

# ***SIMPLE, EFFECTIVE AND (RELATIVELY) INEXPENSIVE: NEW ZEALAND RETIREMENT PROVISION IN THE INTERNATIONAL CONTEXT***

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## **INTRODUCTION**

Issues of pension reform are being discussed in nearly all Organisation for Economic Co-operation and Development (OECD) countries, with population ageing a significant driver.<sup>1</sup> OECD state pensions in the past were generally financed on a pay-as-you-go basis (PAYG<sup>2</sup>). PAYG financing is particularly susceptible to population ageing, which alters the balance between the numbers of those engaged in the paid workforce and those retired.

On the other hand, full funding of retirement (where member and employer contributions are made to an investment account, and the investment return depends on market conditions and is not usually guaranteed) also presents difficulties, because it too relies on the future workforce producing enough for the consumption needs of the retired, and paper promises can be eroded by inflation. There is an emerging consensus that some mix of PAYG and full funding of retirement provision is likely to be optimal.

Australia is now leading the way, with mandatory, fully funded, defined contribution<sup>3</sup> (DC) arrangements supplemented by a residence-based, means-tested age pension. Others – notably Denmark, Hungary, Poland and the Slovak Republic – have moved to include such arrangements as a significant component of their policy. Both voluntary and mandatory occupational DC schemes get state subsidies (usually through the tax system) in a number of countries, with Ireland, Australia, Canada, the United States, Iceland and the United Kingdom (UK) spending the most as a percentage of Gross Domestic Product (GDP), according to OECD data.

This international interest in pension reform has given rise to a considerable amount of research and analysis. In this paper, New Zealand's state retirement savings arrangements are compared to those of other countries. The criteria applied here are:

- simplicity – how easily is the framework understood, how straightforward is it for people to understand what they will get, and how much administration is required?
- effectiveness – how do the payment outcomes relate to levels of income prior to retirement (replacement rates), and how does the framework affect those who want to stay on in paid work after attaining the pension eligibility age?

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<sup>1</sup> For the countries in question, population ageing is driven largely by the decrease in fertility rates in the second half of the last century, combined with the marked decrease in mortality rates that occurred in the first half. Continuing decreases in mortality, or longevity improvement, are an additional component of population ageing.

<sup>2</sup> Under PAYG, benefits for today's retirees are paid from current tax revenues. Assets are not set aside, although PAYG may coexist with some degree of pre-funding, such as in the NZ Superannuation Fund.

<sup>3</sup> Contributions to DC schemes are set as a fixed percentage of wages.

- cost – what is the cost as a percentage of GDP?

The two components of the New Zealand retirement policy framework that put money in people's hands at retirement are NZ Superannuation and KiwiSaver. This paper looks at the combination of these components as a whole, including outcomes from NZ Superannuation (current) and KiwiSaver (projected), and compares these with current designs and outcomes in 26 other OECD countries.<sup>4</sup> Data for the comparisons are taken from OECD and European Union sources.

## SIMPLE

NZ Superannuation is generally acknowledged to be the simplest retirement pension set-up in the OECD. There is no means testing, no contributions history to track, and only a fairly basic residential requirement to meet. There are naturally some complications in the machinery, such as the interface with social security pensions from overseas and the annual adjustment process, but by and large the overriding principle – that New Zealanders in retirement should have enough income to belong to and participate in their society – is straightforward, and its current expression as “65 at 65” is eminently comprehensible.<sup>5</sup>

Other OECD countries generally have a minimum pension for the old, but set at a poverty alleviation level, and it is usually means tested. The primary state pension is frequently earnings related to a greater or lesser degree, and even where it is a flat rate, the full rate is payable only where there is a full contribution history. It can be difficult for people to ascertain their likely entitlements; the UK's Basic Pension plus State Second pension plus Pension Credit is especially complicated as a case in point.

The design concept of KiwiSaver is also simple. Contributions of 2%, 4% or 8% of salary to the scheme are deducted from employee earnings, an employer contribution of 2% of salary is added, and these are transmitted through the tax collection system to providers to accumulate to a lump sum available from age 65 or later to supplement NZ Superannuation.<sup>6</sup>

It is true that KiwiSaver could have been made simpler. For example, making it compulsory rather than using auto-enrolment would have removed the complexity inherent in the opt-out and opt-in choices. Having a maximum of, say, three providers with only four (or perhaps even fewer) investment choices would also have made things

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<sup>4</sup> South Korea, Mexico and Turkey are excluded because their pension systems have relatively low coverage as yet compared to the other OECD countries, and hence their costs as a percentage of GDP are relatively low.

<sup>5</sup> “65 at 65” is the shorthand for the legislated net-of-tax payment to a qualifying married couple of 65% of the net-of-tax average wage (32.5% each), payable from age 65 (subject to 10 years of residency in New Zealand, including five years after attaining age 50). At the time of writing this has become “66 at 65”, since there is effective bipartisan agreement to have the net married couple rate no less than 66% of net average wage.

<sup>6</sup> There is scope for the self-employed and others to make voluntary contributions, although these do not attract an employer contribution.

much simpler. And open competition among providers is adversely affected by the present inability to compare their charges in an easily comprehensible fashion. There have also proved to be some difficulties in conveying how it works in practice. The capped subsidy is misnamed as a “tax credit”, which does not assist comprehension. Transition arrangements for existing superannuation schemes have also added to the complexity.

The preferred policy, however, was to give New Zealanders as much choice as possible. With the benefit of an established and well-respected source of financial information in the form of the Retirement Commission, allowing choice can be seen as not unreasonable, particularly as having to make KiwiSaver decisions may lead to greater interest in financial matters generally, and hence to an improvement overall in financial capability. In any case, one should not confuse the problems that need to be worked through in introducing KiwiSaver with the simplicity of its intent. One may reasonably expect a growing general comprehension of what the scheme will provide on retirement, and of its basic principle that what you put in is what, with investment returns, you get out.

