Superannuation and the economy

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The Association of Superannuation Funds
of Australia (ASFA)

Contents

Executive summary

Why this report has been prepared

While considerable research on the impact of superannuation on the economy has been undertaken in the past, much of it has focused on particular aspects of superannuation or of the economy. This report brings that research together into one holistic document within a rigorous economic framework.

The need for a holistic approach has been heightened by the conversation that the government has commenced on the entirety of the tax system and taxation reform in Australia.

Changes to tax policy settings may need to be made; however, the costs and benefits also need to be considered very carefully. This paper considers the tax settings for superannuation in the context of its contribution to the Australian economy.

Benefits of superannuation for households and governments

The superannuation system is still relatively immature in the sense that many people are yet to have made contributions of nine per cent or more over an extended number of years. However, it is already delivering benefits to retirees equivalent to more than double the public pension.

Superannuation is already reducing the cost to government of the Age Pension. Treasury modelling of an increase in the Superannuation Guarantee (SG) from 9 to 12 per cent indicates that the cost of tax concessions associated with such an increase stabilises relatively soon while the benefit in reduced pensions continues to grow. As a result, there is a positive overall impact on the Budget flowing from an increase in the SG as the system matures given that the Age Pension expenditure savings gradually offset the cost of the tax concessions.

Any wholesale alteration to the tax or other policies which frame superannuation would risk undermining a functional and efficient retirement income solution for individuals and governments.

Impact on household balance sheets

Super has had a substantial and positive impact on the diversity of Australians' savings.

Compulsory and voluntary superannuation saving has transformed household balance sheets over the last two decades, from consisting almost wholly of domestic residential real estate and cash, to now including a diversified range of domestic and overseas financial assets, including equities, fixed interest, infrastructure and commercial property. The tax treatment of superannuation addresses distortions that favour investment in real estate, both for owner occupiers and investors.

Owner-occupied housing is a fundamental Australian aspiration and delivers lasting value to families, including in retirement; however, a diversified approach to accumulation of savings avoids a concentration of risk and supports investment in asset classes that drive more balanced economic growth.

As a result of compulsory superannuation, all Australians have a stake in the Australian economy through the diversified assets they own through their superannuation fund.

Impact on incentives to save

Superannuation tax policy encourages and supports increased domestic savings. Increased domestic savings reduces reliance on foreign capital, with the latter recognised by the ratings agencies as a key risk to the security of the Australian financial system. Super funds were active participants in the vital recapitalisation of corporate balance sheets during the GFC, when access to capital was sorely needed, but foreign capital markets were largely frozen.

A comprehensive income tax system does affect labour force participation and saving decisions at the margin. Super tax concessions help address this potential weakness by reducing the disincentives to save, and encouraging further workplace participation, particularly for those approaching traditional retirement age.

Impact on household and national savings

Compared to other OECD countries, Australia has an above average savings rate. Superannuation makes a major contribution to the relatively high saving rate. Australian Treasury estimates indicate that the superannuation system currently contributes about 1.5 to 2 percentage points to the national saving rate, rising to 3 percentage points by 2050.

What would be the impact of increased taxes on superannuation?

Based on the model of the economy in this paper, reduced incentives for superannuation would be expected to change behaviour, particularly around the level and form of household savings. Voluntary superannuation contributions would reduce, partially replaced by increased saving in other tax preferred vehicles. Alternate tax preferred savings vehicles include owner occupied housing and negatively-geared investment, much of which is property. This will likely fuel increases in property prices, impacting on housing affordability.

Reduced superannuation contributions would flow through to reduced investment in various asset classes, including domestic equities and infrastructure, or through to increased reliance on the external sector (foreign borrowing) to meet investment needs. In the long term, additional effects also would begin to play out. Altered saving and investment flows and labour market effects would feed back into economic growth rates that would be lower. Reduced superannuation contributions also would result in increased public pension liabilities.

Section 1: Introduction

The government has recently launched a consultation process on tax (CoA, 2015), which includes consideration of all major revenue sources and tax expenditures, including those relating to superannuation.

In this context, ASFA engaged Vidler Policy and Research to provide an economic framework for consideration of superannuation tax policy settings.

This paper explores the contribution of superannuation to the Australian economy and provides a framework for assessing the impact of changes to superannuation tax policy that might be considered.

The goal was to draw together the wide variety of research that has been undertaken by governments, academics and the superannuation sector on the impact on the economy of superannuation tax policy settings within a rigorous economic framework.

While a variety of research has been undertaken in the past by a number of groups, typically only certain aspects of superannuation or the economy are dealt with.

What is new in this report is that it draws other existing research into one holistic document.

Superannuation forms a major part of Australia's three pillar retirement income system. With the public Age Pension as the first pillar, compulsory and voluntary superannuation savings are the second and third pillars which aim to build adequate retirement incomes across the income distribution.

Australia's three pillar system is low cost relative to the public PAYGO earnings related pension systems prevalent throughout much of the OECD. The Australian approach is consistent with international best practice (World Bank, 1994) and was recognised by the Henry Review as providing an effective and balanced solution that will help Australia address the risks it faces in the 21st century, including population ageing (AFTSR 2009).

The years since 2006 have seen a deterioration in the Federal Government's budget position.

This trend has many causes. Some are cyclical, including the end of the resources boom; some due to policy changes, including personal income tax cuts; and some structural, including increasing Age Pension, aged care and health costs related to our ageing population among other factors. The prospective impact of population ageing on future government expenditure was emphasised in the Intergenerational Report, released in early March 2015.

The government released a tax discussion paper on 30 March 2015, with a consultation process including green and white papers to follow over the coming year. It is expected that in the course of this consultation, all major areas of taxation and related concessions, including superannuation taxation settings, will be the subject of consideration by the government and the wider community.

Changes to tax policy settings may need to be made; however, the costs and benefits also need to be considered very carefully. This paper considers the tax settings for superannuation and the contribution of superannuation to the Australian economy ahead of that debate.

Section 2: Superannuation – major policy settings

Superannuation is Australia's primary retirement saving vehicle, and for most households it represents the most significant asset aside from the family home.

Superannuation has existed in Australia for over 100 years but began to take its current form as a near universal scheme with its adoption as a workplace entitlement in the 1980s and legislative backing in the form of the SG in the early 1990s.

