DON'T INCREASE THE SUPER GUARANTEE

There are less costly ways to improve retirement incomes, argues **Michael Potter***

Imagine a policy was discovered that had multiple benefits: it would improve the budget bottom line, prevent a cut to wages of about 2.2% after tax, encourage women to stay in the workforce, help respond to population ageing, make the financial system more efficient, and likely reduce risks to households and the economy. It would also avoid a policy that benefits the rich over the poor, and advantaged workers over disadvantaged workers. And all these benefits are supported by detailed research.

Such a policy does exist: abandoning plans to increase the superannuation guarantee (SG). The SG is a mandatory payment by employers to a superannuation fund, usually chosen by the employee. The current SG rate is set at 9.5% of wages, but is scheduled to increase gradually to 12% by 2026.[1] Some employees receive a super contribution above 9.5% as a result of workplace agreements, so an increase in the mandatory SG will have a smaller direct effect on their contributions.

The case against the mandated increase considered in this article builds on the arguments in a 2012 paper by Stephen Kirchner[2] and many other reports, particularly the 2009 Henry Tax Review which evaluated and rejected calls to increase the SG.[3]

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Labour market effects

A mandatory increase in SG contributions will impose additional costs on most employers.[4] These costs are likely to be passed on to employees as lower wages. As the Henry Tax Review argued, 'employees bear the cost of these [superannuation] contributions through lower wage growth'.[5] Others who have argued that an SG increase will come from wages include Treasury,[6] Bill Shorten as Assistant Treasurer,[7] the Australian Council of Social Services (ACOSS),[8] the Australian Greens,[9] CPA (Certified Practising Accountants) Australia,[10] Bruce Bradbury from the University of New South Wales,[11] John Freebairn from the University of Melbourne,[12] and Paul Keating, who introduced the SG.[13]

The estimated impact on take home pay for the full SG increase is shown in the table overleaf, in current dollars. The cut to pre-tax wages is 2.5%, and the estimated cut to take home pay is about 2.2%. A worker on average full time wages is estimated to lose up to $25.87 per week in take home pay due to the SG increase.

This hit to incomes from an SG increase won't happen all at once; instead there will probably be a large cut to annual wage increases.

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Pre-tax income before SG increase		Post tax income		Change in take home pay from increase in SG	
Annual	Description of income	Before SG increase	After SG increase (9.5% to 12%)	$ pw	%
$35,000	about minimum wage	31,808	31,099.25	-13.58	-2.2%
$60,000	about average wage	48,953	47,940.50	-19.40	-2.1%
$80,000	about full time average wage	62,453	61,103.00	-25.87	-2.2%
$120,000	about twice average wage	87,653	85,763.00	-36.22	-2.2%

Sources: Fair Work Commission,[14] ABS[15] and ATO.[16]

Note: The SG increase will occur progressively over a number of years, so the table shows the cumulative impact over all those years.

Assumptions: All income is from wages subject to the SG, and the impact of the SG increase is fully passed through as lower wages.

Wages will still rise, but at a significantly slower rate because of the SG increase. For example, if wages growth remains at the historically low rate of 2.1% per year,[17] then the planned SG increase of 0.5% per year will cut pre-tax wages growth by about a quarter each year. It is hard to imagine any other policy for cutting wages growth by this amount would be acceptable to the public.

It has been argued in the past that SG increases would restrain wage growth[18] or consumption growth.[19] If this argument was valid then, it actually argues against the SG increases today given slow wage and consumption growth.

The SG may not be fully passed through as lower wages,[20] particularly for workers who are paid award wages. While award wage decisions have taken account of SG increase, there is no indication that there was a complete pass-through of the increase.[21] As a result, business would likely have borne some of the cost, leading to a reduction in employment for award workers, who are more likely to be women, migrants and people with lower education levels.[22] Increased business costs would also reduce investment.

Impact on labour force participation

Employees will probably put a lower value on superannuation contributions than on wages,[23] particularly because super balances can be inaccessible for decades. As a result, employees facing an increase in the SG and a decline in money wages may consider they are receiving a cut in the effective value of their compensation, and reduce their labour force participation (or labour supply) accordingly.[24] This impact would be greater for employees who are more responsive to wages, such as women.[25] In contrast, if employees treated super contributions as identical to wages, they would be perfect substitutes and then the need for the SG would be unclear: employees who aren't credit constrained would act to offset completely the SG increase.