KiwiSaver is no more complicated than any other fully funded DC scheme within the OECD, with the possible exception of Mexico, where there are no tax subsidies. The problems of provider fee comparisons are a source of complaint in many jurisdictions. And the collection of KiwiSaver contributions through the tax system is a big plus, offsetting, at least to some extent, the fragmentation (and hence lack of economy of scale) resulting from having 30-plus providers in what is not a large market.

A similar auto-enrolment arrangement to KiwiSaver is proposed for the UK. This implementation will have a centralised administration system, which is simpler to the New Zealand approach but is otherwise comparable, and is likely to have more awkward transition issues to deal with because the UK has much greater existing coverage by occupational pension schemes.

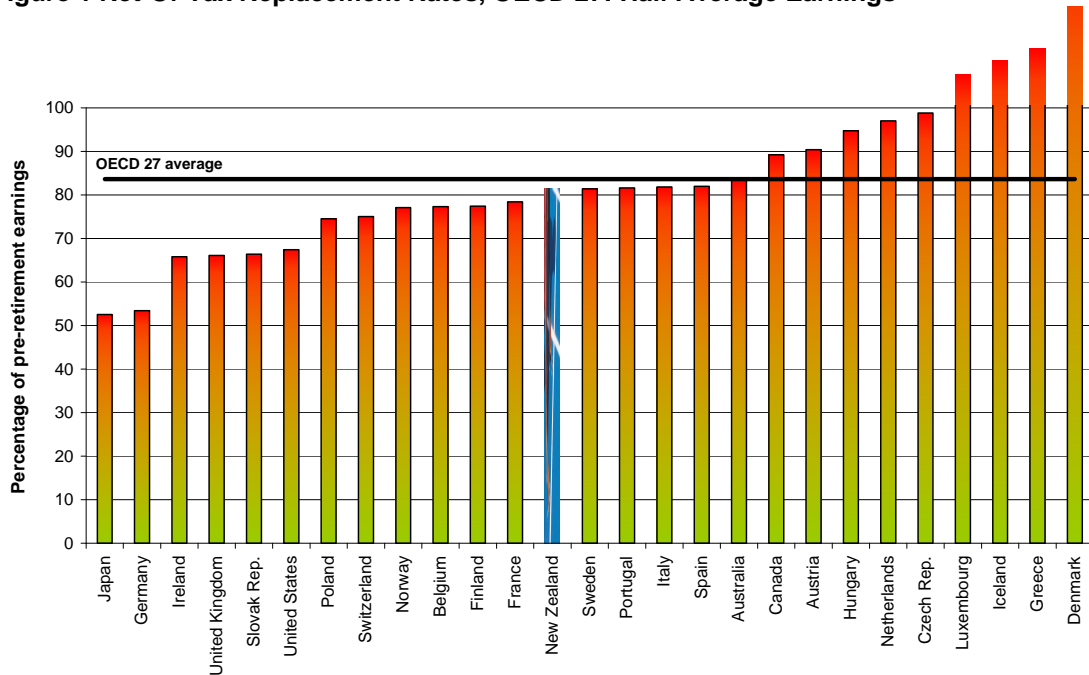
## EFFECTIVE

Effectiveness is primarily judged here by replacement rates at different levels of lifetime income, using the results from *Pensions at a Glance 2007*. This OECD publication is widely used as a reference tool for comparing countries’ pension systems. Net-of-tax replacement rates are shown; that is, the ratio of after-tax income from the state system to after-tax income while in employment.

Conventionally, a replacement rate of 65–70% of pre-retirement earnings is considered an appropriate target to aim for in order to maintain living standards into retirement. By then mortgages should be paid off, savings for retirement all made, and work-related expenditures (such as transport) no longer applicable. Importantly, a higher level may be necessary for those on lower incomes, who are more likely to be renting and who are less likely to have been making savings for retirement.

Figure 1 shows replacement rates for a single person earning half the average earnings over a full lifetime of work. The results assume a full working lifetime, so in many countries the outcomes shown will be higher than would apply were a person to have had periods out of the workforce.

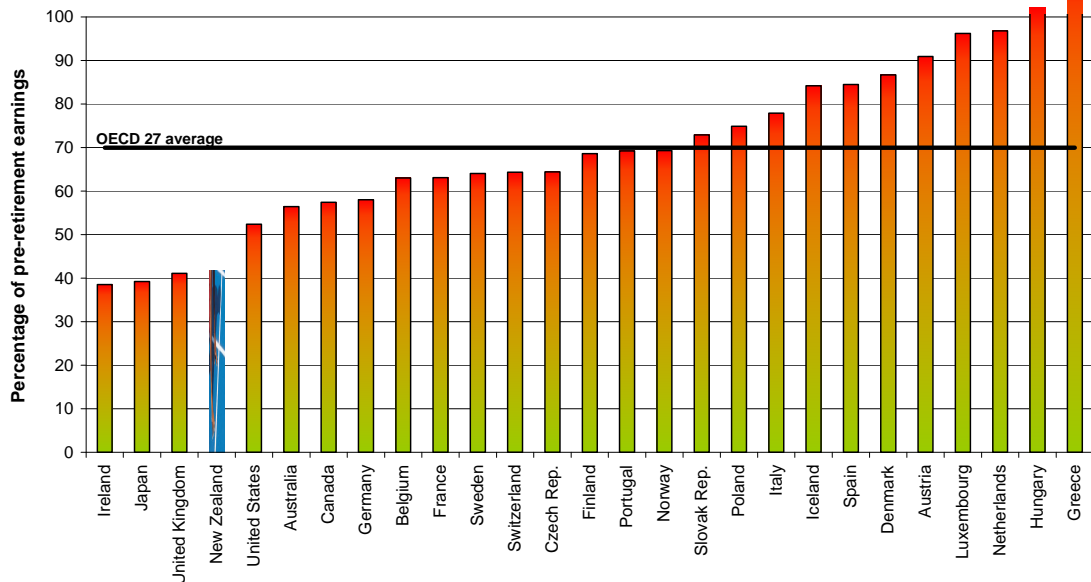
**Figure 1 Net-Of-Tax Replacement Rates, OECD 27: Half Average Earnings**



The average replacement rate shown here, of around 84%, is not necessarily that high when it is remembered that people who have spent their lifetime on half the average wage are unlikely to have other financial resources.

