food and medical expenses. As the institute itself acknowledges, this is a regressive recommendation: it would hit low-income pensioners disproportionately. Given that the largest area of spending growth among older Australians is on medical expenses, it would also mean that the burden of preserving health and treating disease would fall increasingly fall on older Australians themselves. Other, more progressive, taxation measures could also be considered.

A third option is that the real rate of the aged pension simply goes down, as governments struggle to fund benefits for the aged. This would fit neatly with the Coalition’s approach to ageing and aged care: self-reliance. In a speech last May, entitled The Demographic Challenge, then-shadow treasurer Joe Hockey sketched out the Coalition’s approach to an ageing society. The way to prepare for a mushrooming older demographic was by “... attacking spending ... the winding-back of universal access to payments and entitlements from the state. This will require the redefining of the concept of mutual obligations and the reinvigoration of a culture of self-reliance.”

“Is this what we can come to expect from an Abbott government? A brief response from a staffer and then back to business as usual?”

The first step in this process was to establish a Commission of Audit to look at exactly what payments and entitlements could go first. A related step was to abolish the superannuation payment to people earning under $37,000 per year and to reverse the proposed increase on taxation for those earning more than $100,000 of income from superannuation in the draw-down phase.

In the area of aged care, the government has abolished the aged care Workforce Supplement, which paid a supplement to aged-care facilities with an enterprise bargaining agreement in place. It also scrapped the previous government’s requirements for aged-care providers to follow a prescriptive process in setting prices, and the need to document and certify that process. Aged care providers have broadly welcomed these moves. But aged-care providers are not the same as older people; it remains to be seen whether these changes benefit the...
Australia’s population will both grow strongly and become older. Such slow but profound shifts in the nature of a society do not elicit the same scrutiny as immediate policy issues. The preferable time to contemplate the implications is while these near-inevitable trends are still in their infancy.

Population ageing is largely a positive outcome, primarily reflecting improved life expectancy. A female (male) born in 2012 will on average live for an estimated 94.4 (91.6) years. However, population growth and ageing will affect labour supply, economic output, infrastructure requirements and governments’ budgets.

Australia’s population is projected to rise to around 38 million by 2060, or around 15 million more than the population in 2012. Sydney and Melbourne can be expected to grow by around 3 million each over this period.

The population aged 75 or more years is expected to rise by 4 million from 2012 to 2060, increasing from about 6.4 to 14.4 per cent of the population. In 2012, there was roughly one person aged 100 years old or more to every 100 babies. By 2060, it is projected there will be around 25 such centenarians.

Total private and public investment requirements over this 50 year period are estimated to be more than 5 times the cumulative investment made over the last half century, which reveals the importance of an efficient investment environment.

Labour participation rates are expected to fall from around 65 to 60 per cent from 2012 to 2060, and overall labour supply per capita to contract by 5 per cent.

Average labour productivity growth is projected to be around 1.5 per cent per annum from 2012-13, well below the high productivity period from 1988-89 to 2003-04. Real disposable income per capita is expected to grow at 1.1 per cent per annum compared with the average 2.7 per cent annual growth over the last 20 years.

Collectively, it is projected that Australian governments will face additional pressures on their budgets equivalent to around 6 per cent of national GDP by 2060, principally reflecting the growth of expenditure on health, aged care and the Age Pension.

Is this what we can come to expect from an Abbott government? A brief response from a staffer and then back to business as usual?

It is vital that we have a national discussion about how older Australians want to live. How is the government going to fund more and more pensions as the baby boomers move into retirement and live for 30 years afterwards? If people can’t save enough in superannuation to afford them a comfortable standard of living in retirement, what are we going to do about it? Should the government assist in the further development of an annuities market equipped for the 21st century, so people have the option of purchasing a guaranteed income for each year of their retirement?

These are the big questions, and no one in the government appears to be asking them, let alone trying to come up with innovative policy solutions to answer them.

Emily Millane is a research fellow at Per Capita and author of Still Kicking: Longevity and Ageing: the Demographic Climate Change of our Time.

CHAPTER 3
The population debate

AUSTRALIA’S POPULATION

Peter Curson asks: what does the future hold and what population trends will come to dominate the next few decades?

Over the last year Australia’s population increased by almost 400,000 people and now stands above 23 million. Overseas migration has contributed most of this population increase and Australia’s fertility continues to remain at a fairly low level. But what does the future hold and what population trends will come to dominate the next few decades?

First the good news.

Australians are generally living longer and enjoying much healthier lives than ever before and there seems little doubt that Australia’s population will continue to grow. Infant and child mortality are at historic low levels and life expectancy has never been higher. Now the not so good news. Increasing longevity and low fertility, not to mention totally unacceptable obesity and diabetes rates, will pose countless challenges for policymakers in the future. Australia today ranks among the fattest nations in the developed world and at least 14 million Australians are overweight or obese. In addition possibly more than 1 million Australians suffer from diabetes.

Just imagine that within 40 years, Australia may well have a total population of more than 35 million with more than 6 million aged over 65 including more than 2 million aged over 80. Critically, within 40 years there may well be as many Australians aged over 65 as there are working age adults and perhaps 70 per cent of the total population will be regarded as obese with at least 50 per cent overweight.

Critically, within 40 years there may well be as many Australians aged over 65 as there are working age adults and perhaps 70 per cent of the total population will be regarded as obese with at least 50 per cent overweight.

On the local scene, perhaps as many as seven million may be squeezed into the Sydney metropolitan area. What are the implications of such changes? What will such an Australia be like? Already there are hints of the decline of suburban living and the loss of the traditional backyard and what Dick Smith referred to as ‘free-ranging’ kids. Will high density living take over and we will all become like elderly overweight ‘battery hens’ competing with younger people for small apartments in row after row of austere ten story unit blocks above shopping centres, and fighting to use the lifts, the roads and to fit into the seats on public transport?

Over the last few years there has been a spirited debate as to what Australia will be like and whether it will be able to support such population growth. Much of the debate has been emotionally charged, talking about vastly congested cities, lack of affordable housing, failing transport and agricultural systems, lack of jobs (many being offloaded offshore) and even misery and deprivation. Surely if we are going to have a debate about Australia’s population then it should not be about sheer numbers and the fear of being physically and socially overwhelmed, but rather about redefining what ‘old’ and ‘retired’ really mean in the 21st century, about keeping so-called ‘old’ people in the workforce, about how Australia’s social, health and economic systems are going to cope with future population changes, about addressing the appalling obesity problem, about retaining Australia’s ‘best and brightest’, and about the positive contribution that migrants can make to all aspects of Australian life.
But unfortunately emotion rules the roost. Almost daily we are deluged with comments about the need to limit immigration, about ‘stopping the boats’, about how the housing market will fail to cope, how our roads and streets will be choked, and how our environment and lifestyle will be changed forever. In such a context population growth has become ‘securitised’. For many, a larger older population automatically means insecurity, stress, unsustainable growth and declining living standards. The answer put forward is, lower fertility and limited immigration, which will inevitably lead to smaller families and slower population growth. The downside, however, is increased ageing, a loss of skills and labour force pressures.