The SG increase may also:

- Encourage early retirement, because superannuation balances will be higher, effectively generating a further reduction in labour supply.[26] This may offset any benefit from increasing the superannuation preservation age, as discussed below.
- Increase incentives for workers to become self-employed, thus avoiding the mandated super contribution along with other employment regulations and taxes.

Retirement income adequacy

One important goal of the SG increase is to increase retirement incomes. However, it is not clear that retirement incomes are inadequate. The Henry Tax Review stated that 'for most employees on low to middle incomes, the [then] 9 per cent superannuation guarantee rate can provide a reasonable balance between before and after retirement incomes.'[27] Reserve Bank research has suggested that a 9% SG level is adequate for low income earners.[28] Treasury research has reached a similar conclusion.[29] The need for increases at higher income levels is also not clear: the retirement incomes of workers earning $115,000 or more is arguably comfortable at the current SG level.[30]

Maintaining the SG at its current level would therefore ensure that the SG acts as a safety net rather than a *mandatory* scheme for increasing retirement incomes while *mandatorily* reducing incomes before retirement, whether or not these incomes are adequate. The 'adequacy' debate completely ignores adequacy *before* retirement. Supporters of an SG increase need to show that the increase won't make pre-retirement incomes inadequate.

There is also no need for higher contributions to be unilaterally imposed on nearly all workers regardless of their circumstances. Individual savings needs differ dramatically across the population, so a one-size-fits-all approach (above a low minimum) is not appropriate. Leading public finance expert Peter Diamond argues compulsory saving should be set somewhat below the average optimal rate as a result.[31] Any increase in contributions should be voluntary.

There are additional issues with using the SG to increase retirement incomes:

- Employees who currently receive contributions above the mandated level won't directly receive the full increase.

- Other voluntary savings—such as saving through housing and liquid assets like bank accounts or listed shares—are likely to decline (discussed below). Some proponents of SG increases omit discussion of these offsets. This voluntary non-super saving often provides substantial assistance in retirement.[32]

- One important argument for the SG is that it addresses inadequate saving caused by financial short sightedness or myopia. However, this argument does not apply when retirement incomes are adequate as argued above. The groups that are less likely to suffer from myopia—higher income earners and other advantaged workers (discussed in the section on distributional impact)—are also the groups that receive the largest amount from an SG increase. The SG increase provides the greatest increase in retirement incomes to those who least need it.

- Another significant reason to mandate retirement savings is to offset policies that discourage saving, particularly the means tests for the Age Pension, which generate extremely high effective tax rates.[33] However, this is more an argument against superannuation taxes and is weak justification for compulsory increases above adequate levels. In addition, if employees make decisions today based on saving disincentives decades into the future, then they are less subject to myopia, contradicting the point made above.[34]

There is no need for higher contributions to be unilaterally imposed on nearly all workers regardless of their circumstances.

- Proposals to boost superannuation balances through an SG increase are somewhat contradicted by current proposals to restrict super balances, such as through tighter super contribution limits.

- Higher super balances can provide incentives for governments to make adverse changes to tax or expropriate some of these savings, and super balances can't be transferred out (before retirement) to avoid these changes.

Other policies to increase retirement incomes

There are less costly policies to improve retirement incomes that should be pursued instead of an SG increase, regardless of views on whether retirement incomes are adequate:

- Encouraging the use of reverse mortgages to unlock the value of the family home. This would simultaneously permit higher living standards for retirees and, if the home is also included in the pension assets test, cause a substantial decline in the costs of the Age Pension. Simon Cowan and Matthew Taylor have estimated the savings from this latter reform at nearly $15 billion a year.[35]

- Increasing the preservation age (the age when superannuation balances can be accessed) to align with the Age Pension qualifying age, or at least mirror increases in the Pension qualifying age,[36] which is set to rise from the current age of 65 to 67 by 2023. By contrast, the current preservation age for super ranges from 55 to 60 depending on date of birth. This would have wider benefits by increasing the labour supply (participation) of older workers.