Superannuation has both compulsory and voluntary elements that operate along with the public pension as a three pillar retirement income system. The three pillar system is relatively low cost to government[1] and will steadily improve income adequacy and dignity in retirement as the superannuation system matures. The Henry Review endorsed the system as being capable of a balanced and flexible response to the risks faced by Australians in the 21st century (CoA, 2009).

Superannuation receives policy support through mandated contributions and tax incentives which stimulate superannuation savings with those assets being largely 'preserved' to fund retirement income[2]:

1. Assets held in super must be preserved to age 55 (rising to 60 from 2015 to 2024);
2. Employers make compulsory superannuation guarantee (SG) contributions (currently 9.5 per cent of income) on behalf of most employees;
3. Contributions made by an employer are not treated as taxable income for the individual, but instead taxed at 15 per cent within the fund (up to a cap, currently $30,000 for those aged up to 49)[3];
4. Additional 'post-tax' contributions are permitted (up to an annual cap, currently $180,000, with bring forward provisions allowing contribution of up to $540,000 in one year);
5. Fund investment earnings are taxed at 15 per cent in the accumulation phase but not in the pension phase (though earnings from capital gains are more lightly taxed and franking credits are returned to the fund under the dividend imputation system); and
6. Benefits are generally not taxed.

The superannuation tax structure is a 'ttE' system, where 'little t' means concessionally taxed and 'E' means exempt, and the letters refer to the treatment of contributions, earnings and benefits, respectively. Both contributions and earnings are taxed lightly relative to the marginal personal income tax rate of most taxpayers.

This tax arrangement is quite unusual, with most countries adopting an EET structure for taxation of pension funds. In such a structure, contributions are treated as deductions from taxable personal income and fund earnings are not taxed, but benefits returned to the member in retirement are treated as taxable personal income. The latter approach avoids a separate tax structure for superannuation or pension funds, and may also avoid distinctly different tax treatment of employees and retirees.

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1 The public pension system currently costs around 3 per cent of GDP compared to an OECD average of 6.3 per cent (OECD, 2010).
2 The details are complex – Appendix A provides additional detail.
3 Contributions for those earning over $300,000 are taxed at 30 per cent.

Section 3: Economic efficiency

Before turning to evaluation of superannuation policy settings, it is necessary to consider how to evaluate merit in economic terms of various possible approaches. This section begins with an important, but necessarily subtle economic concept: that of efficiency.

3.1   Efficiency and welfare

An important economic goal for society is to maximise welfare – generally defined by economists as maximising the amount of goods and services people able to be consumed (including goods and services such as the environment, education and health). Economists use the term efficient if a set of arrangements or behaviours results in an allocation of resources that maximises welfare. A policy which achieves such goals with minimum negative impact on growth is an efficient one; a policy with significant negative impact is less efficient.

Most economists until the mid-20th century believed that welfare would be maximised through the interaction of demand and supply in free markets; that is, it is most efficient to minimise government intervention in markets. The essence of this thinking is that individuals will accurately judge the costs and benefits of their decisions, and competition will drive continuous improvement in efficiency.

Economic theory has come a long way in recent decades. It is now recognised that there are costs and benefits ('externalities') often not recognised by individuals, such as environmental costs, and also that individuals do not always have the information to make optimal decisions, and their decision-making is prone to 'predictably irrational' biases.

Consequently, many economists now accept there are a range of situations where intervention in free markets can improve efficiency, such as by pricing externalities like environmental impact, and providing default settings which help consumers frame decision-making which is more beneficial in the long term.

Effectively, where allocations are not efficient, taxes and marginal incentives are tools that can improve welfare; however, intervention should be kept administratively simple and designed such that distortions on desirable behaviour are minimised.

Despite the proliferation of economic modelling tools, quantifying welfare effects and impacts is still a difficult task. This is because many variables in economic analysis (such as preferences and utility) are not observed, there are many feedbacks between different effects in the real economy, and there is no laboratory to test alternate policy interventions or 'counterfactuals'. Nonetheless, the theoretical and empirical literature does provide guidance on what policies could be more or less efficient.

3.2   Economic efficiency and retirement policy

This section examines how the taxation of superannuation fund contributions, earnings, and benefits and SG affect efficiency. Retirement policy relates to efficiency in three ways:

1. **Dynamic efficiency:** the optimal trade-off between consuming today and consuming tomorrow
2. **Asset allocation efficiency:** the optimal allocation of assets given each asset's rate of return
3. **Labour market efficiency:** the optimal trade-off between working and not working

The three main effects of the retirement incomes policy are increased retirement savings (both through compulsion and incentives from concessions), a change in household asset allocation (as diversified superannuation savings are accumulated in addition to the family home), and, certainly in theory, improved labour market efficiency (as the distortions of income tax are reduced).

3.2.1 Savings and dynamic efficiency

Economists view saving as a decision to consume in the future, instead of today. An individual should save up to the point where the extra benefit of consumption today equals the benefit of saving (the extra benefit of future consumption times the interest rate).

Economists have argued that it would be rational for a worker to smooth lifetime consumption by saving during their working life to fund consumption in retirement. However, the reality is many people do not save adequately for retirement. It is now recognised that the savings decision is particularly prone to information costs (including a lack of understanding of financial products) and behavioural biases (including inconsistent time preference), such that most people do not voluntarily save enough to fund retirement consumption.

In Australia, before the SG, aside from equity in residential real estate (mainly the family home), the majority of households had little in the way of financial assets at retirement (Bacon, 1995). Recent research suggests that many people do not have adequate levels of retirement income even after taking the Superannuation Guarantee at current levels into consideration (Burnett et al, 2014).

While a proportion of the community are self-sufficient in retirement, the role of retirement income policy is to achieve much broader adequacy of retirement income, in a sustainable and efficient manner. An early solution to this policy problem was public PAYGO pension systems that transfer income directly from workers to retirees. It is now recognised that such systems are vulnerable to demographic change, leading to greater distortions as contribution rates must be continually increased (World Bank, 1994). However, the policy challenge of adequate retirement provision remains. Most research finds Australia's three pillar system to be an effective solution to this policy challenge.

The decision of how much to save or consume today is also a question for nations. The question is how much should be spent on current expenditure and how much invested in a way that generates benefits in the long term, such as in infrastructure, capital expenditure, human capital development and research and development.

