

DOES SIZE MATTER? AN ECONOMIC PERSPECTIVE ON THE POPULATION DEBATE

On balance, the case for a bigger Australia is stronger than for smaller, says **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.

A big Australia, one side tells us, is a 'catastrophe'¹ that 'risks destroying our traditions and even our common language.'² Immigration has 'undermined our higher education system, [and] put intolerable pressure on an overstretched health and transport system.'³ Some go further, blaming 'limp-wristed citizenship requirements' for 'ethnic crime waves sweeping across our nation, where samurai swords and machetes have become part of the media lexicon.'⁴

Not to be outdone, the other side of the debate argues: 'Putting caps on growth would turn Australia into a stagnant, ageing and inward-looking country—a basket case to rival the declining states of Europe.'⁵ Some have warned that if population growth is too slow, the share market would stagnate, small businesses would be unable to fund their ventures, taxes would rise, and debt would balloon.⁶

And just in case overheated claims didn't make the discussion difficult enough, each side delights in building straw men. Perhaps it makes people feel better when they take a stand against 'unchecked population growth' or 'zero population growth.' But, in reality, hardly anyone publicly advocates uncapped immigration, and few population commentators argue for zero immigration. The serious conversation is whether we want our population to grow modestly or significantly. But

the conversation risks being derailed by those who caricature their opponents to score a cheap point.

An odd country

Perhaps one reason the population debate is so odd is that—from a population standpoint—Australia is an odd country.

At the time of Federation, opposition to migration was strong, including from my own party. The White Australia Policy was one of the first acts to pass the parliament.⁷ Post-war migration saw population grow more rapidly, but Australians today still comprise just 1 in 300 of the world's population.

Australia has the third-lowest population density of any country. Only Mongolia and Namibia have fewer people per hectare than Australia.⁸ If the entire population of the world were housed in four-person homes on quarter-acre blocks, they would take up an area roughly the size of Queensland.

Yet just to write this sentence is to realise how nonsensical the idea is. With huge deserts and some of the oldest soils in the world, Australia has vast



Andrew Leigh* is Shadow Assistant Treasurer. This is an edited version of a speech he originally delivered at the Lowy Institute on 13 March 2014.

* I am grateful to Tom Russell-Penny, John Zerilli and the Parliamentary Library staff for research assistance, and Michael Fullilove, Thomas McMahon, Barbara Leigh, Michael Leigh, Henry Sherrell, Nick Terrell, and Sam Trobe for valuable comments on earlier drafts. All errors are mine.

uninhabitable areas, not to mention the many pristine environmental areas we would never dream of bulldozing.

Not only do we have one of the lowest levels of population density in the world—we also have one of the highest urbanisation rates. Nearly 9 in 10 Australians live in urban areas.⁹

And thanks to the accident of history, we have a relatively small number of cities—which helps explain our high house prices.

Thanks to the accident of history, we have a relatively small number of cities—which helps explain our high house prices.

Population predictions

The other odd feature about the Australian population debate is the extent to which it is sparked by population projections.

Both sides of the Australian population debate are like dry underbrush, waiting for the match of the next demographic projection.

This is particularly odd because past projections have been so inaccurate. In 1888, the *Spectator* forecast that our population in 1988 would be 50 million. Not to be outdone, the *Daily Telegraph* predicted 60 million. In the 1920s, Billy Hughes foresaw a population of 100 million, while a bold German hydrologist predicted 480 million.¹⁰

We may spare a chuckle for the forecasters of past eras, but let's not allow hubris to go to our heads. The first *Intergenerational Report* (2002) used demographic forecasts that by the 2040s, Australia's population would be 26 million.¹¹ Eight years later, the third *Intergenerational Report* had us heading to 35 million by the 2040s.¹²

Since this came just after the (largely unforeseen) global financial crisis, it's tempting to think that demographic forecasters were doing their best to make economic forecasters look respectable.

Sure, the rising birth rate and increased migration inflow should have made us update our projections. But they should also have caused us to be more sceptical of demographic forecasts.

In neither case was the government setting a population target. It was simply putting the latest demographic estimates into its report.

And yet both the 2002 and 2010 *Intergenerational Reports* prompted a conversation about what government was going to do about the 'problem.'

In the first instance, the answer was a Baby Bonus. In the second, it was a bipartisan commitment to a sustainable Australia, not a big Australia.

Below, I will discuss the effectiveness of both these policies, but to move beyond myths and wild claims, we need to first begin with the facts.

