



Lessons from across the Tasman

Comparing the Australian and New Zealand retirement income systems

NZIER public discussion paper

Working paper 2024/01, November 2024

About NZIER

NZIER is a specialist consulting firm that uses applied economic research and analysis to help our clients and members make better business and policy decisions and provide valuable insights and thought leadership on important public issues affecting our future. We operate across all sectors of the New Zealand economy and provide a full range of economic and policy consulting services.

Each year NZIER funds, undertakes and makes freely available research and thinking aimed at promoting a better understanding of the significant policy and economic challenges faced by Aotearoa New Zealand. This paper was produced as part of NZIER's Public Good Programme. Our membership is open to all organisations and provides a range of benefits, including access to our long-established Quarterly Survey of Business Opinion and Quarterly Predictions documents.

We pride ourselves on our reputation for independence and our expertise and experience that ensures we deliver high quality, insightful analysis and pragmatic advice that we publicly stand behind, in the right form and at the right time.

Funding

This paper was funded by NZIER as part of its self-funded Public Good Programme.

Authorship

This paper was prepared at NZIER by Adrian Katz with support from Dr Patrick Nolan at Te Ara Ahunga Ora Retirement Commission.

It was quality approved by John Yeabsley.

The assistance of Dr Michelle Reyers, John Yeabsley, Cathy Scott, and Sarah Spring is gratefully acknowledged.

How to cite this document: Katz, Adrian. 2024. Lessons from across the Tasman: Comparing the Australian and New Zealand retirement income systems. NZIER Working paper 2024/01. Available at <https://www.nzier.org.nz/publications/lessons-from-across-the-tasman-comparing-the-australian-and-new-zealand-retirement-income-systems-nzier-working-paper-2024-01>

Registered office: Level 13, Public Trust Tower, 22–28 Willeston St | PO Box 3479, Wellington 6140

Auckland office: Ground Floor, 70 Shortland St, Auckland

Tel +64 4 472 1880 | econ@nzier.org.nz | www.nzier.org.nz

© NZ Institute of Economic Research (Inc). Cover image © dreamstime.com

NZIER's standard terms of engagement for contract research can be found at www.nzier.org.nz.

While NZIER will use all reasonable endeavours in undertaking contract research and producing reports to ensure the information is as accurate as practicable, the Institute, its contributors, employees, and Board shall not be liable (whether in contract, tort (including negligence), equity or on any other basis) for any loss or damage sustained by any person relying on such work whatever the cause of such loss or damage.



Key points

This paper compares the Australian and New Zealand retirement income systems, assesses their performance, and identifies lessons for New Zealand.

Comparing the two systems

Australia's system has important differences from New Zealand's, making it a useful point of comparison. Australia's system consists of a compulsory savings scheme (Australian Superannuation, introduced in 1992), and a means-tested government pension (the Age Pension). New Zealand's system, by contrast, involves a voluntary savings scheme with auto-enrolment (KiwiSaver, introduced in 2007) and a universal public pension (NZ Super).

Our initial opinion of the lessons

All systems have their pros and cons and people have different views about what matters. Here is our general opinion on the lessons for New Zealand from comparing the two retirement income systems.

- **Each system needs to be considered as a whole.** Because New Zealanders have access to a universal pension through NZ Super, KiwiSaver plays a different role from Australian Superannuation.
- **The systems are shaped by different cultural attitudes and histories.** These differences need to be accounted for when adapting aspects of the Australian system to New Zealand.
- **Australia's greater reliance on private savings perpetuates inequalities from working years.** The universal coverage of NZ Super enables New Zealand's system to deliver more equitable outcomes.
- **The simpler design of New Zealand's system helps prevent perverse consequences.** Australia's tax concessions for savings make the system less equitable and more expensive. The Age Pension means test also discourages older people from working.
- **Higher contributions to KiwiSaver could be achieved through an incremental approach.** The Australian experience shows that it is possible to achieve higher contributions by ratcheting up rates over time – although such high rates are not desirable in New Zealand.
- **Australia's pre-funded system places a lower burden on future generations.** Because New Zealand's system is pay-as-you-go, the next generation's taxes will be used to fund the retirement of today's workers. One way of moving toward a pre-funded system would be to strengthen the NZ Super Fund.
- **There is no silver bullet when it comes to economic growth.** Australia's system has a greater effect on savings, which could boost investment. On the other hand, it discourages labour force participation, hurting growth.

Contents

- 1 Introduction2
 - 1.1 Why Australia is a useful comparison.....2
 - 1.2 The structure of this paper2
- 2 Comparing the two systems2
 - 2.1 The demographic and fiscal context.....2
 - 2.2 The systems today4
 - 2.3 A brief sketch of their histories.....5
 - 2.4 System objectives5
 - 2.5 Comparing the Australian Age Pension to NZ Super6
 - 2.6 Comparing Australian Superannuation to KiwiSaver.....7
- 3 Assessing performance8
 - 3.1 Adequacy8
 - 3.2 Equity11
 - 3.3 Sustainability.....15
 - 3.4 Impact on savings and investment17
 - 3.5 Impact on labour and wages.....20
 - 3.6 Assessment summary23
- 4 Drawing lessons23
- 5 References.....26

Figures

- Figure 1 Population by age group3
- Figure 2 Birth and migration rates3
- Figure 3 Government spending.....4
- Figure 4 Net pension replacement rate10
- Figure 5 Average income by age group.....10
- Figure 6 Income sources of people aged 65 and over11
- Figure 7 Income poverty rates by age12
- Figure 8 Income inequality by age group13
- Figure 9 KiwiSaver contributions by gender.....14
- Figure 10 Superannuation balance by group14
- Figure 11 KiwiSaver contributions by ethnicity.....15
- Figure 12 Government spending.....16
- Figure 13 Funds under management18
- Figure 14 Asset allocation20
- Figure 15 Average effective age of retirement21
- Figure 16 Labour market indicators for people 65 years and over22

Tables

- Table 1 Australian Age Pension and NZ Super7
- Table 2 Australian Superannuation and KiwiSaver8
- Table 3 Assessment summary23

1 Introduction

If KiwiSaver were a person, it would be almost old enough to vote. At 17 years old, the scheme has had time to get established and generate evidence on its performance and impact. The economy has undergone major changes since KiwiSaver was introduced in 2007, with changing interest rates, inflation, employment patterns, and housing costs. It is a good time to review its settings and the role that it plays in New Zealand's retirement income system.

1.1 Why Australia is a useful comparison

Historically, Australia has been a useful comparator for New Zealand's welfare system, including its retirement policy. Since 1992, Australia has operated a compulsory savings scheme (the Australian Superannuation Guarantee) along with a means-tested government-funded pension to address pensioner poverty (the Age Pension). In contrast, New Zealand's system consists of a voluntary savings scheme with auto-enrolment designed to smooth incomes over the lifecycle (KiwiSaver), alongside universal superannuation for all residents aged 65 and over (NZ Super). Given the strong economic, social, and historical ties between the two countries, Australia's system could offer valuable lessons for New Zealand.

In their 2024 Pension Index, Mercer gave Australia's retirement income system a B+ and New Zealand's system a B (2024). Mercer said that both systems have a sound structure with many good features but some areas for improvement.

The two systems have been compared previously, including by NZIER (Gill, Hensen, and Wilson 2018) and Ross Guest (2013). This paper covers similar ground to past comparisons but draws on more recent studies and data.

1.2 The structure of this paper

This paper has three parts:

- A comparison of the retirement income systems in New Zealand and Australia
- A discussion of the performance of the two systems across five focus areas
- An initial opinion on lessons for New Zealand from the Australian retirement income system.

2 Comparing the two systems

2.1 The demographic and fiscal context

Ageing populations

The population in both countries is ageing, as shown in Figure 1. The baby boomer generation (people born between 1946 and 1964) is starting to retire in large numbers, and people are living longer. Migration is not making up for the decline in the birth rates, as

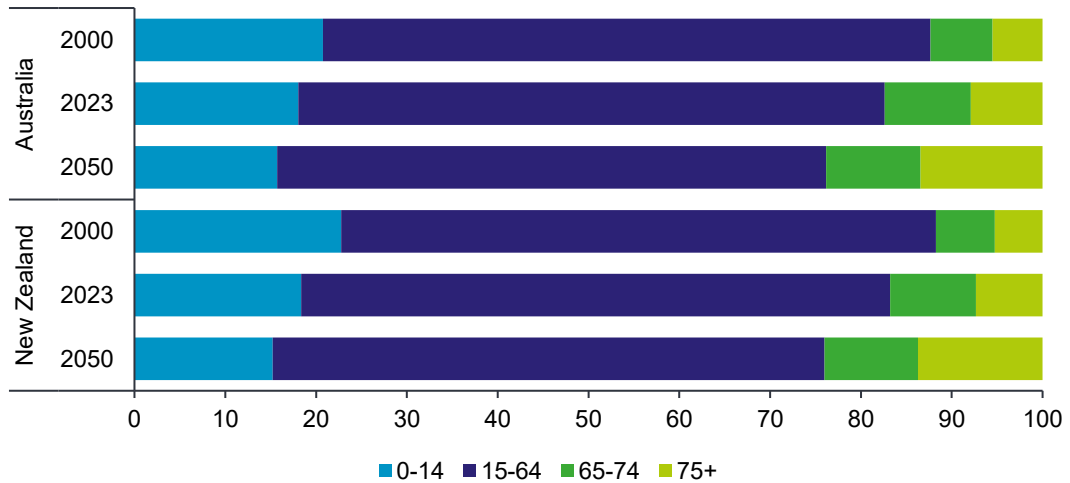


shown in Figure 2. As a result, dependency ratios (the number of workers per dependent member of the population) will decline in years to come.

Spending on pensions, health, and aged care will increase as the share of the working age population (who fund most of this spending) falls. This will have wide-ranging implications.

