

DISCUSSION PAPER

Silver tsunami or silver lining?

Why we should not fear
an ageing population

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DISCUSSION PAPER

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Why we should not fear
an ageing population

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Key Points

1

With people living longer than ever and the baby-boomer generation reaching retirement age, some people worry that we will run short of workers and taxpayers. But demographic ageing will stop well before that occurs. Retirees will never outnumber younger adults.

2

In the countries that have aged the most, there has been no shortage of workers. Instead of less employment, they have less unemployment and underemployment. Economic models that predict less economic activity as populations age are based on false assumptions.

3

The rise in the proportion of older citizens accounts for only a small fraction of the rise in health costs. The major increase in costs is due to new, improved and more services per person.

4

Longevity has deferred, rather than extended, the period in which the elderly need more health care and aged care.

5

High levels of immigration can slow, but not prevent, population ageing. But the cost of extra infrastructure and education to sustain population growth is greater than the avoided costs of pensions, health care and aged care.

6

Those with vested interests in population growth have overstated ageing concerns, to make high immigration seem essential. The resulting negative social and environmental impacts continue to accumulate for no net economic gain.

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Summary

A great triumph of modern civilisation is that most people born are able to live long and healthy lives. But this unquestionable good has become clouded by anxiety about its inevitable consequence: there are more old people about.

Media reports and political discourse on our ageing population often adopt a tone of panic. This discussion paper untangles the facts from the myths, so that Australians can look afresh at the population ageing issue – less from a perspective of panic than one of potential.

Ageing is inevitable but self-limiting

The “demographic transition” describes the shift from pre-modern conditions in which high birth rates were roughly matched by high mortality (particularly of children), to modern conditions where low mortality and long life-expectancy is balanced by small families. This demographic transition process is occurring in all societies, although countries differ in how far and how fast they have progressed.

Australia is reaching the final stages of the demographic transition, where the proportion of older citizens rises steadily, but this is only a transition to a new stable level. If population growth ends, the proportion of people aged 65 and over will settle around 30 to 33%. The proportion of people aged 15-64 years (traditionally referred to as “working age”) is temporarily elevated in the middle of the demographic transition but falls back to normal levels (around 55%) as the proportion of over-65s rises. At no point would people over-65 outnumber younger adults, even if the population were shrinking steadily.

It has been claimed that, without high immigration into Australia, “by 2050 roughly half of us would be over the age of 65 and we’d essentially be one gigantic floating nursing home somewhere in the Pacific”.¹ Scurrilous exaggerations such as this are designed to sway public opinion through ill-founded fear.

The “dependency” fallacy

Much of the conversation around ageing focuses on the ratio of people over-65 to those of “working age”. This “dependency ratio” assumes that those over-65 depend economically on people aged 15-64, and that there will not be enough people of “working age” to perform all the required work. Both these assumptions are false and misleading.

The workforce responds dynamically to the demand for labour

Despite several countries already experiencing a declining proportion of working-age people for more than two decades, none has seen a related decline in workforce. Compared with Australia, Japan has almost twice the proportion of older citizens but roughly the same proportion of people who have jobs. With the same demand for workers but fewer working-age people competing for jobs, there is less unemployment and underemployment. Improved wages and conditions attract more people into the workforce. This is what economic theory expects the labour market to do. But the economic models which predict that ageing will constrain the workforce have ignored these feedbacks.

Ageing is a small contributor to rising health costs

While older citizens incur health expenses more frequently than others, the rise in proportion of older citizens accounts for only a small fraction of the rise in health costs. Population growth and increasing provision of health services per person are the main reasons for Australia's sharp rise in health spending. Internationally, there is little relationship between the extent of population ageing and the national expenditure on health. Older people are getting healthier over time, with high-care needs deferred as longevity increases.

Boosting population growth does not solve ageing

The Australian government's main response to demographic ageing has been to boost population growth through incentives to have more children (particularly the "baby bonus") and elevated immigration levels. Neither strategy prevents population ageing in the long run. As immigration levels are increased, each additional migrant has less and less effect on the population age structure. Boosting births increases the proportion of children rather than working-age people. There is no evidence that boosting the working-age proportion has increased employment per capita. Instead, Australia's labour market has been oversupplied, with high immigration contributing to youth underemployment, wage stagnation and rising inequality.

The cost of population growth exceeds the cost of ageing

The Parliamentary Budget Office (PBO) estimated that ageing will cost the Federal budget "around \$36 billion by 2028-29".² This estimate is based on two false assumptions: (1) that a smaller working-age proportion means less economic activity,

and (2) that health and aged care costs rise in proportion to the over-65 population. Even if the latter were true, the cost of extra infrastructure to support population growth outweighs the small extent to which that population growth could lessen pension, health-care and aged-care burdens. Most of this infrastructure cost falls to State and local governments, and private individuals, rather than the Federal government. The national interest should not be narrowly defined as merely achieving a balanced Federal budget.

The rate of population growth is at the discretion of the Federal government. Changing policies on immigration and pronatalism could quickly ease congestion and improve State government finances, and would allow infrastructure to catch up with our recent growth.

Retirement incomes are threatened by high-growth strategies

The rise of part-time and insecure work, combined with greatly elevated housing costs, means that young adults today are likely to find it more difficult to save for their retirement than their parents' generation did. These trends have been exacerbated by Australia's accelerated population growth since 2005. Australia's current pension system is designed to provide adequate income for retirees who own their own home and are debt-free. As the current youth generation ages, more and more pensioners will be paying rent or mortgages and government will need to supplement the pension to ensure housing security.

Although Australia's aged-pension outlays are modest by OECD standards, the retirement income system is costly due to very generous tax concessions for superannuation contributions which mostly benefit the richest Australians. Options are available to improve the efficiency and equity of retirement funding.

We need a mature intergenerational conversation

Federal Treasury's periodic Intergenerational Reports paint a gloomy picture of ageing stifling economic growth and blowing out government budgets. Their solution is the "3 Ps" mantra: population, participation and productivity. We find, however, due to increasing wellness of older Australians and natural feedbacks in the labour force, the negative economic effects of ageing are likely to be much lower than estimated in Intergenerational Reports. On the other hand, rapid population growth directly undermines both workforce participation (through crowded labour markets) and productivity (through low wages, crowded infrastructure and costly real estate). To date, the Intergenerational Reports have entirely omitted the costs of population growth, including infrastructure and environmental damage. Inclusion of these costs reveals that the rapid population growth "cure" is worse than the "disease" of ageing that it purports to fix.

No need for panic

Vested interests in population growth, including property developers and large retailers, have used ageing myths to persuade both government and the public that high immigration is necessary. This panic rhetoric has been used to misdirect and stifle debate about the real costs of continuing population growth. Often it is combined with unfounded assertions that any opposition to high immigration numbers is motivated by racism and xenophobia. Yet concern about population growth rate does not reflect at all on ethnic identity: at any scale, the immigration program can be non-discriminatory. In order for rational policy debate to resume, legitimate concerns about migrant numbers need to be disentangled from issues of multiculturalism, racism and treatment of refugees.

Silver tsunami or silver lining?

An older, numerically stable or decreasing population offers many benefits for quality of life, environmental sustainability and economic stability. Depopulation dividends could make us richer, smarter, safer, fairer, greener, healthier and happier.

1. Introduction

Our ageing population has captured the public imagination as a threat to our economy and quality of life. This is hardly surprising, because this message has been pressed upon the public by politicians and the media. Often, the conclusion of this commentary is that Australia must pursue high levels of immigration to stave off the perils of rapid ageing. However, this discourse perpetuates a lot of myths and misunderstandings which can lead to unnecessary anxiety and perverse policies.

Demographic ageing (or an ageing population) refers to the shift toward higher proportions of older people. It is not referring to how individual people experience getting old (the realm of gerontologists), although trends in the health and abilities of older citizens affect the extent to which demand for certain services will grow.

Demographic ageing is an inevitable by-product of the great advances of human society, which ensure that most people born survive to live long and healthy lives. Few people would choose to reverse this process, to have the numbers of elderly depleted by premature deaths. However, there is no dispute that the changes are unprecedented, and therefore some anxieties are to be expected. These anxieties might be relieved through better understanding of the process, its likely extent and the policy initiatives that are responding to it.

In the wake of the COVID-19 pandemic, any discussion of future economic prospects is fraught with speculation. No economic conditions or policy settings can now be considered “normal”. The best we can do is examine the likely effects of change, using the pre-pandemic situation as a baseline. In such a sudden economic crisis, the dire prognoses often published about ageing have been brought into a new perspective. It has been claimed that a shift in our age profile will rock the economic boat to a dangerous degree. The pandemic has shown us just how far that boat can be rocked – not without danger, but with concern for human wellbeing trumping economic priorities. Perhaps we will emerge from this crisis with a more open attitude to adjusting our step to accommodate changing human needs. If so, we might be wondering what all the ageing fuss was about.

This discussion paper explains the concepts used in the ageing discourse, and draws upon a wide range of research evidence to test the claims about ageing.

2. The demographics of ageing

The demographic transition

The “demographic transition” is a term used to describe the shift from pre-modern conditions, in which high birth rates were roughly matched by high mortality (particularly of children), to modern conditions where low mortality and long life expectancy is balanced by small families. It is unarguably a defining triumph of the modern era, ensuring that most people born are able to live long and healthy lives.

Because the death rate invariably falls before the birth rate, the middle of the transition is characterised by population growth. In European countries, death rates fell slowly, and birth rates lagged behind but not by much, so population growth was moderate. But the post-WWII dissemination of antibiotics and vaccines saw mortality fall dramatically in underdeveloped countries, causing very large differences between the death rate and the birth rate, and unprecedented rates of population growth. During the 20th century, vast quantities of cheap fossil fuel energy, combined with rapid technological innovation, allowed food to be produced more intensively and distributed around the globe, enabling population growth to continue unhindered for a while. Some people were enticed into thinking that this was the “new normal” and a sign of economic health.

It is a myth that there won't be enough workers to satisfy the demand for goods and services.

However, on a finite planet, the scale of human activity can't rise for ever. Climate change is only one manifestation of this reality. At some point human population numbers must stabilise in order to be ecologically sustainable. The larger they grow, the more difficult it is to achieve a decent standard of living for all. Discussion about the supposed perils of an ageing population must be framed within a perspective of what is both sustainable and desirable for the long-term evolution of human society.

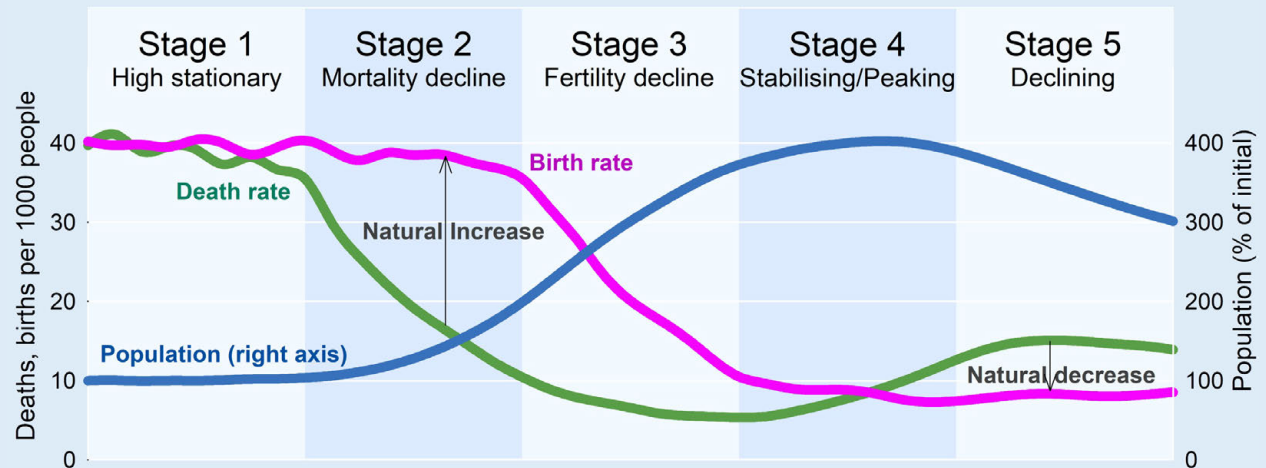
Box 1 explains the stages of the demographic transition, and its effect on age composition of the population.³ Different countries have experienced the transition at different times and at a different pace. For instance, the fall in mortality that took two centuries for European countries has happened in two decades in many developing countries. Depending on the delay between the fall in deaths and the fall in births, the peak population might be three times, or more than twenty times, the initial population. But for all, the implications for age composition are similar.

Box I. Understanding the demographic transition

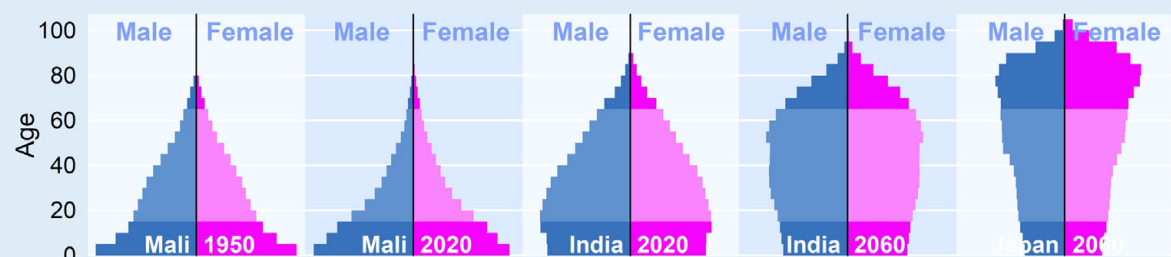
The demographic transition describes the changes that occur in a population as it moves from high death rates and birth rates, through a period of population growth, to low death and birth rates.