Population numbers

About a quarter of the Australian population are born overseas. Another quarter have a parent who is born overseas.

Over the past decade, the Australian population has grown at an annual rate of 1.6%.¹³ About two-fifths of this is 'natural increase'—excess of births over deaths. We're having more babies and dying less often. In just a decade, life expectancy rose by two years, and the birth rate rose by an additional baby for every 10 women.¹⁴

The other three-fifths is net migration, the excess of arrivals over departures. 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.¹⁵

The median age of a new migrant is 33.¹⁶ The median age of a new baby is zero.

Some suggest that the government has two population levers: one marked 'more babies' and one marked 'more migrants'. But only one of them really works.

At best, the large increase in family payments in the early-2000s accounted for a quarter of the increase in births.¹⁷ The impact of the Baby Bonus on births was positive but negligible—not surprising, since it amounted to about 1% of the lifetime cost of a child.¹⁸

There are good reasons to spend on family payments and child care—but boosting the birth rate isn't one of them.

So anyone who says they're pulling the 'more babies' lever is pulling your leg.

The 'population debate' is really an immigration debate.

Final fact. According to Murray Goot and Ian Watson, Australia's immigration program enjoyed strong popular support from 1953 to 1981,

and from 1998 to 2008.¹⁹ In recent years, popular support for our migration program has waned. Popular support for migration has become intertwined with asylum seeker policy, so I will make some observations about asylum seeker policy at the end of this article.

Big Australia

So what's the evidence for and against a big Australia?²⁰ Or, put more crudely, for and against a higher immigration rate?

The claimed impacts of population come in two categories: economies of scale (benefits) and diseconomies of scale (costs).

Let's start with the claimed benefits of population.

1. Cost of government: It is claimed that government might be cheaper in bigger nations because fixed costs of government can be spread across a larger number of taxpayers.

Unfortunately, this is mostly untrue—very few things that government does are fixed costs. Sure, the size of the Reserve Bank wouldn't need to double if the economy doubled, but it's the exception. Most of the cost of running government is transfer payments and service delivery. The number of Medicare offices the nation needs is proportional to the population. There are virtually no economies of scale in government delivery with family payments.

Even in areas where one might hope to get some economies of scale, there is strong political pressure in the opposite direction. Powerful interest groups advocate that a fixed share of our national income be devoted to defence, foreign aid, or government research. There is a reasonable question about whether input targets are the best way to serve national interest. But for now, it's enough to say that by committing to them, we guarantee that in that sector, there will be zero efficiencies from a larger population. To a rough approximation, if we kept our existing government policy settings, then a 10% increase in the Australian population means a 10% increase in government spending.²¹

2. Geopolitical power: It is sometimes suggested that bigger countries have more heft on the

world stage because they have more hard and soft power.

Some relationship between population size and geopolitical power is undeniable, but the impact is pretty small. Norway has only about half the population of Sweden, yet manages to have a comparable impact on world affairs. Australia didn't win a seat on the United Nations Security Council because of its population.

In national defence, population size matters less than one might think. An analysis of 44 twentieth-century conflicts found that the country with the *smaller* population won about half the time.²² If it's weaponry we're after, then a larger economy helps—but it doesn't matter whether growth comes through productivity or population. In the coming decades, our role in the world will depend primarily on how we manage—or mismanage—our strategic relations, not on whether we have a population of 25 million or 35 million people. If 'populate or perish' was ever true, it isn't today.

An analysis of 44 twentieth-century conflicts found that the country with the *smaller* population won about half the time.

3. Dependency ratio: It is claimed that migration needs to be encouraged to deal with the age structure of the population.

As the baby boomers retire, the dependency ratio (non-workers to workers) is likely to increase. In principle, we could offset it by bringing in some young migrants, but this proposes a permanent solution to address a temporary problem. And because today's migrants are tomorrow's dependents, we need to ensure that we are not simply kicking the 'dependency can' down the road. Remember that the typical migrant arrives at age 33—about halfway to the pension age.

4. Cheaper transport: It is claimed that transport networks might work better with a larger population.²³

In my home city of Canberra, weekend buses come once an hour—and the system still loses money. In London, weekend tube trains run every few minutes—and the system is profitable.²⁴

A larger population does create the potential to fund light rail, an underground metro, better ring roads, and under-city tunnels. But it doesn't guarantee better transport networks. In this sense, the argument that population growth automatically leads to better transport infrastructure is the flipside of the argument that population growth automatically leads to more congestion. Both outcomes are possible. Neither is guaranteed.