Getting this decision right is necessary to achieve what economists call 'dynamic efficiency'. With an open economy and access to foreign capital markets, levels of savings and investment are not necessarily in lockstep. However, complete reliance on foreign capital to support investment and economic activity carries risks, discussed is section 4.3 below. Increased domestic savings to fund investment is therefore advantageous.

A comprehensive income tax distorts dynamic decisions, including by taxing nominal rather than real investment earnings, leading to lower saving than would otherwise occur. All three aspects of superannuation tax treatment – concessional tax
of contributions and earnings and tax exempt benefits – act to address this distortion and therefore encourage a higher
level of saving.

Economists have traditionally viewed taxes on contributions and benefits as equivalent, because a tax of, say, 15 per cent, on contributions will have the same effect on final benefits as a 15 per cent tax on benefits (eg. Bateman et al, 2001). However, taxes (and tax concessions) on contributions occur at the time the decision to save is made and, given the insights of behavioural economics, are likely to be more influential. On the other hand, governments may also be prone to excessive discounting, and contributions taxes allow revenue to be raised 30 to 40 years earlier than benefits taxes.

3.2.2 Asset composition

The efficient trade-off between different assets in an economy depends on their relative rates of return – with more productive assets receiving more investment.[4] Differences in the tax

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4 In the long term, asset returns should tend to equate across different classes; a more productive asset class receives more investment due to a higher rate of return, thus higher level of investment drives down the long-run rate of return. Any differences in earnings taxes across assets will affect long-run levels of investment.

treatment of asset classes affect their marginal return to individuals, and hence will distort how households save.

In Australia, owner occupied housing is a key savings vehicle for most families. As the Henry Review recognised, owner occupied housing is an important form of retirement saving as it delivers significant benefits and security to retirees (AFTSR, 2009). Before compulsory superannuation, owner occupied housing was the only store of wealth for the majority of families.

Owner occupied housing is treated favourably in the tax-transfer system, with no recognition of imputed rents, no tax on capital gains and exemption from the pension means-test. Direct investment in real estate is also treated favourably through the negative gearing system.

Policies to stimulate retirement saving through superannuation arguably adjust for these distortions, resulting in a broader asset base for most Australian households. In the absence of these policies, an even higher percentage of Australian household wealth would likely be invested in the property market. Over the longer term the investment return from residential property has not been very different from other equity investments on average. However, recently at least in some areas, such as major capital cities increases in the property prices have had an adverse impact on affordability for first home buyers. Less saving through superannuation and more investment into housing would exacerbate such pressures.

3.2.3 Labour market efficiency

The efficient trade-off between working and not working depends on the marginal benefit of working (the wage rate). The individual decision also translates to economy-wide efficiency, since the marginal product of labour inputs in production (the wage) equals its marginal cost (the enjoyment from leisure).

Both the contributions tax and benefits tax act like a tax on wages and distort this trade-off. In theory, taxes on income distort the decision of how much to work and how much to invest in education (human capital), because these taxes reduce the marginal benefit of extra work. Research suggests that a reduction in the tax rate when the marginal rate is high may increase labour force participation, and depending on how tax-cuts are financed, lead to higher long-term growth (Gale et al, 2014).

The previous section discussed how taxes shape incentives and behaviour, and how to evaluate the efficiency of tax incentives using economic theory. This section considers some of the economic, particularly macroeconomic, effects of the superannuation system.

## 4.1   Superannuation reduces the cost of retirement policy

Retirement income adequacy is an important goal of government policy. An efficient policy solution is one that achieves this goal with minimal distortions and low impact on the economy.

Superannuation is a maturing element of the retirement income system. As asset levels grow, the cost of this element of the system in the form of tax expenditures also grows. However, this cost is offset by reduced public pension payments.

Currently there is no official modelling of the net impact on the Budget of compulsory superannuation or superannuation tax concessions in their entirety. However, Treasury modelling in Charter Group (2013) of an increase in SG from 9 to 12 per cent indicates that the net Budget cost impact of such an increase improves relatively soon after implementation.

This occurs because the cost of concessions associated with such a policy change stabilises relatively quickly at 0.6 per cent to 0.7 per cent of GDP but the benefit in reduced pension outlays continues to improve over time to reach around 0.6 per cent of GDP. As a result the eventual outcome from such an increase in the SG is a positive overall impact flowing from an increase in the SG as the pension expenditure savings gradually offset the cost of the tax concessions (Figure 1).

**Figure 1. Projected net cost: SG increase and public pension**
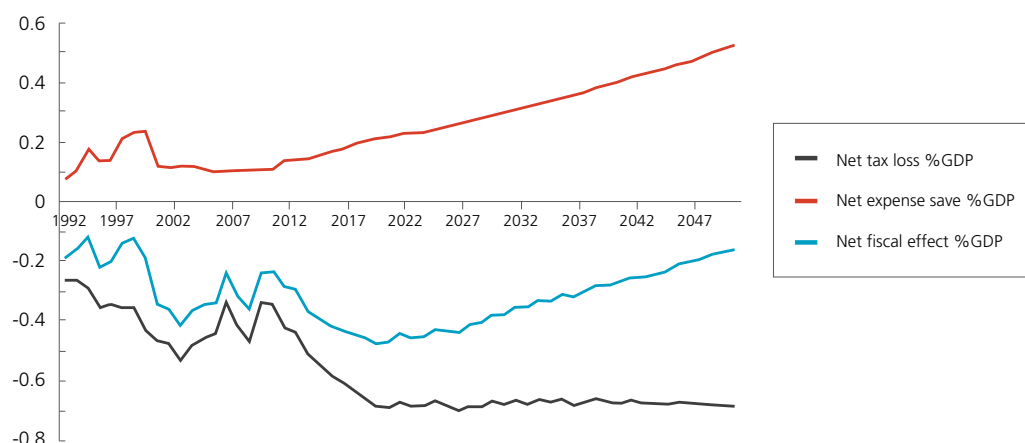
Source: Treasury modelling, in Charter Group (2013).

4.2   Superannuation improves the national saving rate

Compared to other OECD countries, and particularly countries with similar financial systems, Australia has an above average savings rate. Superannuation makes a major contribution to the relatively high saving rate. Gruen and Soding (2011) from the Australian Treasury estimate that the superannuation system currently contributes about 1.5 to 2 percentage points to the national saving rate, rising to 3 percentage points by 2050 (Figure 2).