Figure 1 Population by age group

% of total population

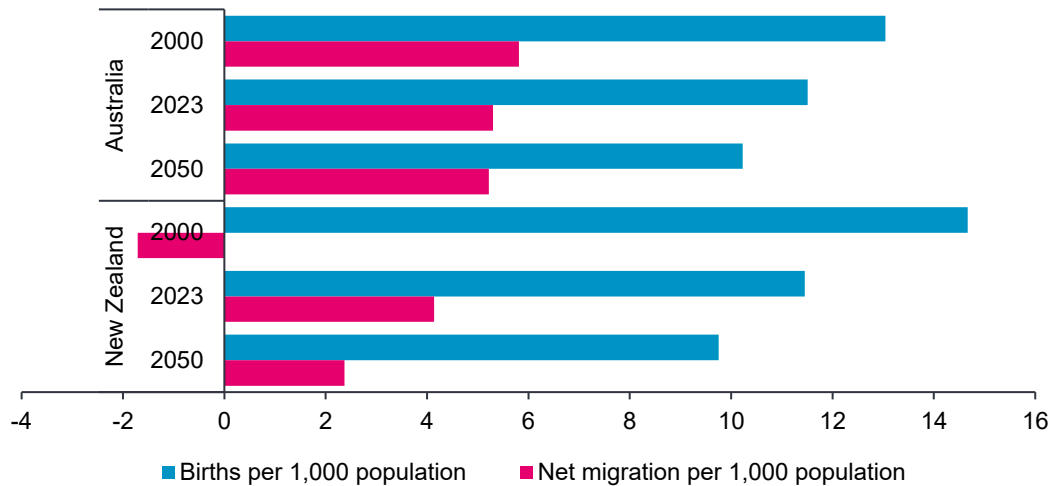


Note: 2050 figures are projections based on the medium fertility variant

Source: United Nations (2024)

Figure 2 Birth and migration rates

Births and net migration per 1,000 population



Note: 2050 figures are projections based on the medium fertility variant

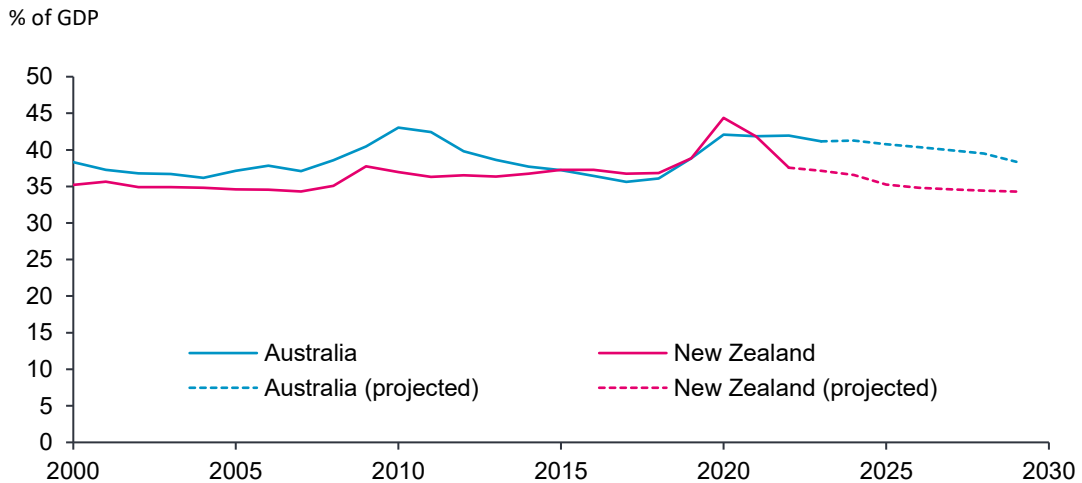
Source: United Nations (2024)



Constrained resources

The retirement income system is shaped by the government's fiscal position. General government spending (including federal, state and local government) tends to be slightly higher in Australia than New Zealand compared to the size of the economy, as shown in Figure 3. The effect of the retirement income system on government finances is likely to increase as the population ages.

Figure 3 Government spending



Source: International Monetary Fund (2024)

2.2 The systems today

Whereas Australia's system involves targeted government support and mandatory private savings, New Zealand's system has a universal government pension coupled with voluntary private savings. In both countries, mortgage-free home ownership has historically played an important role in providing financial security in retirement; however, the number of retirees renting or paying off mortgages is increasing (Symes 2022).

Australia

Australia's 'three pillar' retirement income system consists of:

- The Age Pension, a means-tested public pension to address pensioner poverty
- The Superannuation Guarantee, a compulsory private savings scheme introduced in 1992
- Voluntary private savings, which may be made either inside or outside the superannuation system.

New Zealand

New Zealand's system consists of:

- New Zealand Superannuation (NZ Super), a universal public pension
- KiwiSaver, a voluntary private savings scheme with auto-enrolment introduced in 2007 to smooth incomes over the lifecycle
- Private savings outside of KiwiSaver, such as cash, shares or property.



2.3 A brief sketch of their histories

While the Australian retirement income system evolved gradually over time, the New Zealand system has undergone more significant changes.

Australia

The Australian Age Pension was introduced in 1908, and the coverage and benefits expanded in the first half of the 20th century. Initially, superannuation schemes were provided by large companies, government entities, and professions. These schemes were often voluntary and based on employer contributions.

In the 1980s, unions agreed to moderate wage increases in exchange for broader access to superannuation, leading to widespread coverage. The Australian Superannuation Guarantee was introduced in 1992, making superannuation compulsory for all employers. The rate was initially set to 3% and was set to increase over time.

New Zealand

New Zealand was one of the first countries to introduce an old-age pension in 1898. The scheme was initially means tested and required “good moral character”. A universal pension was introduced in 1938, resulting in a two-tier system.

In 1974, the Kirk Labour government replaced the pension with a compulsory, wage-related contributory scheme. The scheme was quickly abolished by the incoming Muldoon National government in 1975 and replaced with National Superannuation in 1977 – a universal pension from age 60 set at 80% of the average ordinary wage for couples. Over time, the eligibility age was gradually increased to 65, and payment rates were reduced.

In 1997, at the behest of New Zealand First, the Bolger National coalition government held a referendum on the establishment of a compulsory retirement scheme. The proposal was overwhelmingly rejected by the public.

The New Zealand Superannuation Fund was established in 2001 to partially pre-fund future pension costs, and KiwiSaver was introduced in 2007.

2.4 System objectives

The designs and histories of the two retirement income systems result from different aims and objectives.

Retirement income systems pursue a range of objectives (Knox 2009), including:

- **Income smoothing** – Helping people shift income from working years to old age
- **Poverty reduction** – Redistributing additional income to the elderly
- **Risk insurance** – Providing against risks which are particularly relevant to the elderly, such as inflation and longevity.

Along with individual living standards, retirement income policies also influence domestic capital markets, household savings, and wealth distribution.

Retirement income systems need to be considered as part of the broader welfare and social security system – and just one of a set of policies that affects the lives that older people lead. While we acknowledge the importance of a holistic perspective, other forms of government support are outside of the scope of this paper.



Australia

The Australian Age Pension aims to provide a ‘safety net’ targeted to those most in need (Commonwealth Treasury 2020). While the purpose of Australian Superannuation is debated, the Albanese Government is seeking to define it as “to deliver income for a dignified retirement, alongside government support, in an equitable and sustainable way” (Superannuation (Objective) Bill 2023).

New Zealand

NZ Super, which provides universal coverage, lacks a clearly stated purpose in legislation, and people hold a variety of views about what it might be (Retirement Commission 2021). To help address the lack of legislative clarity on the purpose of NZ Super, the Retirement Commissioner released a statement defining the purpose of New Zealand’s Retirement Income System (see Box 1). KiwiSaver aims “to encourage a long-term savings habit and asset accumulation by individuals who are not in a position to enjoy standards of living in retirement similar to those in pre-retirement” (KiwiSaver Act 2006).

Box 1 Purpose statement for New Zealand’s retirement income system

“A stable retirement income framework enables trust and confidence that older New Zealand residents can live with dignity and mana, participate in and contribute to society, and enjoy a high level of belonging and connection to their whānau, community and country.

To help current and future retirees to achieve this, a sustainable retirement income framework’s purpose is twofold:

- To provide NZ Superannuation to ensure an adequate standard of living for New Zealanders of eligible age. NZ Super is the Government’s primary contribution to financial security for the remainder of a person’s life.
- To actively support New Zealanders to build and manage independent savings that contribute to their ability to maintain their own relative standard of living.

The retirement income system sits within the broader government provision of infrastructure also needed to enable older New Zealanders to live well, such as health care, housing, and transport.” (Retirement Commission 2021)

2.5 Comparing the Australian Age Pension to NZ Super

The Australian Age Pension and NZ Super are examples of non-contributory public pensions. They are government-funded and do not require direct contributions from individuals. These schemes are pay-as-you-go, meaning that current workers’ taxes are used to fund the benefits of current retirees.

While the Australian Age Pension is means tested and aims to address pensioner poverty, NZ Super is universal and aims to provide a basic level of income to all eligible residents.

Table 1 compares the Australian Age Pension and NZ Super.



Table 1 Australian Age Pension and NZ Super

Feature	Australian Age Pension	NZ Super
Eligibility age	67	65
Coverage	Means-tested (income and assets)	Universal
Payment rates (2024-25, after tax)	Single: Up to A\$1,144.40 Couple: Up to A\$1,725.20	Single: NZ\$1,043.24 Couple: NZ\$1,606.96
Indexation	Twice yearly to greater of CPI, PBLCI, and MTAW ¹	Yearly to greater of CPI and Net Average Wage
Tax	Generally tax-free	Taxed as income
Funding	General taxation	General taxation
Residency requirement	At least 10 years, with at least 5 years of continuous residency	At least 10 years (increasing to 20 years by 2042) since age 20, with at least 5 years since age 50

2.6 Comparing Australian Superannuation to KiwiSaver

Australian Superannuation and KiwiSaver are examples of defined contribution schemes, where individuals or their employers make contributions (often a percentage of salary), which are then invested. The final retirement benefits depend on the investment’s performance. These schemes are pre-funded, meaning they are covered by assets accumulated in advance.