Figure I: Key features of the demographic transition

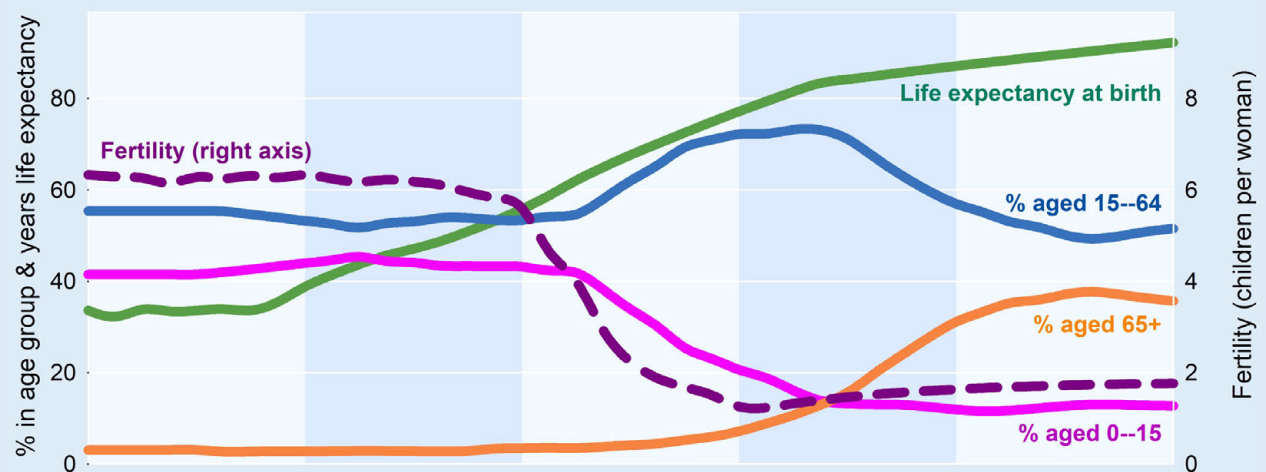
A: Stages of the demographic transition are defined by death rates and birth rates



B: Representative age profiles



C: Fertility, longevity and proportion of age groups



→ A: Stages of the demographic transition, showing crude death rate (deaths per 1000 people per year), crude birth rate (births per 1000 people per year), and size of population. Time is moving from left to right, but the duration of each stage is variable: it might be from twenty years to many decades. B: Examples of population age structure ("population pyramids") typical of each stage. The width of each bar represents the number of people at each age, with the youngest at the bottom. The paler bars are people aged 15-64 years, typically designated "working age". Darker bars below are children, and above are older people, most of whom are retired from the workforce. C: Changes in fertility and life expectancy, and in the proportions of people in age categories, which occur as a result of the transition.

Stage 1 describes “pre-transition” societies with little population growth, despite large numbers of children born per family, because many people died young. The age structure forms a pyramid, with large numbers of children and dwindling numbers in older age cohorts.

Stage 2 marks the mortality transition, enabled by better medical treatment and sanitation measures. For Western Europe, this began in the 18th century, driven by the scientific and medical advances of the Enlightenment, the opening of new lands in the New World, and the Industrial Revolution raising productivity and reducing unemployment. For many other countries it began in earnest in the post-WWII period of globalised development, particularly through the roll-out of vaccination, antibiotics and mosquito control. Because birth rates are still high, population growth accelerates sharply when deaths decline. The age structure is still a pyramid, but now it is by dilution of older cohorts by ever-larger newborn cohorts, rather than by attrition from premature deaths.

Stage 3 is characterised by the fertility transition. When the size of families is reduced, the gap between births and deaths shrinks and hence population growth slows. For Stage 3 to end, fertility must fall below the “replacement level”, where each generation is no bigger than its parents’ generation. This is a little over two children per woman, depending on how much mortality of children and youths still persists. In Stage 3, the age structure becomes more straight-sided at the bottom, or even curving inward, but has a long taper at the top as the old pyramid structure works its way up the ages. This process of “filling up the generations” keeps the population increasing, even after fertility is below two children per woman. It is called “demographic momentum”.

The fertility transition is not an automatic process; lower death rates do not directly cause lower birth rates, although they are a pre-requisite. Without efforts to change cultural norms, there can be a considerable delay between the fall in mortality and the fall in fertility. The longer the delay, the more the population grows. If it grows fast or far enough, overpopulation will start to increase the death rate again. So it is vital that the fertility transition happens soon enough, fast enough and far enough (i.e. reaching two children per woman) to avoid the deprivations of overpopulation. Stages 2–3 cannot go on for ever; they are inherently unsustainable because of population growth. So either the population is allowed to stabilise with low birth rates, or its growth will be stopped by higher death rates, returning to Stage 1.

Stage 4 describes a stabilising post-transition society. The death rate begins to rise simply because there are more old people. When it matches the birth rate, natural increase ends (but population growth might continue due to immigration). If the fertility rate stays around the replacement rate (just above two children per woman) or there are just enough immigrants to top up each generation, then the population could become stationary (not growing) and stable (having a roughly constant age structure).

Stage 5 characterises a decreasing post-transition society. If fertility remains below replacement, and is not augmented by immigration, then the population will shrink gradually, due to more (deaths plus emigrants) than (births plus immigrants). This can also produce a stable age structure, slightly older than the stationary population, but not further ageing unless longevity continues to increase. A country might stay in Stage 5 for long enough to rebalance its resource needs with the carrying capacity of its land, and then choose to increase fertility or immigration and move back to Stage 4.

Important observations from Figure 1C are:

1. The proportion of people aged over 65 does not continue to increase indefinitely but levels off after the transition, once the cohorts reaching old-age stop growing ever larger. The level will be a little higher if the population is declining than if it is stable (see Table 1 below), but remains well below the proportion of younger adults. This fact refutes the claim by Migration Council of Australia CEO Carla Wilshire that, without high immigration, “*by 2050 roughly half of us would be over the age of 65 and we’d essentially be one gigantic floating nursing home somewhere in the Pacific.*”⁴ This is not simply untrue, it is a ludicrous exaggeration.
2. The proportion of people aged 15–64 years (typically, although somewhat anachronistically, designated as “working age”) has a hump in the middle. This is an anomaly caused by the transition. It happens because the proportion of children drops before the proportion of old people builds up. On the other side of the transition, the working-age proportion stabilises at much the same level it was before. It is a myth that there will not be enough workers to satisfy the demand for goods and services, and that there will be more retirees than working-age people.

The proportion of people aged over 65 does not continue to increase indefinitely, but levels off after the demographic transition.

Australia is currently just starting to come off this hump of an abnormally high proportion of working-age people. This is inevitable. Regardless of what the ageing alarmists demand, this high level cannot be sustained, because it is a transient effect of the process of change. As ageing takes its course, we end up with about the same proportion of working-age people as we had in the 1960s. Given that we also have higher workforce participation of both women and older workers than then, this hardly seems to be a reason for economic concern.

How far will ageing go?

As explained above, population ageing is a self-limiting process. But will it reach a level that will cause society serious stress, and should we be taking measures to reduce its extent?

Table 1 (scenarios 3–6) gives age profiles for some different scenarios, which maximise ageing by assuming very high life expectancy and zero or negative population growth. Even under these conditions, people aged over 65 remain far fewer than younger adults. Table 1 begins with the current situation (Scenario 1), followed by five future scenarios. Scenario 2 is a projection by the Productivity Commission⁵ which sees over-65s rising to 29% of the Australian population by the end of this century, almost double the 2020 level. But this projection assumes steady population growth to more than 55 million this century, on its way to much bigger numbers. Without this population growth, and assuming the same high life expectancy, over-65s would level off at around 30–32%, depending on the balance of births and migration (Scenarios 3 and 4). Almost half this increase is due to the assumed increase in life expectancy, which is not guaranteed, especially with obesity-related health issues rising. The rest is due to “filling up the generations”, moving from the Demographic Transition’s Stage 3 to Stage 4 age profile (see Box 1, Figure 1B).

Table 1. The age distribution associated with possible future population scenarios.⁶

Scenario	Assumptions			Age distribution		
	TFR*	Life expectancy	NOM** per 1000	Aged 0–14 %	Aged 15–64 %	Aged 65+ %
1. Australia in 2019	1.74	82.8	9	19	65	16
2. Australia in 2100, high population growth	1.85	92.7	4	15	56	29
3. Stable, stationary population with replacement fertility	2.08	92.7	0	16	54	30
4. Stable, stationary population with low fertility + migration	1.56	92.7	2	13	55	32
5. Low-fertility, gradually declining population (-0.4% p.a.)	1.78	92.7	0.5	13	51	35
6. Very low fertility, rapidly declining population (-0.9% p.a.)	1.41	92.7	0.5	10	49	41

*TFR = total fertility rate, the average number of children women have in their lifetime.

**NOM = net overseas migration, the number of long-term arrivals minus long-term departures, per year per 1000 of the resident population.

Note that scenarios 3 to 6 do not refer to any particular year; they show the final, stable age structure that does not change further unless there are changes in fertility, mortality or migration. Comparing scenarios 3 and 4, a population with more migrants and fewer births will have a higher proportion of people aged 15-64, but also a higher proportion over 65, because migrants also grow old. Only the proportion of children is reduced (because most migrants spend their childhood somewhere else). So, migration doesn't keep the population young, although it might marginally increase the working age proportion.

In Scenario 5, low fertility and low immigration mean that the population shrinks. The proportion of older people stabilises at a higher level, but this is partly off-set by a lower proportion of children. This is what United Nations projections anticipate for Japan and Korea by the end of this century.⁷ Only if fertility and immigration both remain very low, and life expectancy very high, does the 15-64 age group fall below 50% (Scenario 6).

In summary, Table 1 shows the maximum likely extent of ageing if population size is allowed to stabilise or decline. The proportion of people aged over 65 might reach 30 to 40 per cent, but will never outnumber younger adults.

Higher levels of immigration have less and less effect on ageing

Population growth causes lower proportions of older citizens, simply because they are being diluted by bigger young cohorts coming up behind them. Of course, the younger people being added in ever-greater numbers will also grow old, creating an ever-bigger challenge to dilute them with more young people. This is often referred to as “Ponzi demography”.⁸ Ponzi schemes are named after the fraudulent investment scam run by Charles Ponzi in the 1920s (and emulated by Bernie Madoff in the 2000s), which involve paying current investors not from actual earnings on their investment, but from the deposits of ever greater numbers of new investors. Such scams always collapse because of the impossibility of recruiting indefinitely greater numbers of investors. In a similar vein, Ponzi demography is as unsustainable as the perpetual population growth on which it depends.

In Figure 2, we explore the extent to which ageing could be diminished by different levels of immigration. As we see in Figure 2A, increasing levels of immigration increase the projected population steadily. But Figure 2B shows that, for each extra 50,000 increase in net immigration, there is a smaller impact on ageing. Figure 2B shows the effect of these immigration projections in terms of three measures: the percentage of people aged 15-64 years; the median age of the population; and the percentage of people aged 65 and over. The first bar shows the change from 2020 to 2100 if there were no net immigration (that is, if immigration equalled emigration, still allowing tens of thousands of immigrants to replace emigrants). The subsequent bars show the effect at the year 2100 of each additional 50,000 immigrants per year. We see that lifting net overseas migration (NOM) from 300,000 to 350,000 causes only a sixth as much change in measures of ageing as moving from zero to 50,000 NOM per year. McDonald and Temple (2010) and Betts (2020) reported a similar diminishing effect with higher levels of immigration.^{9, 10}

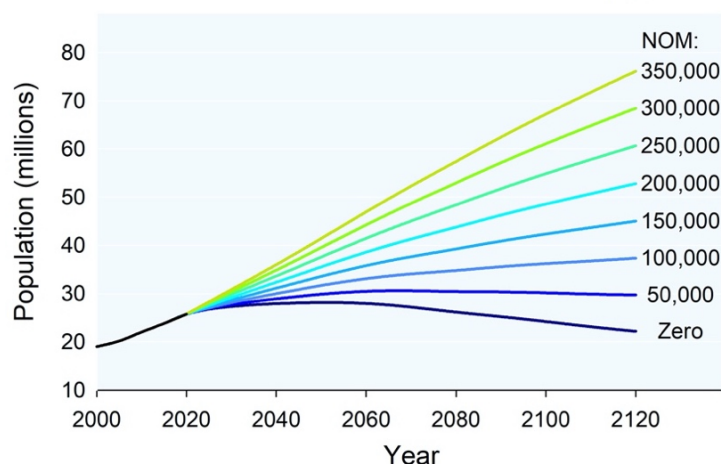
Trade-offs between costs of ageing and population growth

Each of the projections in Figure 2A shows the rate of population growth (the slope of the line) decreasing over time. This is because migration is held at a constant number, which becomes a smaller proportion of the total population as the population grows. As the growth rate slows, ageing progresses. Hence, these levels of migration do not prevent ageing, they merely defer it.

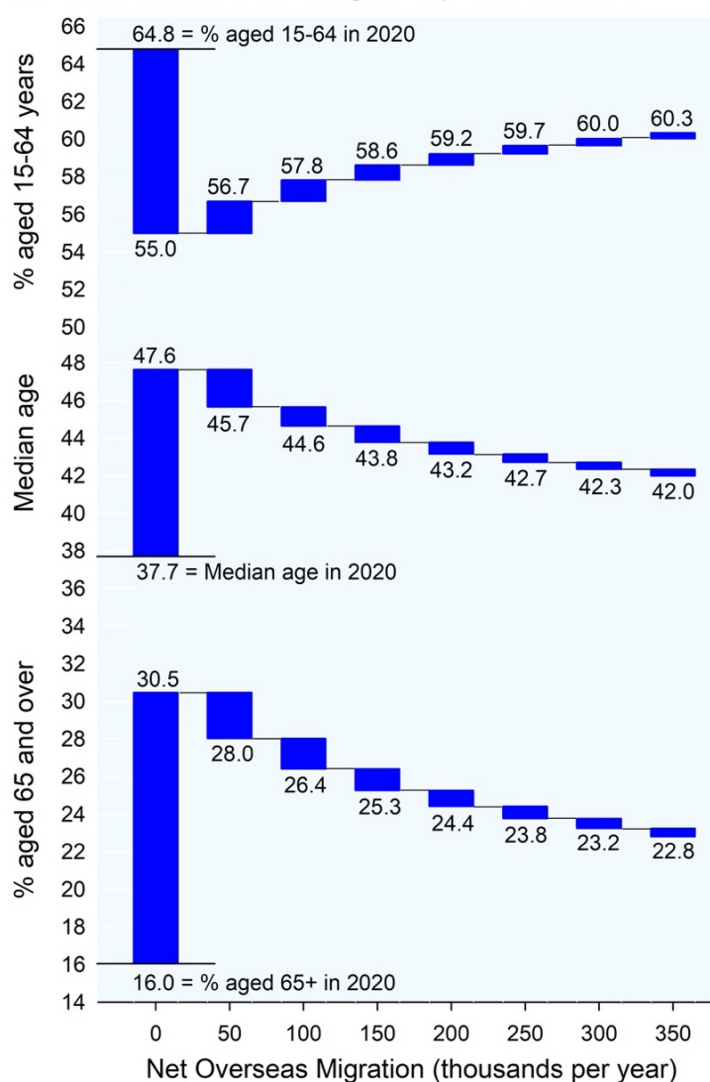
If we had immigration steadily rising, to maintain a constant population growth rate (i.e. exponential growth), then the proportion of over-65s could be kept lower indefinitely (that is, until we were too overpopulated to grow anymore). For instance, by keeping net migration at 1% of Australia’s population (about the level it has been in recent years), Australia’s population would grow exponentially at around 1.6% per year, resulting in a population doubling time of about 43 years. This would have a bigger effect on ageing, with median age rising only slightly to 39 years, and over-65s remaining under 20% of the population. But in this scenario the population rises dramatically, reaching 100 million in 2113, over 400 million by 2200 and 2 billion before 2300. With population growth set at 2% per year (doubling each 35 years), we would have 6.5 billion Australians by 2300.