It can be seen from Figure 1 that New Zealand comes out about average in this comparison. However, since, as noted above, most countries require a full working lifetime for full benefits whereas entitlement in New Zealand depends only on 10 years' residency, our results are almost certainly better than average once those with partial workforce participation are factored in.

**Figure 2 Net-Of-Tax Replacement Rates, OECD 27: Average Earnings**

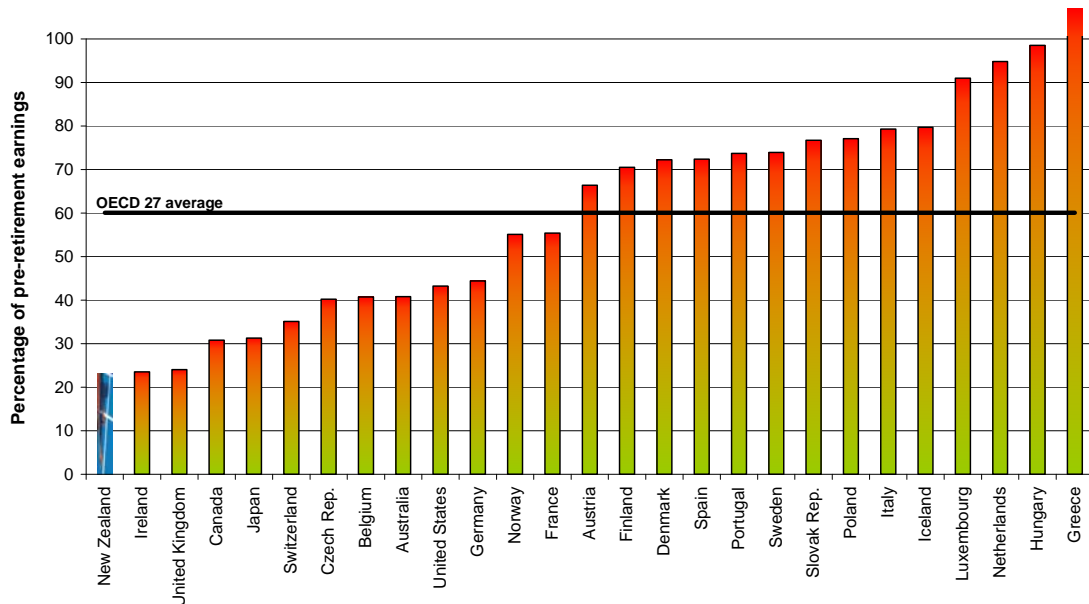


By contrast, Figure 2 shows that for those on average incomes, New Zealand, along with Ireland, Japan and the UK, falls well below the OECD average replacement rate of 70% at this earnings level. Other countries relying on voluntary private savings to boost the state pension include the United States, Australia and Canada, fellow “anglo” countries along with Ireland and the UK; and with New Zealand, clustered near the bottom.

The results for those with double the average earnings over their working lifetime (Figure 3) further emphasise the role expected of voluntary private savings for a number of countries, including the “anglo” group. The New Zealand result is not only marginally the lowest but also a bare third of the average rate of 60% of pre-retirement earnings.

KiwiSaver can thus be seen as the completing piece of the New Zealand retirement policy jigsaw. By facilitating private retirement savings, it should close the gap between what NZ Superannuation provides and average OECD target replacement rates.

**Figure 3 Net-Of-Tax Replacement Rates, OECD 27: Twice Average Earnings**



Some indicative calculations make this point more clearly, and also bring out some other less-appreciated features of KiwiSaver. Assuming for example:

- net investment return on saving of 5% p.a. after tax and expenses
- nominal earnings growth of 3.5% p.a.
- a kick-start payment of \$1,000
- member contributions of 2%, 4% and 8% of wages up to retirement for those on incomes respectively of \$20,000, \$40,000 and \$80,000 p.a. (corresponding broadly to half average, average and twice average annual earnings)
- a government subsidy equal to member contributions capped at \$20 per week
- employer contributions of 2% of member wages

one can calculate the accumulation from age 35<sup>7</sup> to ages 65, 67.5 and 70 in real wage terms, as shown in Table 1.

<sup>7</sup> Commencement at age 35 is chosen to give some time for mortgage payments and other “life establishment” expenses at younger ages.

**Table 1 KiwiSaver Accumulation in Real Wage Terms, from Age 35**

Retiring age		65	67.5	70
Earnings	Rate			
\$20,000	0.02	\$46,198	\$50,920	\$55,815
\$40,000	0.04	\$116,196	\$127,443	\$139,030
\$80,000	0.08	\$326,287	\$359,483	\$393,823

Using annuity factors based on:

- New Zealand Life Tables 2005–2007 combined All Male & Female mortality,<sup>8</sup> allowing for improved longevity by decreasing mortality rates of 1% p.a.
- 2% p.a. interest, to allow for indexing in payment
- a loading of 10% for profit, expenses and contingencies

then the accumulations above can be expressed as lifetime pensions equal to a percentage of present earnings, as shown in Table 2.