- Encouraging, or even requiring, retirees to use lifetime annuities, which reduces longevity risk (including to the government) and the potential for so-called double dipping.[37]

In net terms, the impact on the budget is negative for at least 40 years according to Treasury estimates.

- Reforming superannuation governance as proposed by the 2010 Cooper review[38] and 2014 Murray review,[39] including increasing competition in default funds, extending super choice to employees under all types of enterprise agreement, and implementing governance reforms.

- Minimising abrupt policy shifts in superannuation, which have beset the industry for decades. These changes all discourage super savings.[40] This is particularly important for changes with retrospective effect (see Terrence O'Brien's article on grandfathering in this issue).

- Cutting the regulatory burden on super, which is substantial: one estimate is that the cost of regulatory change alone has been $2.75 billion over the past five years.[41]

- Shifting the focus of super tax concessions towards relieving pressure on the Age Pension (see Simon Cowan's article in this issue).

There is a risk that an increase in the SG will reduce the incentives to implement these less costly reforms, because retirement incomes will be higher.

Budget impact

An SG increase should lead to higher retirement incomes which will generally cut the costs of the Age Pension. However, tax revenues also decline because SG contributions are more lightly taxed than normal cash income for most employees. In net terms, the impact on the budget is negative for at least 40 years according to Treasury estimates—that is, tax revenue falls by more than the reduction in costs of the Age Pension.[42] The policy fails on a key measure of success: the impact on the budget.

A policy that reduces both tax revenue and spending might appear to be a worthwhile policy for advocates of small government. However, the SG increase is a type of compulsion: the SG doesn't meet the definition of a tax[43], but is close to being a tax from an employer perspective (as noted by the OECD).[44] So the SG increase should not be seen as causing a decline in the size of government. The SG increase also worsens the budget repair challenge, and makes increases in other taxes significantly more likely.[45]

Alternative policies to increase retirement incomes, discussed above, reduce the cost of the Age Pension and have much lower costs to the budget.

Response to population ageing

An SG increase will not help respond to population ageing or intergenerational equity. An SG increase worsens the budget position for at least 40 years as noted above, so it hinders efforts to improve public savings to prepare for the substantial budgetary costs of ageing, which include health care, aged care and the Age Pension. These pressures are set to grow, as argued in several Intergenerational Reports[46] and by the Productivity Commission.[47]

The need for public savings for population ageing would be reduced if more of the costs of ageing were privately funded, particularly health and aged care services.[48] However, the major political parties seem reluctant to go down this path.

Increase in household saving

One goal of the SG increase is to boost household savings. However, the SG increase will be offset by a reduction in other household savings, including voluntary super contributions and additional super contributions under employment contracts.

Reserve Bank research has found that the SG increases household savings by less than the full SG rate, with a 10%-30% offset, based on examining differences in savings between people eligible for the SG and those who aren't.[49] However, the characteristics of people who aren't eligible for SG are unusual, so it isn't clear that this result applies to *all* employees subject to the SG.

Earlier Reserve Bank estimates of offsets against private saving are around 30%-50%,[50] with a 'loose consensus' that the figure is around a third,[51] consistent with international evidence. Other Reserve Bank research estimates a figure of about 38%.[52]

The lack of a complete offset raises several concerns. First, this means that savings through super are not a perfect substitute for other savings, and as a result the impact on labour supply of the SG increase is larger, as discussed earlier. Second, it means the harmful impact of the SG increase on credit-constrained households is greater. Third, there is a heightened risk of some households saving too much in super[53] and missing out on current consumption.

The fact that there is a savings offset, albeit incomplete, also raises separate concerns:

- Saving through housing may decline. Proponents of an SG increase may argue that this is a worthwhile goal.[54] However, this is generally asserted rather than proven.

- The SG increase may cause a reduction in human capital investment (particularly education),[55] which is more likely to be harmful.[56]

- The transaction costs of investing outside super are generally lower than the costs of investing in the same assets through super. Therefore, mandating that asset investments must occur indirectly through super will reduce the efficiency of the financial market, regardless of the underlying assets.