Australian Superannuation consists of compulsory employer contributions – the Australian Superannuation Guarantee – alongside voluntary employee contributions. The Superannuation Guarantee rate has risen from 3% when it was introduced in 1992 to 11.5% today and will rise to 12% next year. Employers are required to make these contributions even if employees make no contributions of their own. Australian Superannuation also includes tax incentives to encourage voluntary contributions. Once people retire, they can withdraw their super as a lump sum or tax-free income stream subject to minimum annual withdrawals based on age.

KiwiSaver, in contrast, is a voluntary scheme with automatic enrolment and minimum contributions from both employees and employers of 3%. The government also contributes 50c per \$1 of member contributions, up to \$521.43 per year. There are no minimum withdrawals in retirement and withdrawals are tax-free.

Table 2 compares Australian Superannuation and KiwiSaver.

¹ CPI stands for Consumer Price Index, PBLCI stands for Pensioner and Beneficiary Living Cost Index, and MTAW¹ stands for Male Total Average Weekly Earnings

Table 2 Australian Superannuation and KiwiSaver

Feature	Australian Superannuation	KiwiSaver
Introduced	1992	2007
Participation	Compulsory	Voluntary (opt-out)
Minimum employee contributions	0%	3%
Minimum employer contributions	11.5%, increasing to 12% from July 2025	3%
Government contributions	None	50c per \$1 of member contributions, up to \$521.43 per year
Access age	60	65
Early access	Compassionate grounds, terminal illness, severe financial hardship, incapacity	First home purchase, moving overseas, significant financial hardship, serious illness
Minimum withdrawals	4% to 14% per year in retirement, based on age	No
Tax on employer contributions	15%	Employee marginal tax rate (10.5% to 39% based on income)
Tax on employee contributions	Either pre-tax (salary sacrifice) or post-tax	Post-tax
Tax on earnings	15% in pre-retirement, tax-free in retirement	Prescribed investor rate (10.5% to 28% based on income)

3 Assessing performance

We use the following five focus areas to guide our assessment of the two systems:

- **Adequacy** – To what extent does the system provide sufficient income to maintain a reasonable standard of living in retirement?
- **Equity** – How does the system affect poverty and inequality, including between genders and ethnic groups?
- **Sustainability** – How affordable is the system over the long term?
- **Impact on savings and investment** – How does the system affect household savings, national savings, and investment?
- **Impact on labour and wages** – How does the system affect people’s decisions to work and the wages that they earn?

3.1 Adequacy

This section discusses the adequacy of the Australian and New Zealand retirement income systems, that is, how well they enable retirees to maintain a reasonable standard of living.

3.1.1 Coverage rates

Adequacy is impacted by coverage: the proportion of the population that participates in and is protected by the retirement system.

59% of Australians aged 65 and over receive the Age Pension, whereas nearly all New Zealanders aged 65 and over receive NZ Super (OECD 2023).² Among those aged 15-64, 79% of Australians have a superannuation account, and 84% of New Zealanders have KiwiSaver (OECD 2023).

Not everyone who has an account makes contributions. In Australia, around 90% of those in paid employment receive superannuation from their employer (Commonwealth Treasury 2020).³ Similarly, around 90% of eligible paid employees in New Zealand are currently contributing to KiwiSaver (Retirement Commission 2024).

3.1.2 Pension replacement rates

Pension replacement rates measure how earnings from pension and retirement savings compare to earnings from working. As pension replacement rates focus on income, they only provide a partial picture of older people's financial resources (see Box 2).

Box 2 Income and wealth as people age

Generally, people's incomes increase until around middle age, and wealth increases during working years and is spent during retirement. As a result, older people can have low incomes but high wealth. In Australia, older people are more likely to be in low-income households, but the average wealth of older households is almost four times that of younger households (P. Davidson, Bradbury, and Wong 2024). Homeownership is an important reason for this difference.

We focus on income as it is difficult to obtain wealth data for older people. However, it is important to remember that high wealth outside of the retirement income system may enable those with low incomes to maintain a high standard of living.

Figure 4 presents OECD (2023) estimates of the replacement rate at retirement for different groups of earners in Australia and New Zealand.⁴ Based on the current design of the pension systems, a worker with average earnings and a full career has a net pension rate of 62% in New Zealand and 34% in Australia.

These figures appear to show that earnings from retirement income are higher in New Zealand than in Australia compared to earnings from workers. They also appear to show that the New Zealand system is more progressive, providing a lower replacement rate for high earners compared to average earners.

Replacement rate estimates should be interpreted with care. They are extremely sensitive to modelling assumptions, such as investment returns. The figures for Australia are also impacted by the Age Pension means test – according to the OECD (2023), average earners will not be eligible for the Age Pension at retirement, but will become eligible later in life as they draw down their assets. Using a different modelling approach and assumptions, the

² The number of NZ Super recipients is 103% of the population aged 65 and over. Some recipients live overseas or are under 66 due to specific exemptions.

³ Due to specific exemptions, not all employers are required to contribute to their employees' retirement savings.

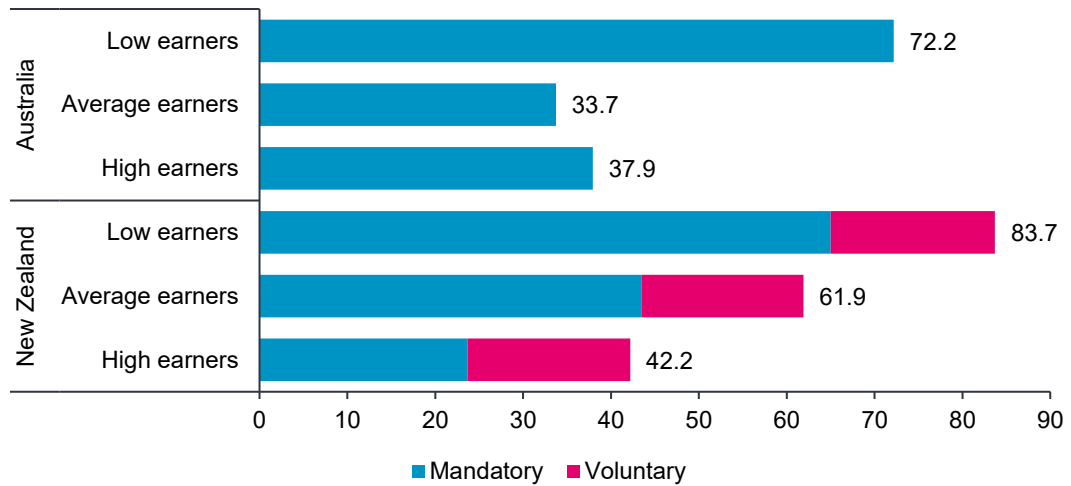
⁴ We present the net pension replacement rate, which is net pension entitlement divided by net pre-retirement earnings. It accounts for tax and social security contributions paid by both workers and pensioners.



Commonwealth Treasury (2020) estimates a pension replacement rate for average earners in Australia of 80% – indicating that Australia’s system may actually provide significantly higher incomes than New Zealand’s.

Figure 4 Net pension replacement rate

Projected individual net pension entitlement as a percentage of net pre-retirement earnings for full-career male workers from the age of 22, 2023



Note: Low earners earn 50% of the average earner in Australia and 63% in New Zealand to account for the minimum wage level. High earners earn 200% of the average earner.

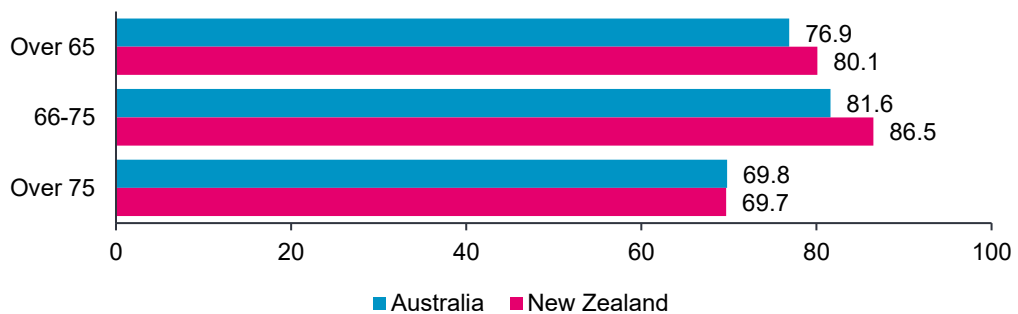
Source: OECD (2023)

3.1.3 Total incomes and income sources

Many retirees earn income from other sources besides pensions and retirement savings schemes, such as employment or other savings and investments. To provide a more complete picture of retirees’ income, Figure 5 shows how total incomes for people aged 65 and over compare with the general population. Compared to the general population, people aged 66 to 75 tend to have slightly higher incomes in New Zealand than in Australia.