Figure 2. Contribution of superannuation to national saving

% of GDP
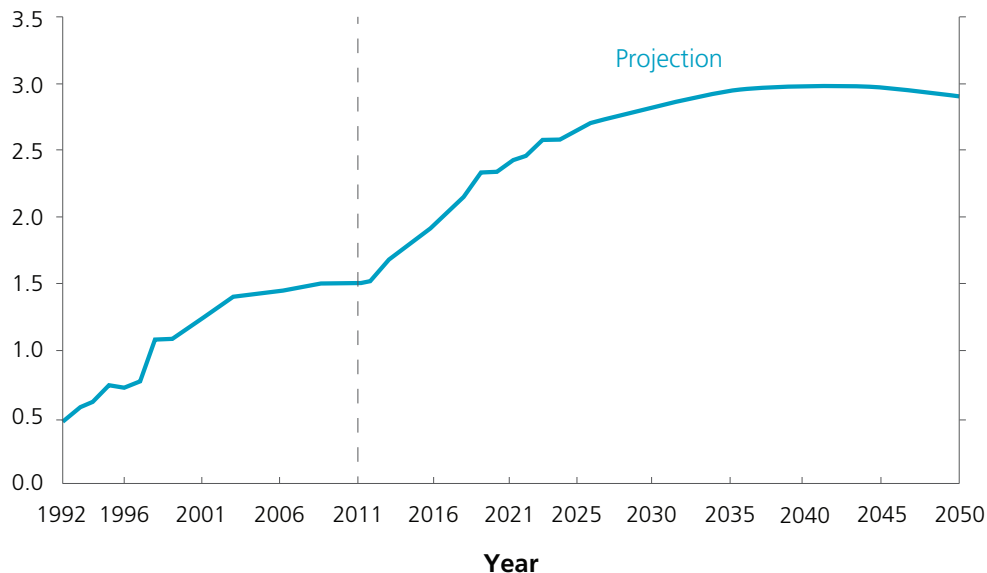
Source: Gruen and Soding (2011).

An important question is the extent to which saving due to compulsory superannuation and tax concessions is offset by reductions in other forms of saving.

The Treasury estimates in Figure 2 assume an offset of other savings of about 50 per cent, while a 30 per cent offset is a more common estimate (Kirchner, 2012). These estimates also assume that the tax concessions offered to superannuation do not displace other forms of government saving (Gruen and Soding, 2011).

However, other Australian research indicates offsetting is limited or non-existent.[5] This is particularly so in regard to compulsory contributions. An important explanation could be that in the absence of rational decision making about how much one ought to be saving, the compulsory rate acts as a suggestion to consumers, influencing their ideas of how much they ought to be saving.

Given this recent Australian research on offsetting behaviour, the Treasury estimates of how much superannuation contributes to national saving appear conservative.

Higher national savings over time lead to higher employment growth and higher standards of living in Australia as Australians benefit from the investments that such savings finance.

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5 Work by Connolly (2007) finds that an additional dollar of compulsory super adds between 70 and 90 cents to total household savings. Shanker and Vidler (2014) find no statistically significant offsetting behavior between workplace default contributions and voluntary contributions, even where default contribution rates are much higher than compulsory SG rates.

4.3   Superannuation reduces reliance on foreign capital

While Australia has a higher saving rate relative to some comparable economies, Australia has traditionally been a net importer of capital because domestic saving has not met the high demand for investment in Australia (Figure 3).

Figure 3. Australian saving and investment rates

% of GDP
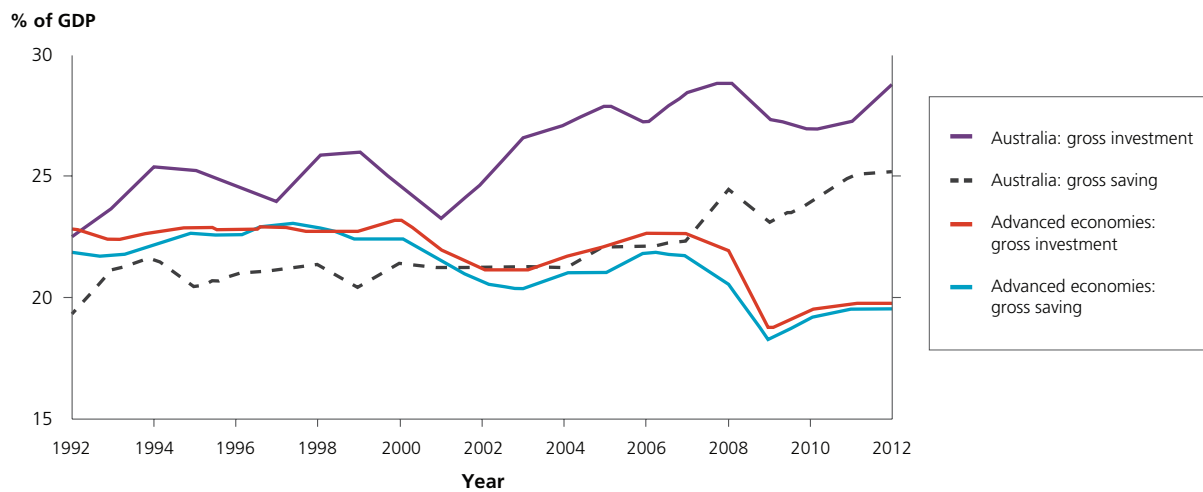
Source: IMF (2014).

Using foreign funds for domestic investment has been a feature of the Australian economy for a very long time, and is not necessarily inefficient, because Australia's current account deficit is driven by high investment demand (Mercerau and Rozhokov, 2006). However, relying on foreign sources of finance does expose Australian firms to global economic shocks. This can particularly be the case since Australia's foreign liabilities are mostly in the form of debt, in 2014 only $0.9 trillion out of $2.5 trillion of total liabilities were in the form of equity.[6] Debt liabilities, particularly short-term debt, present a rollover risk, where, due to foreign shocks, foreign lenders may be unwilling or unable to refinance loans.

An important factor, along with the general health of Australia's financial system, in mitigating the risk of foreign liabilities is having sources of capital available from Australian superannuation funds. Not only does this domestic source of capital reduce the vulnerability of firms to foreign shocks, but it reduces the risk premium foreign investor's demand when investing or lending to Australian firms (FSC, 2014). Easier access to domestic capital for local investment projects can thus also increase investment, and result in greater long-term output and growth.