- Savings in liquid assets (such as bank accounts and listed shares) may decline, making households less prepared for a 'rainy day' and more exposed to financial shocks before retirement.

- Households will become more exposed to risks of adverse regulatory changes to superannuation. Most other forms of saving aren't locked in so the risks are smaller.

There is a heightened risk of some households saving too much in super and missing out on current consumption.

National saving

The super industry argues that an increase in the SG will cause an increase in national saving.[57] Treasury modelling supports this argument, finding that national saving will be about 1.35% higher in 40 years[58] if government dissaving is counted (the negative impact of the SG increase on the budget, as noted earlier). This figure will be higher if governments raise taxes to balance the budget, but this tax hike will have numerous harmful effects as shown in modelling by Kudrna and Woodland (discussed below). Conversely, the figure will be lower if the SG has caused an increase in borrowing, as argued in a recent study by CPA Australia.[59]

Regardless, the need for an increase in national savings has not been substantiated: higher super savings have numerous adverse effects, as noted in the previous section, and the beneficial effects of higher super savings on investment and risk are overstated or non-existent (see discussion below). Stephen Kirchner also notes the official figures for saving have several problems, such as excluding education, even when this boosts human capital, and excluding changes to the value of existing wealth.[60]

Effect on risk

The super industry argues that the SG makes the economy less vulnerable to global shocks by reducing the economy's reliance on foreign investment funds.[61] However, it is more likely that the SG has *increased* rather than reduced risk, particularly by exposing fund members to large movements in value, such as the loss of up to 27% during the Global Financial Crisis (GFC).[62] As noted above, the SG also reduces saving in more liquid assets, making households more exposed to market and government risks before retirement.

Meanwhile the stabilising effect of superannuation during the GFC was minimal. Australia's financial vulnerability due to our Current Account Deficit was dealt with during the GFC through a government bank guarantee. This guarantee could be used in any future financial crises so long as the federal government has a sound balance sheet. However, an SG increase worsens the budget deficit for at least 40 years (as already noted). It therefore makes a sound balance sheet less likely and impairs our ability to implement the bank guarantee, which has been a better protection against international shocks.

Impact on investment

The superannuation industry argues that super is used to finance important Australian investments, including infrastructure.[63] However, the link between Australian saving and investment is not strong, because Australia has a reasonably open capital market.[64] Some studies suggest an increase in saving of $1 increases Australian investment by 50-60c,[65] but others indicate a much lower figure.[66]

This suggests foreign investors are able to provide investment funds when needed. Therefore, the use of the SG to boost investment is poorly targeted, with the SG increase leading to a much smaller rise in national savings, and tenuous links from the remaining saving to investment.

In fact, investment may go down if other taxes are increased to make up for the revenue shortfall from the SG increase (see modelling by Kudrna and Woodland discussed below) or if businesses are unable to pass on the SG costs as lower wages.

Distributional impact

Proponents of an SG increase are generally concerned about equity, but inconsistently overlook the distributional effects of an SG increase.

In broad terms, the SG is proportional to wages, so an SG increase will result in a smaller rise in super balances for people who receive lower wages. Therefore, an SG increase delivers a proportionally smaller benefit to women,[67] part time workers, casuals, migrants, people with lower education levels, people from non-English speaking backgrounds, Indigenous Australians, youth, people with intermittent work patterns, and people with disability.[68] Similarly, the effective tax cut will be smaller for each of these groups.

Promoters of the SG increase should not complain that super balances of disadvantaged groups are lower while simultaneously advocating a policy that will increase these disparities. Supporters of the SG increase would likely oppose tax cuts that provided the greatest benefit to high income earners and smaller benefits to disadvantaged groups, but that is exactly what would happen with the SG increase.