Figure 2. Each increase in net overseas migration (NOM) has less effect on ageing

A. Effect of NOM level on size of the Australian population



B: Effect of NOM level on age composition in 2100



→ Projections of Australia's population using constant levels of net overseas migration (NOM): A: The effect of levels of NOM on the size of the population from 2020 to 2120.¹¹ B: The effect of increasing levels of migration on the proportion of people aged 15-64, the median age, and the proportion of people aged 65 and older, in the year 2100. The first bar shows the change from 2020 to 2100 if there were no net migration. Subsequent bars show the difference that each extra 50,000 immigrants would make

Perhaps these time horizons are too distant for our policy-makers to worry about how we could possibly cope with hundreds of millions of people. Let us pretend for the moment that the size of the future population is unproblematic – that Australia’s natural resources are unlimited and we all aspire to live in high-rise apartments. How would high levels of population growth affect fiscal outcomes related to our age composition?

In Figure 3, we compare five projections that achieve approximately steady population growth rate and age composition. (While these projections are produced by varying immigration, raising birth rates would yield fairly similar results.) Figure 3B shows that if our population grew at 2% per year (projection E), we could keep the proportions of children, 15-64-year-olds and over-65s roughly the same as we currently have (until we are too overpopulated to keep growing). But, as Figure 3C shows, the cost of infrastructure and education to support this growth outweighs any benefit from lowering costs related to elderly citizens. On the other hand, if we had no population growth, or even a gentle decline, then there would be a higher proportion of older citizens, but the savings on infrastructure and education would pay for the increase in pensions, health care and old-age care.

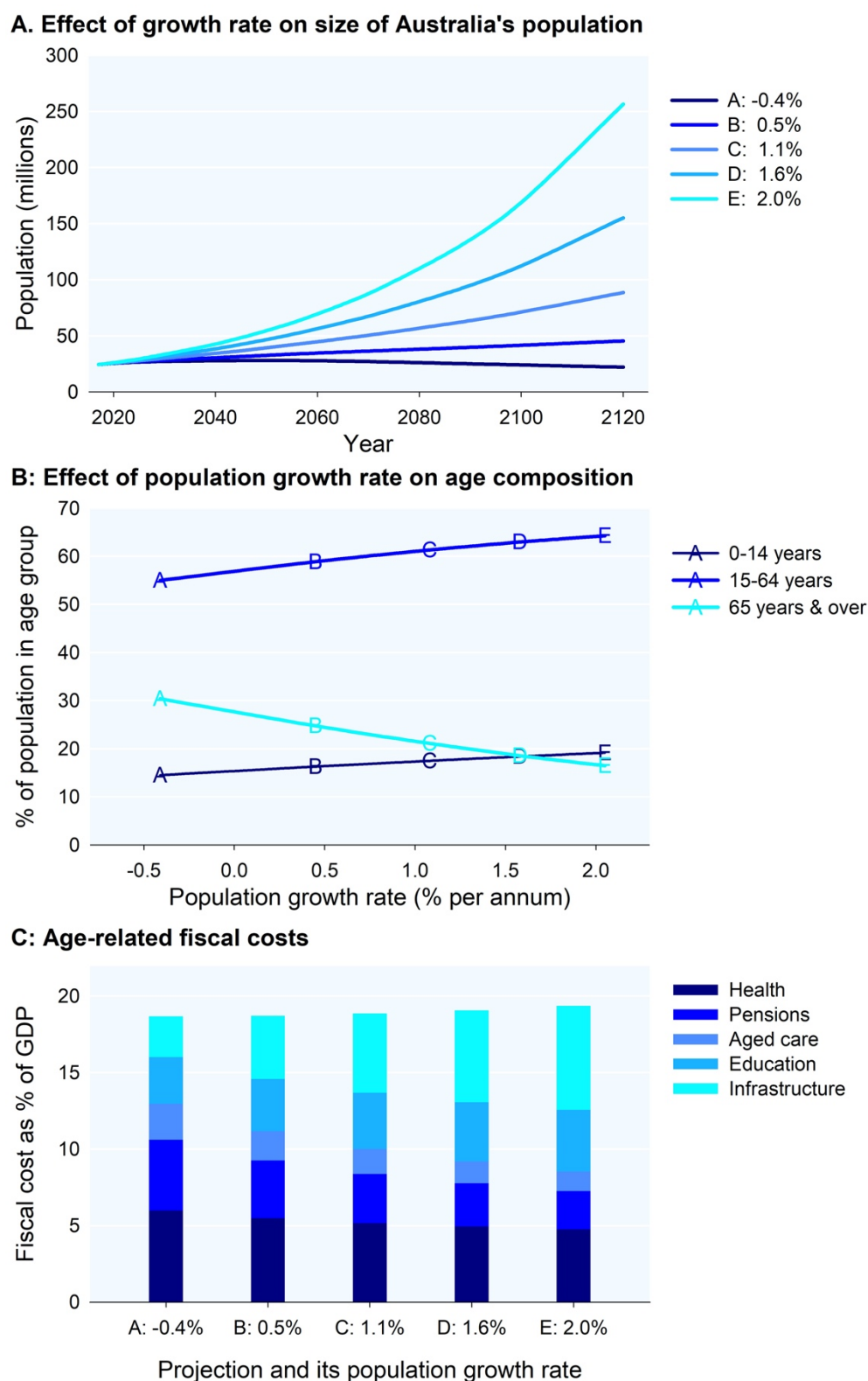
The economic costs of population growth outweigh those of ageing.

Australia’s current growth rate and age composition is near Projection D. Figure 3C suggests that, by choosing to maintain growth for now (knowing it is ultimately impossible to maintain for ever), we stand to gain no fiscal advantage. The claimed fiscal imperative for growth to mitigate ageing can be explained by its omission of the counteracting costs of extra infrastructure to cope with growth. In addition, there is increasing evidence that population density is escalating infrastructure costs,¹² with the need for underground trains, high-rise schools, desalination

plants and waste disposal issues, among other challenges. Hence, we can expect escalating infrastructure costs and strains if the rate of population growth is sustained. In contrast, health and aged care needs might not increase in proportion to the over-65 population, as discussed below. These considerations increase the benefits of an older, stable or gently declining population over a younger, rapidly growing one.

It is the inclusion of capital expenses – for infrastructure and other durable items – which reveals that the economic costs of population growth outweigh those of ageing.¹³ A 2014 study using National Transfer Accounts of 40 countries also found that slightly negative population growth rates “maximize per capita consumption when the cost of providing capital for a growing labour force is taken into account.”¹⁴ This was true across 17 high-income countries, despite most of them offering much more generous pensions than Australia. The authors describe this effect of demographic ageing on human and physical capital as the “second demographic dividend,” referencing the now widely acknowledged “demographic dividend” which is claimed to boost economic growth when lower birth rates reduce the economic burden of dependent children. According to their analysis, this second demographic dividend is larger and more durable than the first.¹⁵

Figure 3. Elevated population growth rates don't lessen fiscal costs



→ Characteristics of five projections which vary immigration to achieve roughly constant population growth rate and age distribution. A: The size of Australia's population under each projection. B: The effect of the population growth rate on proportion of children, nominally "working age" people and people aged 65+. C: Fiscal costs associated with the stable age structure established by each growth rate, assuming that age-specific costs remain similar to today. See endnote for details.¹⁶

3. Ageing and the workforce

Ageing reduces *unemployment*, rather than employment

In any plausible future scenario, we can expect a smaller proportion of people aged 15-64 years than we currently have. As explained above, this is because our current level is abnormally high, as a transient effect of the demographic transition.

But this doesn't necessarily mean that we will have fewer people working, or fewer hours of work being done. Economic theory predicts that, as the labour market tightens, fewer people will be unemployed, and employers will improve wages and conditions to attract job-seekers. This would have the effect of drawing more people into the workforce who were not working, or keeping people in work who would otherwise have retired. Employers who are paying higher wages are also likely to invest more in equipment and training to improve productivity of workers. Like any other market, the labour market is a dynamic, adaptive system that works to match demand with supply.

There is no evidence at all that countries with more “working age” people have more employment.

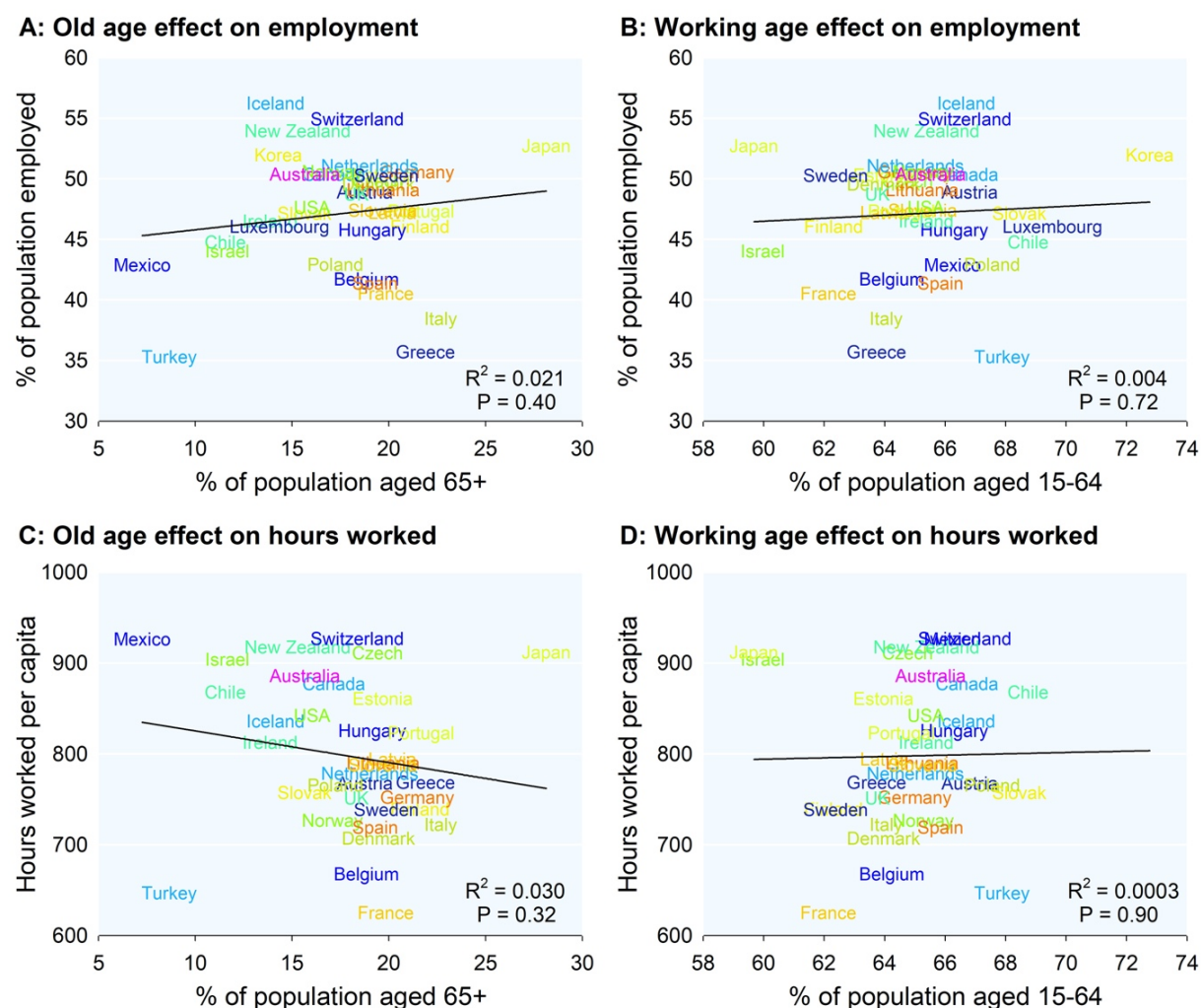
Oddly enough, this established theory is abandoned entirely in modelling exercises that predict that ageing will shrink the workforce and tax revenues. As a result, their predictions exaggerate the impacts of ageing. Most of these models (e.g. IMF 2015¹⁷) take current age-specific workforce participation (that is, the proportion of each age group that is currently working or seeking work) as a constant, and assume that these

levels will continue into the future, uninfluenced by a decline in “working age” people or by adding job-seekers through immigration. More sophisticated modelling, such as the Productivity Commission's, acknowledge the recent trends of increasing participation of women and increasing education levels associated with greater workforce participation, and project these trends into the future.^{18,19} But even these models omit any capacity for the labour market to respond to greater or fewer job-seekers under different scenarios. Consequently, all such models predict that a fall in the proportion of “working age” people means a fall in the workforce, and that higher immigration leads to higher proportions of people with jobs.

The real world offers us a case study to test whether these models and their predictions are valid. Across the 36 member countries of the Organisation for Economic Co-operation and Development (OECD), some (like Japan and Germany) are quite advanced in the ageing process, while others (like Mexico and Israel) still have high proportions of children, and some (like Australia and South Korea) are in the middle with 15-64 year-olds near their maximum level.

Among them, there are also cultural differences that influence women's workforce participation, hours of work per worker, and retirement age. There are also different economic circumstances affecting unemployment. However, as we see in Figure 4, there is no correlation between the proportion of people who have paid employment and the proportion who are aged over 65. Nor is there any correlation with the proportion who are aged 15-64. Nor is there any correlation if we look at hours worked instead of people employed. On all measures, the correlations are not statistically significant, meaning that any slope on the line is more likely due to chance, and at best it would account for a very small proportion of the difference between countries. There is no evidence at all that countries with more "working age" people have more employment.