5. Cultural goods: It is claimed that a bigger population might improve the quality of cultural goods.²⁵

It is likely that a bigger population will mean bigger cities. If the field of urban economics has taught us anything, it is that cities increase productivity.

As a nation's population size rises, it is more likely to host the football World Cup or a Lady Gaga concert, and more likely to boast a terrific university or a great newspaper. Living in a bigger place, you're more likely to watch a television show or read a book that's set in your city. These things benefit the entire population, so one can think of them as a benefit that new migrants bestow on the existing population. I rate this argument as reasonably convincing, though one doesn't want to push it too far. For example, it doesn't pay to think how large Sydney's population would have to be in order to save the weekday print edition of the *Sydney Morning Herald*.

6. Business innovation: It is suggested that a larger population 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.²⁶ Others contend that innovators are over-represented among migrants. There are various theories as to why this might be the case. It might be speaking two languages—as some evidence suggests that bilingualism raises intelligence.²⁷ Or it could be that a global outlook is good for business, with Austrade reporting that half of Australia's exporters are foreign born.²⁸

It might also be that the migrant experience has a direct effect. Westfield co-founder Frank Lowy has said of his experience: 'What spurred me on was that I knew I was creating a new life for myself and my family in a country that was truly free.'²⁹ Whichever channel this operates through—long odds, languages or lifestyles—it strikes me as perhaps the most cogent argument for a bigger Australia.

7. Benefits to migrants: There is a benefit to the migrants themselves.

Moving from a poor country to a rich one raises lifetime wages by a considerable amount. For example, one study finds that the typical migrant to New Zealand more than triples their earnings.³⁰ The figure for Australia is the probably similar. Of all of the claimed impacts of migration, this is probably the one about which there is the least difference among scholars. It also helps explain why the demand for permanent visas to rich countries outstrips supply. According to the Gallup World Poll, two-fifths of the developing world would move to the developed world if they could.³¹

It is likely that a bigger population will mean bigger cities. If the field of urban economics has taught us anything, it is that cities increase productivity. As English economist Alfred Marshall put it a century ago, in cities 'the mysteries of the trade become no mystery but are, as it were, in the air.' The typical worker who moves from a rural area to an urban area increases her productivity by about one-third.³² This helps explain why Australia, like many other countries, has seen steady migration from the bush to the city. And it also helps explain why policies to promote population growth in smaller regional areas have in some cases been unsuccessful.³³ Most migrants will end up living in cities (as will most newborn babies, for that matter).

Assessing each of the above claimed benefits, I'm sceptical that size will reduce the per-person cost of government, or give us much additional heft on the global stage. Similarly, I don't think much of the arguments that we should populate

to address the age structure of the population, or because it will give us better transport networks. But it does seem likely it will get us better cultural goods and more entrepreneurs—which may make us more productive. And it's undeniable that migration would be good for migrants.

Now, let's look at the claimed costs of migration.

1. Traffic congestion: It is often said that a larger population will mean more traffic congestion.

Let's take Sydney, the Australian city with the longest commuting times. Over the past decade, Sydney's population has grown by 12%, while commuting times have grown by 4%.³⁴ 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 congestion policies, not population control. Even if we stopped all population growth tomorrow, cars would still become cheaper to buy and cheaper to use. Reducing the social cost of congestion should be a priority. But we should tackle it efficiently and directly, not via population policies that may have adverse consequences for society.

2. House prices: It is said that a bigger population will increase house prices.

This impact depends on our ability to increase the supply of housing to meet demand. Lately, Australia has not done a very good job of this, with one estimate suggesting that the gap between population growth and dwelling growth has led to a shortfall of 200,000 homes in the past decade alone.³⁵ But as with congestion, 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.

3. Lower incomes: It is suggested that nations with larger populations have lower levels of income per person.

This is an empirical claim, so rather than chatting about it, let's just ask the question: What do the data say? It turns out that the relationship between population size and income per person is modestly *positive*.³⁶ In countries that are more open to trade, the relationship is weaker—but there is no evidence of the reverse effect: that a smaller population will lead to affluence. Another claim bites the dust.

It turns out that the relationship between population size and income per person is modestly *positive*.

4. Environmental costs: It is claimed that a larger population will irreparably damage the natural environment.

This concern goes back to Malthus in 1798, portending environmental catastrophe at a time when the world's population was around 1 billion. What the modern-day Malthusians miss is that more people don't automatically mean more 'stuff.' Three-quarters of Australians work in the service sector. The output of derivative traders and dentists, barristers and baristas is essentially weightless. In fact, the entire output of the United States weighs only marginally more today than it did a century ago.³⁷ We have also become significantly more efficient, with cars that use less fuel, lights that use less electricity, and paper that uses fewer trees.