And what about migration, what role will it play in the Australia of the future? Many countries have relied on net migration for many years to provide skilled labour as well as to provide people for the jobs no one else wants to do. An added plus has been the impact that young migrants have had on pushing up fertility levels in countries like the UK and Australia. There is also little doubt that immigration has enriched Australia’s economy and enhanced its quality of life.

Despite this, there is currently something of a backlash against current immigration levels and pressure to lower intake rates, particularly in light of the fact that the current number of students and others on temporary visas virtually matches the number of migrants seeking long-term settlement. And let’s not mention the ‘boat people’!

We must also bear in mind that population projections in the past have often proved wrong. The 1920s and 1930s were full of predictions of rapidly declining birth rates threatening the viability and existence of Western societies. No one foresaw the post World War Two baby boom, and almost miraculously in the 1950s many Western societies like Australia entered a major period of population growth bolstered by high migration rates.

And it is not that long ago that Paul Ehrlich preached of a possible demographic Armageddon if we didn’t control rampant population growth in the world. What happened? Well in most instances fertility began to fall in a spectacular fashion and while the developing world continued to grow there has so far been little evidence of cataclysmic doom.

Australia currently stands at a demographic crossroads. One road points towards increased immigration, higher fertility and moderately high population growth. The other, looks down a long path to low fertility, low immigration rates and slow population growth marked by rapid ageing.

Be all that as it may, there seems little doubt that Australia’s population will continue to increase and the recent slight resurgence in fertility and current immigration rates suggests a population of at least 35 million within 35-40 years.

Peter Curson is Professor of Population and Security at the Centre for International Security Studies, The University of Sydney; and Emeritus Professor of Medical Geography, Macquarie University.
Australia’s population reaches 23 million today according to the Australian Bureau of Statistics’ (ABS) online population clock.

How do they know it’s today? They don’t really. The clock provides an estimate only, working from the last census, and accounting for the average rates of births, deaths and net migration since then. The result is an addition of one person every minute and 23 seconds.

**HISTORICAL TRENDS**

Nevertheless, the milestone justifies some serious reflection on the growth of the Australian population. The latest ABS data shows that our population grew by 1.7% in the year ending September 2012. Australia has consistently recorded growth rates of between 1-2% since 1971, higher during the mid-20th century population boom. Only once in 200 years have we recorded a negative annual rate.

Despite this, Australia has demonstrated considerable anxiety over population growth. Australian governments have long been concerned with the ability of the nation to fill and defend our sizeable land mass. In 1904, a NSW Royal Commission determined that a rapid decline in the birth rate (to a “low” of around six babies per woman, mind you) threatened the “moral influence of the family” and “the strength of the nation”. Two Commonwealth inquiries followed in the 1940s, making little progress beyond such moralising.

The post-war baby boom quelled these anxieties for a time. In addition, mass migration accelerated population growth. Australia became one of few nations in the world to accept a large-scale immigration program as a permanent policy feature.

**RECENT GROWTH**

Today, over a quarter (27%) of Australia’s population is overseas-born, a proportion considerably higher than in other receiving countries such as the US (13%) and Canada (20%). Immigration added 228,000 people to Australia’s population in the year ending September 2012, or 60% of our growth.

And yet, in recent decades, particularly as Australia’s birth rate declined to record lows around the turn of the 21st century, population anxiety has resurfaced.

These days, it’s not so much about staffing our defence forces, and Australia seems to have accepted that much of its land mass is uninhabitable. Nor is it about nationhood or morality. Rather, the justifications for concern over Australia’s population growth are now purely economic. It is accepted wisdom that perpetual economic growth requires perpetual population growth.

This concern is primarily generated by industry. Quite simply, a larger population means a larger market. The Business Council of Australia, for example, has long advocated for higher immigration and briefly devoted some attention to encouraging births too.
Remember Steve Vizard’s inaugural population summit in 2002? A target of 50 million Australians by 2050 was put forward by industry leaders, such as the late Richard Pratt. Unfortunately for these lobbyists, demographers were obliged to demonstrate that such a target was impossible within the parameters provided by current levels of fertility and mortality. Faced with such realism, the population summits have disappeared from the calendar.

Nevertheless, Australian politicians are ever mindful of powerful business interests, and their endorsement of a “big Australia” (to use Kevin Rudd’s words) only seems to vary by degrees. Though the rhetoric might have altered to suit public sentiment, high immigration targets have been pursued under Howard, Rudd and Gillard alike.

Our national anxiety about sufficient population growth belies the fact that our growth rate is high by the standards of developed nations. There are many countries with much lower long-term fertility rates, and weak or non-existent cultures of accepting migrants. Japan is already shrinking. On current trends, the population of Western Europe will also be smaller at the end of the century than it is today. Even the economic powerhouse that is modern-day China, thanks to its one-child policy, will reach a peak population in 2025, after which it too will start to shrink.

Many of Australia’s source countries – faced with intrinsic decline – have become receiving countries themselves. The competition for skilled migrants, particularly from countries facing rapid population ageing, will become intense. Under these circumstances, it is arguably unwise to rely on high immigration for our continued prosperity.

LOOKING TO THE FUTURE

Decline does not feature in Australia’s current population outlook. Australia’s fertility rate has bounced back sufficiently that we effectively replace ourselves from one generation to the next. The established immigration program then gives our policymakers an additional tool with which to supplement growth if necessary, and (in theory) manage specific economic issues, including labour shortages in specific fields.

We need to leave our misplaced anxieties over population growth behind, and turn our attention to sustainability. The Australian government insists that the immigration program is meeting the needs of the mining boom, but the majority of immigrants still head for Melbourne or Sydney. There are many who argue that Australia’s major cities are already overcrowded, as evidenced by traffic congestion, failing public transport systems, and prices that render housing beyond the reach of many.

To my mind, the important question is not so much whether we have sufficient growth, but whether we can manage the growth we have. Can we ensure that infrastructure keeps up with population growth? Can we neutralise the environmental impact of this growth? Can we spread the wealth already generated by growth? If we don’t address these questions, we compromise the very quality of life that is coveted by migrants to Australia.

Our population of 23 million may be relatively small, but our population outlook is the envy of other nations. Now there’s something to celebrate.

Genevieve Heard is Research Fellow, Centre for Population and Urban Research at Monash University.

Five reasons Australia should stay small

Dr Damien Giurco from the Institute for Sustainable Futures believes there are ‘smarter paths’ for Australia to follow instead of doubling its population. Here is why, in an article reproduced courtesy of SBS News

1. What do we mean by ‘big’?

Australia needs to question what it would mean to be big and why this is desirable. Do we mean a big population to increase global influence instead of educating bigger brains to be respected for smarter ideas? Do we mean bigger immigration so we can expand the working population to feed our bigger waistlines or to generate more consumers for bigger corporate profits? These aren’t good enough reasons for a big Australia. Or could we mean a bigger heart for refugees and a bigger vision for Australia’s future?

2. Reduce footprint before feet

Our world needs to embrace more ethical and sustainable patterns of living; the impacts of our consumption are too high and others have too little. Population growth is only half the story – both what and how much we consume have a huge influence. Did you know that Australia’s carbon dioxide emissions are about the same as Indonesia’s? Indonesia has more than 230 million people and we have almost 23 million but our footprint per person is ten times higher. We must acknowledge our history of how we got to where we are today – will we always seek to define our status by what we buy?