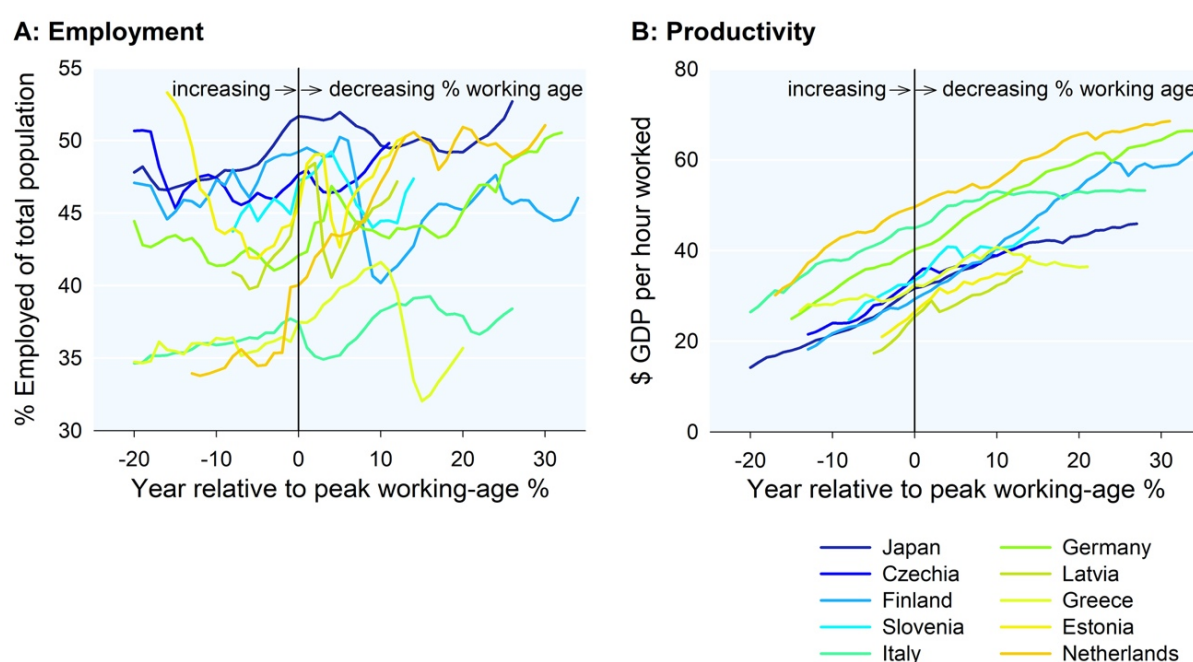
Figure 4. Ageing is not correlated with the workforce across OECD countries



→ The relationship between the proportion of people employed and proportion of (A) "older" people or (B) of "working age" people, and alternatively the hours worked each year per head of total population correlated against (C) "older" people and (D) "working age" population. Data from 2018. Source: OECD.²⁰

Within countries, is there any indication that the “demographic burden” of a shrinking working-age group is constraining employment? Let’s have a look at what the data tell us. Many countries passed their peak “working age” proportion more than twenty years ago. Some Eastern European countries peaked more recently, but have aged very rapidly due to emigration of young adults. Figure 5A shows ten OECD countries where the proportion of 15-64 year-olds has fallen by 7% or more from its peak. In Japan, the working age proportion was 15% lower in 2018 than it was at its peak in 1992. Yet we find no decline in workforce that can be attributable to the decline in working-age proportion. These countries have also had strong productivity growth, uninterrupted by an ageing workforce (Figure 5B). MIT economists Acemoglu and Restrepo also found no relationship between the rapidity of ageing and growth in per capita GDP, and argued that ageing countries more rapidly adopted automation to boost productivity.²¹

Figure 5. Workforce and productivity stay up when “working age” proportion declines



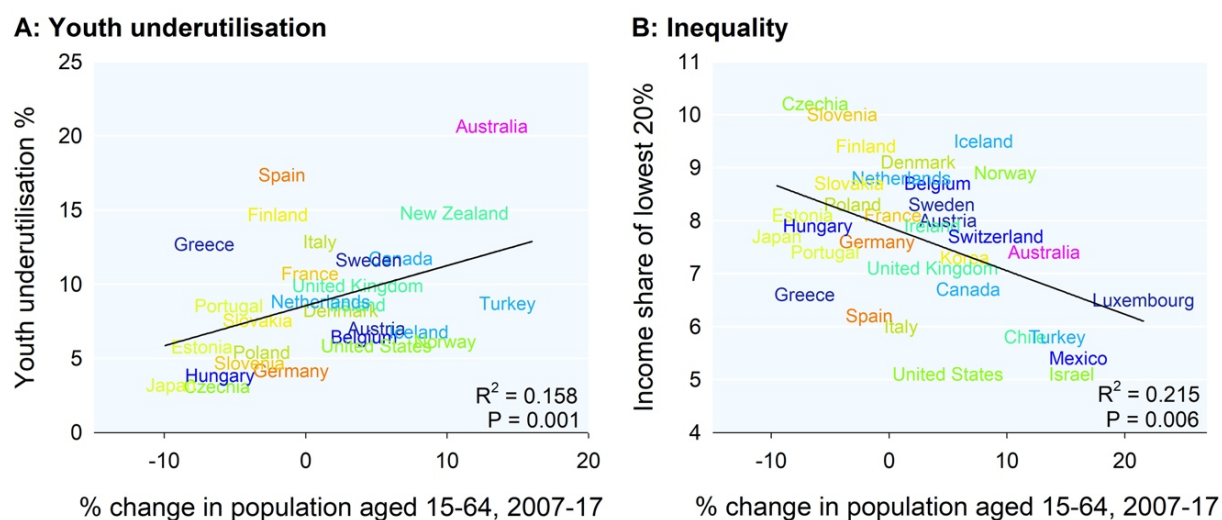
→ The change across time leading up to, and after, the year of maximum proportion of people aged 15-64 (nominally “working age”), in (A) the prevalence of employment, and (B) productivity of labour, in the 10 OECD countries which have seen the greatest decline in proportion of “working-age” people. Data from OECD.²²

These results suggest that the labour market is operating to include more working-age people in the workforce, as the working-age proportion declines. In Figure 6A, we find that young people seeking to enter the workforce find it significantly harder when the working-age population is growing more rapidly.

Over the decade prior to the COVID-19 pandemic, Australia’s youth underemployment rate was extraordinarily high by developed-country standards, more than twice the average for G7 countries, and was unusual within the OECD in having risen substantially since the end of the Global Financial Crisis.²³ This decade was characterised by sustained rapid population growth.

Economic theory also suggests that, in labour markets that are oversupplied with job-seekers due to rapid population growth, wages will be kept down especially for low-paid workers. Again, there is evidence that this is the case, with more rapid growth of working-age population correlating with a smaller share of income going to the poorest households. (Figure 6B).

Figure 6. Signs of labour oversupply where “working-age” population is growing fastest



→ The effect of growth or shrinkage of the “working-age” population over the previous decade on A: Underutilisation (the sum of unemployment and underemployment) of people aged 15-24 years, in 2017, and B: Income share of the poorest 20% of households, as an indicator of inequality. Data from OECD, Stat and World Bank.

The dependency fallacy

A much-used statistic in the ageing discourse is the “dependency ratio”, defined as the number of people aged 65 and over divided by the number of people aged 15-64. Alternatively, the “support ratio” is the reciprocal: the number of 15-64 year olds for each person aged 65 and over.

These ratios imply that those over-65 depend economically on the 15-64 year olds, and that the number of people aged 15-64 is a good estimate for how much economic activity will be achieved. Both these assumptions are misleading. As we have seen, a tighter labour market can increase the participation of working-age people, disconnecting the change in the working-age proportion from any change in the amount of work done.

In Australia today, there are more people of “working age” who are not working than there are people over 65.²⁴ Many of these people want to work, or want more hours of work than they can get. Whether they are actively job seeking and classed as unemployed, or whether they are discouraged by poor experiences of job-hunting or exploitative work, their presence makes it easier for employers to keep wages low. It also allows employers to demand higher levels of qualification and experience for the same work, and to erode job security.

Between 2004 and 2008, Australia’s immigration rate tripled and the population growth rate increased by 75%. Although the Global Financial Crisis reduced the migrant inflow somewhat, it had remained around twice the 2004 level until the COVID-19 border closure. The role of this accelerated population growth in suppressing wages and expanding underemployment has been widely commented upon. Even CommSec senior economist Ryan Felsman identified high population growth as a reason that wage levels were not rising.²⁵ Commonwealth Bank economist Gareth Aird emphasised the extent to which the headline GDP growth has masked stagnation in GDP per capita. Meanwhile, wage-earners are receiving an ever-lower share of national income, and at the same time household debt has soared due to housing costs pushed up by population growth.²⁶ These trends suggest that the increased supply of young workers has not proportionally increased economic activity, as the dependency ratio implies, but has largely translated into labour underutilisation.

Do migration levels help or harm employment of Australians?

Whenever it is suggested that elevated immigration has exacerbated underemployment and insecurity of jobs, a key retort is that “Immigrants don't take Australian jobs. They create jobs for others.”²⁷ The claim is presented as axiomatic, without reference to the scale of immigration – apparently the effect is the same whether immigration is 5,000 or 500,000 per year.

Rising debt is not a sustainable method of maintaining employment.

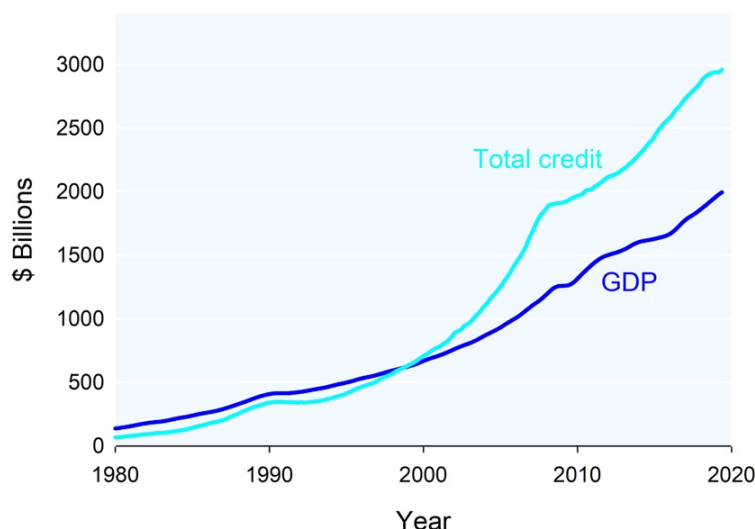
Without denying other potential benefits of immigration, do the economic arguments about job creation stack up? The usual explanation is that “their own spending stimulates the economy and actually creates a net result of more jobs.”²⁸ This implies that the more migrants we have, the better off we should be. For the argument to hold, each migrant would have to create sufficient extra demand to more than replace the job that they occupy. This might work for rich Germans retiring to Spain but

not for migrants who can spend only the wages they earn here. Not all their spending translates into local wages – some of it goes to rents, imports and corporate profits. If the wages share of GDP is 42%, we could estimate that one employee's spending might create 0.42 additional jobs, leaving a deficit of 0.58 jobs available to other job-seekers. If it were otherwise – if each additional employee did generate more new jobs than the one that they occupy – then unemployment would never exist. Could migrants be uniquely effective at creating jobs through their spending, compared with other workers? Given that, on average, they earn less than Australian-born workers and send more of their earnings overseas, this seems a nonsensical claim.

Some economists like to brand the argument that more migrants limit employment for locals as the “lump-of-labour fallacy” – the idea that there is only a fixed number of jobs. This is a straw man rebuttal; as explained above, the argument is not whether consumer demand from more migrants creates more jobs but whether it creates enough jobs to replace those occupied by the migrants. A far more pervasive and damaging fallacy prevails: the “job-seekers create jobs fallacy”. This is not only the fallacious assumption in the models of ageing and the workforce, but also in the “blame the victim” approach to eroding unemployment benefits and raising obligations on the unemployed. The COVID-19 response should make it abundantly clear that employment is limited to a greater extent by the demand for workers than by the supply of job-seekers.

However, there is a way that immigration can generate more jobs for locals. If each migrant worker causes sufficient extra debt to be raised, then more than one additional job might be created. The mortgages for additional housing, business investment in expansion, and government debts to create infrastructure, are spent into the economy. In fact, rising debt more than accounts for recent economic growth in Australia (Figure 7), but it is not a sustainable method of maintaining employment. Indeed, it has “Ponzi scheme” written all over it. Over time, more and more disposable income will be spent servicing debt, strangling consumer demand and employment opportunities. So far, we have minimised this effect by lowering interest rates (with negative consequences for retirement savings). How much lower can they go?

Figure 7. Australian GDP growth (and jobs growth) has been sustained by growth in debt



→ Australian GDP and total outstanding debt, in current dollars (not inflation-adjusted).²⁹

Despite the explosion of household debt³⁰ since immigration was elevated, there is still no sound evidence that higher immigration levels don't harm employment prospects for locals. Australia's exceptionally high immigration has not given us particularly strong employment statistics. For youth, they have been decidedly weak (see Figure 6). The Productivity Commission's report *Why Did Young People's Incomes Decline?* found that real incomes for young Australians aged between 15 and 34 have declined since 2008, with both wages and hours worked down. Those graduating since 2010 have, on average, taken lower ranking jobs than earlier graduates.³¹ Wage stagnation, and the divergence between wage growth and productivity growth, has been more pronounced in Australia than most developed countries despite high commodity prices buoying our economy.³² Across skilled and unskilled categories, trends in the Australian labour market suggest oversupply rather than shortage.

Across skilled and unskilled categories, trends in the Australian labour market suggest oversupply, rather than shortage.

One study, commissioned for the Productivity Commission's 2016 *Migrant intake into Australia* inquiry, claimed to show there was no adverse effect of immigration on employment of Australian-born workers.³³ The study has many problems, one being that migrants (especially temporary and recent migrants) were under-represented in the surveys from which data were drawn.³⁴ The study concludes: "Once we control for the impact of experience and education on labour market outcomes, we find almost no evidence that immigration harms the labour market outcomes of those born in Australia." The word "almost" skims over evidence of higher unemployment among low-skilled workers and lower wages for recent graduates.

A recent attempt to update this study more openly presents correlation as causation. Because migrants are more prevalent among graduates than among low-skilled workers (given that temporary migrants were mostly not included), and because graduates have higher wages and workforce participation but lower unemployment, the author implies that the migrants caused the higher wages and employment. This is like saying there are more bees on the plant with more nectar, so the bees must have made the nectar. The author concludes, "We find that immigration

has largely been a positive for incumbent workers with positive effects observed when considering a number of outcomes of local workers.”³⁵ In reality, her methodology did not allow such “effects” to be tested.