**Table 2 KiwiSaver Accumulations from Age 35, Converted to Income as a Percentage of Present Earnings**

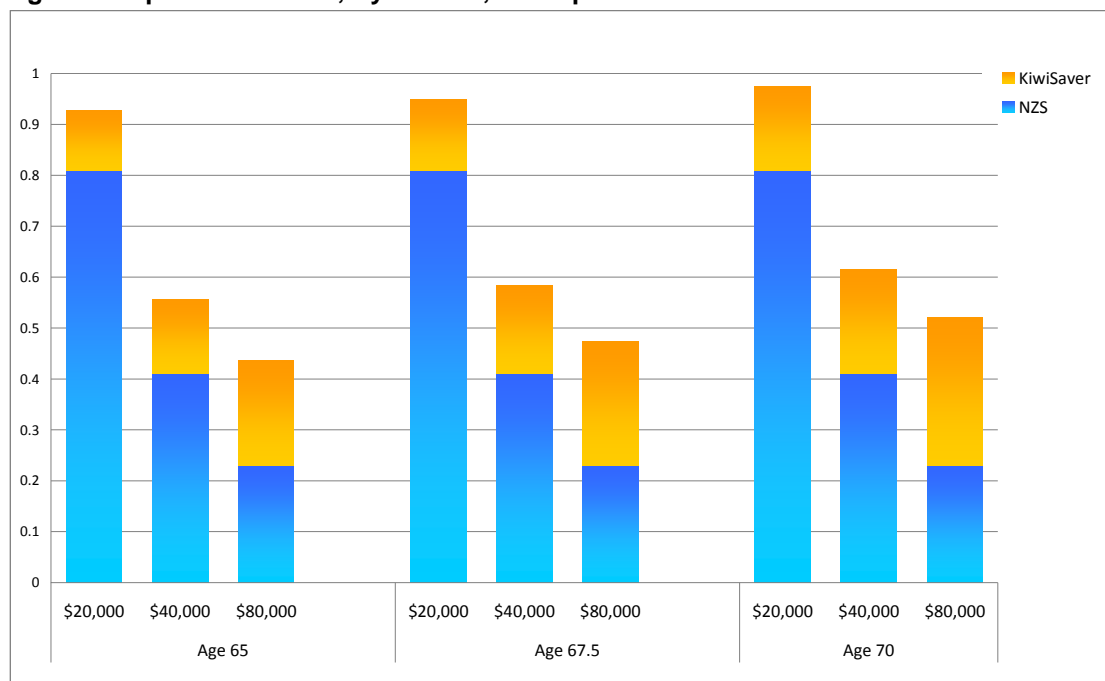
Retiring age		65	67.5	70
Earnings	Rate			
\$20,000	0.02	12%	14%	16%
\$40,000	0.04	15%	17%	21%
\$80,000	0.08	21%	24%	29%

Figure 4 shows the results of combining the net-of-tax NZ Superannuation replacement rates with the above percentages of pre-retirement earnings. The results for retirement at 65, 67.5 and 70 are grouped separately.

The effect for someone retiring at age 65 on average earnings – represented here as \$40,000 p.a. – is to bring the replacement rate up to around 55%. This is still shy of the OECD average of 70%, but is clearly an improvement on NZ Superannuation alone. A person on half average earnings who manages to participate in KiwiSaver is shown as having a replacement rate in excess of 90%. This would not in fact be silly; as noted earlier, it would seem more likely that people with that income background will not be in a position to absorb reductions in their income as they become older. They may in fact not wish to annuitise, as suggested, but instead choose to keep any KiwiSaver savings as a buffer for contingencies, to pay off a mortgage, or to make some investment that will improve their quality of life as they age. Conversely, people on higher earnings will have to save even more than the maximum KiwiSaver 8% contribution – or start sooner – if they want to meet the OECD average for that group of 60% of pre-retirement income.

<sup>8</sup> Using 2006 population figures as weights.

**Figure 4 Replacement Rate, By Income, NZ Superannuation And KiwiSaver**



Source: own calculations

The results, assuming working through to 67.5 or 70, show the benefits of a longer accumulation period plus a shorter retirement period. Working a further 2½ years from 65 gives 2–3% additional income, and another 2½ years gives another 4–5%. Given that the trade off in terms of increasing one’s KiwiSaver accumulation to pay for a slightly shorter retirement should be transparent, it may be that KiwiSaver will provide an incentive for those on higher salaries to stay in the workforce – which would be an unintended but positive effect.

More generally, KiwiSaver may enhance retirement planning for all middle and higher income groups provided there is clear information on the enhanced benefits of staying on in work – by publicising age-related annuity rates, for example. Entitlement to NZ Superannuation at age 65 may be seen as a signal to think about retirement. KiwiSaver, on the other hand, may well make the NZ Superannuation eligibility age less important, since unlike NZ Superannuation it will continue to build the longer it is left.

While the desirability of building on NZ Superannuation will generally be accepted, it may be argued that the above process of saving to enhance NZ Superannuation is occurring in any event, and hence that KiwiSaver is an expensive reaction to a non-problem. Proponents of this argument usually rely on published studies that purport to show that many New Zealanders are, in fact, saving adequately for their retirement.