During the GFC, when capital was most urgently needed to support continuing economic activity the availability of capital to Australia was reduced. The Australian currency fell, reflecting perceptions of Australia as a relatively high risk investment destination, and risk premiums in global capital markets increased. Overseas capital markets effectively froze. Australian corporations, including the major banks, seeking to recapitalise their balance sheets, turned to Australian superannuation funds to supply equity capital via placements and other raisings. Secondary capital raisings on the ASX during 2007, 2008 and 2009 were $62 billion, $60 billion and $99 billion respectively (ASX, 2010), with subscriptions dominated by institutional investors, particularly domestic superannuation funds (Washington and Evans, 2009).

Commentators have already predicted that Australia's superannuation savings will result in a reversal of the current account deficit, with Australia becoming a net lender (Blythe, 2014). Recent data suggesting a narrowing of the Australian current account deficit is consistent with this prediction (ABS, Cat No. 5302).

This potential reversal or at least dampening of the current account deficit must be viewed from the perspective of savings efficiency. Australian consumers may still be saving too little from the point of view of inter-temporal efficiency. The resulting growth from greater domestic investment can thus be seen as welfare improving.[7]

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6 Australian Bureau of Statistics (ABS) 2014, *Balance of Payments and International Investment Position*, cat. no. 5302.0, ABS, Canberra.
7 A higher level of saving and investment is not always efficient. This is because saving today comes at the cost of consumption today. The efficient balance is given by the inter-temporal optimisation of consumers; but if consumers are not making optimal saving decisions, higher saving improves welfare.

4.4 Household balance sheet diversification

An important advantage of the superannuation system is that it has facilitated a broadening of the range of assets held by households.

In 1990, most households kept the majority of wealth in real estate, particularly the family home, with 10 per cent of wealth held in bank accounts. Only the top 10 per cent of households by wealth had any significant holdings financial assets, such as shares in listed companies (Figure 4).

However, by 2010, the range of assets held by households across the income distribution had broadened, particularly through superannuation. This reduces the relative exposure of households to the Australian residential property market, giving many households exposure to equity and bond markets for the first time as well as infrastructure and commercial property, and geographic diversification through exposure to overseas assets. Given the concentration of the Australian economy and listed equity market in the financial and mining industries, international exposure also gives a significantly broader industrial diversification.

Figure 4. Household asset composition, by wealth band, 1990 and 2010
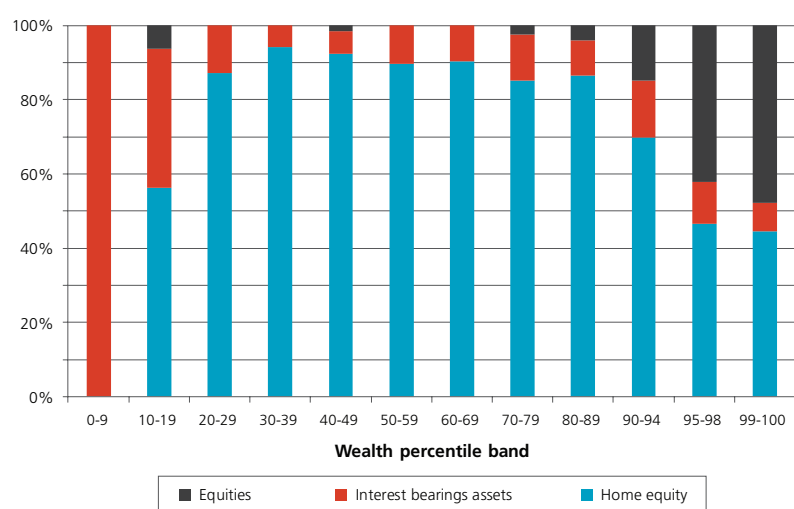

Source: Bacon (1995).

Figure 4 shows this effect of superannuation. Two decades later, in 2010, households all the way across the wealth distribution hold financial assets (Figure 5), predominantly in the form of superannuation.

Universal superannuation has unambiguously improved the asset diversification of Australian households. For the first time, many families outside the wealthiest 10 per cent have a broad asset base outside the family home. Exposure to equities, bonds and commercial property is now shared more evenly across the wealth distribution. Asset classes such as infrastructure equity and debt are available to superannuation fund members, particularly through MySuper options. APRA-regulated superannuation funds have also contributed to a reduction in 'home bias' by investing a significant minority of assets overseas.

These factors contribute to improved risk adjusted returns and reduce exposure to the housing market, particularly for low to middle income workers.
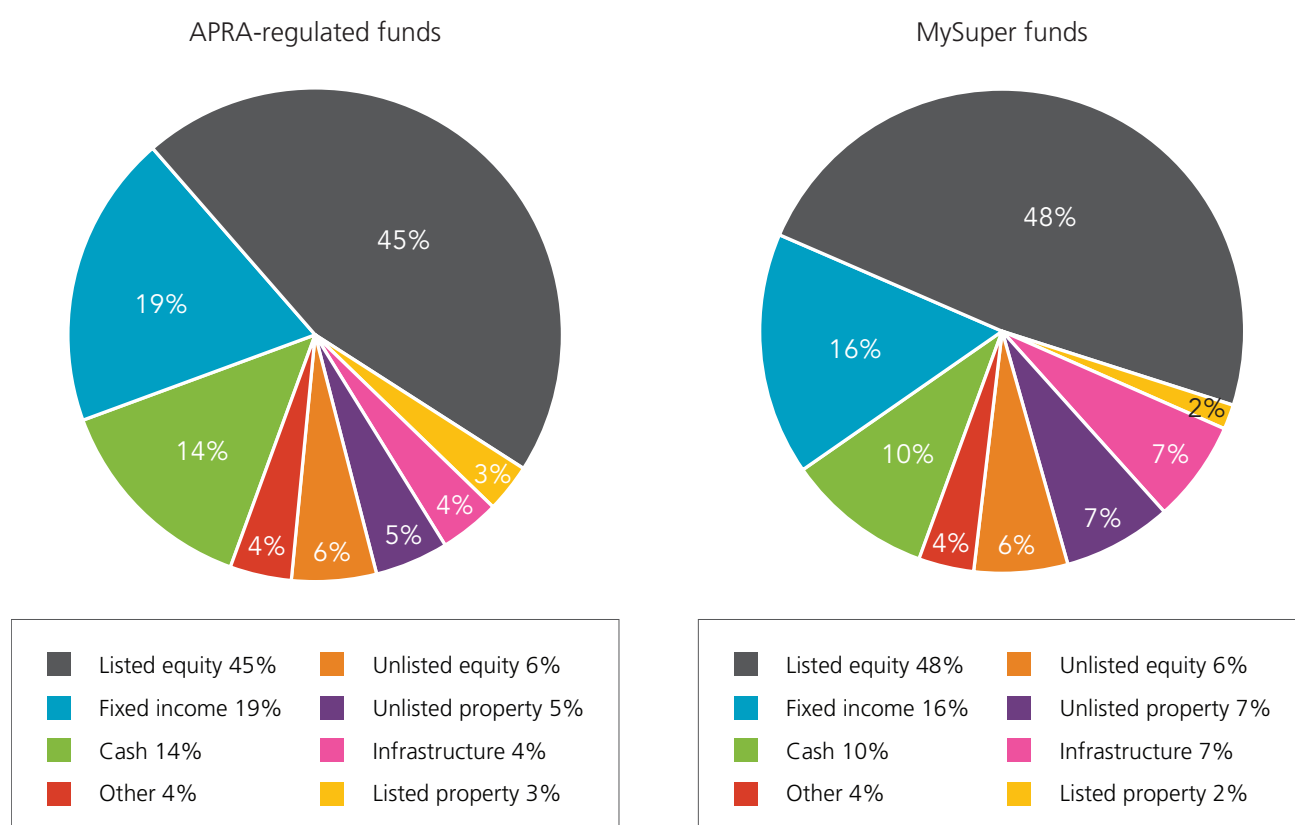