These analyses both depend on the assumption that people only ever work at their level of qualification, which is to say that graduates never compete for unskilled or low-skilled jobs. If this assumption is not true, then no conclusions can be drawn from their analyses.

The 2016 census suggests that this is very far from true for migrants from non-English-speaking backgrounds.³⁶ Economist Iain Campbell suggested Australia’s temporary skilled migration program is more accurately “a de facto low-skilled migration programme.”³⁷ It is also increasingly untrue for Australian graduates, not only due to elevated migration levels but also due to rapid increases in university enrolments.³⁸ The Productivity Commission’s above-mentioned report *Why Did Young People’s Incomes Decline?* documents the decline in quality of jobs that post-GFC graduates are finding, and their slower career progression.³⁹

This increasing tendency for graduates to end up in jobs below the level of their qualifications undermines arguments that skilled migrants fill areas of skill shortage, easing economic bottlenecks and thereby expanding opportunities for other workers. While this might have been true for some disciplines during the ramp-up of the mining investment boom, over the past decade skilled migrants have predominantly held skills that are oversupplied by domestic graduates.^{40, 41} The number of applicants per job has risen, and job vacancies are being filled very rapidly in Australia compared with other countries.⁴² Criticising a policy agenda intended to suppress wages, economist Richard Denniss commented, “It is only in recent years that the wage rises that accompany the normal functioning of the labour market have been rebranded as a ‘skills shortage’.”⁴³

People are retiring later, but is it a good thing?

Increasing the average age of retirement is a very effective means of adjusting the relative proportions of “working age” and “retirees”. A shift from age 65 to 70 increases the working-age proportion by around 5.5%, and decreases the proportion of retirees accordingly. But this does not necessarily require changing the law on age of pension entitlement. As people are living longer, and are healthier for their age than earlier generations, many choose to retire later.

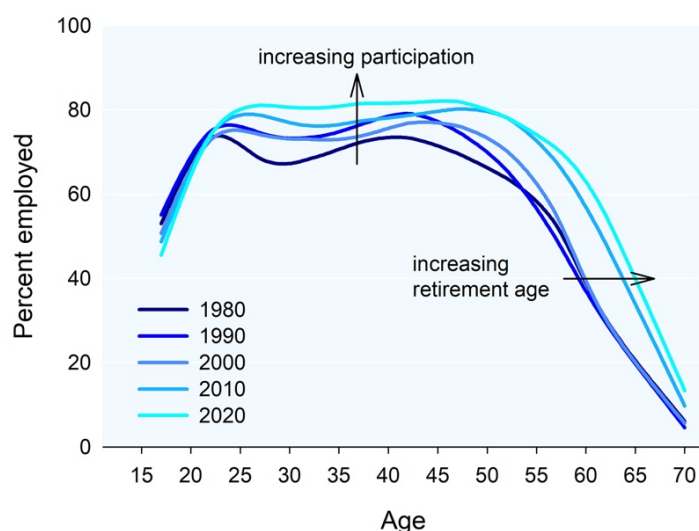
Mandatory increases in pension age can be regressive and arguably unjust.

Indeed, mandatory increases in pension age can be regressive and arguably unjust.⁴⁴ Longevity gains have not been enjoyed equally by all economic classes. For example, rich French men can expect 13 years more life than the poor.⁴⁵ Recent Australian data show that inequality in death rates are widening, with the poorest fifth of the population twice as likely as the richest to die by the age of 74.⁴⁶ Since poorer workers also have less capacity to save for retirement

and often perform more physical work that is difficult for older bodies to sustain, it hardly seems fair to punish them for the longevity enjoyed by rich people. Some economists argue instead for adjustments to the pension level, so that those retiring later receive a higher pension, to equalise the expected total payments over fewer remaining years of life expectancy.⁴⁷ Sweden already has such a “notionally defined contribution” (NDC) pension system, where people can draw a full pension from the age of 62 but a higher pension the longer they defer it.⁴⁸

Figure 8 shows that average retirement age in Australia increased by around five years between 2000 and 2020. In contrast, between 1980 and 2000, workforce participation of prime-aged workers steadily increased but retirement age did not.

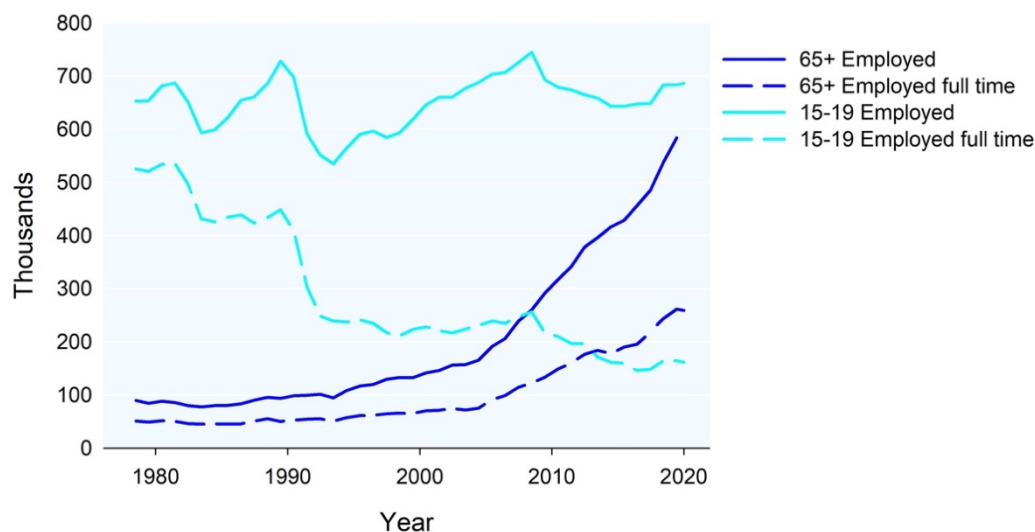
Figure 8. People are retiring later than in past decades



→ The shifting profile of age-specific employment participation over recent decades.⁴⁹

However, forcing people to delay retirement is of no advantage to the economy if it merely displaces others from the workforce. If job vacancies are scarce, it is better if those not in paid work are voluntarily retired and constructively engaged in society, than if they are disenfranchised youth. Delayed retirement has coincided with less employment of young workers (Figure 9). Underemployment has also risen most sharply in young workers – the 15-24 age group. The question arises: in the context where the labour market is already flooded with young job-seekers, are people who defer retirement making it harder for young people to enter the workforce? Are they contributing to wage stagnation by increasing competition for scarce jobs?

Figure 9. People aged over-65 are becoming a sizeable share of the workforce



→ Change in numbers of employees (total, and full time) in the age groups 15-19 and 65+.⁵⁰

Later retirement has been aided by relaxation of compulsory retirement-age rules in the public service and by the increasing availability of part-time work arrangements. However, in recent years it has also been motivated by deteriorating economic positions of older workers,

The rise in older employment is not limited by a lack of willingness, but by a lack of opportunity to work.

particularly those who do not own their home outright and are increasingly facing mortgage or rental stress due to escalating housing unaffordability.⁵¹ Some of the deferral between 2000 and 2010 was in response to the Global Financial Crisis reducing retirement nest-eggs. Since then, the decline in interest rates continues to make it harder to save enough to provide retirement income. As economist Greg Jericho points out, this

leads to a vicious cycle, where lower interest causes retirement deferral, contributing to keeping unemployment up and wages down, triggering further rates cuts.⁵² Industry Super Australia recently found that, over the past decade, the average super balance of people nearing retirement has risen 140 per cent to \$263,700, but the average mortgage debt carried by people nearing retirement had grown five times to \$352,100.⁵³ Only 28% of people in their first year of retirement considered themselves financially comfortable, compared with 48% a decade earlier. Rising workforce participation is generally seen as an indicator of economic strength but in this case it could be a symptom of economic weakness.

The pension entitlement age is being ramped up from 65 to 67, by six month increments every two years between July 2017 and July 2023. It is too early to tell how much impact this is having on actual workforce participation of over-65s. We do know that unemployment and underemployment of older workers is increasing.⁵⁴ This suggests that the rise in older employment is not limited by a lack of willingness, but by a lack of opportunity, to work. But if “willingness” actually means “duress”, this is nothing to celebrate.

We should not limit our evaluation of older citizens’ contributions to the community by only including paid work. In addition to those in paid work, 13% of people over 65 are carers who report that caring for a family member was the main reason for leaving the workforce when they did.⁵⁵ Unpaid care work has been estimated at 1.9 billion hours per year, valued at over \$60 billion.⁵⁶ Retirees also contribute to society in many ways through volunteer work and childcare. They are the mainstay of many community organisations.

The COVID-19 pandemic has revealed starkly that the very services needed to support elderly and vulnerable people, such as Red Cross, Meals on Wheels, Foodbank and UnitingCare, have relied heavily on volunteers aged over 70 whose self-isolation presented a challenge for those services.⁵⁷ Retirees are also an important group of consumers and investors, lubricating the economy. Without their patronage of the arts and local tourism, there would be fewer of these diversions available for working-age people to enjoy. The economic and social contributions of retirees need to be deducted from any supposition of their economic burden.

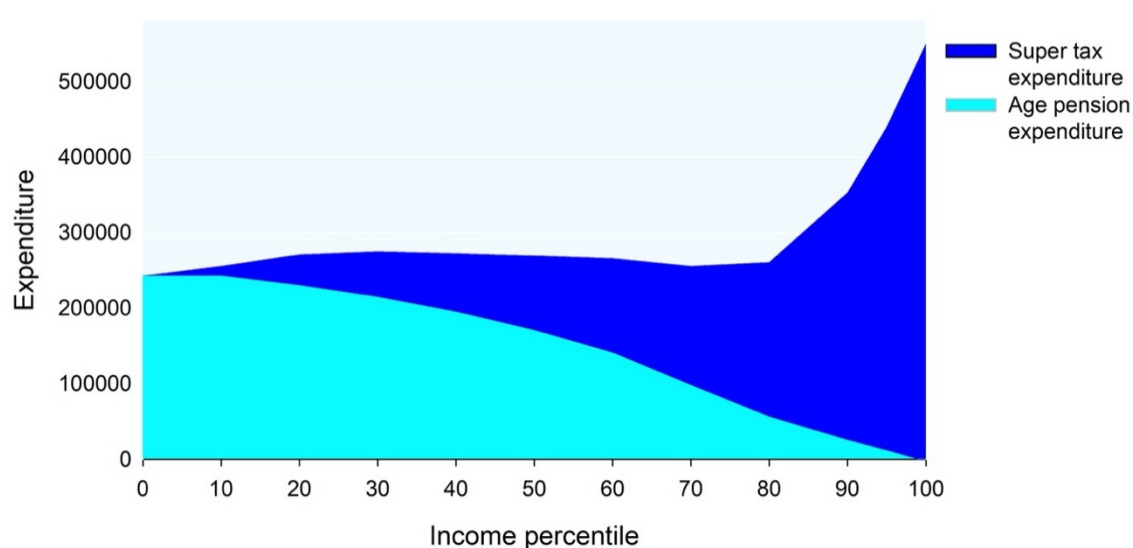
4. Ageing-related expenditure

Is our retirement income system efficient?

Australia's retirement income system comprises the public old-age pension and superannuation (super), as well as private assets including investments outside of super, and property including the family home. The introduction of compulsory super from 1992 was intended to reduce dependence on public pensions. Indeed, the proportion of people over 65 on public pensions declined from around 75% to 65% in the decade to 2015⁵⁸ due to the combination of deferred retirement and increased superannuation.

However, owing to the generosity of tax concessions on super contributions and earnings, the super system is costing the government around as much as pensions. While the expenditure on pensions is weighted toward people with low incomes and low wealth, the super tax concessions go predominantly to the richest (Figure 10).

Figure 10. Superannuation tax concessions are welfare for the richest



→ Distribution of government support for retirement income, by household income percentile (males, 2012). The vertical axis shows total dollars support per person over the retirement period. From Ingles (2015), figure 3.⁵⁹

This expenditure (i.e. the amount of tax foregone due to concessions) is projected to grow rapidly, to \$52 billion in 2022-23, as an increasing share of super earnings are in the untaxed pension phase. Between 2014-15 and 2022-23, super tax concessions are growing at 7.8% per year, more than twice the rate of the old-age pension bill.⁶⁰ This very expensive method of saving-promotion also adds to anxiety about retirement, with the uncertainty inherent in investment earnings.

While these tax concessions might have been politically necessary to counter what amounted to a reduction in take-home pay (deferred pay rises) when super was introduced, they are undermining the main purpose of super, which was to save the government money by shifting people from public pensions to self-funded retirement. As economist Cameron Murray argues, government revenue and the entire economy have also paid a penalty by compulsory super lowering take-home pay, and hence consumer spending.⁶¹ The Australia Institute's David Ingles says, "since private superannuation is heavily supported by the state through generous tax concessions, the Government cannot be said to have a consistently residualist [i.e. safety-net] approach to retirement income policy. Rather it has an ideological attachment to self-provision despite a lot of evidence that state provision works better in the retirement income arena."⁶²

Having a means-tested pension discourages low-wage workers from staying in the workforce. The more workers save in the lead-up to retirement, the less pension they receive. New Zealand has a universal old-age pension, and has less old-age poverty and higher workforce participation of people over pension-age than Australia.⁶³ Australia has among the highest levels of old-age poverty in the OECD⁶⁴ and this is escalating due to housing costs.⁶⁵ Figure 10 shows that, if super tax concessions were to be concurrently wound back, a universal pension need not cost more.

Wage suppression lowers superannuation savings and represents a time-bomb for the pension bill.

The rising proportion of retired people is not the only challenge to the retirement income system. Australia's current pension system is designed to provide adequate income for retirees who own their own home and are debt-free. As this becomes no longer the norm, a rent supplement will need to be added to the pension, or large investments made in public housing, to avoid escalating homelessness.

The Australia Institute has demonstrated that wage suppression lowers superannuation savings and represents a time-bomb for the pension bill.⁶⁶ In addition, the rise of part-time and insecure work, with greater frequency and duration of unemployment, combined with greatly elevated housing costs, all compound to mean that young adults today are likely to find it more difficult to save for their retirement than their parents' generation did. Even before the pandemic, household debt, underemployment and average duration of unemployment had reached all-time highs, while hours worked per employee and wages share of GDP were at all-time lows.⁶⁷ This is in sharp contrast to other OECD countries, despite Australia enjoying strong export commodity prices. What distinguishes Australia from most in the OECD is our high rate of population growth, which is undermining employment and housing affordability.