As noted earlier, some workers will be able to offset the SG increase by reducing other savings. These people are more likely to be rich or from other advantaged groups. So the SG increase will have a greater cost pre-retirement on low income earners (and other disadvantaged groups), as the Henry Tax Review argued: 'The effect of this reduction in a person's standard of living before retirement [from an SG increase] is likely to fall most heavily on low- to middle- income earners who are unlikely to be in a position to offset the increase in the superannuation guarantee by reducing their other savings.'[69]

This mandated increase in super saving may make disadvantaged groups (including low income earners) more exposed to risks in the financial market, as noted above. And to the extent that these groups are able to reduce other saving, they might cut saving through the family home, meaning they may pay more tax. Alternatively they may cut spending on education, which will likely make them worse off in the longer term.

Economy-wide impact

Several studies have looked at the net effect of an SG increase on the economy as a whole.

Recent modelling by George Kudrna and Alan Woodland of an increase in the SG from 9% to 12% found:[70]

- The increase in the SG, combined with a reduction in super taxes on low income earners, will reduce living standards, particularly for future generations, if the budget shortfall is made up by higher income taxes.[71] These policies cause reduced employment, reduced investment, lower GDP and higher pension spending in the long term.[72]

- The increase in the SG will only be beneficial for overall living standards if the reduction in tax revenue is funded by an increase in the GST. However, this option is probably unacceptable to the public because it results in losses to all current retirees and low income households.[73] The benefit of this option to the overall economy is caused by the tax mix switch from income tax to GST,[74] so the benefit is largely unrelated to the SG increase itself.[75]

This modelling is compared with Treasury modelling of a company tax cut in the table below, showing that on almost all measures a company tax cut would be preferable.

Measure	SG increase	Company tax cut
After-tax wages	Decrease	Increase
Employment	Decrease	Increase
Capital stock & investment	Decrease	Increase
GDP	Decrease	Increase
Pre-retirement standard of living	Decrease	Increase
Retirement standard of living	Increase	Increase (but probably by less than SG increase)
Effect on budget	Nil — offset by increases in income tax in both cases	

Source: Kudrna & Woodland (2013) and Kouparitsas, Prihardini & Beames (2016).[76]

Earlier modelling by Ross Guest and Ian McDonald found that an increase in the SG from 9% to 12% would reduce living standards by around 1% per year for the first 30 years.[77] Living standards increase after about 30 years, but in today's money the improvement is approximately zero.[78] A subsequent study by Guest found a 3% increase in the SG would cause small reductions in well-being (or utility) in the long run.[79]

Other modelling by Peter Dixon, James Giesecke and Maureen Rimmer largely omits the employment and tax costs caused by a SG increase.[80] Yet this modelling still finds a loss to GDP in the first few years from a 1% SG increase, followed by a gain after several years.[81] The paper does not indicate whether the present value of the GDP changes is positive or negative, so even this model, which omits major costs of the SG increase, is unable to show the change is beneficial.

Finally, Allen Consulting Group modelling for the Association of Superannuation Funds of Australia[82] finds substantial benefits from increasing the SG from 9% to 12%, but the paper admits[83] it excludes the costs of increasing the SG so can't be used to determine whether the costs are greater or less than the benefits. The report also assumes that the impact of the SG increase on the cost of capital won't have an impact on foreign investment into Australia, which is unrealistic.

If policy proceeds, it should be improved

Despite the arguments against an SG increase, the policy may still proceed. If so, it should be improved. The best way to offset the worst aspects of the SG increase is to permit an opt-out. Over time employees would be enrolled in a higher SG, but would have the option of taking this SG increase as higher wages instead. There would be a floor of contributions, perhaps 9.5%, and employees would be able to choose a contribution between that figure and 12%. An opt-out would allow employees with other pressing needs (such as buying a home) to access their funds. This would be considerably better than allowing early access to super funds for these purposes.

However, this approach would impose additional administrative costs on employers which is why it would be better to keep the SG at its current level and retain the present approach where there is an 'opt-in' to higher contributions.

The government should also:

- Require award wage increases to take any SG increase fully into account. This will limit the costs of the increase to employment and investment.

- Reduce the budget costs of ageing—particularly the costs of aged care and health—by encouraging more self-sufficiency for wealthier retirees, given these people will have higher retirement incomes because of the SG increase.

- Undertake other superannuation reforms to improve governance, and promote competition and choice (as discussed earlier) to prevent increased contributions from being lost through high fees or poor investment returns.