3. Older, slower, exhausted in 2050

In 1990 a typical Australian was about 32 years old, in 2010 they’re 37 years old. Together with an ageing population, our cities are increasingly choked in traffic and we don’t have a strategy for putting money from the mining boom into infrastructure and innovation that will underpin the prosperity of our cities and regions beyond the boom. What will Australia be good at in 2050? Where is our vision for the future? In the short term, urban and rural Australians need better planning for transport, energy and water services – doubling our population would increase challenges we are already struggling to meet as well as further degrading our environment.

4. Creating a resource-efficient future

The simplistic days of bigger meaning better are fading – from the excesses of Wall Street to the limits of one planet – tomorrow’s money will be made by finding new ways to do more with less. Promoting a bigger population for Australia is like trying to solve our problems by doing more of the same. For Australia to be a wise and nimble player in the transition to a new and resource-efficient global economy, we must seize the initiative on pursuing excellence, beginning with education. History and language should be prioritised alongside science and technology, recognising the strength in our cultural landscape to generate and implement ideas which help us prosper in tomorrow’s world.

5. Australia Unlimited

Creativity and wisdom, leadership and opportunity, ingenuity and resilience – rather than a big population – let these be the qualities which underpin and define the future we share.

Dr Damien Giurco is from the Institute for Sustainable Futures.

Five reasons Australia should be ‘big’

Economist Dr Oliver Marc Hartwich is an advocate of a ‘big Australia’. Here are five reasons courtesy of SBS News as to why he thinks the nation has nothing to fear from a growing population.

1. Australia is growing whether we like it or not
There are three factors that determine the size of our future population:
- How long Australians are going to live
- How many children we will have
- How many people move to and leave Australia.

Government cannot do much about much about an improving life expectancy – nor should it. Government cannot determine how many children we will have, either. And again it’s not the government’s business anyway.

This leaves migration as the only lever for population policy. However, it is difficult to fine-tune our net migration intake, nor would it be desirable to reduce migration at a time of near full employment and reported skills shortages.

Even if we cut migration by half we would still see Australia grow to almost 30 million by 2050. This is to say we better get used to the idea of a growing Australia. It is going to happen anyway.

2. Australia has a good track record of dealing with migration
No other country in the world has managed to integrate its migrants so well as Australia. Australia’s migrant community is, on average, less often unemployed or on benefits than the Australia-born population.

Migrants’ children do well in school tests, and migrants are not more criminal than the rest of us.

Australia is one of the most attractive destinations for potential migrants and through the points system in immigration we can continue to attract migrants who will bring the skills and qualifications that this country needs.

3. It’s easier to grow than to shrink
Most European countries would love to swap their demographic problems for ours. Many European societies are ageing and shrinking. By the middle of the century there will only be two working-age Europeans left to care for each European pensioner.

Thanks to Australia’s strong population growth this so-called dependency ratio will remain much lower in Australia for a long time. The result is less pressure on social and health services and a stronger fiscal position. Australia can use this chance to prepare its social security systems for the long-term prospect of an aged population.

4. Population growth will benefit the economy
Australia’s growing population will benefit the economy as consumers, savers, entrepreneurs, and workers. More people will make it possible to increase the division of labour.

It will open up new opportunities for niche products and services, which otherwise could not be offered.

It will also make it possible to provide better mass transit infrastructure for which we currently lack the capacity.

5. Australia is in the most dynamic world region of the 21st century
The ‘tyranny of distance’ is giving way to an ‘opportunity of proximity’. The fastest growing region of the world is Asia, in which there are hundreds of millions, or rather billions, of people who have escaped poverty and joined the global middle class.

What is happening in front of our eyes and not far from our borders is one of the greatest economic transformations that the world has ever seen.

Australia has the chance to be part of this growing Asia Pacific region. But we are not going to achieve this by sticking our heads in the sand, yearning to halt or reverse these changes.

Population growth is going to happen, and it will ensure that Australia can fully play its role in the region.

Jessica Brown and Dr Oliver Marc Hartwich are Research Fellows at the Centre for Independent Studies. Their reports are titled, Populate and Perish?, Modelling Australia’s Demographic Future and Why a growing Australia is nothing to fear.

Big Australia is making us poorer

Economist Leith van Onselen explains why in this article from *MacroBusiness*

Former head of the Business Council of Australia (BCA) and Audit Commission chair, Tony Shepherd, has warned that immigration intake should be maintained at current levels and then rise in the years ahead to confront the challenges of an ageing population...

In a sign that Australians will live healthier and longer lives, by mid-century there will be about 35,000 people over the age of 100. The continued arrival of young migrants will be essential to dealing with the ageing of the population...

“As the population rises we should consider raising the rate, having regard to our capacity for absorption”. ... keeping net overseas migration at current levels will add $1.6 trillion to the Australian economy every year by mid-century, driving almost half the country’s economic growth over the coming decades.

That Mr Shepherd has backed a “Big Australia” is hardly surprising, given his long-time role as a mouthpiece for Australia’s biggest companies. After all, it is big business and the owners of capital that are the primary beneficiaries of Australia’s high immigration intake.

You see, rising population is an easy way for businesses to sell more goods and services. Immigration also gives businesses access to lower cost workers. And there’s less need to become more efficient when your customer base is growing inexorably. Rather, just sit back and watch the profits flow.

Take, for example, Australia’s banks, which get the double bonus of not just having more consumers to sell debt to, but also extra demand for housing, which helps to support house prices and their loan collateral, especially given the urban consolidation policies operated by Australia’s states.

However, while the big end of town is a clear winner from rapid population growth, it doesn’t wear many of the costs. That is borne by you and I.

It is you and I that will be forced to spend more time in traffic jams as Australia’s infrastructure – already straining after a decade of rampant immigration – fails to keep up with population growth.

It is you and I that will be called upon to pay for expensive new infrastructure (e.g. roads, rail and desalination plants) in a futile bid to support the rapidly growing population.

It is our children that will be required to live in smaller and more expensive housing, often further away from the CBD, as more people flood into our major capital cities.

And it is our children that will be called upon to once again ramp-up the immigration intake once the current batch of migrants grows old and needs support – the very definition of a ponzi scheme.

Perhaps the silliest claim from Shepherd is that without strong immigration, the economy’s growth would suffer – as if growth in overall GDP is the be all and end all. What he fails to mention is that economic growth through population is an illusion – it expands the economic pie (more inputs equals more outputs) but leaves everyone’s share of that pie unchanged.

One only needs to view the below chart to see what I am talking about. Despite enjoying the biggest mining investment boom in history, per capita real GDP has risen by a paltry 4.8% since September 2008, versus 15.9% growth in overall real GDP (see chart below).

That’s right, more than two-thirds of Australia’s economic growth has come entirely from population growth, with growth in per capita terms anaemic, despite the huge mining investment boom.

And then there’s Shepherd’s claim that a strong migration intake is required to offset the ageing of the population. This view has been debunked by the Productivity Commission, which found that immigration’s effect on Australia’s age structure is only modest and temporary:

... several studies, including some undertaken by the Commission, indicate that policy-induced changes to Australia’s population are unlikely to significantly affect the ageing trends. Improvements in longevity are the major cause of population ageing over the long run. In recent projections, Commission researchers estimated that an increase in the long-run
If all we are doing is growing for growth’s sake, pushing against infrastructure bottlenecks, diluting our fixed endowment of minerals resources, and failing to raise the living standards of the existing population, what’s the point?