Source: ABS (2012).

4.5   Patient capital for alternate asset classes

The investments made by professional investment managers in APRA-regulated superannuation funds are diverse and include support for critical parts of the economy that may not be available through other means, including infrastructure, private equity, and commercial and industrial property.

Pooled superannuation allows investment in lumpy assets (where splitting ownership across many parties is difficult) and over longer time horizons than is the case for most individual investors. Figure 5 shows the asset allocation of APRA-regulated superannuation funds.

Approximately 19 per cent of all APRA-regulated fund assets, or $232 billion, is invested in unlisted equity, unlisted property, infrastructure or other alternative assets. In MySuper options these categories represent 24 per cent of investment, or approximately $94 billion.

Figure 5. Large APRA funds and MySuper funds asset allocation, 2014

APRA-regulated funds

■ Listed equity 45%	■ Unlisted equity 6%
■ Fixed income 19%	■ Unlisted property 5%
■ Cash 14%	■ Infrastructure 4%
■ Other 4%	■ Listed property 3%

MySuper funds

■ Listed equity 48%	■ Unlisted equity 6%
■ Fixed income 16%	■ Unlisted property 7%
■ Cash 10%	■ Infrastructure 7%
■ Other 4%	■ Listed property 2%

Source: APRA (2015).

There is Australian evidence that well-targeted investments in transport infrastructure result in productivity increases that benefit many industries (BITRE, 2014). Arguably, a shortfall in infrastructure investment in Australia is hampering economic growth, notably in transport and telecommunications. Established infrastructure assets are particularly well-suited to pension fund investment because they generate income over the long term, tend to have defensible, regulated market positions and have counter-cyclical properties. This can provide governments with the capacity to recycle proceeds from the sale of such assets into new infrastructure investments.

Superannuation funds have also contributed significantly to private equity investment, including venture capital. Superannuation funds are the largest investors in private equity in Australia, having now committed over $8.5 billion out of a total commitment of $18.5 billion (ABS, Cat No. 5678.0, 2015).

Changes in superannuation tax arrangements have multiple economic effects. This section outlines a simple presentation of the economy in order to conceptualise the potential effects associated with a counterfactual scenario of reduced superannuation tax concessions.

Changes in superannuation tax arrangements affect immediate and future government and household budget balances, saving levels, labour force participation and long-run growth. These are considered in terms of three interrelated channels:

1. **Static budget effects.** These include the impact on short and long term long-run budgets and saving balances holding growth and national income fixed.
2. **Investment and growth.** These include macroeconomic effects from changes to saving. These will in turn feedback into government and household budgets through wage payments and total tax revenue.
3. **Labour market.** These include macroeconomic effects from changes to the labour force participation rate. Once again, these will in turn feedback into government and household budgets.

An evaluation of the costs and benefits of tax policy should take into account the timing and interaction of these effects. It is possible to map, qualitatively, how the above channels flow through the economy using a stylised flow diagram model (Figure 6). Further detail is presented on this figure using an algebraic model in Appendix B.

Figure 6. Economic impacts of superannuation tax policy
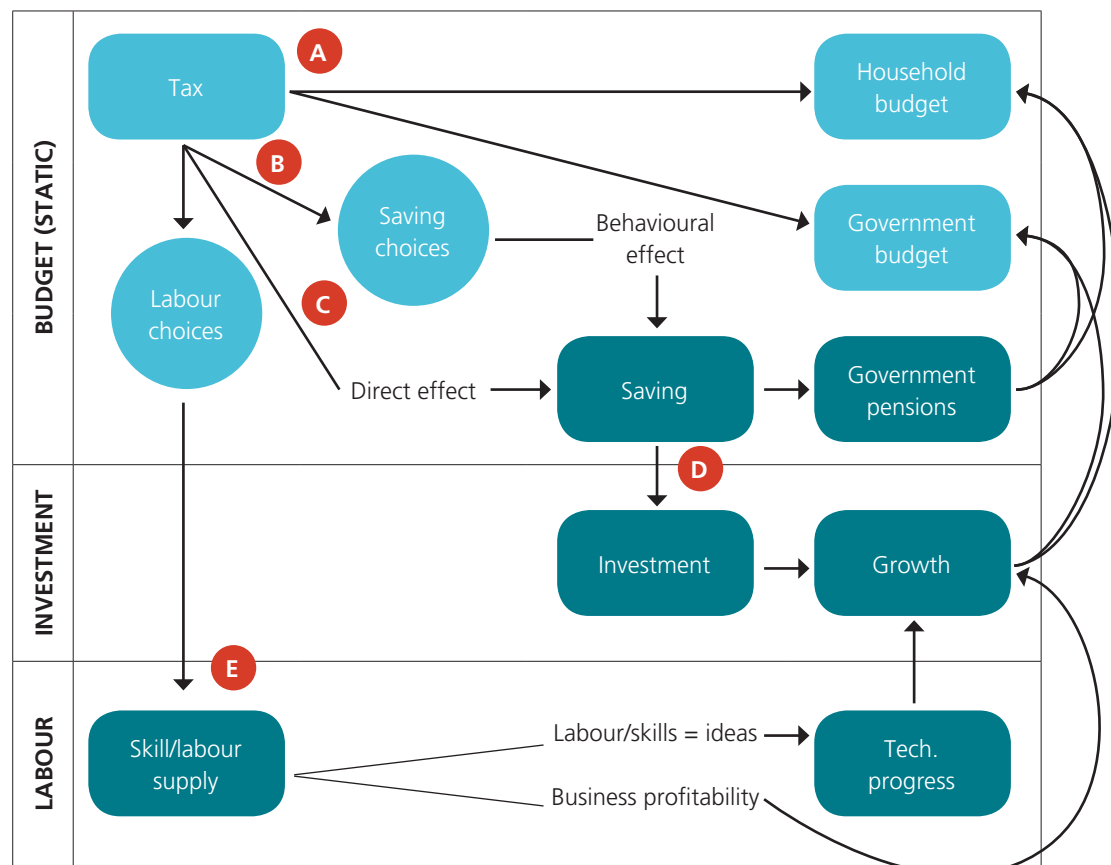
Source: vpr – Vidler Policy and Research.