Conclusion

An SG increase is likely to:

- Reduce wages for employees who receive an SG contribution.
- Reduce employment, particularly for workers on awards and women.
- Increase early retirement.
- Increase the risk to households and financial markets.
- Increase costs of the financial system, and reduce its productivity.
- Provide a larger tax cut for the rich and those who are advantaged in the labour market.
- Worsen the budget deficit.
- Hinder efforts to prepare for population ageing.
- Slow the implementation of other worthwhile superannuation reforms.
- Cut economic growth and overall living standards.

Therefore, the SG increase is a policy that should be abandoned in the interests of all Australians.

Endnotes

1 Australian Taxation Office, 'Changes to the Super Guarantee' (October 2014), https://www.ato.gov.au/General/New-legislation/In-detail/Other-topics/Repeal-of-MRRT-and-related-measures/Changes-to-the-super-guarantee/

2 Stephen Kirchner, *Compulsory Super at 20: 'Libertarian Paternalism' Without the Libertarianism*, CIS Policy Monograph 132 (Sydney: The Centre for Independent Studies, 2012).

3 Ken Henry et al, *Australia's Future Tax System: Retirement Income Strategic Issues Paper* (2009), Section 2.

4 The additional cost will occur for employees who are covered by the SG, to the extent their existing employer contributions are below 12%. The coverage of the SG is discussed at https://www.fairwork.gov.au/pay/tax-and-superannuation

5 Ken Henry et al, *Australia's Future Tax System: Final Report* (2009), Part 2, Chapter A.

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8 ACOSS, *Building Super on a Fair Foundation: Reform of the Taxation of Superannuation Contributions*, ACOSS Paper 185 (February 2012).

9 The Greens approvingly quoted economists who argued: '. . . the ultimate incidence of the increased [superannuation] guarantee will be on workers (in the form of slower growth in wages) rather than on employers.' Senate Economics Legislation Committee, *Inquiry Into Minerals Resource Rent Tax Bill 2011,* Minority Report by the Australian Greens (2012).

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17 Australian Bureau of Statistics, *Wage Price Index, Australia, June 2016*, Cat No 6345.0.

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19 Barrie Dunstan, 'Strategist Makes Good Case for Higher Guarantee Rate', *Australian Financial Review* (8 August 2008), p. 67.

20 As argued by Bernie Fraser on ABC Radio National Breakfast (10 September 2014), available from http://www.abc.net.au/radionational/programs/breakfast/bernie-fraser-renewable-energy-target/5732598

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22 Seamus McGuinness, John Freebairn and Kostas Mavromaras, *Characteristics of Minimum Wage Employees*, Research Report No. 2/07 (Melbourne Institute of Applied Economic and Social Research, July 2007).

23 For example, Marcia Keegan and Laurie Brown, 'Impact of the Increase in the Superannuation Guarantee on Wage Costs in the Health Sector', Australian Labour Market Research Workshop (Canberra: National Centre for Social and Economic Modelling, 29-30 November 2012).

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25 Sandra Dandie and Joseph Mercante, 'Australian Labour Supply Elasticities: Comparison and Critical Review', *Treasury Working Paper* 2007-04 (October 2007); and Bob Breunig, Deborah Cobb-Clark and Xiaodong Gong, 'Improving the Modelling of Couples' Labour Supply', *Economic Record* 84:267 (December 2008), pp. 466-485.

26 Freebairn, 'Some Long-Run Labour Market Effects of the Superannuation Guarantee' (see note 24). See also Productivity Commission, *An Ageing Australia: Preparing for the Future*, Productivity Commission Research Paper (November 2013), p. 179.

27 Ken Henry et al, *Australia's Future Tax System: Retirement Income Strategic Issues Paper* (2009), Section 2.

28 Table 5, page 297 of Malcolm Edey and Luke Gower, 'National Saving: Trends and Policy' in *The Australian Economy in the 1990s*, eds. David Gruen and Shona Shrestha, Proceedings of a Conference (Sydney: Reserve Bank of Australia, Economic Group, 2000).