Figure 5 Average income by age group

% of average equivalised household disposable income of total population, 2022

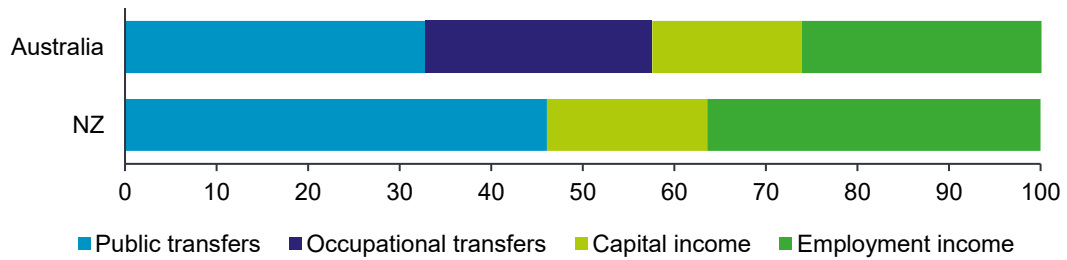


Source: OECD (2023)

Figure 6 presents a breakdown of older people’s income by source. In New Zealand, older people gain a higher proportion of their income from NZ Super and employment income. In Australia, people gain a higher proportion of their income from occupational transfers (i.e. the Superannuation Guarantee).

Figure 6 Income sources of people aged 65 and over

% of total equivalised gross household income, 2020



Source: OECD (2023)

3.2 Equity

This section discusses the equity of the Australian and New Zealand retirement income systems, including how they affect poverty and inequality. There are many different ways of defining and measuring equity, as discussed in Box 3. In the context of retirement income systems, it is common to assess equity by comparing inequalities in retirement to inequalities in the working population.

Box 3 Definitions and measures of equity

There are a range of different ways equity can be measured, such as:

- The number of people in poverty
- The distributions of income and wealth
- The proportion of people who receive government support

Different measures reflect different notions of equity, fairness and justice. New Zealanders have a wide variety of views but tend to believe that fairness of processes matters more than fairness of outcomes (Katz and Hogan 2024).

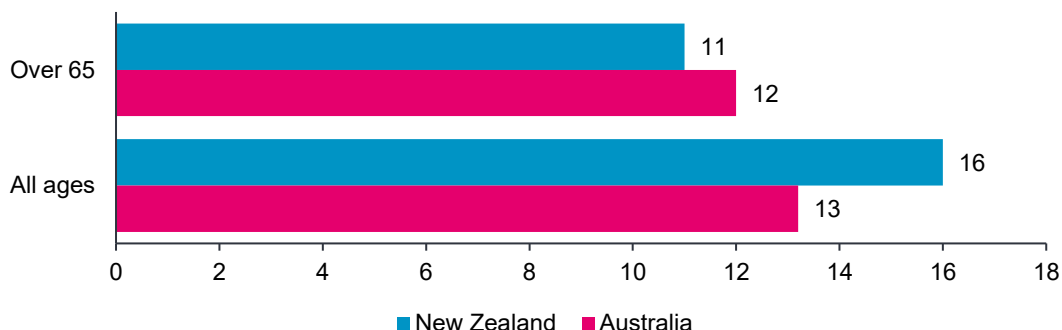
3.2.1 Income poverty

Figure 7 presents income poverty rates by age in Australia and New Zealand, measured as the proportion of people whose household income is below 50% of the median after subtracting housing costs.⁵ In both countries, income poverty is lower for people aged 65 and over than the general population. The difference is much larger for New Zealand, implying that the retirement income system plays a greater role in reducing pensioner poverty.

⁵ Measuring poverty based on 50% of median household can be highly sensitive to the level of the Australian Age Pension or NZ Super. We use household income after deducting housing for housing costs as this accounts for the effect of a mortgage-free home. See Perry (2019) for a discussion of poverty measures.

Figure 7 Income poverty rates by age

% of people with income lower than 50% of median equivalised household disposable income after subtracting housing costs, 2018



Source: Davidson, Bradbury, and Wong (2018) and Perry (2019)

3.2.2 Income inequality

Figure 8 presents income inequality in Australia and New Zealand for people over 65 and the general population measured using the Gini coefficient.⁶

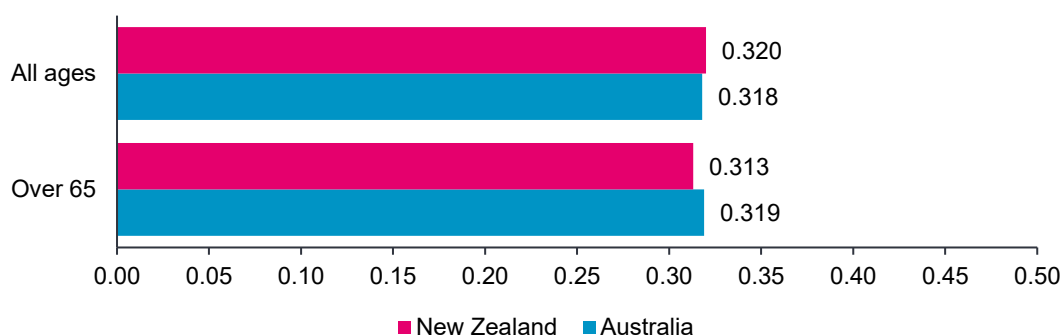
In Australia, income inequality among people aged 65 and over is similar to the general population (Commonwealth Treasury 2020). People aged 65 and over derive a greater proportion of their income from savings, which are less equal than incomes. Superannuation tax concessions increase inequality, as people with higher lifetime incomes receive more concessions than those with lower lifetime incomes. The Age Pension reduces inequality because it is means tested, more than offsetting the effect of tax concessions.

In New Zealand, income inequality among people 65 and over is lower than the general population. Because NZ Super provides a universal flat-rate income, it provides a higher proportional benefit to lower-income retirees. In addition, NZ Super is taxed as income, so those with other sources of income may receive less after-tax superannuation due to being in a higher tax bracket.

⁶ The Gini coefficient measures income inequality on a scale of 0 to 1, where higher values indicate higher inequality. 0 reflects perfect equality, where everyone has the same income, and 1 reflects perfect inequality, where one person has all the income and everyone else has nothing.

Figure 8 Income inequality by age group

Gini coefficient, 2020



Note: Based on equivalised disposable household income

Source: OECD (2023)

3.2.3 Gender gap

Depending on the design of the retirement income system, it can either attenuate or perpetuate inequalities in the working age population, such as the gender pay gap – discussed in Box 4 – and ethnic pay gaps.

Box 4 The gender pay gap

The gender pay gap refers to the average difference in earnings between men and women. Women's earnings tend to be lower than men because:

- Women are more likely to take time out of work to care for families or work part-time
- Women are more likely to work in occupations and industries that pay less
- Women are paid less per hour for equal work due to unobserved factors such as bias and discrimination (Sin, Stillman, and Fabling 2017).

In Australia, the average superannuation savings balance is 25% higher for men than women (Australian Taxation Office 2024). The gap is driven by differences in earnings in working life, with retirement income system settings having only a small effect (Commonwealth Treasury 2020). As women live longer and retire earlier, they need their savings to last longer in retirement. Despite the gap in superannuation savings balances, income inequality between women and men in retirement is lower than working life due to the Age Pension. Because the Age Pension does not depend on working-life earnings, it reduces the size of the gap in percentage terms. Women are also more likely to receive the Age Pension than men.

The Australian government recently announced that it will pay superannuation for those on paid parental leave from July 2025 (Australian Department of the Prime Minister and Cabinet 2024), which could address part of the gender pay gap.

Like Australian Superannuation, the average KiwiSaver balance is 25% higher for men (Trollip 2024). While women have the same KiwiSaver employee contribution rates as men on average, they have lower contribution amounts due to lower earnings, as shown in

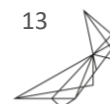
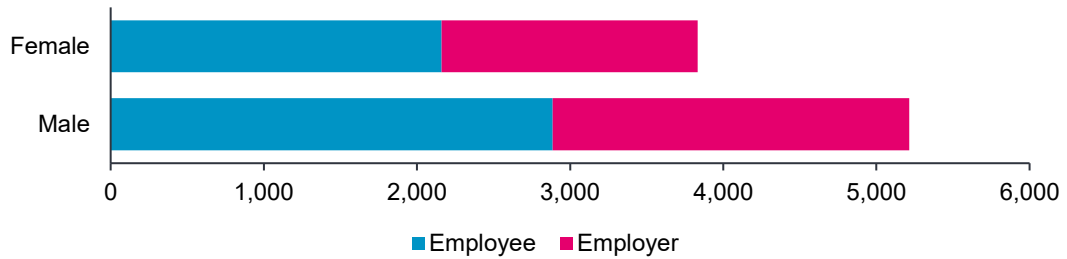


Figure 9.⁷ Because retirement savings schemes contribute to a larger proportion of retirement income, the overall retirement income gap is likely to be larger in Australia than New Zealand.

If people make KiwiSaver contributions while they are on paid parental leave, the government will also make employer contributions of 3%.

Figure 9 KiwiSaver contributions by gender

NZ\$ average annual contributions for those with non-zero contributions, year ending March 2023



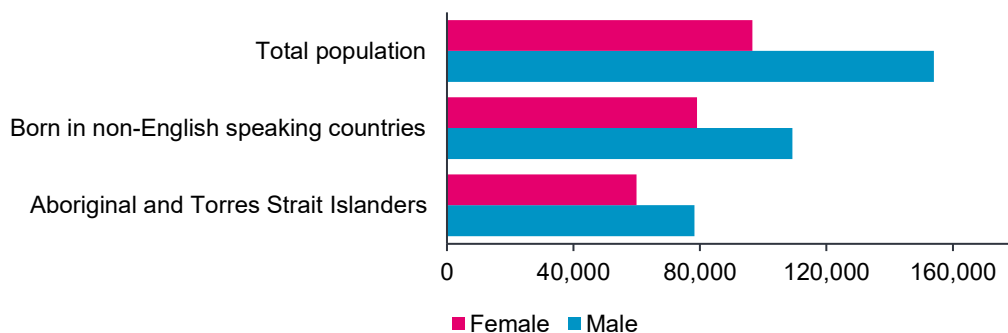
Source: Kirkpatrick, Meehan, and Pacheco (2024)

3.2.4 Ethnic gaps

Figure 10 presents Australian Superannuation balances and coverage rates among different demographic groups.⁸ First Australians have significantly lower superannuation balances and coverage than the general population due to lower working life incomes (Commonwealth Treasury 2020). First Australians also have lower life expectancies, resulting in shorter retirements. The Age Pension and other support payments reduce income inequality between First Australians and non-indigenous people.