Ironically, it might also be undermining our retirement income system. The Australian government has sought to reduce the future pension burden by both introducing superannuation and by escalating population growth. Both measures seem destined to be counterproductive in the longer term. Home ownership among younger cohorts is declining rapidly and they are likely to retire either as renters or still heavily mortgaged.⁶⁸ The underemployed, over-mortgaged generation is likely to reverse the trend of recent decades, back toward increasing pension dependence.

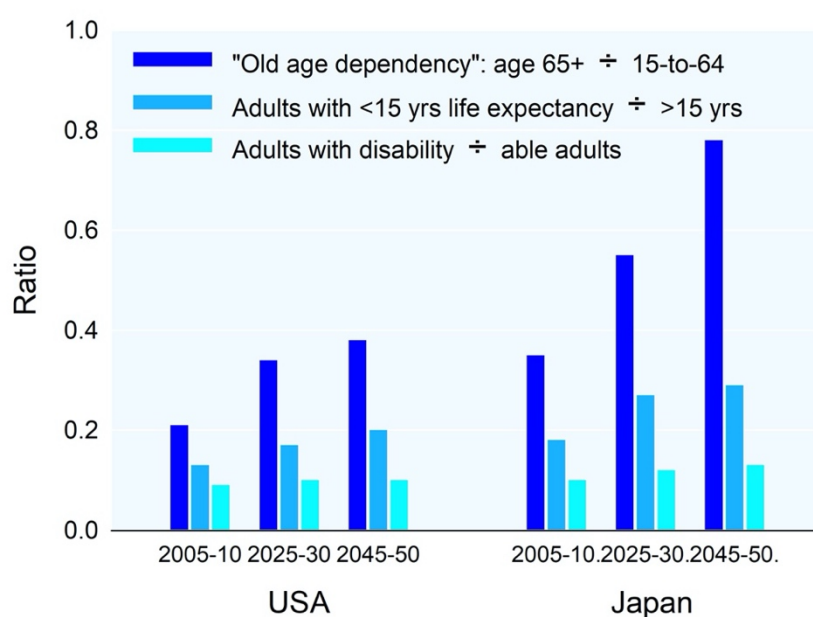
With or without population growth, there will be increasing numbers of retirees. It is not entirely clear whether there would be greater welfare expenditure in an older, low-growth scenario than a younger high-growth scenario, once income support for working-age people and housing assistance for retirees are factored in. But there is no doubt that the low-growth option maximises wellbeing, with more employment, savings and tax contributions across the life course, not to mention lower housing costs, better infrastructure provision, a healthier environment and relief from congestion.

Caring for the frail elderly

Apart from ill-founded concerns about a shrinking workforce, concerns are often voiced about rising expenditure on aged care and health care. There is now a considerable body of academic literature demonstrating that these costs do not rise in proportion with the numbers over 65.⁶⁹ As life expectancy has risen, for most people the extra years are healthy years, while the proportion of life with disability has shrunk. This is referred to as “compression of morbidity.”⁷⁰

Leading ageing researchers Warren Sanderson and Sergei Scherbov argue that ageing should be measured in “prospective age” (the number of years of life expectancy remaining) rather than “chronological age” (years already lived).⁷¹ Due to increasing lifespans, Europe has grown older in terms of its median (chronological) age, but younger in terms of prospective age. This might be a “glass-half-full” versus “glass-half-empty” argument, but it does have bearing on public costs. In Figure 11, their data demonstrate that the proportion of people nearing the end of their lives (a primary determinant of health-care needs⁷²) increases to a much smaller extent than the traditionally quoted “dependency ratio”. In contrast, the proportion of adults with severe or profound disability (indicative of the need for aged-care services) barely rises as ageing progresses.⁷³

Figure 11. The challenge of ageing looks different depending on how we measure it



→ Alternative measures of ageing, contrasting the “old age dependency ratio” (the ratio of number of people aged 65 and over to those aged 15 to 64) with the ratio of people with fewer than 15 years of life expectancy to younger adults, and the ratio of disabled to able-bodied adults. Data from Sanderson and Scherbov (2010).⁷⁴

According to the Australian Institute of Health and Welfare, between 2003 and 2015, years of life lived without disability increased by 3.9 years for Australian males (to 63.0 years), and by 3 years for females (to 65.2 years). This is a more rapid gain than longevity, meaning that the average period with disability had contracted.⁷⁵ Similar gains have been recorded elsewhere, including USA⁷⁶ and Germany⁷⁷, but there are suggestions that these gains could be reversed as the new generations entering old age bring elevated incidence of obesity and diabetes.^{78, 79}

The rise in proportion of older citizens accounts for only a small fraction of the rise in health costs.

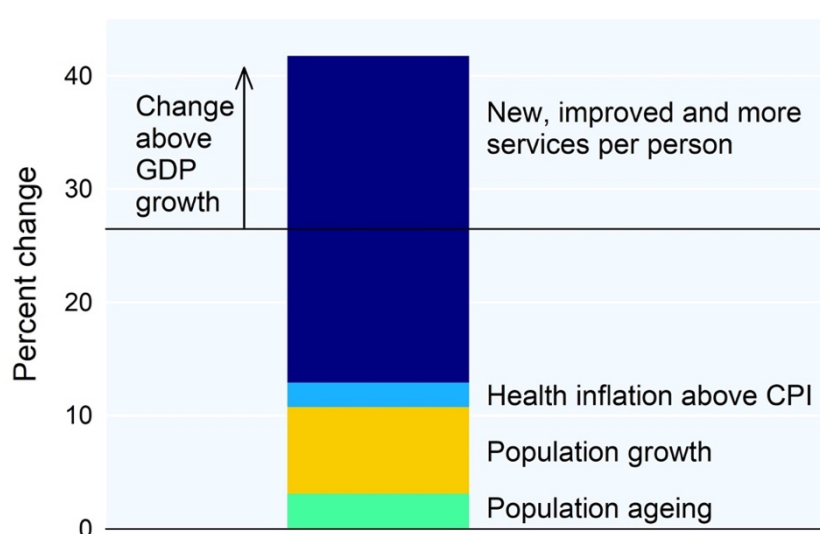
Despite increase in the share of people who are over 80, the proportion of older citizens in residential care has remained steady, around 5% of the over-65 population.⁸⁰ The average age of entry into residential care has risen in parallel with longevity. Hence, despite increased longevity there is no increase in the average time spent in care, which remains around two years.⁸¹ Age of dementia onset (the dominant reason for residential care) has also risen.⁸² Only one in three

disabled elderly had severe or profound core activity limitation requiring daily help. The majority of disability care is provided by family members in the home, and many of those carers are also people over the age of 65.⁸³ Together, these trends show that old-age care expenditure will not increase in direct proportion to the over-65 age group. It will increase, but to a smaller extent.

Ageing is a small contributor to rising health costs

Population growth and increasing provision of health services per capita have increased Australia's health spending sharply. While older citizens incur health expenses more frequently than others, the rise in the proportion of older citizens accounts for only a small fraction of the rise in health costs (Figure 12). The major increase in costs is due to new, improved and more services per person.

Figure 12. Ageing is a small contributor to the increase in health expenditure



→ Changes in the Australian governments' health expenditure (\$ billions), 2002-03 to 2012-13.
Source: Grattan Institute (2013).⁸⁴

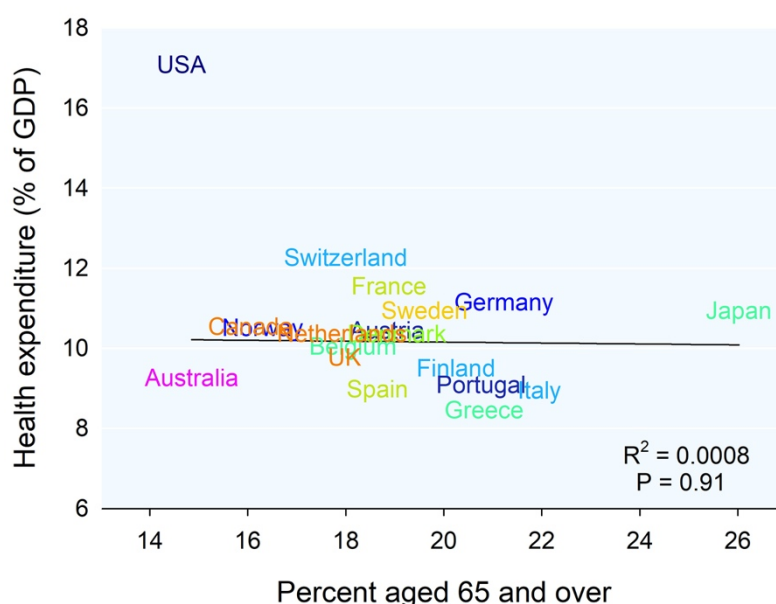
The costs in Figure 12 are only the on-going costs: for Medicare items; drug subsidies under the Pharmaceutical Benefits Scheme; and hospital services. In addition, we need to take into account the up-front cost of building hospitals. This is not insignificant. Recent new builds have cost from \$2.5 million to \$4.4 million per bed. To maintain our current provision of four beds per 1,000 people, which is already below the OECD average,⁸⁵ we must spend around \$11,000 for each person added to the population, just on building new hospitals. In contrast to population growth, demographic ageing does not create a proportionate increase in demand since older people are getting healthier over time, with high-care needs deferred as longevity increases.

By far the biggest contribution to increased health expenditure is more servicing per person, with more spending on drugs, diagnostics and therapies. To the extent that these rising costs deliver better health and longer lives, while generating good quality local jobs, society might see this as a positive development. However, to the extent that cost increases are due to inefficiencies and over-servicing by an increasingly for-profit health delivery system, and the increasing power of drug companies over the price of medicines, there are policy options which might contain or reverse cost trends. For instance, compared with Australia's Pharmaceuticals Benefits Scheme, which has become progressively more beholden to drug companies, New Zealand's Pharmaceutical Management Agency (PHARMAC) negotiates lower costs for drugs and achieves similar health outcomes for half the per capita expenditure on drugs.⁸⁶

International comparisons show no correlation between the extent of ageing and the amount each country spends on health.

International comparisons show no correlation between the extent of ageing and the amount each country spends on health. Figure 13 includes Western and Northern European countries, along with other members of the G12 – all countries with high standards of health care. USA was omitted from the regression, as it is an outlier, spending far more than other countries on health, despite relatively low proportions of older citizens, and mediocre health outcomes. Clearly the policy choices about structure of the health system have more bearing on costs and outcomes than demographic ageing.

Figure 13. Health expenditure in rich countries is unrelated to extent of ageing



→ Health expenditure as percentage of GDP in G12 and other comparably rich countries. Data from World Bank.⁸⁷

The cure is worse than the purported disease

Exaggerated figures for the cost of ageing are used as the main justification for maintaining high population growth. In the 2019 Federal budget, the Parliamentary Budget Office (PBO) estimated that, over the next decade to 2028-29, demographic ageing would subtract 0.4 % from real annual growth in tax revenue and add 0.3 % to real annual growth in spending. In all, this would cost the budget “around \$36 billion by 2028-29.”⁸⁸ However, the drop in tax receipts assumed that the workforce would shrink in line with the “working-age” proportion, which we have seen is a false assumption.

Missing entirely from these estimates are the costs associated with population growth. Public infrastructure has been estimated to cost more than \$100,000 for each extra person added to the population,⁸⁹ meaning at least \$40 billion per year, or \$400 billion over the decade to 2028-29. Only a fraction of these costs fall on the Federal government, but it is deceptive of Federal budgets to disregard costs which ultimately must be funded by increased revenue-raising by State governments, disbursement of more Federal tax revenue to the States or increased household costs for rates, utilities, tolls and co-payments for government services (hidden taxes).⁹⁰

As population growth increases, as we saw in Figure 3C, the extra infrastructure and education costs outweigh any diminution of pensions, aged care or health care, even if we assume today’s age-specific costs apply to tomorrow’s healthier retirees. In reality we can expect infrastructure to get more costly in bigger, denser cities, while innovations in aged care and a more efficient retirement income system could reduce costs of ageing. As we have seen, housing inflation is leading to more retirees without home ownership, and a rent supplement must ultimately be added to the pension bill if escalating old-age poverty is to be avoided. Ending population growth could end or reverse this trend.

It is also likely that population growth is eroding per capita income tax receipts. A rise in proportions of part-time work and low-paid work means less tax is collected for the same hours of work. Taxable incomes are spread over more tax-free thresholds and low tax brackets. The shift in share of GDP from wages to corporate profits also allows more of this economic activity to avoid taxation. If ageing were occurring without population growth, the tightening labour market and increased workforce participation would be likely to increase lifetime tax raised per worker.

There are also many non-monetary costs of population growth, from loss of lifestyle choices to environmental degradation, increased global warming and the impact of associated disasters such as bushfires and floods, increased vulnerability to pandemics and epidemics, and increasing vulnerability to global supply shocks.

Australia’s current high level of population growth is entirely at the discretion of the Federal government. Changing policies on immigration and pronatalism toward achieving a stationary population could quickly ease congestion and improve State government finances, although it would take some time for infrastructure to catch up with our recent growth.

5. Reframing ageing

Progress and intergenerational fairness

How well we support the old, the young, the disabled and the disadvantaged is an important measure of societal success which is arguably a better indicator of success than GDP growth.

As we move through the demographic transition, the “dependent” population moves from being mostly children to being mostly retirees. Consequently, rising costs associated with old-age care are at least partly off-set by reduced expenditure on children. However, a greater share of the financial burden falls to government rather than private costs within families. This, of itself, should not be a cause for concern. The whole of society is not carrying a greater burden of dependence, just paying for it differently.