29 For instance see George Rothman, *The Adequacy of Australian Retirement Incomes—New Estimates Incorporating The Better Super Reforms*, Paper presented to the Fifteenth Colloquium of Superannuation Researchers (July 2007). The paper also critiques some of the other studies with different findings.

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31 Cited in Kirchner, *Compulsory Super At 20* (see note 2), p. 17.

32 See Kirchner, as above, p. 17; and Daley, Coates and Wood, *Super Tax Targeting*.

33 See David Ingles and Miranda Stewart, 'Why Pensioners Are Cruising Their Way Around Budget Changes', *The Conversation* (June 2015); and Rafal Chomik and John Piggott, 'A Note on the Treatment of Assets in the Australian Age Pension Means Test', *ARC Centre of Excellence in Population Ageing Research Working Paper 2016/01* (February 2016).

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35 Matthew Taylor and Simon Cowan, *The Age Old Problem of Old Age: Fixing the Pension*, Research Report 3, (Sydney: The Centre for Independent Studies, May 2015).

36 As proposed by the 2009 Henry Tax Review (Ken Henry et al, *Australia's Future Tax System: Final Report*, Part 5); by Stephen Kirchner, *Compulsory Super at 20* (see note 2); by Simon Cowan, *The Myths of the Generational Bargain*, Research Report 10 (Sydney: The Centre for Independent Studies, March 2016); and by the Productivity Commission, *An Ageing Australia* (see note 26), p. 201.

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38 Cited in Kirchner, *Compulsory Super At 20*, (see note 2), p. 18.

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43 The OECD definition of a tax is 'a compulsory unrequited payment to the government'. See http://www.oecd.org/ctp/glossaryoftaxterms.htm#T

44 The OECD argues that payments like the SG either increase employer labour costs or reduce wages in a similar way to taxes. See OECD, *Taxing Wages 2008-2009 Special Feature: Non-tax Compulsory Payments as an Additional Burden on Labour Income* (2010), p. 26. The OECD also argues (p. 29) that it 'will often not be relevant' to business whether costs are higher because of taxes on the one hand or payments such as the SG on the other.

45 Treasury has argued that the government is likely to increase other taxes to offset the lost taxes from the SG increase. See David Gruen and Leigh Soding, 'Compulsory Superannuation and National Saving' (see note 42).