Figure 10 Superannuation balance by group

A\$ balance for people who are not yet retired, 2018



Source: Clare (2022)

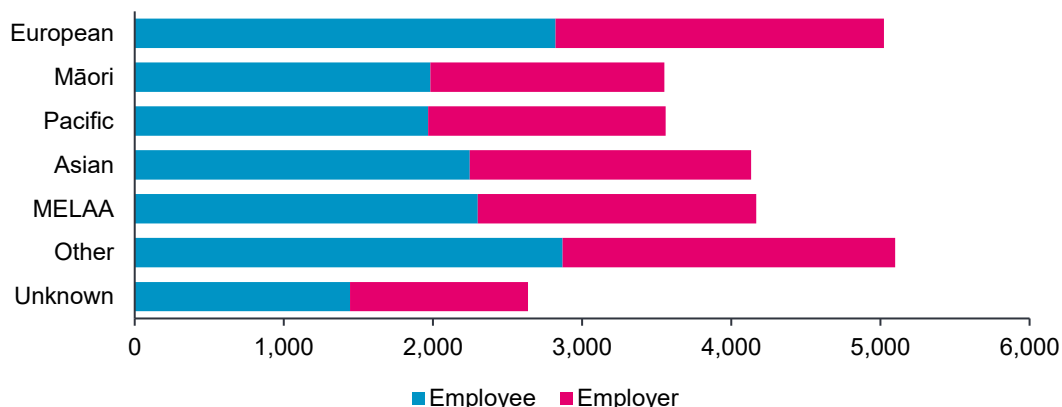
⁷ For more detail on the drivers of the KiwiSaver contributions and potential solutions, see Bealing and Leung (2022).

⁸ The gender gap presented here is larger than the 25% figure mentioned earlier as the data is from a different period and does not include those who are already retired.

Data limitations make it difficult to compare ethnic gaps in New Zealand with those in Australia. KiwiSaver providers do not collect information on ethnicities, making it impossible to quantify the effect on KiwiSaver balances. As shown in Figure 11, European employees contribute around 40% more to KiwiSaver each year than Māori and Pacific employees, reflecting both higher earnings and higher contribution rates.

Figure 11 KiwiSaver contributions by ethnicity

NZ\$ average annual contributions for those with non-zero contributions, year ending March 2023



Source: Kirkpatrick, Meehan, and Pacheco (2024)

3.3 Sustainability

This section discusses the financial sustainability of the Australian and New Zealand retirement income systems, that is, how affordable they are for society over the long term.

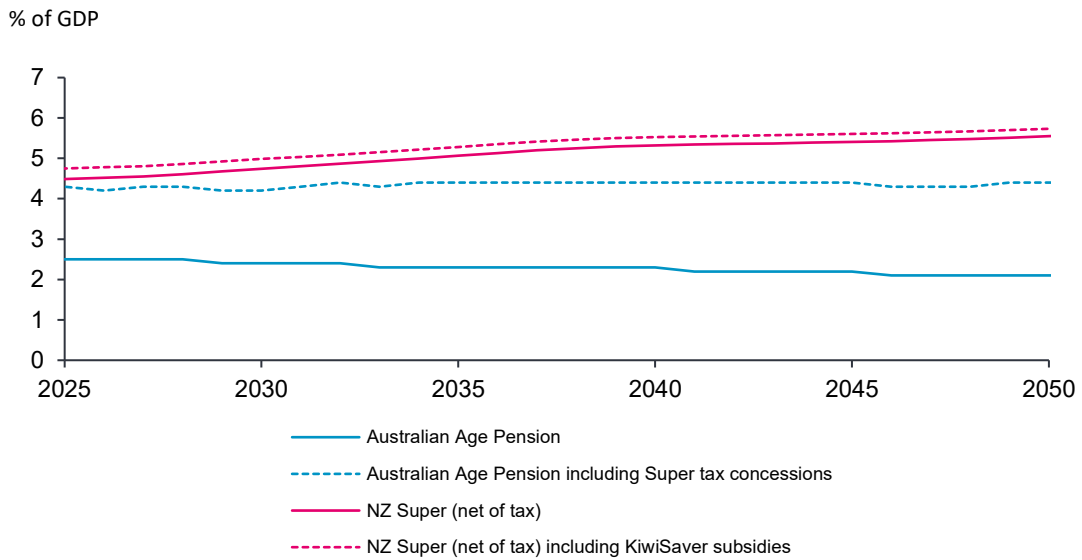
3.3.1 Pension spending

Figure 12 presents projected government pension spending as a share of GDP. Spending on NZ Super relative to the size of the economy is much larger than spending on the Australian Age Pension due to its universal coverage. After accounting for tax, spending on NZ Super is expected to rise over time from 4.1% of GDP in 2020 to 5.5% in 2050 as the population ages. Spending on the Age Pension is expected to decline from 2.5% of GDP to 2.1% in 2050 as growing superannuation balances mean fewer people will qualify.

Another important government cost is revenue lost to Superannuation tax concessions or KiwiSaver subsidies. In Australia, lost revenue from tax concessions is expected to rise from around 2.0% of GDP in 2020 to around 2.5% in 2050, exceeding the cost of Age Pension expenditure. Tax concessions reduce Age Pension expenditure by contributing to higher superannuation balances; however, the cost of tax concessions outweighs these benefits. As noted previously, tax concessions increase inequality as they provide greater benefits to people with higher incomes. In New Zealand, KiwiSaver subsidies currently account for just 0.3% of GDP.

Assuming government revenue and borrowing remain constant as a percentage of GDP, the increased costs of the retirement income system in New Zealand over time will result in fewer funds being available for other public services.

Figure 12 Government spending



Note: Age pension spending includes service pension

Sources: Commonwealth Treasury (2023), New Zealand Treasury (2024; 2021)

3.3.2 Sovereign wealth funds

Australia and New Zealand have both invested in sovereign wealth funds to help meet rising pension costs in the future.

The Australian Future Fund was established in 2006. It is intended to “strengthen the Commonwealth’s long-term financial position by making provision for unfunded superannuation liabilities that will become payable during a period when an ageing population is likely to place significant pressure on the Commonwealth’s finances” (Australia Department of Finance 2024). The government contributed a total of A\$60.5 billion when the fund was established. It can withdraw from the fund from 2020 but does not plan to do so until at least 2026-27. The Future Fund currently has a balance of A\$225 billion or 8.4% of GDP (Future Fund Management Agency 2024).

The NZ Super Fund was established in 2001 to “partially pre-fund the future cost of New Zealand Superannuation to reduce the burden of the ageing population on future taxpayers” (The Guardians of New Zealand Superannuation 2024a). The government typically contributes around NZ\$2 billion a year, and it is expected to start withdrawing in the 2030s. The fund currently has a balance of NZ\$78 billion (The Guardians of New Zealand Superannuation 2024b), amounting to around 19% of GDP. According to Treasury projections (2024), NZ Super Fund will smooth the increase in NZ Super expenditure, but it will not fully fund it.⁹ When annual withdrawals peak in the 2080s, they are expected to reach around 0.9% of GDP. At this point, withdrawals and tax payments will account for around 20% of net spending on NZ Super.

⁹ The Treasury’s assumptions appear conservative. The Treasury assumes that the NZ Super Fund will earn an annual rate of return of 7.7% in 2025, declining to 6.8% from 2080 onwards. By comparison, the NZ Super Fund has achieved a return of 9.8% since inception (The Guardians of New Zealand Superannuation 2024a). Higher returns will enable NZ Super Fund to cover a higher proportion of NZ Super expenditure.

3.4 Impact on savings and investment

Retirement income systems play important roles in raising aggregate household savings and deepening domestic capital markets. This section discusses the impact of the Australian and New Zealand retirement income systems on savings and investment.

3.4.1 Household savings

In standard economic theories of saving (see Box 5), the amount households choose to save depends on their lifetime income. As the Australian Age Pension and NZ Super provide income in retirement, they reduce the incentive to save. NZ Super is likely to have a larger effect due to its universal coverage.

Box 5 Economic theories of saving

Economists have put forward different theories about how households decide how much to save.

Friedman's permanent income hypothesis states that saving decisions are based on long term expected income rather than current income. This indicates that policies that improve long term income security, such as the Australian Age Pension and NZ Super, might reduce private savings.

According to Modigliani's lifecycle hypothesis, households save to smooth consumption over their lifetime, saving during working years and dissaving during retirement. However, evidence suggests that households smooth consumption less than the theory predicts. Australian Superannuation and KiwiSaver are designed to encourage more consumption smoothing.

More recently, behavioural economists have proposed that psychological factors like self-control, mental accounting, and default options significantly impact savings decisions. KiwiSaver draws on behavioural insights by using nudges such as automatic enrolment and default contribution rates.

Standard theories also predict that an increase in contributions to retirement savings schemes balance does not translate to an increase in savings, as households will offset the increase by reducing other forms of savings or increasing borrowing (the substitution effect). However, financially constrained households are less likely to be able to offset savings, and households' decisions may be influenced by behavioural biases or nudges.

Evidence from the Australian Superannuation Guarantee shows that while households do substitute away from other forms of savings to some extent, the scheme has a positive impact on household savings overall. Each additional dollar of compulsory employer contributions leads to an increase in household savings of around 60 cents on average, with a larger effect in larger in financially constrained households (Ruthbah and Pham 2020; Connolly and Kohler 2004).