It could be that the optimum level of taxation is slightly higher in a mature society than in a youthful one. The modern, neoliberal obsession with lower taxation being a sign of successful governance has no basis in evidence. We seek greater happiness through becoming both richer and lower-taxed but, as economist Richard Denniss has pointed out, most countries that are richer than Australia pay higher tax, while the only ones that are both richer and lower-taxed are tax-havens and petro-states. None of these report greater happiness than Australia.⁹¹

But intergenerational equity extends beyond caring for our elderly. There can be no more important priority for a society than to ensure that the nation’s youth are enabled to transition successfully to stable, productive careers. Socially, this is the bedrock of lifetime wellbeing. Economically, it is the key to high employment, productivity, savings and well-funded retirement. Yet neoliberal policies throughout the Anglophone world in the last 30 years have undermined the prospects for youth. Flooding labour markets with economic migrants has been one contribution. In addition, shifting higher education to a user-pays system has undermined meritocracy, stifled social mobility and removed the quotas on government-funded places, which linked training places offered with career opportunities. This has left many graduates carrying large debts but unable to find work that utilises their qualifications. The Productivity Commission found that graduate underemployment had more than doubled between 2008 and 2016, noting “some evidence that graduate starting salaries have not increased as fast as wages elsewhere in the economy [reflecting] a more general widening of the relative wage gap between younger and older full-time employees.”⁹²

When each generation’s prosperity depends on impoverishing the next, this is the antithesis of progress.

The Actuaries Institute has documented a widening gap between the wealth and wellbeing of older and younger Australians, with young people losing ground in economic, housing and

environmental domains.⁹³ It looks like Millennials will be the first Australian generation to be worse off than its parents. Rapid population growth has contributed to the rising cost of housing, with each generation carrying a greater mortgage debt relative to incomes. Of course, more borrowing pushes up GDP, and the super funds of older people benefit from greater corporate profits. But if our economic metrics say this is success, then we have the wrong metrics. When each generation's prosperity depends on impoverishing the next, this is the antithesis of progress.

Future generations have no political voice. Their interests are not served by accelerated depletion of non-renewable resources, and the growth of cities in which life is increasingly dependent on fragile globalised supply lines for food and energy. They are not served by the blind pursuit of growth for its own sake, when this growth is exacerbating climate change, species loss and other environmental crises.

Treasury's Intergenerational Reports

The Federal government produces periodic Intergenerational Reports, to discuss long-term issues relating to demographic change. Unfortunately these reports take a narrow perspective, focusing on fiscal consequences of ageing. Even within that brief, ideological myopia leads to a selective and misleading presentation of possible futures.

The Intergenerational Reports were first introduced in 2002, to open a national conversation about ageing and to justify the Howard government's policies to boost births and immigration. The central thesis is that our economy depends on the three "P"s: population, participation, and productivity. Of these, the lever most accessible to Federal policy is population.

Immediately we face a problem with this thesis, because it focuses on aggregate GDP, which is not a measure of our wealth or wellbeing. Wealth is measured in per capita terms – there is no point increasing the size of the pie if each person's slice is no bigger.⁹⁴ For instance, India's GDP is more than double Australia's, but this does not make Indians richer – their income per person is less than a twentieth of Australia's. Hence population growth can only improve wealth if it increases participation or productivity. And it will only improve wellbeing if productivity gains translate into higher real wages, particularly for the low-paid. But as we have seen above, crowding the labour market lowers productivity, participation and wages.⁹⁵

The Productivity Commission, in its landmark study *Migrant intake into Australia* (2016), also argues (along with many other economists⁹⁶) that population growth lowers productivity, due to the lag in creating enough capital assets to expand employment opportunities and avoid congestion of infrastructure.⁹⁷ While the Productivity Commission models did conclude that GDP per capita would be slightly higher with high population growth and a consequently smaller proportion of retirees, this was due to the flawed assumption (as shown earlier in this paper) that the workforce would shrink in lock-step with the "working-age" proportion. It also noted that migrant employment outcomes would need to improve greatly to match Australian-born levels, in order for the modelled outcomes to be realised. In any case, the report concluded that average workers would be worse off, due to lower wages under high population growth. Other qualifiers included that "Technological solutions [to environmental pressures of higher population] come with higher costs"; "There are also impacts on the price of land and housing ..."; and "GDP per person is a weak measure of the overall wellbeing".

The Intergenerational Reports have lacked this level of nuance. Missing entirely is any evaluation of the cost of providing infrastructure for the added population, which is likely to outweigh any fiscal benefit from reducing ageing, as we saw in Figure 3C above. The fourth Intergenerational Report (2015) even makes the extraordinary claim that infrastructure spending is independent of

demography: "Other areas of spending – such as defence, official development assistance and infrastructure – are not linked explicitly to demographic factors."⁹⁸

These reports also fail to consider the value of natural resources to the Australian economy. Australia's consumption of imported goods depends largely on commodity exports – the products of natural (agricultural and mineral) assets which don't expand with the population. Merely stating that a bigger population offers the opportunity to diversify our economy does not make us internationally competitive in manufacturing or service industries. Indeed, our increasingly expensive real estate and over-congested infrastructure continue to undermine our competitiveness. According to the Harvard Atlas of Economic Complexity, Australia's economic diversity has diminished dramatically throughout the recent period of elevated population growth, becoming increasingly dependent on minerals and agriculture.⁹⁹

A much broader and more nuanced policy discussion is needed about intergenerational equity than has been offered to date in the Federal government's narrowly focused Intergenerational Reports.

Merchants of myth: the creation of the ageing population panic

The analyses presented in this paper paint a very different picture of demographic ageing than the dire prognoses we find in the media almost daily. Those articles are high on emotion and low on evidence.

ANU demographer Liz Allen was recently quoted as saying, "We have an ageing population with more people retiring from the workforce than people entering the workforce. That means we have fewer people contributing to our tax base, which pays for our vital services: our roads, our infrastructure, our hospitals, our schools – everything."¹⁰⁰

Why would a demographer make such a demonstrably false statement? Quite apart from the ever-present assumption that the "working-age population" equates with workforce and taxes, which we have demonstrated to be incorrect (see Figure 4), youth cohorts continue to outnumber those retiring. In 2020, some 260,000 Australians will turn 65, while some 285,000 turn 18. In addition, the "baby bonus" kids (an extra 50,000 per year) will start entering the workforce over the next few years. **And the recent increase in average retirement age, of about one year every four years, results in only three-quarters of the retirements we would otherwise have had.**

Allen continues, "Our migrant intake will help fill the gaps." There is no attempt to quantify the "gaps" to be filled. Recent migration levels, at around one migrant for each Australian school leaver, is surely overkill. But Allen suggests that anyone who questions the numbers is attempting to "greenwash racism."¹⁰¹

These tropes, that ageing causes economic malaise, that high migrant intakes are invariably good for us, and any other views have questionable motives, have become almost universal in Australian media and political discourse. But it was not always so. The shift can be traced to a campaign ramped up in the late 1990s by a number of leading businessmen and property developers, to reverse the Howard government's restraint on immigration levels and advance a goal of much greater population growth. This escalation of activity into a concerted growth lobby is detailed in a 2006 study by social scientists Katharine Betts and Michael Gilding.¹⁰² It is not coincidental that the property industry rivals mining as the greatest source of political donations and lobbying activity.¹⁰³

The growth lobby sought to enthuse government about the prospects for greater growth, to present population growth as necessary to counter ageing, and to dissipate public resistance through a combination of catastrophising ageing and presenting “multiculturalism” as the only alternative to racism. The lobby fostered the myth that any reduction in immigration would reverse Australia’s ethnic diversity while insinuating that this is always the underlying intent of such calls for reduction. A deliberate confusion between refugees and general immigration was also used to appeal to both immigration advocates and the concerned public. For instance, in a 2014 radio interview, former prime minister John Howard said that one of the main reasons for his government’s tough stance on asylum seekers was that “the more people think our borders are being controlled, the more supportive they are in the long term of high levels of immigration.”¹⁰⁴

By catastrophising ageing the growth lobby sought to enthuse government about the prospects for greater growth

While much of the discourse has been conducted on an emotive level – presenting the debate as a binary choice between “pro-immigration” as the moral high ground and “anti-immigration” as locking the doors in xenophobic paranoia – an underpinning of expert analysis and recommendation was needed to legitimise the goal. With such deep pockets behind the growth message and having achieved considerable political

buy-in (evidenced by Treasury’s Intergenerational Reports), it has evidently been better for academic careers to support growth. Meanwhile, academics publishing work that challenges the viability of endless rapid growth have often endured pushback.

After initially building their constituency quietly, in 1999 the growth lobby launched the Australian Population Institute (APop) as an arms-length vehicle for growth-promotion events and media.¹⁰⁵ The Business Council of Australia (BCA) then commissioned the Australian Academy of Technological Sciences and Engineering (ATSE) to produce the report “Future Population” (2000) to dismiss environmental constraints to elevated population growth.¹⁰⁶ The report was outsourced to urban planning consultants. Its dismissal of environmental constraints was roundly criticised by environmental scientists for its failure to review and reflect the substantial scientific literature on this subject.¹⁰⁷

A bigger commission to ATSE followed, to report on “The Technological Implications of an Australian Population of 30 million by 2050” (the 30/50 Report, 2007), intended to significantly raise the benchmark of expected and desired population growth in Australia.¹⁰⁸ The report was “underpinned by a hypothesis that a larger population is needed to support sustained economic growth in a rapidly ageing Australian society.”¹⁰⁹

The 30/50 report was commissioned by the Scanlon Foundation, backed by entrepreneur and property developer Peter Scanlon, with a mission “to support the creation of a larger cohesive Australian society”.¹¹⁰ Preparatory to the ATSE 30/50 report, Scanlon commissioned the Australian Institute for Demographic Research (AIDR) at the Australian National University (ANU) under demographer Peter McDonald, to prepare a projection achieving 30 million Australians by 2050.¹¹¹

Prior to involvement with the Scanlon Foundation, Professor McDonald had been agnostic on population growth. In a 1997 review of the book “People Policy: Australia’s Population Choices” by CSIRO economist Douglas Cocks, McDonald and co-author Anthony Hayes suggested that net migration of 50,000 per year, with the aim of population stabilisation under 25 million, was emerging as a “consensus”, noting the 1995 Australian Academy of Science report “Population 2040: Australia’s Choice” and the 1994 House of Representatives’ committee of inquiry into

Australia's population "carrying capacity" (the Jones inquiry) both align with Cocks' conclusion.¹¹² In 1998, McDonald and co-author Rebecca Kippen noted that, whatever the size of the population when it finally, and inevitably, stopped growing, it would have little effect on the age structure, concluding, "variation in the size of any future population will be a much more important policy consideration than variation in its age structure."¹¹³ This conclusion contrasts with McDonald's more recent contributions, in which ageing is paramount, working-age proportion determines workforce, and population size is assumed barely relevant to policy setting.^{114, 115}

What of the researchers who have addressed the question of Australia's ecological carrying capacity or optimum population? A major study by CSIRO Sustainable Ecosystems, commissioned by the Department of Immigration, Multiculturalism and Indigenous Affairs (DIMIA), constructed a world-leading model of the physical economy – the Australian Stocks and Flows Framework (ASFF) – informed by experts across many disciplines through a series of sectoral workshops. The report examined the effects of three population scenarios, "determined by net immigration rates of (i) zero persons per year, (ii) 70,000 persons per year, and (iii) two thirds of one percent (0.67%) of the current population size each year" (generating populations in 2050 of 20, 25 and 32 million respectively). Its report, "Future Dilemmas: Options to 2050 for Australia's Population, Technology, Resources and Environment,"¹¹⁶ was published in 2002. This was not before protracted negotiations with DIMIA, however, leading to accommodations in the final text, to remove any indication that the researchers might see the high population scenario as more problematic than the low (lest CSIRO be accused of "getting too close to the policy process"¹¹⁷). This allowed the report to be interpreted by the pro-growth lobby as endorsing a population above 30 million by 2050¹¹⁸ when this was not the view of the authors.¹¹⁹

The CSIRO report was cited by the ATSE as demonstrating that their 30/50 scenario would not be limited by resources. To demonstrate how dramatically this shifted policy thinking, Cocks commented in 2003 that "the high-population scenario [in "Future Dilemmas"] could never be politically feasible and should not have been used."¹²⁰ The immigration settings in that scenario were exceeded within three years. Now ABS projections anticipate not 32 million but close to 40 million Australians by 2050.

With demographic circumstances so dramatically changed by 2008, the Department of Immigration and Citizenship (DIAC) commissioned a further study from CSIRO Sustainable Ecosystems together with National Institute of Labour Studies and Flinders University School of the Environment. The report, "Research into the Long-term Physical Implications of Net Overseas Migration" concluded that "higher levels of NOM impose greater adverse impacts on the quality of our natural and built environments, other things being equal," notably impacting urban water supply, energy security, greenhouse gases and urban encroachment on agricultural land, as well as greater lifestyle constraints needed to contain foreign debt.¹²¹ The report was delivered in 2010 but withheld by DIAC, who added a cover-letter disclaiming that the ASFF model "is highly contested by experts ... [and] should be interpreted with caution," before finally publishing it without a media release on Christmas Eve (a well-known tactic to minimise media attention). The report has since been removed from the department (now Home Affairs) website.

DIAC simultaneously commissioned a companion study, from demographers Peter McDonald and Jeromey Temple (2010), on the effects of immigration levels on labour supply and GDP growth.¹²² This study had a much narrower focus, asking "How effective can migration be in ameliorating population ageing in Australia and what would be the ensuing impact on the rate of growth of per capita gross domestic product?" As usual, the positive effect of immigration depended entirely on making labour force participation of each age group constant in all scenarios, i.e. an inelastic labour market and, consequently, a workforce proportional to the

“working-age” population. The introduction noted that, “increases in the population of working age through immigration can have detrimental effects deriving from rapid population increase. If planning and provision lag behind population growth, rapid increases in population will lead to increased housing shortages, urban congestion, strains on the provision of water and energy and environmental degradation. Even if planning for future population growth is well done, there may come a point at which the improvements to age structure brought about by immigration are no longer worth the effort that is involved in managing the consequent population growth.” (p. 7) Nevertheless, the authors failed to raise this caveat in the conclusions which confidently recommended immigration rates that ensure multiple doublings of Australia’s population.

McDonald and Temple (2010) emphasised that higher levels of immigration yield diminishing returns, using this as their rationale for choosing an upper boundary for desirable immigration, and set a lower boundary based on the false assertion that low immigration levels delay the emergence of a stable age structure. Hence they arrive at a goldilocks level in the range of 160,000 to 210,000 NOM per year – suggesting an ideal of 180,000, conveniently matching Treasury’s 2010 Intergenerational Report.¹²³ The data in the study did not justify such a conclusion on objective grounds (see endnote for explanation).¹²⁴ Nevertheless, this paper is still available on the Department of Home Affairs website, and has been repeatedly cited as justifying Australia’s permanent migration quota¹²⁵ – including recently in the Prime Minister’s dismissal of calls to reduce immigration once the COVID-19 lock-down is over.¹²⁶

Surveys consistently report majority preference against further growth in Australia’s population.