The Productivity Commission report on ageing points out that the infrastructure spending needed to manage population growth over the next 50 years will be five times the total that was needed over the last 50 years. This investment in capital widening must seriously weaken Australia’s capacity to invest in the capital deepening that would boost productivity.

Despite this, Treasury continues to emphasise its ‘three P’s’: population, participation and productivity. While Treasury treats these three variables as if they were independent, some commentators argue that population growth has a positive effect on productivity. But there is a contrary argument. Population growth imposes pressures on infrastructure and adds to congestion; in so doing it depresses productivity.

International comparisons show that there is no association between population growth and growth in per capita GDP. This is not surprising as comparative data on 32 OECD countries show no positive association between population growth and growth in labour productivity. Assertions that immigration-fuelled population growth will boost productivity remain conjectural.

Shepherd has also failed to acknowledge that Australia earns its way in the world mainly by selling its fixed mineral resources (e.g. iron ore, coal, natural gas, and gold). More people means less resources per capita. A growing population also means that we must deplete our mineral resources faster, just to maintain a constant standard of living.

No, the key criteria that needs to be met in deciding whether to expand the immigration intake is: “will it improve the living standards of the pre-existing population?” The answer to this question seems to be a resounding “no”. Therefore, policy makers should definitely not proceed with Shepherd’s plan, or preferably should curtail immigration to a level that provides net benefits to the existing population.

If all we are doing is growing for growth’s sake, pushing against infrastructure bottlenecks, diluting our fixed endowment of minerals resources, and failing to raise the living standards of the existing population, what’s the point?

In order to boost its economy and sustain future growth, the migration levels of Australia needs to be increased by about 30% per year, according to independent modelling by the Migration Council of Australia.

The higher migration numbers would boost Australia’s economy by $1.6 trillion, says a new report from the MCA who warned that reducing the migration intake would have a profound impact on labour participation, productivity, the national skills base and income. Without a strong migration program Australia’s economy will suffer and it will not hit its projected population target of 38 million by 2050 – the projected population target of the government’s intergenerational report.

“What we get in terms of gains is quite amazing for Australia, and something that we should be encouraging,” MCA’s CEO Carla Wilshire told the ABC.

“Migration will be adding $1.6 trillion to Australia’s GDP. So in a single year, about 40 per cent of GDP will be owing, in some form, to the migration program that we run,” says Ms Wilshire.

She states that a healthy migration program is critical to address the country’s fiscal deficit and the ageing population. The MCA notes that migration by 2050 will increase the labour market participation by 15 per cent. This is going to have an impact on fiscal revenues for government, because migrants are generally younger, more skilled and have a higher employment participation rate. Thus they contribute more to the tax base and rely less on government welfare services.

“In fact, there’s less of a spend per migrant in terms of government services. And so when you combine those two factors (tax contribution vs reliance on welfare), their impact is to contribute more in some senses to the government’s fiscal bottom line,” says Ms Wilshire.

The MCA’s report warns that if the government does not increase the migration program, or even worse, stop the migration program altogether, the consequences would be very significant.

“You would lose that gain in terms of the 15 per cent participation bump, you would lose in terms of employment. You would lose the injection of highly skilled individuals into the Australian economy.

Without a strong migration program Australia’s economy will suffer and it will not hit its projected population target of 38 million by 2050.

“And this migration, it leads to about a 60 per cent increase in the population with a university education. Those are all really significant factors in terms of our economic wellbeing, which really relies on healthy high levels of migration to the country,” says Ms Wilshire.
HANDS, MOUTHS AND MINDS:
THREE PERSPECTIVES ON POPULATION GROWTH AND LIVING STANDARDS

EXECUTIVE SUMMARY KEY POINTS FROM A POLICY MONOGRAPH BY
STEPHEN KIRCHNER FOR THE CENTRE FOR INDEPENDENT STUDIES

- The long-run relationship between population growth and living standards has been a source of controversy among Australian economists.

- There is little argument that population growth and immigration have contributed to ‘extensive’ economic growth, that is, growth in the size of the Australian economy.

- There is much less agreement on the crucial question of whether population growth and immigration have also made a positive contribution to ‘intensive’ growth, that is, growth in real national income per capita, a widely used proxy for living standards.

- Economists in the Hands tradition view the past and prospective contribution of population growth to long-run growth in real living standards as being either broadly neutral or slightly negative.

- The MOUTHS perspective is associated with Malthusianism and anti-growth environmentalism. It argues that population growth can cause living standards to stagnate or even decline by placing increasing demands on current and future output and resources.

- The Minds perspective, by contrast, argues that the main contribution population growth makes to living standards is via an increased supply of ideas and innovations. From this perspective, population growth, given appropriate institutions and incentives, not only contributes positively to productivity and rising living standards but is also the main driver of these improvements in the long run.

- Australian economists have for the most part relied on the Hands and MOUTHS perspectives in arguing either for or against population growth and immigration. However, neither of these perspectives offers clear or compelling conclusions about the implications of population growth for long-run living standards.

- Economists and policymakers need to change the way they think and talk about the role of population growth in driving economic growth by adopting the Minds perspective.

- Immigration should be regulated to capture the long-run dynamic benefits from population growth rather than to correct short-term labour market imbalances.

- The permanent migration program should be allocated via competitive auction to minimise inefficient non-price competition for permanent migration rights and to enable government to better capture and redistribute the economic rents attached to these rights.

Stephen Kirchner is a Research Fellow at The Centre for Independent Studies.

The views expressed in this paper are those of the author and not of the CIS, its Board of Directors, the members of its Council of Academic Advisors, or staff.

POPULATION V ENVIRONMENT: THE PROBLEMS WITH A BIG AUSTRALIA

Australia’s population growth is exacerbating problems with traffic congestion, water, waste disposal, queues for healthcare and easy access to fresh food, argues academic Jonathan Sobels in this opinion piece from Crikey.

Why do new freeways fill up with cars so quickly and congestion seems to get worse? Why do we run out of water in our cities and have to install desalination plants? Why is more money being outlaid to reduce queues for the dentist or elective surgery? Why do we import 70% of our seafood, or transport fresh food from north Queensland to Melbourne? Why is it that our electricity infrastructure has had to be so extensively renovated while our electricity bills skyrocket? And why are there no new landfill sites within the Sydney Basin?

Population growth is a significant multiplier of all the other reasons that lead to our communities’ problems in areas like transportation, waste disposal, easy access to fresh food, water, air, education, and health and dental services.

The key factor in all of these scenarios is inexorable population growth. It is a significant multiplier of all the other reasons that lead to our communities’ problems in areas like transportation, waste disposal, easy access to fresh food, water, air, education, and health and dental services.

So despite other causes such as droughts, floods, the GFC and the high Australian dollar, population growth and a warming climate together underpin the extent to which these problems affect our quality of life. Crikey yesterday examined the link between population growth and greenhouse gas emissions.

It is the absolute numbers in population growth that offer part of the explanation. Also important is our rate of consumption of energy, water, air, land, vegetation and ‘stuff’ (a technical term) by each of the people in the population.