Despite population growth, urban air pollution has been improving in most developed countries over the past generation.³⁸ Australia won't meet emissions reductions targets by curbing population growth, but we will if we keep an emissions trading scheme.³⁹ Likewise, market-based mechanisms did more to reduce desalination in the Murray-Darling basin than any change to the nation's migration policies might have done.⁴⁰

5. Social unrest: It is argued that population growth causes social unrest because it places pressure on social institutions to evolve more rapidly than they are able to manage.

Again, the claim is empirical so let's turn to the data. It turns out that over the past half-century, there is no systematic relationship between

how much a country has democratised and its population size (or population growth rate).⁴¹ This result shouldn't be surprising. Do we really think Australia today would be a healthier democracy if our population had remained at its 1950 level of 8 million?

Julian Simon points out, a larger nation has more mouths, but also more hands and more minds.

6. Distrust: Population growth that occurs via migration will increase ethnic and linguistic diversity. My own research finds that the short-run impact of this is to reduce interpersonal trust.⁴² In the face of difference, we 'hunker down' and become a little more disconnected. But I'm optimistic that the benefits of difference will eventually outweigh the costs. New migrants may be less likely to join the local rugby club and the RSL, but they bring their own ideas and institutions. Indeed, Australia is one of the few developed countries where second-generation immigrants outperform native-born children on school exams.⁴³ Diversity may be scary at first, but it's a positive force in the long run—and may ultimately lead to new kinds of civic engagement.

So, where do we end up? 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. As Julian Simon points out, a larger nation has more mouths, but also more hands and more minds.⁴⁴ Indeed, Stephen Kirchner cogently argues that the Australian migration debate has been too focused on mouths versus hands, ignoring the benefit of minds.⁴⁵

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. Population growth will also make us more diverse, which means we'll be temporarily less trusting but perpetually more interesting.

What this summary highlights is that the question 'how many?' may be less important

than the question 'who?' If our goal is to boost innovation, it's vital that our migration settings target people with a propensity to become entrepreneurs. Similar lessons apply to trust. To use a US analogy, we need more Sergey Brins and fewer Tamerlan Tsarnaevs.

And yet the debate over Australia's migration policy has focused more on the size of the intake than its composition. This is particularly odd given that—as I have noted—a majority of permanent migrants come through the skilled migration channel. 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.⁴⁶

Our 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.⁴⁷ But overall, it should be a source of pride.

Less of a source of pride has been our refugee and asylum seeker policies. If there's one point that unites people across the political spectrum, it is that the issue has not been well managed over recent years. Indeed, I cannot end an article about population without some discussion of the issue of refugees and asylum seekers.⁴⁸

Refugees comprised just one-tenth of migrants to Australia in the past decade. So refugees are not clogging our roads. But the asylum seeker conversation is clogging our policy debate, because it's both controversial and complicated.⁴⁹

Australia takes 13,750 refugees a year, down from 20,000 under Labor.⁵⁰ Globally, there are 11 million refugees. Add those who are internally displaced or stateless, and the United Nations High Commission on Refugees counts 39 million people on its list of 'persons of concern.'⁵¹

Among developed nations, there are two ways of taking refugees: the 'knock on our door' approach, and the 'go to the UNHCR' approach. Most developed countries follow the former principle. A few—notably Canada, the United States and Australia—work with the UNHCR. These three nations take 9 in 10 of those from UNHCR camps.⁵²

And then there are the drownings at sea. We will never be quite sure how many people died in the past decade coming to Australia by boat—but the figure probably exceeds 1,000. About 1 in 20 asylum seekers who set out on the sea journey to Australia die on the way. Under the Gillard and Rudd governments, the Refugee Resettlement Agreement with Papua New Guinea (and the previously unsuccessful agreement with Malaysia) was an attempt to close off the channel of refugees coming by sea. The purpose is to be compassionate—to prevent events like the SIEV X disaster and the Christmas Island tragedy from ever happening again. But it is undeniable that the approach is harsh even when implemented well. And as recent events at the Manus Island detention centre illustrate, the policy has not been implemented well.