5.1   Static budget effects

The top panel in Figure 6 consists of immediate and long-term impacts on government and household accounts (holding all flow on effects in the economy fixed). This panel illustrates the three ways tax policy will impact on household and government budgets.

The first (A) refers to increased tax revenue from higher earnings or contributions taxes. On the household side, a reduced contributions tax concession means higher taxes on both income and retirement.[8] A benefits tax also acts as an income tax, though it is levied in the future. Reduced superannuation earnings concessions will lead to lower future returns from superannuation balances.

Saving balances will be effected both with and without behavioural changes. Without behaviour change (C), the impact on the total level of saving of any increase in contributions taxes will depend on how the tax is collected. If the government collects the tax from SG contributions, then total savings will fall. However, if the government collects the contributions tax from the paid wages to employees and leaves the SG contribution level fixed, then total saving will remain the same. An increase in the earnings tax will reduce the total level of saving since taxed returns are not being accumulated. Conversely, abolishing the earnings tax altogether should result in an increase in SG and hence total assets since the extra earnings are automatically saved for the household.

Changes in income and earnings taxes affect the household budget today and in the future. But the total impact on economic growth and welfare will depend on how taxes are levied and associated changes in government expenditure.

Tax changes shift incentives and households will respond by altering behaviour (B). Currently, out of $115 billion in annual total super contributions, $36 billion (APRA, 2014) are voluntary employee contributions and an additional $9 billion are salary sacrifice contributions. Households may respond to an increase in contributions taxes by shifting the concessionally-taxed salary sacrificed contributions to other tax-preferred assets, such as housing. Furthermore, any increase in the earnings tax may also jeopardise the post-tax $36 billion contributions, with some shifting into other tax-preferred assets or immediate consumption.[9] Lower saving balances will mean lower future returns for households, particular after they have retired.

The government budget will be immediately more favourable if contributions and earnings taxes are increased. Even with behavioural change from a shift in voluntary saving to other tax-preferred assets, Treasury estimates suggest a sizeable improvement in the immediate budget position (Treasury, 2015).

However, in the long-run this improvement will be offset by an increase in future pension liabilities. For a couple with assets over $286,500, the Age Pension per fortnight decreases by $1.50 for every $1,000 over the threshold. The government in the 2015-16 Budget is proposing that the offset of the Age Pension be increased by decreasing the Age Pension by $3.00 for every $1,000 over revised thresholds, which are proposed to be $250,000 for a single homeowner and $375,000 for a couple homeowner.

Income derived from superannuation over various income thresholds will also reduce Age Pension payments. While the current median balance is around $142,000; any future budget impact must take into account the growth of these balances to a point where marginal changes in savings today impact on future pension claims. The policy changes proposed in the 2015-16 Budget will, if implemented, increase the level of offset between superannuation assets and pension outlays. The increase in the SG to 12 per cent is also important in this regard.

Alternate strategies to balancing the cost of superannuation tax concessions and public pension outlays are conceivable. For example, ASFA has proposed limiting the tax assistance provided for superannuation balances over $2.5 million.

5.2   Investment and growth

Flow-on effects in the economy coming from changes in levels of domestic saving are illustrated in the middle panel of Figure 6. As discussed above, saving can fall even without behavioural change. When household saving falls, total assets available in the economy for capital investment will fall (D).

Capital is an input into production, so a fall in assets means lower investment, lower capital, and lower GDP. Lower GDP in turn means lower production and profits, lowering wages and earnings for the household and the total tax revenue for the government. The magnitude of these *dynamic general equilibrium* effects will depend on the response of savings to changes in the tax structure (see Econtech, 2008, for a detailed general equilibrium analysis from an increase in saving).

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8 Alternately, if net contributions (ie. contributions after tax) are held constant, a reduced contributions concession results in lower take-home pay and reduced household consumption demand.
9 See Ross (2007) for elasticities of these responses derived from survey results.

Open-economy effects have not been considered in this simple model – as domestic investment falls, off-shore investment can take some of its place. However, as discussed in the previous section, this reliance on offshore investment may come at a cost of increased risk to investors, resulting in higher interest payments and lower profitability of local investments. Furthermore, a fall in saving will still result in lower future returns for individual households, as returns to asset flow to overseas households.

5.3   Labour market

Finally, in the lowest panel, even if there are no inter-temporal distortions in the way of an earnings tax, a reduction in contribution and benefit tax concessions would represent an increase on income and savings tax, reducing household incentives to supply labour (E) (Kudrna and Woodland, 2010). This is because these taxes reduce the marginal wage paid to the household. Labour is an input into production, and lower labour supply means lower production and profitability for firms. Reduced concessions will potentially have negative effects on household and government budgets over time as wages and profits fall. Modern growth theory also suggests that productivity growth is directly linked to ideas and innovation generated by workers (Romer and Jones, 2012). Hence, lower labour force participation may lead to lower productivity growth and once again a worsening of both household and government budgets.