Why have our elected governments not been much more alert to, and proactive in, creating policies and programs that deal with the consequences of population growth?

In our 2010 study commissioned by the Immigration Department on the impact of different levels of Net Overseas Migration on Australia’s physical, natural and built environments out to 2050, we found a serious lack of awareness of just where the notion of population growth actually relates to our environments. There was, for example, a flawed economic logic that suggested that a national optimal number for NOM could be produced to account for impacts on our physical environment.

And further, that such a number could be plugged into a cost-benefit analysis with an economically derived figure of optimum migration to produce a policy that resulted in maximum sustainable, per capita wealth.
What is the reality? That people live in concentrations called cities and towns, and that migrants can choose where they live. They choose where their fellow countrymen live: primarily in western Sydney, north and west Melbourne and parts of Perth.

Why have our elected governments not been much more alert to, and proactive in, creating policies and programs that deal with the consequences of population growth?

Put together, 20% of statistical local areas (ABS zones) account for almost 80% of all migrant residences. A national population figure therefore has no relevance to policy unless it is underpinned by specific and explicit reference to locations where people live. Then, and only then, can one begin to understand the causality links between people in our settlements and the physical natural and built environments which frame our existence.

Our study used various approaches to assess where (and therefore how) this population-environment interaction occurs. We used modelling from CSIRO that explored how the ‘stuff’ of agriculture, industry and commerce adds together to produce our livelihoods and lifestyles in Australia. We used case studies of the three main locations for migrant residence to explore water and food security, energy supply, biodiversity loss, land-use competition, and waste disposal.

Three particular findings from our study were clear:

1. In modelling the state of stocks and flows of real ‘stuff’ in our world, i.e. not through economic proxies, we found that an annual average NOM of 260,000 people would increase our per capita wealth by 2.3 times in 2050. By using a NOM of 50,000 our per capita wealth would be about 2.0 times what it is today. But consider the difference in lifestyles if you had to share your favourite roads and hospitals with many more people for a dubious financial benefit.

2. Even allowing for a substantial improvement in our water-use efficiency and in technology fixes, our drying climate linked to increased population means serious structural shortages of water will occur in Sydney, Melbourne and Perth by 2050 if not much earlier.

3. Sydney is already dysfunctional, not only with transportation, but waste disposal. What happens when an extra 1 million people are added to its population, a significant proportion of which will be migrants – and another 20% by volume of waste is generated annually. Where does it go? There is no place called ‘away’ any more ...

There is a clear need for much more work at the regional level to provide governments with the information required to structure meaningful policies and programs in a systemic way that a) cut across the territoriality of departments and philosophies, especially the thrall of economics; and b) produce said policies with time-spans that appreciate the long-term effects of population well beyond the territoriality (again) of political tenure.

Dr Jonathan Sobels is Adjunct Senior Research Fellow in the School of Natural and Built Environments at the University of South Australia.

Does size matter? An economic perspective on the population debate

IN THE DEBATE OVER A LARGER AUSTRALIA, THERE ARE DUD ARGUMENTS ON BOTH SIDES, WRITES ANDREW LEIGH

If there’s one thing that’s really big in the population size debate, it’s the size of the scare campaigns made by both sides. One side tells us that a big Australia is a ‘catastrophe’, while the other says that slow population growth will hurt share prices and drive up debt.

Australians comprise just one in 300 of the world’s population. We have the third-lowest population density of any country. Only Mongolia and Namibia have fewer people per hectare than Australia. Yet we also have one of the highest urbanisation rates. Nearly nine in ten Australians live in urban areas.

An unusual feature of Australia’s population debate is how much it is sparked by population projections. This is especially odd given the record of past projections. In 1888, the *Daily Telegraph* predicted that the population in 1988 would be 60 million. The Australian Treasury recently updated its population forecast for the 2040s from 26 million to 35 million.

And while you might think that the government has two population levers: one marked ‘more babies’ and one marked ‘more migrants’, only one of them really works. Government can control migration, but its policies have little impact on whether or not people have babies. So the population debate is really a migration debate.

In the debate over a larger Australia, there are dud arguments on both sides.

Advocates of more migration argue that size will reduce the per-person cost of government, and give us much additional heft on the global stage. I don’t think there’s much evidence for either of these.

But it does seem likely it will get us better cultural goods, such as international sporting events and great entertainers. If you want to host a World Cup or attract the world’s best musicians, size helps.

Perhaps the best argument for a larger population is that it means more entrepreneurs. One channel for this is simply scale: if extraordinary people like Albert Einstein and Steve Jobs are one in a million, then it follows that they are also an argument for another million people. Innovators may also be over-represented among migrants. Some evidence suggests that bilingualism raises intelligence, and a global outlook is good for business (half of Australia’s exporters are foreign-born).

How about the claimed costs of migration?

It is often said that a larger population will mean more traffic congestion. Over the past decade, Sydney’s population has grown by 12 per cent, while commuting times have grown by 4 per cent. And yet while gridlock is one of the most serious problems faced by Sydneysiders today, the best way to address it is through good city planning and economically sensible policies, not population control. Even if we stopped all population growth tomorrow, cars would still become cheaper to buy and use. We should tackle congestion efficiently and directly, not via population policies that could harm Australia in other ways.

A similar argument applies to house prices, where the best approach is to focus directly on housing affordability, by removing unnecessary supply constraints, and ensuring that housing policies are as effective as possible. Even if we adopted a zero population growth strategy, rising incomes and higher marriage ages would still drive up the demand for housing, creating a good argument for getting housing policies right. Likewise for the natural environment, where market-based policies can do far more than population control to address the challenges of water supply and climate change.

Population growth has the potential to get us things we cannot obtain in other ways: better cultural goods and a more productive, more entrepreneurial culture. A larger nation has more mouths, but also more minds. Size has potential costs, but economics teaches us that these are best addressed by good policies to reduce congestion, increase housing supply and protect the environment.

Over the past decade, three in ten permanent immigrants have been family reunion, six in ten have been skilled migrants, and one in ten have been refugees. Skilled migrants are more likely to compete with high-wage workers, making the Australian immigration system quite different from the US immigration system. Some evidence suggests that the Australian skilled migration system reduces inequality.

The skilled migration system can surely be improved – for example, through harmonising occupational requirements with source countries, or better exchanging data on applicants’ labour market history. But overall, it should be a source of pride.

Skilled migration will remain the largest component of our permanent migration program, and it is vital that we don’t just focus on ‘how many’, but also on ‘who?’. If we want to have a healthy migration debate, then ensuring that our migrant mix reflects our national values and priorities matters more than fretting about the next set of demographic projections.

Andrew Leigh is Shadow Assistant Treasurer and Federal Labor Member for Fraser.

PUTTING FORWARD A REASONED VIEW ON AUSTRALIAN IMMIGRATION

Cutting population growth is perhaps just too simple – and unrealistic – a solution, comments Ivan Motley, the founder of .id, a leading provider of demographic data and forecasts in Australia.

A recent BRW article noted that some key business leaders people were taking up arms against ‘Big Australia’.

It reported that Australian entrepreneur Dick Smith was frustrated with a ‘growth at all costs’ economic mindset, and the idea that Australia’s ageing population could be supported through immigration. He said that immigrants themselves grow old, and so such a policy was ultimately nothing more than a “Ponzi scheme”.