After participating in this debate closely for four years, I've come to the view that which approach you prefer depends on whether you think in categorical or utilitarian terms. Categorical reasoning, as you'll recall, judges the morality of an individual act. Utilitarian reasoning looks at the greatest good for the greatest number. A categorical rule might say 'never set fire to the Australian bush.' A utilitarian might judge it to be appropriate in a backburning operation.⁵³

In the asylum-seeker debate, many people of goodwill simply cannot get past the fact that a person who claims a well-founded fear of persecution comes to Australia and is turned away. This is the categorical approach.

Others of equal goodwill could not abide the approach that prevailed after the High Court struck down the Malaysia agreement—which led to refugees having a strong incentive to travel by boat to Christmas Island, rather than attempt to be processed by the UNHCR. Utilitarians argued that taking more onshore arrivals didn't make us more generous. One of the few points of agreement among Labor and the Coalition is that for every additional person who arrives by boat, we should take one less person from a refugee camp. The utilitarian approach is to meet our refugee quota in a way that jeopardises the fewest lives.

In the asylum seeker debate, we can probably get further if we admit the truth in each other's

positions. Utilitarians should recognise that the Refugee Resettlement Agreement effectively sends away people who have come knocking at our door. Those who prefer the categorical approach should admit that their preferred policy would not achieve the greatest good for the greatest number.

In answering most problems, I tend to use utilitarian reasoning. That leads me to believe that we have to deter a sea journey with a 1 in 20 chance of death. At the same time, I think we should at the very least restore the annual intake of 20,000 refugees—taken almost exclusively out of UNHCR camps—and encourage other developed nations to join in this process. (It's a mark of the prevalence of categorical reasoning in the asylum seeker debate that a one-third cut to Australia's refugee intake has passed largely without comment.)

I also hope that the coming decade sees asylum seekers becoming less of a partisan issue. Over the past 20 years, Australia has seen Indigenous policy go from being used as a wedge issue in racially charged elections to commanding bipartisan support.⁵⁴ In the early 1990s, conservatives argued that Native Title would 'destroy our society' and 'break the economy and break up Australia.'⁵⁵ Today, all politicians support Closing the Gap. I would like to see the same outbreak of bipartisan decency occur with asylum seeker policy.

A bipartisan approach to respecting the dignity of asylum seekers would mean never playing politics with the funerals of asylum seekers. No longer talking about 'illegals' engaged in a 'peaceful invasion.' Not deploying the language of human rights in the service of a partisan agenda. Not making tear-choked over-my-dead-body declarations, and then dropping the issue after your side wins power.

Putting the dignity of refugees at the heart of the policy would also make it feasible for Australia to play a leadership role on the issue of asylum seekers. This means better regional cooperation, and exploring innovative solutions, such as the developed world financially supporting developing nations to take more refugees. To eschew creative thinking is to doom the silent millions in refugee camps worldwide to lives of hopelessness and unfulfilled potential.

Conclusion

In this article, I've focused on data and evidence, but we should never forget the powerful stories behind every migrant journey.

The father of a friend of mine was born in a refugee camp in Germany in 1946, the son of Polish and Russian refugees. He was a few years old when his family hoped to emigrate to the United States. The Red Cross moved them by train down to Naples, and he was so excited that he constantly stuck his head out the window.

A piece of soot got stuck in his eye, and when they got to Naples, the US immigration officials were worried that he had an eye infection that could be contagious, so they refused to take the family. 'You might try the Australians,' he said, gesturing to officials in the other corner of the room. And that's why my friend—some 30 years later—was born in Queensland rather than New Jersey.

Apart from Indigenous Australians, all Australians are either migrants or the children of migrants. So it's no surprise that the population debate—which is really a migration debate—should have attracted plenty of attention.

In this article, I have reviewed the arguments for and against population growth. There are dud arguments on both sides. But on balance, the case for bigger is stronger than the case for smaller. Yet this requires politicians to act on the challenges population growth creates: traffic congestion, housing affordability, and mistrust.

The asylum seeker debate should be founded on the bedrock of bipartisan respect for refugees. Over the past two decades, we have taken large strides in this direction with Indigenous Australians, and it ought not be beyond us to do the same with refugees. Australia can—and should—take more asylum seekers. Even after we have done so, they will still be a small minority of our total migrant intake.

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 we attract the entrepreneurs of the future matters more than fretting about the next set of demographic projections.