5.4   Summary of potential economic effects

This section summarises the potential effects of a counterfactual scenario in which government reduces concessional taxation of superannuation contributions and earnings. These are not quantified. Effects are discussed in relation to the short, medium and long term.

Short-term effects are essentially accounting effects that assume no change in behaviour. Medium-term effects assume changes in behaviour, particularly in relation to the level and type of household saving. Long-term effects also include feedbacks from changes in the level and type of household saving to economic growth, as well as long-term government budget impacts.

Based on the model of the economy outlined, if government reduced superannuation tax concessions, in the short term, assuming no behaviour change, taxation revenue will rise as the proportion of household income currently attracting superannuation tax concessions is taxed at marginal income tax rates.

However, there is ample evidence that behaviour does respond to tax incentives, so over time savings and other behaviour is expected to shift in response to the policy change. In the medium term, incentives would be expected to change behaviour, particularly around the level and form of household savings, with voluntary superannuation contributions being reduced, partially replaced by increased saving in other tax preferred vehicles. All policy settings equal, alternate tax preferred savings vehicles include owner occupied housing and negatively-geared investment, much of which is property. This will likely fuel increases in property prices, impacting on housing affordability.[10]

Reduced superannuation contributions will flow through to reduced investment in the main superannuation asset classes including domestic equities and infrastructure, or increased reliance on the external sector (foreign borrowing) to meet that investment need. In the long term, additional effects begin to play out. Altered saving and investment flows and labour market effects feed back into economic growth rates. Reduced superannuation contributions flow into increased public pension liabilities.

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10 Residential housing markets in the main population centres exhibit low elasticities of supply (Gitelman and Otto, 2012). This implies that the main outcome of an increase in demand is an increase in prices, rather than an increase in supply. This may exacerbate housing affordability issues.

Appendix A: Superannuation policy settings

The rules under which superannuation operates have changed continuously. This Appendix summarises current treatment.

Superannuation assets can be transferred from fund to fund but must be preserved within the system until age 55 for those born up to 30 June 1960, rising to 60 between the years 2015 and 2024.[11] The higher age will apply to all those born after 1 July 1964.

Compulsory employer SG contributions were introduced in 1992 at the rate of three per cent of income, rising to nine per cent by 2002. SG contributions are currently 9.5 per cent and legislated to rise to 12 per cent in increments of 0.5 per cent between 2021 and 2026.[12] The self-employed are not subject to compulsory SG contributions.

SG contributions are 'pre-tax contributions' – generally taxed in the fund at 15 per cent, rather than an individual's marginal personal tax rate. Until 2017, workers on incomes up to $37,000 that complete a tax return receive a Low Income Superannuation Contribution (LISC) rebate to their fund, effectively reducing the tax on their SG contributions to 0 per cent. Very high income earners (current threshold $300,000) pay an additional 15 per cent contribution tax.

Voluntary employer and employee (salary sacrifice) and self-employed pre-tax contributions are permitted up to a cap, currently generally $30,000, indexed to wages in increments of $5,000. For workers aged 49 and over, the cap is higher: currently $35,000. Additional voluntary contributions made from after-tax income are permitted up to a cap indexed to wages, currently $180,000.[13]

Superannuation fund investment earnings are taxed at 15 per cent in the accumulation phase and 0 per cent in the pension phase; however, earnings from capital gains are more lightly taxed and franking credits are returned to the fund under the dividend imputation system for members in both the accumulation and pension phases.

Benefits are now generally tax-free.[14] Benefits can be taken as a lump sum or a pension. The most popular form of pension is the 'account-based pension' which has an aged-based minimum annual withdrawal, rising in steps from 4 per cent at 66-64 up to 14 per cent at age 95 and above.

People above preservation age who are not yet retired may also access a 'transition to retirement' pension of up to 10 per cent per year of their superannuation balance.

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11 There is provision for early under extremely limited personal circumstances.
12 Employers are not required to pay SG in respect of employees below 18 years or those paid less than $450 per month and the SG obligation is capped at an indexed ceiling, currently: $197,720 salary.
13 Under certain circumstances individuals can make larger post-tax contributions, including by using the cap for multiple years.
14 Accumulations in certain schemes in respect of contributions made between certain dates are taxable, but at concessional rates.

Starting with the household, let B_H (formula 1) be the household's budget balance at a point in time. The household earns wages, w, on labour hours worked, L, and a rate of return, r, on total assets, A. The government collects an income tax T_W and a tax on asset earnings, T_C, and also transfers (pension payments), T, to households. Households consume, $ConsH$, or save. Households save through SG contributions, voluntary super contributions, VS, or non-super savings, $SavH$.

$$B_H = (1 - T_W)wL + (1 + r(1 - T_C))A + T = ConsH + SG + VS + SavH \qquad (1)$$

Superannuation assets will only be available to the household once they retire.

The government budget, B_G (formula 2) is revenue (tax) minus expenditure. Revenue consists of tax collected from income, private investment earnings and corporate income, T_P. Corporate income will be a share α of total production in the economy. And total production will be a function, F, of total capital, A, labour, L, and the level of productivity, P.

$$B_G = wT_WL + rT_CA + \alpha T_P F(A,L,P) - T - E \qquad (2)$$

The government spends money on transfer pension payments, T, and other expenditure, E.

The above two equations show how changes in income and earnings taxes affect the household budget today and in the future. Increasing the super fund earnings tax increases T_C. Increasing the contributions tax acts like an increase in income tax, T_W, and also an increase in superannuation earnings tax, T_C.[15]

Total GDP (formula 3) is total production, equal to the total wage bill, plus the total return on assets.

$$GDP = F(A,L,P) = wL + rA = B_H + B_G \qquad (3)$$

The growth of productive capital stock (formula 4) depends on total savings, S, by households.

$$Growth(A) = S/A \qquad (4)$$

Total savings will be the sum of SG, voluntary super saving and non-super saving. GDP growth (formula 5) happens from growth in all factors (capital, labour and productivity) that go into production in the economy.

$$Growth(GDP) = Growth(A) + Growth(L) + Growth(P) \qquad (5)$$

Reducing the total saving stock reduces output since there is less capital available for investment, and lower labour force participation also means lower output.

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15 Note: Assuming no behaviour change, a benefits tax has an equivalent impact on accumulated savings as a contributions tax, and both are treated by economists as a tax on income. The timing of revenue to government is obviously very different.

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