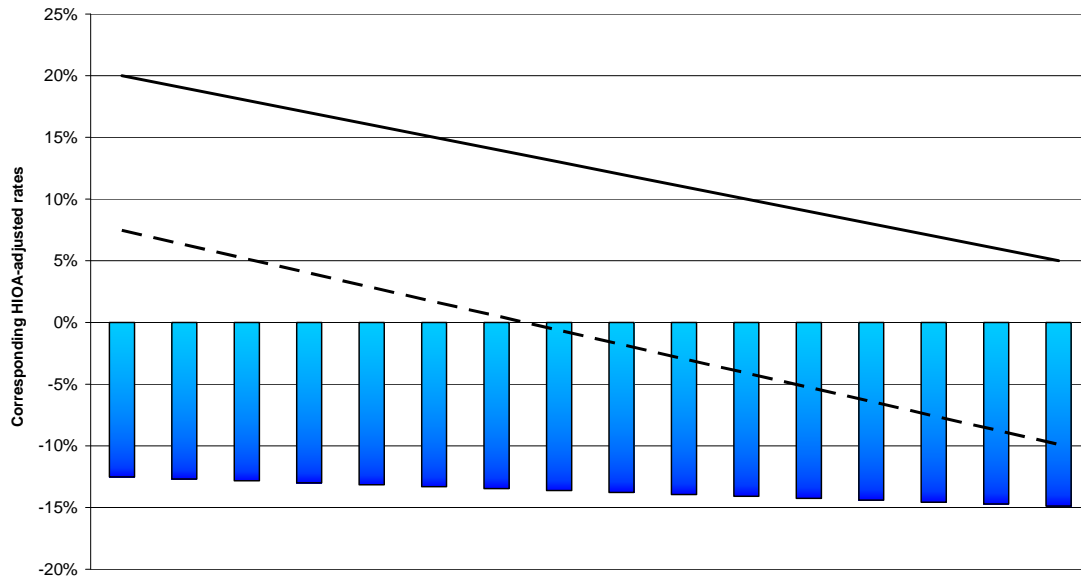
These studies, however, derive rates of saving by reference to the residual between income and expenditure from the Household Economic Survey (HES) carried out every three years by Statistics New Zealand. Such derived rates do not take into account what appears to be significant under-reporting of expenditure. A comparison made by the Government Statistician (Bascand et al. 2006) between the HES and the aggregate-based Household Income and Outlay Account (HIOA) results came to the following conclusions.

- Income in the HES is about 96% of that recorded in the HIOA, whereas expenditure in the HES is about 83% of that recorded in the HIOA.
- Key income items in the HIOA match reasonably well with estimates derived from other independent sources, although there may be some mis-measurement in secondary income flows, such as income from trusts.
- There is no reason to suspect that the HIOA overestimates or underestimates expense items.
- It follows that savings residuals derived from the HES may be significantly biased upwards.

Figure 5 shows the effect of modifying rates based on the HES by the adjustments suggested by the comparison of the HES and HIOA. A savings rate of 20% under the HES would become a little under 8% if the HIOA adjustment is applied; a savings rate of 5% under the HES becomes negative 10%. An HES result of about 13.5% would translate to nil savings. The adjustment by level of purported saving is not constant: the bars show an increasing reduction as the unadjusted savings rate lessens.

The extent of adjustment suggested here is probably excessive: it is unlikely that the adjustments calculated by comparing the aggregate HES and the HIOA data would apply exactly in any given case, and there remain some issues with HIOA as well. Nonetheless, given that Statistics New Zealand warns very strongly against using the HES to derive savings rates as a residual, it is perhaps unfortunate that the studies using HES-derived savings rates did not have much stronger caveats. In any event, it would not appear sensible to say, on the basis of studies done to date, that most New Zealanders were saving adequately for retirement, and safer to develop policy on the basis that HIOA results give a better guide.

**Figure 5 Savings Rates: Effect Of HIOA Adjustment On HES-Derived Rates**



Another argument sometimes put forward as a criticism of KiwiSaver is that it is regressive; that is, it offers more to the rich than to the poor, since the former are more able to set aside income and enjoy the subsidies than the latter. Considered in isolation this observation is probably correct. However, when one takes into account the highly redistributive nature of NZ Superannuation, the NZ Superannuation plus KiwiSaver combination makes a lot more sense – still strongly redistributive overall, but moderated by providing something for those on middle and higher incomes.

As with all defined contribution arrangements there are some gender issues with KiwiSaver. These are illustrated by Figure 6, which shows the distribution by age (15 to 64) of average weekly earnings (left-hand side, solid line) and participation in paid work (right-hand side, dashed line), for men and women. Male weekly earnings are consistently higher, in part because more women work part time but also because male hourly rates remain higher. Male participation rates are also higher, largely because females take on greater unpaid caring responsibilities: the fall-off in participation at older ages seems likely to reflect women looking after frail parents, although wives retiring at the same age as husbands may also have some effect as there tends to be an age differential.

This, however, emphasises the importance of the design principle that KiwiSaver is to complement NZ Superannuation, not replace it. New Zealand does rather better for women who need to take time out of the paid work force than most, if not all, other countries.

**Figure 6 Distribution of Average Weekly Earnings and Participation in Paid Work, by Age and Sex**



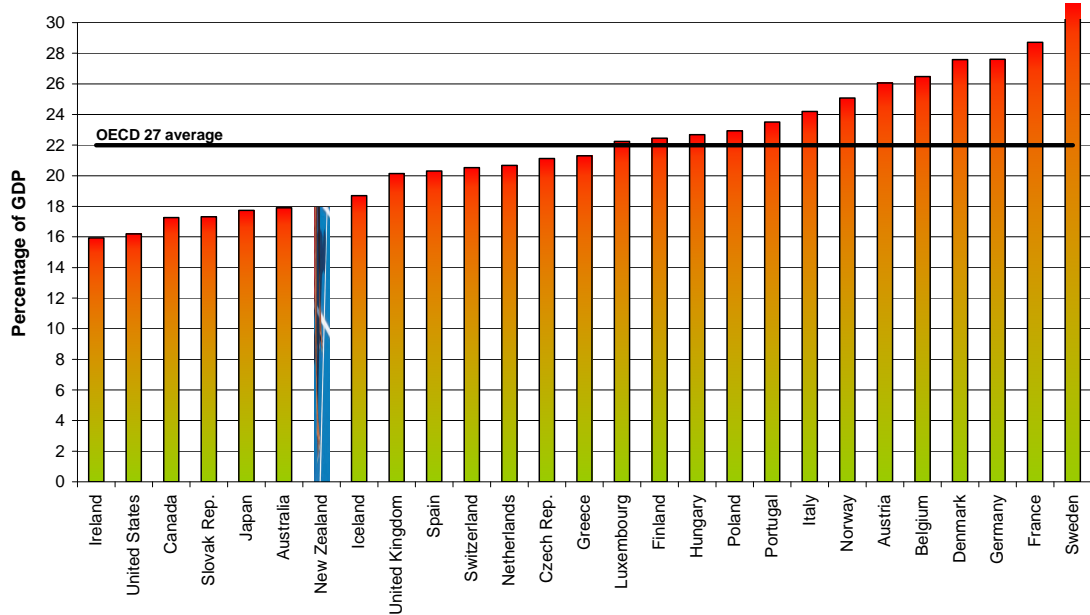
Source: NZ Income Survey June 2006 (Statistics NZ 2006)

It is not unreasonable to conclude, then, that the combination of NZ Superannuation and KiwiSaver has the potential to be effective in providing retirement incomes that at least bear comparison with OECD results in terms of replacement rates over all earnings levels, rather than just for those with low incomes, while still maintaining the belong-and-participate goal.