Endnotes

- 1 Dick Smith, quoted in Joanna Mather, 'No payout for small Australia,' *The Australian Financial Review* (24 April 2013).
- 2 Bob Birrell, quoted in John Pasquarelli, 'Abbott should run a mile from Big Australia,' *The Australian* (18 May 2011).
- 3 Dick Smith, quoted in Stephen Lunn, 'The demographer vs the entrepreneur: Tackling taboos in the Big Australia debate,' *Weekend Australian* (28 May 2011).
- 4 John Pasquarelli, 'Abbott should run a mile from Big Australia,' *The Australian* (18 May 2011).
- 5 Jessica Brown, 'Should Australia's population be controlled?' *Sunday Herald Sun* (2 October 2011).
- 6 Kevin Chinnery and Anthony Sibillin, 'The Big Cost of Small Australia,' *BRW* (19–25 August 2010).
- 7 Today, no Labor first speech is complete without a heart-warming migrant story, but my party had a poor track record on immigration for the first half of its existence. Labor supported the White Australia Policy at the time of Federation. In 1938, some Labor members opposed taking Jewish refugees (e.g. Senator John Armstrong said: 'I urge the Government to take steps to prevent the unrestricted immigration of Jews to this country.') In 1949, Labor Immigration Minister Arthur Calwell was shocked when the High Court ruled that he could not deport an Indonesian woman who had six children with her Australian husband.
- 8 William Coleman, 'Pipe Dreams and Tunnel Visions: Economists and Australian Population Debates Before the Baby Boom,' ANU Working Papers in Economics and Econometrics No. 568 (Canberra: ANU, 2012).
- 9 Graeme Hugo, 'Population Distribution and Internal Migration' in Jonathan Pincus and Graeme Hugo (eds), *A Greater Australia: Population, Policies and Governance* (Melbourne: Committee for Economic Development of Australia (CEDA), 2012), 72–95.
- 10 Quoted in William Coleman, 'Pipe Dreams and Tunnel Visions,' as above.
- 11 The 2002 *Intergenerational Report* forecast a population of 24.5 million in 2035 and 25.3 million in 2042; see Peter Costello, 'Intergenerational Report 2002–03, 2002–03 Budget Paper No. 5' (Canberra: Australian Treasury, 2002), 22. Extrapolating forward, this implies a population around 26 million in 2047.
- 12 Wayne Swan, 'Australia to 2050: Future Challenges,' 2010 *Intergenerational Report* (Canberra: Australian Treasury, 2010), 159.
- 13 ABS (Australian Bureau of Statistics), *Australian Demographic Statistics*, Cat. No. 3101.0 (Canberra: ABS, 2013).
- 14 The total fertility rate (roughly the number of babies a woman can expect to have in her life) rose from 1.765 in 2003 to 1.933 in 2012. ABS (Australian Bureau of Statistics), *Births, Australia*, Cat. No. 3301.0 (Canberra: ABS, 2013).