At the same time, Flight Centre’s Graham Turner also called for more balanced growth, adding he would like to rein net immigration down from its current level of around 200,000 persons per year, to around 80,000 per year going forward.

For me, the article highlights two things. The first is that the issue of immigration and population growth is still as provocative as ever, and it remains a hot-button topic on both sides of the political spectrum.

The other is a slightly misleading focus on absolute numbers. We’d like to suggest an alternative.

In our last post we highlighted the impact immigration was having on the structure of the Australian population. We compared the ABS 2008 forecasts, which assumed a net overseas migration (NOM) of 180,000 per year, to our own forecasts which assumed a NOM of 200,000 persons (Chart 1).

As we noted, since immigration tends to focus on younger people approaching child-bearing age, the net effect of increasing immigration is to increase forecasted growth in younger cohorts.

This in turn helps ‘balance’ out Australia’s population profile, with younger groups filling in the gaps left by the baby boomer bulge. This is where the idea that immigration is a ‘solution’ to population ageing comes from. We discuss this in detail in our ebook Three growth markets in Australia.

It is legitimate to ask whether a more balanced population profile actually does solve the challenges of ageing Australia, or whether a larger population demands an environmental or social price you’re willing to pay. However, I’d disagree with the assertion that it sets up

A detail of a bar chart comparing .id SAFi forecasts to ABS 2008 forecasts for Australian population growth by age from 2011-2031.

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a Ponzi scheme where we become addicted to more and more immigration.

Generally speaking, the ideal to strive for is balance in the population profile. On the face of it, a higher immigration profile does restore balance. Problems in the profile emerge through sudden lurches – population booms or busts. The baby boomers were a boom. The one-child policy in China was a bust. Both created imbalanced populations and ageing societies.

At .id, we also wonder if it might not be better to think about immigration in percentage terms, rather than in the absolute levels often discussed in the media. If we fix immigration in absolute terms as Graham Turner is suggesting, then over time, as the population grows, immigrants play less and less of a role in Australian society.

If immigration were set relative to the size of the population however, this might create outcomes that were both sensible and politically more ‘sellable’.

For example, over the 5 years prior to 2013 the net effect of migration has been to add around 1% to the existing population. So if we maintain this relativity throughout the forecast period, we end up with the following result (Chart 2).

Under this model, NOM goes from 225,000 in 2014 to around 314,000 by 2031. That adds another 1.5 million to the population taking it from an estimated 29.7 million in 2031 to 31.2 million. Importantly, it goes a lot further to balancing out Australia’s aged profile.

Most importantly, as population forecasters, it’s our job to be realists. In my memory, our immigration program has always had the best interests of the Australian economy at heart. There are only a few exceptions to this rule that I can remember – visas for the Chinese after Tiananmen Square, visas for the Kosovo Albanians, the Bicentennial (big increase in family reunion and refugee intake in late ’80s). I believe that this will be true in the future. If the Government feels that the labour force needs to be expanded, it will increase the skilled intake.

At some stage in the future, we will no doubt be competing more heavily with other heavy intake nations (Canada, USA, European nations, oil-rich Middle-Eastern countries etc.) for skilled labour as they emerge fully from the GFC. Beyond 2031, it is not unreasonable to think that we may have to compete with Taiwan, Japan, South Korea and Brazil for migrants and more Indians and Chinese will just stay home as the opportunities there become just as attractive. It is also possible Australia will have a recession like we did in the early to mid-90s, and then no one will want to come to Australia.

Of course a larger immigration intake and a bigger Australia requires greater investment in physical and social infrastructure, and our environmental challenges become doubly pressing.

However, as a final note, I’d point out that the sum impact of Australian society on the Australian environment is a factor of the number of people and the impact per person.

Reducing the number of Australians would obviously reduce our total impact. But wouldn’t it be better to focus on our personal environmental footprint? This would require personal sacrifice as well as difficult collective action (the shift to renewables for example), but I feel that the rewards would be worth the effort. It seems to me it would make sense for the debate to focus on these challenges.

Cutting population growth is perhaps just too simple (and unrealistic) a solution.

With thanks to Matthew Deacon for his thoughts on this subject. You can read Matthew’s detailed analysis in our ebook, Three growth markets in Australia.

POPULATION IS NOT THE PROBLEM

It is the footprint of Australians, not their number that is the problem, asserts Peter Burdon in this opinion piece first posted on ABC Environment

Population growth is often nominated as the mother of all environmental problems. But it’s not so simple.

“POPULATION GROWTH is the most important issue we face. If you can’t get your head around that your words are empty and meaningless!”

Surely I am not the only one who has been harangued by these words. They usually come at the end of a public lecture from an older wealthy white man who has been waiting with increasing agitation for his opportunity to talk. It is usually also followed by some call to implement punitive measures for “the breeders”.

I really hate this argument ... and not just because I have two children of my own.

I hate it because it obscures the complexity of human impact on the environment. One simple framework for understanding this impact is the IPAT formula, which holds that ecological impact (I) is a function of population (P), affluence (or consumption levels) (A), and technology (T).

According to this equation, reducing population is an important part of reducing our environmental impact. However, population is not the only, nor necessarily the most important, factor. Rather, it is absolutely necessary that people in affluent societies learn how to consume not just differently and more efficiently, but less (A). This is supported by the ACF Consuming Australia Report which found that: “Most of our impact on the environment actually comes from the pollution created and the water and land used in the production and distribution of the goods and services we purchase.”

An exclusive focus on population not only obscures this complexity; it also plays on people’s prejudices about who the “breeders” are and shifts attention away from our own significant responsibility for the environmental crisis.

Allow me to explain what I mean. Paul Crutzen, the Nobel Prize winning chemist described the period from the industrial revolution to the present as the “anthropocene”. If adopted at the 35th International Geological Congress in 2016, the term anthropocene would serve to mark the significant impact of human activity on the Earth’s ecosystem. Speaking in favour of this descriptor, David Suzuki contends that “human beings have joined God [as being] powerful enough to influence” the Earth’s geophysical processes.

With respect to population, the number of human beings on Earth grew from two billion people in the 1920s to seven billion in 2011. This number is increasing by over two people per second or 200,000 people every day and is expected to peak this century at around 10 billion people. Each additional life needs food, energy, water, shelter and hopefully a whole lot more. This growth has obvious material impacts on the environment.

The impossibility of sustaining this system of endless, pointless consumption without the continued erosion of the living planet and the future prospects of humankind is the conversation that we need to have.

However, what concepts like the anthropocene and arguments around population growth often disguise, is that not all human beings are equally responsible for ecological harm. Lumping all human beings into a single subject...
Australia’s Population Growth

does great violence to the billions of people who are actually the victims of the gluttony and excess of the minority.

In 2009 David Satterthwaite published a prescient paper in the journal, Environment & Urbanization. Satterthwaite found that the places where population rates are growing the fastest also have the slowest increases in carbon emissions. The inversion of this is also true.

For example, between 1980 and 2005 the population rate in sub-Saharan Africa grew an astonishing 18.5 per cent while carbon emissions grew only 2.4 per cent. By contrast, in North America, population grown grew 4 per cent while carbon emissions grew 14 per cent.