**(RELATIVELY) INEXPENSIVE**

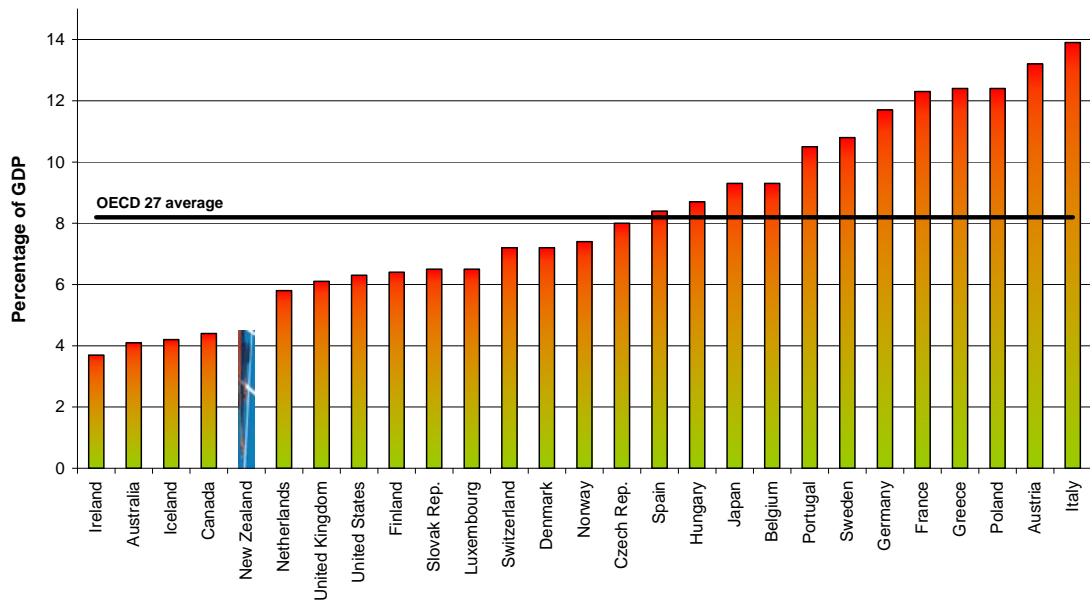
It is all very well to be comparable in outcomes, but what about costs? To put matters in context, Figure 7 shows the expenditure on social security generally for the same OECD countries as before. From the results reported here it is apparent New Zealand is a moderate spender on social security. Unlike the countries at the right-hand end of the figure, we can be said to have a little headroom, at least at the current time.

**Figure 7 Social Security Costs, OECD 27**



Turning to the costs of old-age pensions, the New Zealand position looks very reasonable, as Figure 8 shows.

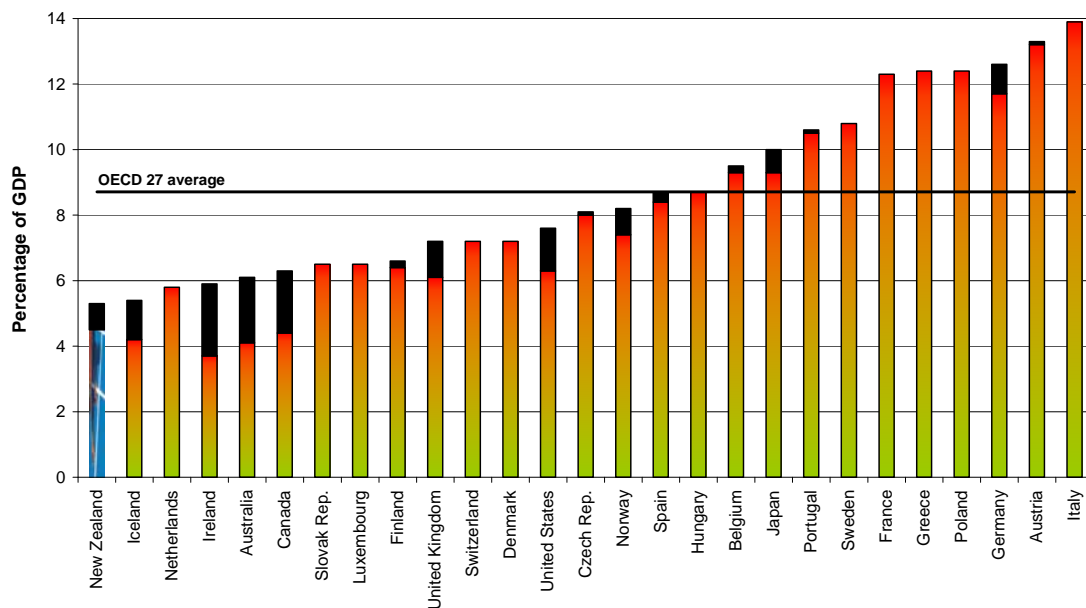
**Figure 8 Old-Age Pension Costs, OECD 27**



These costs are gross of any tax recoveries, and do not include any pre-funding, such as the capital contribution to the NZ Superannuation Fund. Here New Zealand shows up as one of five countries with a distinctly below-average cost.