Beyond the claimed necessity of combatting ageing, the growth lobby sought to build a popular constituency of support for high immigration as signalling a denunciation of racism. In the name of “social cohesion”, the Scanlon Foundation has supported various institutions including the Australian Multicultural Foundation and Monash University’s Institute for Global Movements. In 2012

Mr Scanlon headed the newly formed Migration Council of Australia (whose CEO we have already quoted making outlandish claims about population ageing). Since 2006, the Monash unit has been supported to run a Social Cohesion project, including a professorial position long held by Andrew Markus. The initial funding of \$600,000 was hailed as “one of the biggest private sector donations for social sciences” by Professor John Nieuwenhuysen, then director of both the Australian Multicultural Foundation and the Institute for Global Movements.¹²⁷ The project has run a large annual survey of the Australian public’s attitudes to multiculturalism which invariably reports strong public support for migration.¹²⁸ Other surveys, which do not confuse the issue of population numbers with that of multiculturalism, consistently report majority preference against further growth in Australia’s population.¹²⁹

These and other efforts have cultivated a sentiment that low immigration is anti-immigrant. Yet immigrants are clearly better off if they are entering a labour market that is not overcrowded, and are encountering a community that is not disgruntled by eroding employment prospects, housing affordability, environmental quality and public amenity. None of these impacts on the Australian-born community are the fault of immigrants. They are the fault of an immigration program acting for the benefit of deep-pocketed developers, employers and retailers. The numbers debate does not reflect at all on ethnic identity. At any scale, the immigration program can be non-discriminatory. That the issues of migrant numbers and ethnic diversity are so confused is a victory for the growth lobby’s ability to market myths.

The combination of catastrophising ageing and conflating migration numbers with multiculturalism, treatment of refugees, racism and xenophobia, has successfully made

reasoned public discussion almost impossible. In May 2020, Labor Shadow Minister for Home Affairs, Kristina Keneally, raised a media storm by suggesting that Australia might be wise to limit temporary migration after the COVID-19 lock down, to avoid restoring exploitative work practices and to “make sure that Australians get a fair go and a first go at jobs.”¹³⁰ Critics responded that it is “oxymoronical” to praise multiculturalism while expressing a view to reduce immigration numbers¹³¹ and that it is inappropriate “for an immigrant like Kristina Keneally to lecture Australians about the need to restrict immigration”¹³² (deplorably implying that an immigrant can never become Australian, and should not voice political views, never mind that she is an elected parliamentarian and immigration is in her designated portfolio). Strident calls came that “Aussies-first rhetoric must stop” as they constituted “tones of dog whistling.”¹³³ (“Aussies-first” has always been an explicit principle of Australia’s economic migration program, if barely applied in practice.¹³⁴)

These responses characterise the double bind of the Australian population debate, which on one hand demands that numbers be discussed separately from ethnicity, and on the other hand ensures that any attempt to do so is called out for “dog-whistling xenophobia” or “greenwashing racism”. This manifests itself in the near-silence of the environmental movement on the subject of population numbers, which were a central environmental concern before accusations of racism suppressed the expression of this concern. American left-wing commentator Angela Nagle labelled such accusers the “useful idiots of big business”.¹³⁵

With the right-wing press being a willing megaphone for the property industry, the left-wing media in a state of hypervigilance against racism, and a tri-partisan political commitment to “Big Australia” based on ageing myths, all working to lock in extraordinarily high immigration levels by both historical and international standards, the growth lobby has achieved a policy coup. For the policy debate to be restored to a rational footing, the role of vested interests needs to be acknowledged.

The COVID-19 pandemic provides an excellent opportunity to rethink both immigration settings and aged care systems. This discussion paper has offered a careful untangling of the myths and misconceptions that continue to be recycled, so that Australians can look afresh at the ageing issue – less from a perspective of panic than one of potential.

6. Conclusion: Silver tsunami or silver lining?

Demographic ageing represents the final stage of the inevitable demographic transition, a process on which our modern quality of life depends. It is therefore to be celebrated rather than feared.

We have found no credible evidence that ageing will constrain Australia's workforce, productivity or GDP. While aged care and health care will likely increase as a share of national spending, the rise will be much smaller than the rise in number of retirees because older cohorts are getting healthier and better services are extending their independence. There are many options for offsetting increased pension costs, including lowering excessive superannuation tax concessions. Most European countries proudly provide universal old-age pensions at a more generous level than Australia, despite having higher proportions of retirees.

If Australia's population were allowed to stop growing, or even enter a slow decline, then the savings in infrastructure spending would more than compensate for the small increase in ageing-related costs that this would entail. In addition, tax contributions per adult would increase due to higher wages and workforce participation. In contrast to the common claims of a fiscal burden, we anticipate a fiscal dividend.

An older, stationary or declining population offers many benefits for quality of life, environmental sustainability and economic stability.

With any change, there are winners and losers. The losers from an older, non-growing population would include the big employers of low-wage workers who will find it harder to exploit their workforce, and property developers who will have less access to the windfall gains from rezoning land. Developers can always profit from value-adding to properties, which is the useful function they provide to society. It is only their speculative profits from rising land values that will diminish – profits gained directly at the expense of housing affordability. It is hardly

surprising that the big business and property lobby groups are active promoters of “Big Australia”, including through scaremongering about ageing. We should not confuse their vested interests with the national interest.

An older, stationary or declining population offers many benefits for quality of life, environmental sustainability and economic stability. Indeed, population ageing has been associated with many positive trends.¹³⁶ An older, declining population can be:

- *richer* with less underemployment, lower debt and better balance of trade
- *smarter* with a more experienced workforce
- *safer* with less crime, better infrastructure, and less risk of critical shortages of water, food, energy or other limited resources, and lower pandemic risk
- *fairer* with better pay and job security
- *greener* with lower greenhouse gases and other pollution, and more space for nature
- *healthier*, as we spend more of our life in good health and avoid the stresses of insecure employment and
- *happier*, with less queuing, commuting, competing, concrete jungles and crowds, and more time for ourselves, family and community.

Much can be done to adapt public policy and programs to accommodate demographic ageing. Largely, it is already being done in response to market forces. The pace of these adjustments is far gentler than those achieved in response to globalisation of labour or the information revolution.

Our natural fear of our own old-age frailty is often transferred to a fear of demographic ageing. This is an irrational association. Individually, people have been ageing better over time, and there is every reason to be optimistic about further improvements in the future. With higher proportions of elderly citizens, their political voice is also strengthened. The rising attention to the issues faced by older people can only improve our responses to long-neglected problems such as old-age poverty, loneliness and the accessibility of public buildings and transport systems. Rising digital literacy of the elderly is providing many more tools to improve social contact, access to services and independence.

But a mature society is not just a society for the elderly. In a post-transition world with a stationary or declining population, children can be better supported to fulfil their potential. Young adults are more likely to access secure jobs in which their contribution is valued and their human capital is nurtured. Older workers might be offered greater flexibility to remain in the workforce to the extent that they choose. Families are more likely to achieve affordable housing and to benefit from inheritance. Less income inequality and more volunteerism by our army of able retirees will add to social cohesion. The other species who call Australia home might enjoy a reprieve from the relentless disturbance or destruction of habitats they inevitably face as Australia's population grows. Future generations will have a greater chance of enjoying a world with a benign climate and healthy biodiversity.

These “depopulation dividends”¹³⁷ are there for the taking, if we embrace our demographic maturity and end the counterproductive attempts to dilute the older cohorts. We need to see our generations as collaborating rather than competing with each other. Through an older, stable or declining population we can glimpse a silver lining to the otherwise darkening clouds of environmental and social crises.

Endnotes

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- ² Parliamentary Budget Office (PBO) (2019). *Australia's ageing population: understanding the fiscal impacts over the next decade*, Commonwealth of Australia, pp. iv, 4.
- ³ Data for Figure 1 were taken from actual examples (past and projected values), selected so that each stage lasted approximately 30 years. Based on West Africa (Stages 1 and 2) and South Korea (Stages 2–5). Data from UN (2019), *World Population Prospects 2019*.
- ⁴ Carla Wilshire (2013). *op. cit.* at endnote 1.
- ⁵ Productivity Commission (2013). *An ageing Australia: preparing for the future*. Research Paper, Melbourne. <https://www.pc.gov.au/research/completed/ageing-australia>
- ⁶ Source: Scenario 1. Australian Bureau of Statistics; 2. Productivity Commission (2013, *op. cit.*); 3 & 4: Modelled using UN (2017) life tables; 5. Based on UN (2017) medium fertility projection for Japan in 2090; 6. Based on UN (2017) constant fertility projection for Japan in 2090.
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- ¹¹ Projections using Spectrum DemProj version 4. Demproj is a single-year cohort model, incorporating age-specific fertility, mortality and migration, using profiles from United Nations 2015 World Population Prospects. These projections assuming constant TFR of 1.8, and life expectancy rising to 85.6 (male) and 88.9 (female) by 2050, then remaining constant. The life expectancy is somewhat lower than the Productivity Commission's assumptions in Table 1. A greater increase in life expectancy would reduce the relative effect of immigration on ageing.
- ¹² van Onselen L, O'Sullivan J and Cook, PG (2019). *Population growth and infrastructure in Australia: the catch-up illusion*. Discussion Paper, Sustainable Population Australia. <http://www.population.org.au/publications/discussion-papers/infrastructure>
- ¹³ O'Sullivan JN (2012). The burden of durable asset acquisition in growing populations. *Economic Affairs* 32(1), 31-37. Feb. <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0270.2011.02125.x/pdf>
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- ¹²³ A follow-up study in 2013 used the spurious argument that higher immigration could increase productivity (evidence from the Productivity Commission and others would suggest the opposite), to suggest the ‘goldilocks’ range could be higher than previously stated – conveniently endorsing the 215,000 level chosen by the 2015 Intergenerational Report (which was in preparation at that time): McDonald P and Temple J (2013) *The long term effects of ageing and immigration upon labour supply and per capita gross domestic product: Australia 2012-2062*. Canberra, Demographic Insight P/L. However, it is the 2010 report that the government continues to cite, generally mis-quoting it as endorsing the current quota for permanent non-humanitarian migration, rather than referring to NOM, which has been running at around 50,000 per year higher than the permanent non-humanitarian visa quota due to humanitarian visas and an increase in temporary workers and foreign students.
- ¹²⁴ The model yielded smaller benefits for each additional 10,000 migrants per year, but did not show any point above which higher immigration generates lower growth in GDP per capita (this growth being due to the flawed assumption that labour force participants remain in a fixed ratio with working-age people). The selection of a middle range was purely arbitrary, although some convoluted justifications are entered into. The authors contradict themselves in claiming, “a higher level of migration not only leads to a lower proportion of the population aged 65 years and over, it also achieves the transition to a long-term stable age structure more rapidly than a lower level of migration.” They appear to be under the false impression that the lower proportion over 65 will be maintained in the long-term stable state, rather than being an indication of how far that scenario still has to go before reaching a stable, stationary population (at which point all scenarios would have similar age structure). Thus they clearly misread their own graph (Figure 15) when they conclude that “any level below 100,000 substantially delays the emergence of the stable age structure” (p. 37). The exact opposite is true. They make much of the observation that the marginal effect of additional migration on GDP per capita growth rate becomes negative by 2050 for migration rates above 170,000, but fail to note that this is due to the sudden

increase in immigration at the start of the scenario generating a rapid increase in retirements 40 years later, replicating the sudden increase in 'baby boomer' retirements which are the focus of ageing concern this decade. (This is very visible in their chart of "labour supply entry exit ratio", p. 54.) The effect would be short-lived, as they would have seen if they extended the time period for another generation. In any case, the value of this metric is dubious – working at too high a level of derivation (the growth rate of the growth rate) tends to lose connection with the policy-relevant metric (GDP per capita). Thus their lower-boundary claim is based on the false assertion that low immigration levels delay the emergence of a stable age structure, and the upper boundary is based on a misinterpretation of a shortlived artefact of their high-immigration scenario. However, given the arguments they do present, it is difficult to see why they opted for an ideal range of 160,000–210,000 rather than 100,000–170,000 (other than that this endorsed Treasury's 2010 Intergenerational Report).

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About the author

Dr Jane O’Sullivan, B.Agr.Sci, PhD, grew up in regional Victoria. Pursuing a concern for the sustainability of the human enterprise, she studied Agricultural Science at the University of Melbourne. After postdoctoral research in the UK at the University of Durham and the John Innes Institute, she joined a zoological expedition to Andean cloud forests and Amazon rainforests of Ecuador and Peru, before returning to Australia in 1992. At the University of Queensland, she led international collaborative research on mineral nutrition of tropical root crops in the Pacific and South East Asia, through the Australian Centre for International Agriculture (ACIAR). She co-authored ACIAR books *Mineral Nutrient Disorders of Root Crops in the Pacific*, *Nutrient Disorders of Sweet Potato* and *Yam Nutrition: Nutrient Disorders and Soil Fertility Management*, and the online diagnostic tool *Sweetpotato DiagNotes*. From 2009, she turned attention to the demographic pressures on food security, economic development and environmental sustainability. She has participated in a wide range of cross-disciplinary collaborations with international colleagues in ecological economics, environmental philosophy, climate change responses and family planning promotion and implementation. In 2010, she assisted Ugandan colleagues to run a Horn of Africa regional conference on Population and Climate Change sponsored by UNFPA and Sustainable Population Australia. She is a member of the International Union for the Scientific Study of Population (IUSSP). Her 2016 article *The risk of misrepresenting the demographic dividend* for the society’s weekly blog *n-IUSSP* remained in the top ten most read articles for more than two years. Publications include *The burden of durable asset acquisition in growing populations* (Economic Affairs 32:31-37, 2012); *Ageing paranoia, its fictional basis and all too real costs* (in: Goldie & Betts (eds) “Sustainable Futures: Linking Population, Resources and the Environment,” CSIRO Publishing, 2014); *Population Projections: Recipes for Action, or Inaction?* (Population and Sustainability 1:45-57, 2016); *Synergy between Population Policy, Climate Adaptation and Mitigation* (in: Hossain et al. (eds.) “Pathways to a Sustainable Economy: Bridging the Gap between Paris Climate Change Commitments and Net Zero Emissions.” Springer, 2018); *Aging Human Populations: Good for Us, Good for the Earth* (Trends in Ecology & Evolution 33:851-862, 2018); *Climate change and world population* (in Letcher (ed.) “The Impacts of Climate Change,” Elsevier (forthcoming)).

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Silver tsunami or silver lining?

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