KiwiSaver has had a much smaller effect on household savings than Australian Superannuation for several reasons. First, New Zealanders have lower wages, preventing them from saving as much. Second, KiwiSaver is much younger than Australian Superannuation, so there has been less time for savings to accumulate. Third, the average annual contribution of an active account member is around 7% of average wages,¹⁰ compared to 12% in Australia (OECD 2023). Fourth, the substitution effect appears to be much stronger in New Zealand – data from the first three years of KiwiSaver suggests that each dollar of employee contributions increases savings by an average of 36 cents (Law, Meehan, and Scobie 2017).

¹⁰ Author's estimate based on total employee and employer contributions of \$9,424 million and 1.8 million contributing paid employees for the year ended June 2024 (Financial Markets Authority 2024).

The stronger substitution effect in New Zealand is most likely due to the lack of mandatory contributions. Financially constrained households find it difficult to borrow, so mandatory contributions force them to increase their savings, reducing the size of the substitution effect (Ruthbah and Pham 2020). When contributions are voluntary, financially constrained households have the option of reducing their contributions or opting out.

3.4.2 National savings

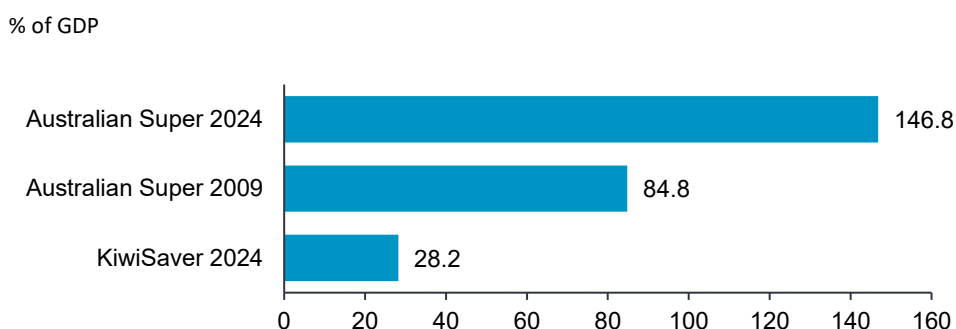
As mentioned in the previous section, the Australian Age Pension and NZ Super reduce households' incentive to save for retirement. Because they are funded through taxation or borrowing, they also reduce government savings (although some economic theories imply the reduction in government savings will be offset by an equal increase in household savings – see Box 6). Both factors reduce national savings.

Box 6 Ricardian equivalence

The theory of Ricardian equivalence states that the government's spending decisions do not affect the overall level of national savings. If the government increases spending, households will increase private savings, anticipating future tax increases to pay off government debt. If Ricardian equivalence holds, increased government pension spending may be offset by increased private saving. However, the theory depends on strong assumptions about foresight and rational behaviour, and most economists believe it only holds in part.

Australia's national savings rate is much higher than New Zealand, at 25% of GDP compared to 17% (International Monetary Fund 2024), and Australian Superannuation is thought to be an important contributor (Gruen and Soding 2011). As Figure 13 shows, Australian Superannuation funds under management are over five times as large as KiwiSaver relative to the size of the economy. This is not surprising, considering that the scheme has been running for much longer and has higher contribution rates. Even in 2009, when Australian Superannuation was the same age as KiwiSaver is today, funds under management were three times as large. Superannuation balances account for 23.8% of household net wealth in Australia, compared to just 4.9% for KiwiSaver in New Zealand.¹¹

Figure 13 Funds under management



Source: NZIER calculations based on data from the Australian Prudential Regulation Authority (2024) and Reserve Bank of New Zealand (2024)

¹¹ Authors' calculations using data from Australian Prudential Regulation Authority (2024), Australian Bureau of Statistics (2024a), Reserve Bank of New Zealand (2024), and Stats NZ (2024b).

The impact of Australian Superannuation and KiwiSaver on national savings is likely to be less than the growth in superannuation assets indicates. As we have discussed, a portion of the income directed to the superannuation funds has been diverted from other savings, so each dollar in superannuation leads to less than a dollar in household savings. Moreover, the cost of tax concessions and subsidies contributes to increased government borrowing, offsetting the increase in household savings.¹²

Assuming that Australian Superannuation increases private savings by 70% and ignoring the effect of public savings, it is estimated to contribute to national savings by around 2.5–3.0% of GDP (Gruen and Soding 2011).

Data from the first three years of KiwiSaver suggests that, after taking into account tax concessions and government contributions, the long term effect on net national savings was marginal or even negative (Law, Meehan, and Scobie 2017). This study is quite old, and the effect of KiwiSaver on national savings may be more positive now that it is better established and less heavily subsidised.

3.4.3 Investment

National savings can raise economic growth by increasing domestic investment (see Box 7).

Box 7 Savings, investment and growth

According to the Solow growth model, the long run level of GDP per capita is determined national savings alongside technological progress and population growth. Higher savings leads to more investment, raising the capital stock, resulting in higher labour productivity and output. The model predicts that there is a golden rule level of national savings that maximises long-term living standards. Economists generally believe that national savings is below the golden rule, implying that the government can increase long term economic growth through policies that encourage savings, such as the Australian Superannuation Guarantee.

The relationship between savings and investment is more complex in small economies like Australia and New Zealand, where capital can flow freely across borders. In these cases, an increase in savings rates may not directly translate into an increase in domestic investment. Instead, savings could be invested abroad, or domestic investment could be funded by foreign capital.

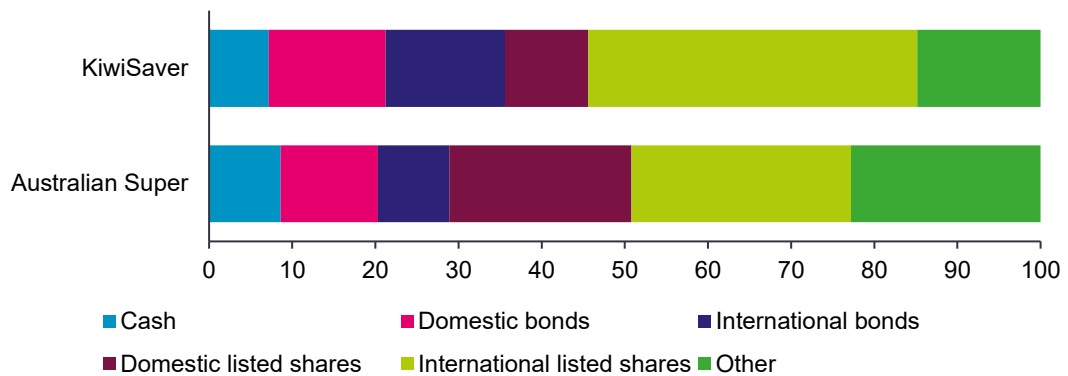
Looking at asset allocation can help reveal how retirement savings schemes affect investment patterns. As Figure 14 shows, 33.6% of Australian Superannuation assets are invested in domestic bonds and shares, compared to 24.1% for KiwiSaver. This difference is unsurprising given New Zealand's smaller size and more limited range of investment options, which makes portfolio diversification challenging.

Despite lower savings rates, New Zealand has more overall investment than Australia, at 26% of GDP compared to 24% (International Monetary Fund 2024). This discrepancy is likely tied to New Zealand's smaller size and greater reliance on foreign investment.

¹² Given Australian and New Zealand governments both aim to achieve budget surpluses over the long-term (The Guardians of New Zealand Superannuation 2024b), it could be argued that the cost to the government will be offset by reduced spending in other areas, keeping public savings constant.

Figure 14 Asset allocation

% of total balance



Source: Reserve Bank of New Zealand (2024); Australian Prudential Regulation Authority (2024)

3.5 Impact on labour and wages

The design of retirement savings systems can impact the wages that people are paid and the incentives for older people to remain in the workforce. This section discusses the labour market impacts of the Australia and New Zealand retirement income systems.

3.5.1 Labour supply

Encouraging older people to remain working for longer has benefits for older workers themselves, their employers, the government, and wider society (see Box 8).

Box 8 The benefits of working for longer

Encouraging older people to remain in work long has multiple benefits (OECD 2006):

- It boosts labour force growth and helps offset the negative impact of population ageing on economic growth
- It improves public finances through reduced welfare expenditure and increased tax revenue
- It helps employers by giving them more time to replace retiring workers with new entrants
- It can improve workers welfare by providing social connection and enabling them to attain better living standards.

On the other hand, older people staying in the workforce for longer may be a sign that they lack the financial security to retire.

Under the Australian Age Pension, the income that a pensioner earns can reduce their pension income. While the first A\$11,800 of annual work income is not counted under the pension income test, income over this limit reduces the pension payment by 50 cents for every dollar. After accounting for tax, this amounts to an effective marginal tax rate of 69% (Davidson 2023).

NZ Super payments are not affected by work income, so any income is simply taxed at the marginal tax rate (between 17.5% and 33%). As a result, older people have much stronger incentives to work.



In Australia, financial security is the main factor that influences people’s decisions about when to retire, and “reached retirement age or eligible for superannuation” is the top reason retirees choose to stop working (Australian Bureau of Statistics 2024c). The eligibility age for Australian Age Pension is slightly higher than NZ Super (67 vs 65), and evidence suggests that changes to the eligibility age have caused people to retire later.¹³ Australians can access their Superannuation savings before New Zealanders can access their KiwiSaver (60 vs 65), giving them the ability to retire before they reach the eligibility age.