The final element is the cost of savings subsidies. Figure 9 has the same data as Figure 8, but the addition represents the costs of tax incentives or other government subsidies.

**Figure 9 Old-Age Pension Costs Including Cost Of Savings Subsidies, OECD 27**



The data for the cost of savings subsidies come principally from *Society at a Glance* (OECD 2006:79). No figure is provided there for New Zealand, for the obvious reason that at that time we did not subsidise retirement savings. Hence an estimate is needed, and 0.8% of GDP was used, based on the Treasury’s original projected costs of KiwiSaver by 2015. The most recent budget forecast has something rather lower, in the order of 0.4% of GDP.<sup>10</sup>

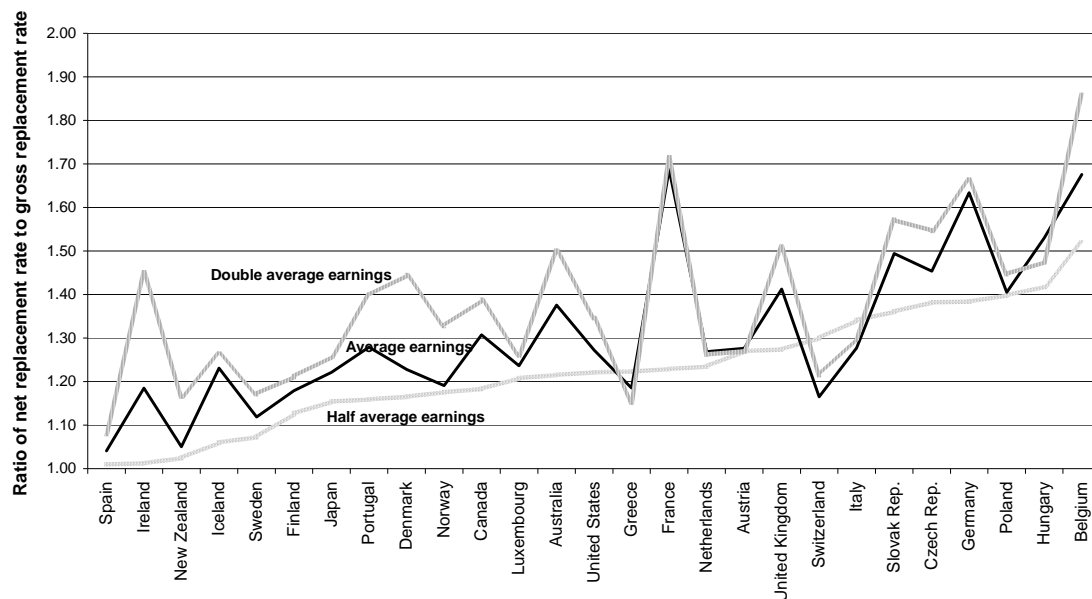
Although New Zealand ranks on this measure as having (marginally) the least expensive form of old-age pension in these countries, this result may be a little misleading. The differences between the bottom few countries are not great, and a few points difference could change their rankings. It is clear, however, that in international terms, even with the addition of KiwiSaver, the New Zealand system is indeed relatively inexpensive.

<sup>10</sup> Data on the costs of NZ Superannuation are derived from the New Zealand Treasury’s Fiscal Strategy Model (FSM) and NZ Superannuation Fund Model projections; see <http://www.treasury.govt.nz/government/fiscalstrategy/model>.

Some form of subsidy is apparent in all the anglo countries, and also in Germany and Iceland. (Some commentators believe Germany is currently moving towards the anglo model and away from the European approach.) In most of these countries the subsidy increases with earnings, or, if capped, is capped at a much higher level than KiwiSaver. It therefore seems unlikely that New Zealand will move out of the bottom five.

Another aspect of cost is the effect of tax (and social security deductions, where applicable) in the countries surveyed. Figure 10 compares the ratio of the *Pension at a Glance* net and gross replacement rates at half average, average and twice average earnings. Where the ratio is close to 1, the country is taxing pensioners on a similar basis to workers, but as the ratio rises, the country either has a very progressive tax scale at the low end and/or is offering tax concessions and/or social security deduction exemptions to the old. The last two represent an additional cost not captured here.