- 15 DIAC (Department of Immigration and Citizenship), *Australia's Migration Trends 2011–12* (Canberra: DIAC, 2013). Note that this analysis ignores temporary migrants, who are included in the measure of net overseas migration. A full decomposition of net overseas migration for the decade 2003–04 to 2012–13 is 26% permanent family, 52% permanent skilled, 7% permanent humanitarian, and 16% temporary migration (percentages do not add to 100% due to rounding). The rise in temporary migration is a feature of the shift in migration policy over the recent years, and makes the Australian migration system more susceptible to changes in labour demand.
- 16 This is based on data for family and skilled visa migrants in wave three of the Longitudinal Survey of Immigrants to Australia, weighted by the share of each. See www.immi.gov.au/media/research/lisia3/migrant-characteristics.htm.
- 17 Ralph Lattimore and Clinton Pobke, *Recent Trends in Australian Fertility*, Productivity Commission Staff Working Paper (Canberra: Commonwealth of Australia, 2008), cited in Ross Guest, 'The Economics of a Sustainable Population' (Canberra: Parliamentary Library, 23 November 2010). Guest points out that the Australian Total Fertility Rate (TFR) rose by 14%, from 1.73 in 2001 to 1.97 in 2008, and cited the estimates of Lattimore and Pobke that the effect of Australia's suite of family payment increases over a similar period was between 2.5% and 3.7%.
- 18 Robert Drago, Katina Sawyer, Karina Sheffler, Diana Warren, and Mark Wooden, *Did Australia's Baby Bonus Increase the Fertility Rate?* Working Paper 1:09 (University of Melbourne: Melbourne Institute of Applied Economic and Social Research, 2009); Ralph Lattimore and Clinton Pobke, *Recent Trends in Australian Fertility*, as above.
- 19 Murray Goot and Ian Watson, 'Population, Immigration and Asylum Seekers: Patterns in Australian Public Opinion' (Canberra: Parliamentary Library, 2011).
- 20 In what follows, I take it for granted that a larger population means increased city populations, and a larger economy.
- 21 Cross-country regressions find little evidence that the share of GDP devoted to defence falls as the population rises, but some evidence that the share of GDP devoted to government education spending falls as GDP rises. However, it is difficult to imagine that this could apply in the current Australian context. See Alberto Alesina and Enrico Spolaore, *The Size of Nations* (Cambridge, MA: MIT Press, 2005), chapter 10.
- 22 Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle* (Princeton University Press, 2010), 21. Biddle also finds similarly disappointing results for other factors. The country with the larger GNP won 625 of the time (N=13), the country with more military personnel won 49% of the time (N=43), and the country with more military spending won 57% of the time (N=35). None of these differences is statistically significant at the 90% level.
- 23 For example, Ross Garnaut has argued that the positive scale effects on infrastructure and public services are large enough to offset any negative wage effects of immigration: Ross Garnaut, 'Immigration: Who Wins and Who Loses,' in *Migration: Benefiting Australia*, Conference Proceedings (Sydney: Department of Immigration and Multicultural and Indigenous Affairs, 7–8 May 2002), 131–164.
- 24 In 2012–13, the London underground made £33 million.
- 25 Harry Clarke, 'Should Australia Target Its Population Size?' *Economic Papers* 22:1 (2003), 24–35.
- 26 Another variant of the scale argument relates to the size of the domestic market. If an entrepreneur is producing a non-tradeable good or service, and a component of her costs are fixed, she will be more likely to succeed if the domestic market is larger. However, the increasing flow of goods and services across borders means that this argument applies to fewer and fewer start-ups.
- 27 Paul Collier, *Exodus: How Migration is Changing Our World* (Oxford: Oxford University Press, 2013), 117.
- 28 Kevin Chinnery and Anthony Sibillin, 'The Big Cost of Small Australia,' *BRW* (19–25 August 2010), 24.
- 29 Carolyn King, *Who Brought the Luck to the Lucky Country?: Great Australian Migrant Business* (Red Dog Books, 2011).
- 30 David McKenzie, Steven Stillman, and John Gibson, 'How Important is selection? Experimental vs. Non-Experimental Measures of the Income Gains from Migration,' *Journal of the European Economic Association* 8:4 (2010). The income gain from moving is 263%, which is likely to be causal, since the estimate is based on a lottery. See also Michael A. Clemens, Claudio E. Montenegro, and Lant Pritchett, 'The Place Premium: Wage Differences for Identical Workers Across the US Border,' Working Paper No. 148 (Center for Global Development, 2008).
- 31 Quoted in Paul Collier, 2013, *Exodus: How Migration is Changing Our World*, as above, 167.
- 32 Ed Glaeser, *Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier and Happier* (London: Penguin Books (Kindle edition), 2011), loc.661.
- 33 Productivity Commission, 'Submission to the Taskforce on the Sustainable Population Strategy for Australia' (Canberra: Productivity Commission, 2011), 29–30; John Daley, 2012, 'Critiquing government regional development policies,' in Jonathan Pincus and Graeme Hugo (eds), *A Greater Australia: Population, Policies and Governance* (Melbourne: Committee for Economic Development of Australia (CEDA)), 212–222.
- 34 NSW Bureau of Transport Statistics, 2013, *Bureau of Transport Statistics 2011/12 Household Travel Survey Summary Report, 2013 Release*, (Sydney: BTS), tables 2.1 and 4.5.2.
- 35 See National Housing Supply Council, 2012, *Housing Supply and Affordability—Key Indicators, 2012*, (Canberra: Australian Treasury), 22.