These factors explain New Zealand’s older effective retirement age¹⁴ (Figure 15) and higher labour force participation rate among people 65 years and over (Figure 16). This has implications for economic growth. Australia’s Commonwealth Treasury has estimated that if participation rates increased by 5 percentage points by 2040, real GDP per capita would be 2.4% higher (Commonwealth Treasury 2010).¹⁵

Figure 15 Average effective age of retirement

Years, 2022



Source: OECD (2023)

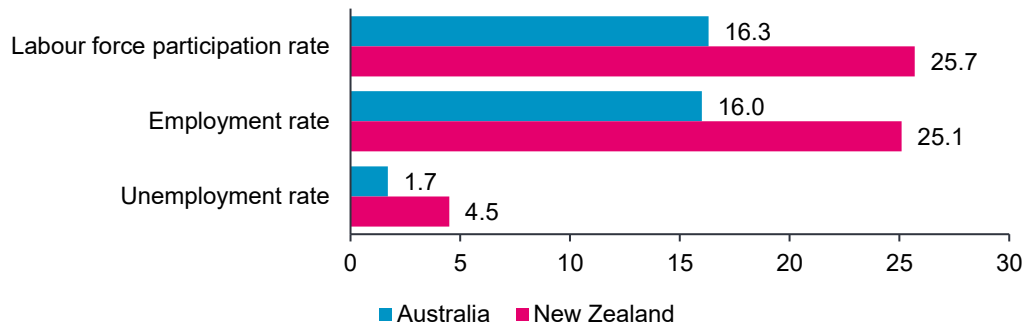
¹³ Atalay and Barrett (2015) find that a one year increase in eligibility rates increasing the labour force participation rate of women aged 60 to 64 years by 12 percentage points. Morris (2019) finds that when adjusting for pre-existing trends in female participation rates, effect falls to 4 percentage points and becomes statistically insignificant. Morris (2022) finds a marginally significant effect of 3 percentage points.

¹⁴ The effective retirement age is defined as the average age of exit from the labour force for workers aged 40 and over.

¹⁵ Similarly, Chomick and Piggot (2012) calculate that – assuming GDP per hour worked is constant – if Australia had the same mature-age participation as NZ, GDP in 2012 would have been 4% higher.

Figure 16 Labour market indicators for people 65 years and over

June 2024 quarter



Note: The labour force participation rate is the number of people in the labour force (people employed or seeking work) divided by the total population. The employment rate is the number of employed people divided by the total population. The unemployment rate is the number of unemployed people divided by the number of people in the labour force.

Source: Australia Bureau of Statistics (2024b), Stats NZ (2024a)

3.5.2 Wage growth

Whereas the Australian Superannuation Guarantee involves a mandatory employer contribution of 11.5% (rising to 12% next year), the default KiwiSaver employer contribution is 3.0%. While some argue that the higher employer contribution benefits employees by reducing their financial burden, others argue that the cost will be passed on in the form of lower wages (see Box 9)

Box 9 The economic incidence of employer contributions

Economic theory distinguishes between the statutory incidence of a policy (who is legally required to pay) and its economic incidence (who ultimately bears the cost). When employers are required to contribute to retirement savings programmes, they might pass on the cost to employees by reducing their wages or absorbing it themselves.

Traditionally, economists have considered compulsory employer contributions to be like a payroll tax, which means that economic incidence primarily falls on the group that is least responsive to price changes. If labour demand is relatively elastic compared to supply – meaning employers are more willing to adjust hiring levels in response to changing wages than workers are to change the amount they work – then the cost will be borne disproportionately by workers.

Summers (1989) shows that, in the long run, if workers value employer contributions to their retirement savings accounts, then they will be willing to accept lower wages in exchange. This means that the entire cost of the mandated benefit will be shifted to workers through lower wage growth, regardless of the relative elasticities of labour supply and demand.



Evidence from the Australian Superannuation Guarantee shows that mandatory employer contributions lead to lower wages. Studies find that around 80% of the increase in the Superannuation Guarantee is passed on to workers through lower wage growth (Coates, Cowgill, and Mackey 2020; Breunig and Sobeck 2020).¹⁶

The labour decisions of older people also affect wage growth. Higher participation rates for older workers in New Zealand raise labour supply overall, reducing wage growth for young and old alike.

3.6 Assessment summary

Table 3 provides a high-level summary of our assessment of the two systems.

Table 3 Assessment summary

Focus area	Summary
Adequacy	On average, New Zealand’s system appears to provide higher incomes relative to the working age population
Equity	While New Zealand’s system reduces income inequality in retirement, Australia’s system perpetuates inequalities from working years
Sustain-ability	Government spending on the system is expected to increase over time in New Zealand, but remain constant in Australia
Impact on savings and investment	Australia’s system has a larger effect on savings due to compulsory contributions and higher rates
Impact on labour and wages	Australia’s system discourages working, resulting in lower labour force participation

4 Drawing lessons

We have identified seven key lessons from comparing the Australian and New Zealand retirement income systems. All systems have their pros and cons, and different people have different views about what is important. These lessons reflect our general opinion based on our assessment of the two systems.

Each system needs to be considered as a whole. It is not appropriate to compare parts of the two systems without looking at how they work as a whole. At first glance, the fact that Australian Superannuation had more funds under management in 2009 than KiwiSaver does in 2024 appears to indicate it is a more successful scheme. However, this ignores the fact that Australian Superannuation operates in a different system with different objectives. The universal nature of NZ Super means New Zealanders tend to be less reliant on KiwiSaver, so high balances are not as important for ensuring adequate income in retirement.

¹⁶ Some studies using macroeconomic data, such as Stanford (2019) and Taylor (2019) do not find a correlation between wage growth and the superannuation guarantee. However, these studies have methodological issues and are likely to be less robust than studies using individual or firm level data.

The different goals and structures of the two retirement systems reflect different cultural attitudes and histories. New Zealand's retirement income system has historically emphasised universal benefits and equality, while Australia has leaned more towards targeted support. These differences may stem from different cultural attitudes, social priorities, and ethnic diversity between the two nations. New Zealanders voted against an Australian-style compulsory savings scheme twice, both through the election of the Muldoon government in 1975 and through the 1997 referendum. The Australian system cannot be transferred to New Zealand wholesale and needs to be adapted to the local context.

A greater reliance on private savings can perpetuate inequalities. Because Australia's retirement income system relies on private savings, it perpetuates inequalities from working years. In contrast, NZ Super leads to more equal incomes in retirement. Any attempt to increase the role of private savings needs to build in ways of reducing inequalities. One example recently implemented in both countries is the government covering employer contributions during paid parental leave.

The simpler design of New Zealand's system helps prevent unintended consequences. Australia's superannuation tax concessions add complexity and cost, but disproportionately benefit the wealthy. The Age Pension means test also discourages older people from working. The targeting is imperfect – not all who need the Age Pension receive it – leading to increased fraud risk and higher compliance costs. These features of the Australian system create winners and losers, turning them into contentious political battlegrounds.

Higher contributions to KiwiSaver could be achieved through an incremental approach. Australia's approach to ratcheting up the Superannuation Guarantee rate over time has allowed it to achieve much higher individual retirement savings balances than New Zealand. Because the economic incidence of employee and employer contributions is similar, there is no obvious advantage of having solely employer contributions from an economic point of view – however, they may make the scheme more politically palatable. It is likely that New Zealand could also achieve higher KiwiSaver balances by increasing contributions over time, and it may be possible to do this through defaults rather than compulsion. However, rates as high as Australia are unlikely to be desirable, given the availability of NZ Super. Encouraging people to save too much for their future reduces their living standards today. Modelling indicates that setting employee and employer contribution rates to 4% would enable median income earners to achieve a 70% replacement rate for 20 to 30 years (Retirement Commission 2024).

Australia's system places a lower burden on future generations. New Zealand's retirement income system is more costly for the government, although the difference is much less pronounced after accounting for the cost of Australia's tax concessions. Whereas Australia's system is mainly pre-funded, meaning that each individual saves for their own future, New Zealand's system is mainly pay-as-you-go, meaning that current workers' taxes are used to fund the benefits of current retirees. In the context of an ageing population, this intergenerational transfer places a high burden on young people and future generations (Coleman 2012). This is mitigated by the NZ Super Fund, which partly pre-funds the projected increase in NZ Super spending.



There is no silver bullet when it comes to promoting economic growth. Although it is difficult to demonstrate a causal relationship, the introduction of retirement savings schemes may have supported the development of the financial services industry in both countries. As a result of KiwiSaver, more people invest in shares, making them more diversified and better protected against economic shocks. An increased supply of investment may make it easier for local businesses to raise capital, contributing to economic growth. These effects could be stronger in Australia due to the larger funds under management for Australian Superannuation compared to KiwiSaver. On the other hand, higher labour force participation among older people in New Zealand is likely to have a positive impact on economic growth.