**Figure 10 Comparison Net-To-Gross Replacement Ratios at Different Lifetime Earning Levels, OECD 27**

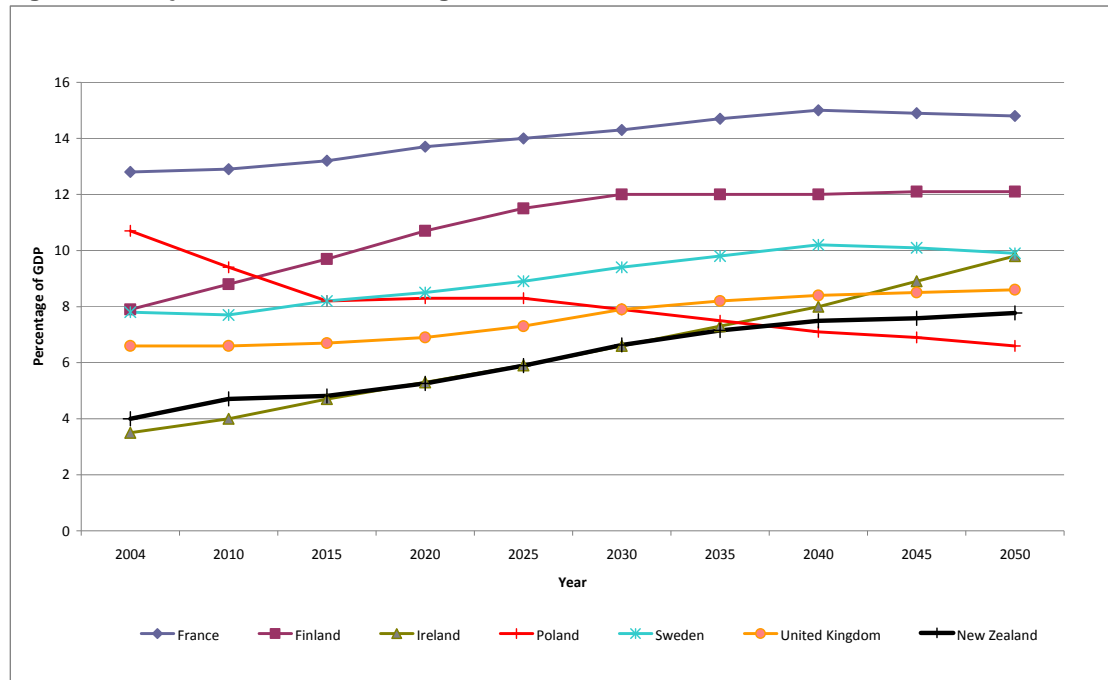


The figure is ordered by the results for those on half average earnings, but generally it can be seen that for all three cases New Zealand does not incur a lot of additional cost, whereas many other countries show quite different results. This reinforces the conclusion that the NZ Superannuation plus KiwiSaver combination remains relatively cheap.

The remaining question, of course, is what of the future? Projections for the OECD countries proved difficult to locate at the time of preparing this paper, but the European Union has been producing some useful projections. Figure 11 shows projections for some of those OECD countries also in the EU (which includes the UK and Ireland), with

projections for New Zealand added. In this case, the New Zealand data are gross cost taken from the most recent Budget projections, without the NZ Superannuation Fund contributions.

**Figure 11 Projected Costs Of Old Age Pension: Selected Countries, 2004-2050**



Source: Special Report No. 1/2006 European Commission Directorate-General for Economic and Financial Affairs, plus NZ Fiscal Strategy Model (EPC and EC DG ECFIN 2006)

The figures for Ireland (triangles) are similar to those for New Zealand up until 2035, but the NZ Superannuation cost then flattens out more than the Irish system cost does, and does not go over 8% of GDP. The UK result (circles) is above the New Zealand result, but there is some convergence. Generally these projections show increasing costs flattening out. The exception is Poland, which has introduced fully funded defined contribution schemes, the costs of which are not reflected in these data.

## CONCLUSION

NZ Superannuation is simple. KiwiSaver is rather less so, but nonetheless no more intrinsically complicated than voluntary private savings schemes encouraged in some places and compulsory ones mandated in others – and having both PAYG and fully funded approaches operating together is now seen as optimal. The auto-enrolment method adopted for KiwiSaver is arguably more complicated than either the voluntary or compulsory approaches, but preserves an element of choice seen as highly desirable.

The combination of NZ Superannuation and KiwiSaver is effective, or potentially so. NZ Superannuation alone does not produce replacement rates for middle and upper income

earners that are commensurate with OECD averages, but KiwiSaver offers the opportunity to fill the gap, as well as providing a buffer against life shocks for those on lower incomes. KiwiSaver may also make more transparent what is actually being set aside for retirement, and provide a mechanism for people to make up shortfalls and trade off longer careers against a higher standard of living in retirement. The combination of KiwiSaver and NZ Superannuation also appears to be one of the least expensive of any of the OECD arrangements, while being effective – particularly for low-income earners. Long-term projections for the EU do not show this position changing.

While this is all very positive, some caveats are needed. First, the country data referred to may not always be strictly comparable, despite the best efforts of the OECD and EU; it is also based on the position in 2003 or 2004, because it takes some time for collection, checking and publication.

Second, all countries have to prioritise spending under the pressure of competing needs. Health costs are an obvious example, with the scope for medical services to enhance wellbeing outstripping the ability to deliver them to all citizens. New Zealand clearly has more headroom than most, but may still have to think carefully about whether there are savings that could be made further down the track.

Third, intergenerational issues have not had a great deal of attention in New Zealand. The generations coming into retirement – let alone those already there – have been advantaged by being able to support NZ Superannuation from a much wider base (relative to recipients) than will increasingly be the case over the next three decades. It follows that changing demography and social conditions may bring about circumstances in which parametric change to NZ Superannuation and/or a review of KiwiSaver rules will obtain some strong degree of consensus. Can one envisage a time when “68 at 68” would seem eminently sensible, just as “65 at 65” does now?

With those caveats, however, one can put one’s hand on one’s heart and say, “The combination of NZ Superannuation and KiwiSaver, in an international context, forms a design which is simple, effective and (relatively) inexpensive”.

## REFERENCES

- Bascand, G., J. Cope and D. Ramsay (2006) “Selected issues in the measurement of New Zealand’s saving(s)” paper presented at the *Reserve Bank of New Zealand Workshop on Saving*, 14 November, Wellington, [www.rbnz.govt.nz/research/workshops/14nov06/2895712.pdf](http://www.rbnz.govt.nz/research/workshops/14nov06/2895712.pdf) [accessed 14/5/08].
- EPC (Economic Policy Committee) and EC DG ECFIN (European Commission Directorate-General for Economic and Financial Affairs) (2006) *The Impact of Ageing on Public Expenditure: Projections for the EU25 Member States on Pensions, Health Care, Long-Term Care, Education and Unemployment Transfers (2004–2050)*, Special report 1/2006, Office for Official Publications of the EC, Luxembourg.



- OECD (2006) *Society at a Glance: OECD Social Indicators 2006 Edition*, Organisation for Economic Co-operation and Development, Paris.
- OECD (2007a) *Pensions at a Glance: Public Policies across OECD Countries*, Organisation for Economic Co-operation and Development, Paris.
- OECD (2007b) *Society at a Glance, 2007 Edition*, Organisation for Economic Co-operation and Development, Paris, [www.sourceoecd.org/9789264007123](http://www.sourceoecd.org/9789264007123).
- Statistics New Zealand (2006) *NZ Income Survey June 2006*, Statistics New Zealand, Wellington.