This argument is further supported with reference to the concept of ‘carrying capacity’, popularised by Professor William Rees at the University of British Columbia. Carrying capacity is a calculation of how large a population any environment can support without degrading the environment. Rees has estimated what he calls the productive biocapacity of the Earth. This is made up of all the food, water and energy produced each year and measured in units called global hectares (GH). Rees has worked out that if we were to share the Earth’s productive capacity fairly, there would be 1.8 GH each. But the reality tells a very different story.

According to Rees’s data, most of Africa use approximately two-thirds of their share of the Earth’s productive capacity (1.37 GH). The average Indian uses less than half (0.89 GH). The Chinese use slightly over their fair allocation (2.11 GH). But Europeans use much more (4.45 GH), with the British on average using over five global hectares (5.33 GH). The average North American uses more than four times their fair share (9.42 GH) and Australia uses a whopping 9.8 global hectares per person.

If all humans consumed the same as the average Indian does today, the Earth could sustain as many as 15 billion people. If we consumed as little as the average Rwandan, this would go up to 18 billion. But our planet can only sustain 1.5 billion people living as they do in the United States and only 1.2 billion living as we do in Australia.

In sum, it’s not just population, it’s consumption. And it’s not the poor, it’s the rich.

It is also important to understand that the world is in the process of a dramatic demographic transition. In just 60 years, the global average number of children each woman bears has fallen from 6 to 2.5. Population growth rates are slowing almost everywhere and the great majority of forecasted growth will take place among those who consume almost nothing.

This does not mean that everything will be fine or that we should not support policies that will cause population to peak sooner rather than later. However it does mean that we should be clear about why we are supporting these policies and the impact we can reasonably expect them to have.

In other words, policies that promote sex education, access to contraception, lift the social status of women and empower them to make free choices over their bodies are all crucial to tackling the myriad of issues that surround poverty and gender inequality. These problems demand our attention more than ever. But, as a 2010 paper from the Proceedings from the National Academy of Sciences stated, “even if zero population growth were achieved, that would barely touch the climate problem”.

Population is the issue that gets blamed when people cannot confront their own impact. Rather than demonising the poor, why don’t we dedicate our energy to thinking about how we can best accommodate the billions of babies, which through the lottery of birth will have so much of their future prospects determined before they have even taken a breath. How might such a shift in perspective alter the way we think about the environment and the way we share resources?

We might also take a hard look at our own consumption patterns, which unlike population, is growing at a rapid rate and showing no sign of slowing down. The impossibility of sustaining this system of endless, pointless consumption without the continued erosion of the living planet and the future prospects of humankind is the conversation that we need to have.

In sum, it’s not just population, it’s consumption. And it’s not the poor, it’s the rich.

Peter D. Burdon is a senior lecturer at the Adelaide Law School.

WORKSHEETS AND ACTIVITIES

The Exploring Issues section comprises a range of ready-to-use worksheets featuring activities which relate to facts and views raised in this book.

The exercises presented in these worksheets are suitable for use by students at middle secondary school level and beyond. Some of the activities may be explored either individually or as a group.

As the information in this book is compiled from a number of different sources, readers are prompted to consider the origin of the text and to critically evaluate the questions presented.

Is the information cited from a primary or secondary source? Are you being presented with facts or opinions?

Is there any evidence of a particular bias or agenda? What are your own views after having explored the issues?

CONTENTS

BRAINSTORM 52
WRITTEN ACTIVITIES 53
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MULTIPLE CHOICE 55-56
Brainstorm, individually or as a group, to find out what you know about Australia’s population growth.

1. What is population growth, and why is it important to understand?

2. What do the letters ERP stand for in relation to population growth, and what can it be used for?

3. What are intergenerational reports, and what purpose do they serve?

4. What was the ‘baby boom’, when was it, and how did it affect Australia’s population?
Complete the following activity on a separate sheet of paper if more space is required.

Australia currently stands at a demographic crossroads. One road points towards increased immigration, higher fertility and moderately high population growth. The other, looks down a long path to low fertility, low immigration rates and slow population growth marked by rapid ageing.

Peter Curson, *Australia's population.*

Consider the above statement. There are many factors that can affect, or be affected by, Australia’s population growth. Form into groups of two or more people, and using the space provided below, address the following factors. Include how these factors could affect Australia’s population growth, or how Australia’s population growth can be affected by them. Discuss your ideas with the class.

**AGEING POPULATION**

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**IMMIGRATION**

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**ENVIRONMENT**

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If there’s one thing that’s really big in the population size debate, it’s the size of the scare campaigns made by both sides. One side tells us that a big Australia is a ‘catastrophe’, while the other says that slow population growth will hurt share prices and drive up debt.

Andrew Leigh, Does size matter? An economic perspective on the population debate.

Consider the above statement. Form into groups of two or more people, and using the space provided below, compile a list of points with which to debate whether you agree with the concept of either a ‘big Australia’ or a ‘small Australia’, and your reasons why. Include an explanation of the term, and present examples from your research to back up your arguments.
Complete the following multiple choice questionnaire by circling or matching your preferred responses. The answers are at the end of the next page.

1. What do the letters NOM stand for in relation to Australia’s population growth?
   a. Net optimum migration
   b. No overseas migration
   c. Net overseas migration
   d. New overpopulated market
   e. No optimum migration
   f. New overseas migration
   g. No overpopulated market

2. What is a ‘population clock’?
   a. A ‘clock’ that ticks over every time a baby is born to update the population count.
   b. An ‘clock’ that estimates population calculated using the previous Census data adding one person every minute and 23 seconds.
   c. A ‘clock’ that updates the population daily calculated from deaths and births data from the Australian Bureau of Statistics.
   d. A ‘clock’ that automatically updates the estimated population calculated from monthly online surveys.
   e. An online clock that tells the local time for the everyone in the population.

3. What do the letters TFR stand for in relation to Australia’s population growth?
   a. True fertility ratio
   b. Total fatality rate
   c. Total family rate
   d. Tested fatality rates
   e. Total fertility rate
   f. Total family relationships

4. Australia’s population had almost reached how many people by Federation in 1901?
   a. 1 million
   b. 4 million
   c. 10 million
   d. 14 million
   e. 20 million
   f. 40 million

5. What is zero population growth?
   a. When a population experiences zero new births.
   b. When a population is in balance and new births and deaths are the same.
   c. When a population is in balance and births plus immigration equal deaths plus emigration.
   d. When a population is out of balance and there is no new immigration.
   e. When a population experiences a rise in the death rate.
6. Respond to the following statements by circling either ‘True’ or ‘False’:

a. Over a quarter of Australia’s population is overseas-born. True / False

b. The median age of Australia’s population was 37.3 years at 30 June 2012. True / False

c. Over the next 40 years, the proportion of the population participating in the workforce is expected to increase as a result of population ageing. True / False

d. At the turn of the 20th century, the median age of Australia’s population was 22 years. True / False

e. A female born in 2012 will on average live for an estimated 94.4 years. True / False

f. In 2012, there were roughly 25 people aged 100 years old or more to every 100 babies. True / False

g. A male born in 2012 will on average live for an estimated 100.6 years. True / False
The total fertility rate in Australia has been rising since 2000 and now stands at 1.9 babies per woman (around half what it was in the early 1960s) (ABS, *Does size matter? – Population projections 20 and 50 years from 2013*). (p.1)