5 References

- Atalay, Kadir, and Garry F. Barrett. 2015. 'The Impact of Age Pension Eligibility Age on Retirement and Program Dependence: Evidence from an Australian Experiment'. *Review of Economics and Statistics* 97 (1): 71–87. https://doi.org/10.1162/REST_a_00443.
- Australia Department of Finance. 2024. 'Future Fund'. 19 June 2024. <https://www.finance.gov.au/government/australian-government-investment-funds/future-fund>.
- Australian Bureau of Statistics. 2024a. 'Australian National Accounts: Finance and Wealth, June 2024'. <https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-finance-and-wealth/latest-release>.
- . 2024b. 'Labour Force Survey'. <https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia-detailed/latest-release>.
- . 2024c. 'Retirement and Retirement Intentions, Australia, 2022-23 Financial Year'. <https://www.abs.gov.au/statistics/labour/employment-and-unemployment/retirement-and-retirement-intentions-australia/latest-release>.
- Australian Department of the Prime Minister and Cabinet. 2024. 'Paying Super on Government Paid Parental Leave to Enhance Economic Security and Gender Equality'. 7 March 2024. <https://ministers.pmc.gov.au/gallagher/2024/paying-super-government-paid-parental-leave-enhance-economic-security-and-gender-equality>.
- Australian Prudential Regulation Authority. 2024. 'Quarterly Superannuation Performance Statistics: September 2004 to June 2024'. <https://www.apra.gov.au/quarterly-superannuation-statistics>.
- Australian Taxation Office. 2024. 'Taxation Statistics 2021-22: Individuals Statistics'. <https://www.ato.gov.au/about-ato/research-and-statistics/in-detail/taxation-statistics/taxation-statistics-2021-22/statistics/individuals-statistics>.
- Bealing, Michael, and Christina Leung. 2022. 'KiwiSaver Equity for Women: Building Long-Term Financial Wellbeing'. NZIER. <https://www.nzier.org.nz/publications/kiwisaver-equity-for-women-building-long-term-financial-wellbeing>.
- Breunig, Robert, and Kirsten Sobek. 2020. 'The Economic Incidence of Superannuation'. Canberra: Crawford School of Public Policy, Australian National University.
- Chomik, Rafal, and John Piggott. 2012. 'Mature-Age Labour Force Participation: Trends, Barriers, Incentives, and Future Potential'. CEPAR briefing paper 2012/01. ARC Centre of Excellence in Population Ageing Research. <https://core.ac.uk/reader/30676810>.
- Clare, Ross. 2022. 'Developments in Account Balances: Superannuation Account Balances for Various Demographic Groups'. The Association of Superannuation Funds of Australia.
- Coates, Brendan, Matt Cowgill, and Will Mackey. 2020. 'No Free Lunch: Higher Superannuation Means Lower Wages'. Melbourne, Victoria: Grattan Institute.
- Coleman, Andrew. 2012. 'Intergenerational Transfers and Public Policy'. Wellington: New Zealand Treasury. <https://www.wgtn.ac.nz/cpf/publications/pdfs/1.13-Coleman-paper.pdf>.
- Commonwealth Treasury. 2010. 'Intergenerational Report 2010: Australia to 2050 - Future Challenges'. https://treasury.gov.au/sites/default/files/2019-03/IGR_2010.pdf.
- . 2020. 'Retirement Income Review: Final Report'.
- . 2023. 'Intergenerational Report 2023: Australia's Future to 2063'.
- Connolly, Ellis, and Marion Kohler. 2004. 'The Impact of Superannuation on Household Saving'. Research Discussion Paper 2004–01. Reserve Bank of Australia.
- Davidson, Peter, Bruce Bradbury, and Melissa Wong. 2018. 'Poverty in Australia: 2018'. Australian Council of Social Service and UNSW Sydney. https://www.acoss.org.au/wp-content/uploads/2018/10/ACOSS_Poverty-in-Australia-Report_Web-Final.pdf.



- . 2024. 'Inequality in Australia 2024: Who Is Affected and How'. Australian Council of Social Service and UNSW Sydney. https://povertyandinequality.acoss.org.au/wp-content/uploads/2024/04/Inequality-Report-2024_who-is-affected-and-how.pdf.
- Davidson, Saxon. 2023. 'Unprecedented Nationwide Jobs Crunch: Geographic Analysis of Worker Shortages in Australia'. Institute of Public Affairs.
- Financial Markets Authority. 2024. 'KiwiSaver Annual Report 2024'. <https://www.fma.govt.nz/assets/Reports/KiwiSaver-Annual-Report-2024.pdf>.
- Future Fund Management Agency. 2024. 'Portfolio Update at 30 June, 2024'. <https://www.futurefund.gov.au/investment/investment-performance/portfolio-updates>.
- Gill, Derek, Mike Hensen, and Peter Wilson. 2018. 'Retirement Income Policies in Australia and New Zealand: Facing the Fiscal Challenge from an Ageing Population'. NZIER. <https://www.nzier.org.nz/publications/retirement-income-policies-in-australia-and-new-zealand-facing-the-fiscal-challenge-from-an-ageing-population>.
- Gruen, David, and Leigh Soding. 2011. 'Compulsory Superannuation and National Saving'. *Economic Roundup*, no. 3.
- Guest, Ross. 2013. 'Comparison of the New Zealand and Australian Retirement Income Systems: Background Paper Prepared for the 2013 Review of Retirement Income Policy by the Commission for Financial Literacy and Retirement Income'. <https://retirement.govt.nz/policy-and-research/retirement-income-policy-review/2013-review-of-retirement-income-policies>.
- International Monetary Fund. 2024. 'World Economic Outlook Database, April 2024'. <https://www.imf.org/en/Publications/WEO/weo-database/2024/April>.
- Katz, Adrian, and Sarah Hogan. 2024. 'Perceptions of Fairness in New Zealand: Phase 1 Report'. NZIER. <https://www.nzier.org.nz/publications/perceptions-of-fairness-in-new-zealand>.
- Kirkpatrick, Linda, Lisa Meehan, and Gail Pacheco. 2024. 'Distributional Analysis of KiwiSaver Contributions'. Auckland: New Zealand Policy Research Institute. <https://assets.retirement.govt.nz/public/Uploads/Policy/Distributional-analysis-of-KiwiSaver-contributions.pdf>.
- Knox, Dr David. 2009. 'What Objectives Are Relevant in Setting Retirement Income Policy?' Institute of Actuaries of Australia. <https://actuaries.asn.au/Library/Events/SPF/2009/David%20Knox%20-%20Objectives%20in%20retirement%20income%20final.pdf>.
- Law, David, Lisa Meehan, and Grant M. Scobie. 2017. 'KiwiSaver: An Evaluation of a New Retirement Savings Scheme'. *New Zealand Economic Papers* 51 (3): 262–80. <https://doi.org/10.1080/00779954.2016.1196719>.
- Mercer. 2024. 'Mercer CFA Institute Global Pension Index 2024'. <https://www.mercer.com/insights/investments/market-outlook-and-trends/mercercfa-global-pension-index/>.
- Morris, Todd. 2019. 'Large Response to Delayed Eligibility or a Pre-Existing Trend in Female Participation? Re-Examining an Australian Pension Reform'. SSRN Scholarly Paper. Rochester, NY. <https://doi.org/10.2139/ssrn.3382046>.
- . 2022. 'The Unequal Burden of Retirement Reform: Evidence from Australia'. *Economic Inquiry* 60 (2): 592–619. <https://doi.org/10.1111/ecin.13034>.
- New Zealand Treasury. 2021. 'Long-Term Fiscal Model for He Tirohanga Mokopuna 2021'. <https://www.treasury.govt.nz/publications/ltfm/long-term-fiscal-model-he-tirohanga-mokopuna-2021>.
- . 2024. 'New Zealand Superannuation Fund Contribution Rate Model - BEFU 2024'. <https://www.treasury.govt.nz/publications/new-zealand-superannuation-fund-contribution-rate-model-befu-2024>.
- OECD. 2006. 'Live Longer, Work Longer'. Ageing and Employment Policies. OECD. <https://doi.org/10.1787/9789264035881-en>.



- . 2023. *Pensions at a Glance 2023: OECD and G20 Indicators*. OECD Pensions at a Glance. OECD. <https://doi.org/10.1787/678055dd-en>.
- Perry, Bryan. 2019. 'Household Incomes in New Zealand: Trends in Indicators of Inequality and Hardship 1982 to 2018'. Wellington: Ministry of Social Development.
- Reserve Bank of New Zealand. 2024. 'KiwiSaver: Assets by Sector'. <https://www.rbnz.govt.nz/statistics/series/non-banks-and-other-financial-institutions/kiwisaver-assets-by-sector>.
- Retirement Commission. 2021. 'Purpose Statement for New Zealand's Retirement Income System'. 2021–01. Policy Papers. <https://assets.retirement.govt.nz/public/Uploads/Retirement-Income-Policy-Review/CFFC-Policy-Papers-2021-01.pdf>.
- . 2024. 'KiwiSaver - Opportunities for Improvement'. <https://assets.retirement.govt.nz/public/Uploads/Research/2024/KiwiSaver-Opportunities-for-Improvement.pdf>.
- Ruthbah, Ummul, and Nga Pham. 2020. 'Household Savings and the Superannuation Guarantee'. Monash Centre for Financial Studies.
- Sin, Isabelle, Steven Stillman, and Richard Fabling. 2017. 'What Drives the Gender Wage Gap? Examining the Roles of Sorting, Productivity Differences, and Discrimination.' Working Paper 17–15. Motu Economic and Public Policy Research.
- Stanford, Jim. 2019. 'The Relationship Between Superannuation Contributions and Wages'. The Centre for Future Work at the Australia Institute.
- Stats NZ. 2024a. 'Household Labour Force Survey: June 2024 Quarter'. <https://www.stats.govt.nz/information-releases/labour-market-statistics-june-2024-quarter/>.
- . 2024b. 'National Accounts (Income, Saving, Assets, and Liabilities): March 2024 Quarter'. <https://www.stats.govt.nz/experimental/national-accounts-income-saving-assets-and-liabilities-march-2024-quarter/>.
- Summers, Lawrence H. 1989. 'Some Simple Economics of Mandated Benefits'. *The American Economic Review* 79 (2): 177–83.
- Symes, Luke. 2022. 'Household Housing: Tenure, Costs, and Trends'. New Zealand Treasury. https://assets.retirement.govt.nz/public/Uploads/Retirement-Income-Policy-Review/2022-RRIP/ToR7-slides-Household-housing-tenure_-costs_-trends.pptx.
- Taylor, Kyle. 2019. 'Does Higher Superannuation Reduce Workers' Wages?' Research Paper. The McKell Institute.
- The Guardians of New Zealand Superannuation. 2024a. 'Media Fact Sheet'.
- . 2024b. 'Monthly Performance Data'. <https://nzsuperfund.nz/performance/investment-performance/monthly-performance-data/>.
- Trollip, Ben. 2024. 'KiwiSaver Demographic Study'. Melville Jessup Weaver.
- United Nations. 2024. 'World Population Prospects 2024'. <https://population.un.org/wpp/>.