46 Wayne Swan, *Intergenerational Report (*2010) and Joe Hockey, *Intergenerational Report (*2015).

47 Productivity Commission, *An Ageing Australia* (see note 26). Kirchner presents other views in *Compulsory Super At 20* (see note 2), pp. 12-14
48 See for example Kirchner, pp. 12-13; and Taylor and Cowan, *The Age Old Problem of Old Age: Fixing the Pension* (see note 35).
49 Ellis Connolly, *The Effect of the Australian Superannuation Guarantee on Household Saving Behaviour*, Reserve Bank of Australia Research Discussion Paper RDP 2007-08 (2007).
50 Ellis Connolly and Marion Kohler, *The Impact of Superannuation on Household Savings*, Reserve Bank of Australia Research Discussion Paper 2004-01 (2004) estimate 38%; other estimates are summarised in Table 2 and range from 17% to 75%. However, the more recent estimates are generally more relevant.
51 Edey and Gower, 'National Saving: Trends and Policy' (see note 28), p. 297.
52 Connolly and Kohler, *The Impact of Superannuation on Household Savings* (see note 50).
53 Kirchner, *Compulsory Super At 20* (see note 2), pp. 13-14.
54 This argument was put at the time of the original introduction of the SG, see Edey and Gower, 'National Saving: Trends and Policy' (see note 28), p. 288.
55 Michael Drew and Jon Stanford, 'Why is Superannuation Compulsory?', *Australian Economic Review* 37:2 (February 2004), p. 186.
56 Andrew Leigh, 'Returns to Education in Australia', *Economic Papers: A Journal of Applied Economics and Policy* 27:3, pp. 233–249 (September 2008), doi:10.1111/j.1759-3441.2008.tb01040.x
57 For example Allen Consulting Group, *Enhancing Financial Stability and Economic Growth: The Contribution of Super* (Melbourne: August 2011).
58 Gruen and Soding, 'Compulsory Superannuation and National Saving' (see note 42).
59 Simon Kelly, *Twenty Years of the Super Guarantee: The Verdict*, Report for CPA Australia (August 2013).
60 Kirchner, *Compulsory Super At 20* (see note 2), pp. 5-12.
61 For example Allen Consulting Group, *Enhancing Financial Stability and Economic Growth* (see note 57).
62 Rafal Chomik and John Piggott, 'Pensions, Ageing and Retirement in Australia: Long-Term Projections and Policies', *Australian Economic Review* 45:3 (2012), pp. 350-361; and Australian Financial Markets Association, *Submission to the Consultation on Financial System Inquiry Final Report* (31 March 2015). Some super account holders will manage their super and non-super assets to offset this risk, but many account holders would not.
63 Allen Consulting Group, *Enhancing Financial Stability and Economic Growth* (see note 57).
64 Two effects that weaken the link from savings to investment are (a) some of the increased super savings is invested offshore; and (b) the increased super savings lowers the Australian cost of capital which causes a reduction in foreign investment.
65 Saten Kumar, Scott Fargher and Don Webber, *Testing the Validity of the Feldstein-Horioka Puzzle for Australia* (2009). The random effects model in: Saten Kumar and B. Bhaskara Rao, 'A Time Series Approach to the Feldstein-Horioka Puzzle with Panel Data from the OECD Countries', *Munich Personal RePEc Archive Paper No. 18464* (November 2009). And the models with more controls in: Julien Fouquau, Christophe Hurlin and Isabelle Rabaud, 'The Feldstein-Horioka Puzzle: a Panel Smooth Transition Regression Approach', Orleans Economic Laboratory Research Document No. 2006-23 (2006).
66 Jerry Coakley, Ana-Maria Fuertes and Fabio Spagnolo, 'Is the Feldstein-Harioka Puzzle History?', *The Manchester School* 72:5 (September 2004), pp. 569-90.
67 See also Alison Preston and Siobhan Austen, 'Women, Superannuation and the SGC', *Australian Bulletin of Labour* 27:4 (December 2001), pp. 272-95.
68 See Australian Bureau of Statistics, *Household Income and Wealth, Australia, 2013-14*, Cat No 6523 (2016), 'Feature Article: Superannuation in Australia, 2003–04 to 2013–14'.
69 Ken Henry et al, *Australia's Future Tax System: Final Report*, Detailed Analysis: Part 2 (2009), Chapter A.
70 George Kudrna and Alan Woodland, 'Macroeconomic and Welfare Effects of the 2010 Changes to Mandatory Superannuation', *Economic Record* 89: 287 (December 2013), pp. 445–468.
71 As above, Table 5.
72 As above, Table 4.
73 As above, Table 3.
74 As above, p. 460.
75 In other words, the overall benefit in this option could be obtained by a cut in income tax or taxes on super, offset by an increase in the GST, with no change in the SG rate.
76 Kudrna and Woodland, Table 4 and page 462 for wages; Michael Kouparitsas, Dinar Prihardini and Alexander Beames, *Analysis of the Long Term Effects of a Company Tax Cut*, Treasury Working Paper 2016-02 (The Australian Government the Treasury, 2016).
77 Ross Guest and Ian McDonald, 'Superannuation, Population Ageing and Living Standards in Australia', *Economic Analysis and Policy* 32:1 (March 2002), pp. 19-34.
78 As above, p. 32.
79 Ross Guest, 'Superannuation, Owner-Occupied Housing Demand and Private Savings in Australia', *Australian Economic Review* 37:2 (June 2004), pp. 198-204. Results are in Table 1, but are for an increase in the SG from 12% to 15%. Note that this study assumes that households aren't myopic and therefore understates the benefit of the SG.
80 Peter Dixon, James Giesecke and Maureen Rimmer, *Superannuation Within a Financial CGE Model of the Australian Economy*, Centre of Policy Studies Working Paper G-253 (Melbourne: Victoria University, June 2015).
81 As above, Figure 29.
82 Allen Consulting Group, *Enhancing Financial Stability and Economic Growth* (see note 57).
83 As above, p. 44.