Nearly three-quarters of people over 65 who are discouraged from seeking work say employers think they are too old (Millane, E, *Four ways to cope with Australia’s ageing population*). (p.32)

In December 2013, the estimated resident population clocked in at 23.3 million. Around one fifth (19%) of the population was aged less than 15, while 14% of the population was aged over 65 (including around 2% aged over 85) (ibid.). (p.2)

A female (male) born in 2012 will on average live for an estimated 84.4 (81.6) years. However, population growth and ageing will affect labour supply, economic output, infrastructure requirements and governments’ budgets (Productivity Commission, *An Ageing Australia: Preparing for the Future*). (p.33)

Australia’s population is projected to rise to around 38 million by 2060, or around 15 million more than the population in 2012. Sydney and Melbourne can be expected to grow by around 3 million each over this period (ibid.). (p.33)

In 2012, there was roughly one person aged 100 years old or more to every 100 babies. By 2060, it is projected there will be around 25 such centenarians (ibid.). (p.33)

Nearly one in 300 of the world’s population is Australian. As a result of population ageing (The Treasury, *Australia’s Population GrowthIssues in Society | Volume 395*), (p.39)

Australia’s population in the year ending September 2012, or 60% of our growth (ibid.). (p.36)

Today, over a quarter (27%) of Australia’s population is overseas-born, a proportion considerably higher than in other receiving countries such as the US (13%) and Canada (20%). Immigration added 228,000 people to Australia’s population in the year ending September 2012, or 60% of our growth (ibid.). (p.36)

Australia’s carbon dioxide emissions are about the same as Indonesia’s. Indonesia has more than 230 million people and we have almost 23 million but our footprint per person is 10 times higher (Giurco, D, *Five reasons Australia should stay small*). (p.38)

Even if we cut migration by half we would still see Australia grow to almost 30 million by 2050 (Hartwich, OM, *Five reasons Australia should be ‘big’*). (p.39)

Australians comprise just 1 in 300 of the world’s population. We have the third-lowest population density of any country. Only Mongolia and Namibia have fewer people per hectare than Australia. Yet we also have one of the highest urbanisation rates. Nearly 9 in 10 Australians live in urban areas (Leigh, A, *Does size matter? An economic perspective on the population debate*). (p.46)

Over the past decade, 3 in 10 permanent immigrants have been family reunion, 6 in 10 have been skilled migrants, and 1 in 10 have been refugees (ibid.). (p.46)

The number of human beings on Earth grew from 2 billion people in the 1920s to 7 billion in 2011. This number is increasing by over 2 people per second or 200,000 people every day and is expected to peak this century at around 10 billion people (Burdon, PD, *Population is not the problem*). (p.49)

In just 60 years, the global average number of children each woman bears has fallen from 6 to 2.5 (ibid.). (p.50)

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**Baby boom**

Refers to the generation born between the end of World War II and the mid-1960s. Baby boomers are usually taken to be those born in the years 1946 to 1965 inclusive.

**Census**

The complete enumeration of a population or groups at a point in time with respect to well-defined characteristics (e.g., population, manufacturing, etc.). When the word is capitalised, ‘Census’ usually refers to the national Census of Population and Housing.

**Dependency ratio**

The dependency ratio is a measure used to compare the size of the working age population to the size of the non-working age population, calculated as the sum of people aged 0-14 and 65 years and over (that is, ‘dependents’) divided by the number of people aged 15-64 years, multiplied by 100.

**Estimated resident population (ERP)**

The ERP is the official measure of the population of Australia and is based on the concept of residence. It refers to all people, regardless of nationality or citizenship, who usually live in Australia, with the exception of foreign diplomatic personnel and their families. It includes usual residents who are overseas for less than 12 months. It excludes overseas visitors who are in Australia for less than 12 months. Estimates of the Australian resident population are generated on a quarterly basis by adding natural increase (the excess of births over deaths) and net overseas migration (NOM) occurring during the period to the population at the beginning of each period.

**Fertility rate**

The sum of age-specific fertility rates (live births at each age of mother per female population of that age). It represents the number of children a female would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.

**Immigration**

Immigration is important to Australia’s population growth. Australia’s fertility level is currently well below the replacement level of 2.1.

**Intergenerational reports**

Reports released by the treasury to look at the long-term impacts of Australia’s demographic trends, including the impact of an ageing population on Australia’s economy and government finances.

**Migration adjustment**

The Australian Bureau of Statistics applies a number of adjustments to overseas arrivals and departures (OAD) data in order to produce estimates of net overseas migration (NOM). These mainly comprise adjustments designed to reflect differences between stated travel intentions and actual travel behaviour, but also include adjustments to transform numbers of overseas movements into numbers of travellers. These adjustments are collectively referred to as ‘migration adjustments’, although they have been referred to in the past as ‘category jumping’ adjustments.

**Natural increase**

The excess of births over deaths.

**Net overseas migration (NOM)**

NOM is the net gain or loss of population through immigration to Australia or emigration from Australia. It is: based on an international travellers’ duration of stay being in or out of Australia for 12 months or more; the difference between the number of incoming travellers who stay in Australia for 12 months or more and are added to the population (NOM arrivals) and the number of outgoing travellers who leave Australia for 12 months or more and are subtracted from the population (NOM departures). Net overseas migration has a significant impact on population projections. Net overseas migration is mainly comprised of permanent migration (including skilled and family) and temporary migration (including temporary skilled and students).

**Population ageing**

Australia’s population is ageing because of sustained low levels of fertility combined with increasing life expectancy at birth. The ageing of the population affects the entire age structure of the population.

**Population growth rate**

The growth of Australia’s population has two components: natural increase (the number of births minus the number of deaths) and net overseas migration (NOM). The annual population growth rate for the year ended 31 December 2014 was 1.4%.

**Population policy**

Relates to attempts by governments to alter the growth rate, size, age distribution and geographic distribution of a nation’s population.

**Population projection**

The computation of future changes in population numbers, given certain assumptions about future trends in the rates of fertility, mortality and migration. Demographers often use low, medium and high projections (scenarios) of the same population, based on different assumptions of how these rates will change in the future. Australia’s estimated resident population (ERP) at 30 June 2012 of 22.7 million people is projected to increase to between 36.8 and 48.3 million people by 2061, and to between 42.4 and 70.1 million people by 2101.

**Zero population growth**

This occurs when a population is in equilibrium, achieved when births plus immigration equal deaths plus emigration. Actual zero population growth is an extreme rarity for most populations.
WEB LINKS

Websites with further information on the topic

Australian Bureau of Statistics  www.abs.gov.au
Australian Conservation Foundation  www.acfonline.org.au
Australian Policy Online  www.apo.org.au
Australian Population Association  www.apa.org.au
Australian Population Institute  www.apop.com.au
Department of Immigration and Border Protection  www.border.gov.au
Department of the Environment  www.environment.gov.au
Sustainable Population Australia  www.population.org.au
Sustainable Population Party  www.votesustainable.org.au

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THANK YOU
▶ ABC News
▶ Migration Council of Australia
▶ Australian Bureau of Statistics.

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