- 36 Alberto Alesina and Enrico Spolaore, *The Size of Nations* (Cambridge, MA: MIT Press, 2005), chapter 10.
- 37 Arnold Kling and Nick Schultz, *From Poverty to Prosperity: Intangible Assets, Hidden Liabilities, and the Lasting Triumph Over Scarcity*, (New York: Encounter Books, 2009).
- 38 Economists refer to this tendency of environmental outcomes to worsen and then improve as the 'environmental Kuznets curve.'
- 39 This applies even more strongly given that prospective migrants to Australia do not have a zero carbon footprint in their country of origin. For a useful discussion of population and climate change, see Barry Brook, 'Climate Change Implications of a Large Australian Population,' in Jonathan Pincus and Graeme Hugo (eds), *A Greater Australia: Population, Policies and Governance*, as above, 104–112.
- 40 One study found that under plausible scenarios for population growth, water availability would not be an issue in major Australian cities over the period to 2100. Alaric Maude, 'A Century of Debate About Population and the Environment: Key Issues,' in Jonathan Pincus and Graeme Hugo (eds), *A Greater Australia: Population, Policies and Governance*, as above, 26–33.
- 41 To test this theory, I used World Bank data for the period 1960–2005, and analysed the relationship between the change in a nation's polity democracy score and its population. I found no statistically significant relationship, regardless of whether I used the log of the 1960 population, the change in log population from 1960 to 2005, or the change in log population controlling for the starting level of log GDP per capita. Coefficients were in most cases close to zero.
- 42 See Andrew Leigh, *Disconnected* (Sydney: UNSW Press, 2010), chapter 9; Andrew Leigh, 'Trust, Inequality, and Ethnic Heterogeneity,' *Economic Record* 82:258 (2006).
- 43 OECD Family Database, 'CO3.6: Percentage of Immigrant Children and Their Educational Outcomes' (Paris: OECD, 2012).
- 44 Julian Simon noted: 'It is your mind that matters economically, as much or more than your mouth or hands. In the long run, the most important economic effect of population size and growth is the contribution of additional people to our stock of useful knowledge. And this contribution is large enough in the long run to overcome all the economic costs of population growth,' quoted in Erik Brynjolfsson and Andrew McAfee, *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies* (WW Norton & Company, 2014), 94.
- 45 Stephen Kirchner, *Hands, Mouths and Minds: Three Perspectives on Population Growth and Living Standards*, Policy Monograph 123 (Sydney: The Centre for Independent Studies, 2011).
- 46 In a 2006 study, the Productivity Commission found that skilled migration reduced the wages of professional by 7%, and increased the wages of tradespeople and labourers by 4% and 3%, respectively. Productivity Commission, *Economic Impacts of Migration and Population Growth* (Canberra: 2006). While the magnitude of these figures strikes me as implausibly high, the direction of the effect seems to accord with what one would expect. Another study estimates the effect of migration on low-skill wages across 21 countries, and finds that the Australian migration program has the second-largest positive effect on low-skill wages: Frédéric Docquier, Çağlar Özden, and Giovanni Peri, 'The Wage Effects of Immigration and Emigration,' National Bureau of Economic Research Working Paper 16646 (Cambridge, MA: NBER, 2010).
- 47 Productivity Commission, 'Submission to the Taskforce on the Sustainable Population Strategy for Australia' (Canberra: 2011), 24.
- 48 In her first major speech as prime minister, Julia Gillard outlined her views on population size and asylum seeker policy. See Julia Gillard, 'Moving Australia forward' (Lowy Institute, 6 July 2010).
- 49 Andrew Markus argues that the asylum seeker debate was responsible for a modest drop in support for immigration. See Andrew Markus, 'Immigration and Public Opinion' in Jonathan Pincus and Graeme Hugo (eds), *A Greater Australia: Population, Policies and Governance*, as above, 114–133.
- 50 Simply dividing the total 'Settlement Services for Migrants and Refugees' budget by the number of humanitarian arrivals produces an average cost of resettling a refugee around \$30,000. However, the marginal cost is likely to be lower.
- 51 United Nations High Commission on Refugees, *UNHCR Mid-Year Trends 2013* (Geneva: UNHCR), 6.
- 52 United Nations High Commission on Refugees, *UNHCR Global Trends 2012* (Geneva: UNHCR), 19 (I use the 2013 mid-year report for stocks, but the 2012 annual report for flows, because half-year data is likely to be more volatile).
- 53 Utilitarian reasoning is also referred to as consequentialist reasoning. Common examples that highlight the distinction include the starving family example (if stealing bread from a large store would prevent a poor family from starving, a utilitarian/consequentialist might allow it, but a categoricalist would argue that stealing was always wrong) and the Anne Frank example (if the Nazis knock on the door and ask if any Jewish people are in the house, a categoricalist might feel bound to tell the truth, while a utilitarian/consequentialist would lie because it served the greater good).
- 54 This point was articulately made by Craig Emerson discussing refugee politics with Kim Huynh on 'Emmo Forum' (18 January 2014), episode 14.
- 55 Quoted in Nicola Roxon, 'Ministerial Statements: 20th Anniversary of the Mabo Native Title Decision,' *Hansard* (House of Representatives, 31 May 2012).