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CONTENTS

Changing taxes for changing times — Dr Ken Henry AC **1**

The economic outlook and challenges for the Australian economy — Dr David Gruen **15**

Australia's current account deficit in a global imbalances context — Phil Garton, Matt Sedgwick and Siddharth Shirodkar **29**

New estimates of the relationship between female labour supply and the cost, availability, and quality of child care — Xiaodong Gong, Robert Bruenig and Anthony King **51**

Managing manna from below: sovereign wealth funds and extractive industries in the Pacific — Martin Gould **63**

Key themes from Treasury's Business Liaison Program **87**

Ted Theodore: the proto-Keynesian — John Hawkins **91**

What's new on the Treasury website **111**

Past editions of *Economic Roundup* **117**

Sources of economic data **119**

Changing taxes for changing times

Dr Ken Henry AC
Secretary to the Treasury

Address to the Australasian Tax Teachers Association (ATTA) conference, 21 January 2010

Introduction

Thank you for inviting me to speak here today.

This is a marvellous theme for a conference — 'changing taxes for changing times'.

The topic implies a way of thinking about tax that might appear a little unorthodox.

The traditional way of thinking about tax policy relies on the axioms of 'efficiency, equity and simplicity'; what Justice Asprey, in his landmark 1975 Review, called 'the big three' (Asprey 1975).[1] The elegance of those axioms has influenced almost every subsequent reform exercise. Jeff Harmer, John Piggott, Heather Ridout, Greg Smith and I didn't see any reason to jettison any of them in our recent review of the tax and transfer system either.

But when we set out on our review, we were determined to avoid falling into the trap of thinking that those axioms, a parchment and a quill, might be all that was needed to design a tax system for any age and any economy. This is, in fact, a difficult trap to avoid. It is actually quite tempting to think that the axioms should predominate under any conditions; whether it's a tax system for a developed or a developing economy; a small open economy or a large closed one; a country facing up to its environmental challenges or one that is not. Some might even be tempted to think that rather than assisting policy design, social context might even harm its integrity, introducing unhelpful distractions.

When the five of us got down to work, we quickly agreed that Australia's future tax system design certainly needs to have regard to efficiency, equity and simplicity. But we also agreed that it needs to do so in a way that understands and is influenced by context; specifically, by the challenges that Australia is likely to face. We accepted that those challenges might be quite different from those confronting other countries, and different also from those we have confronted in our own history. We did not consider

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1 Adam Smith is sometimes attributed these axioms from his *Wealth of Nations*. But like most attributions to that brilliant work, this is an over-simplification. Smith actually provides four principles in the *Wealth of Nations* (Book V, p. 892-3). They are: I. The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities, that is, in proportion to the revenue which they respectively enjoy under the protection of the state; II. The tax which each individual is bound to pay ought to be certain, and not arbitrary; III. Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it; IV. Every tax ought to be contrived as both to take out and to keep out of the pockets of the people as little as possible, over and above what it brings into the public treasury of the state. While I is clearly an 'equity' statement, II and III are more than just concerned with 'simplicity' and IV is only roughly about 'efficiency'.

it an unhelpful distraction that the way in which challenges are addressed might be influenced by history, community norms and societal expectations.

We thought it also worth bearing in mind that it is not desirable to try to do everything at once. Tax reform should always be a project for the coming decade — not just the coming weeks or months.

Matching tax design to society's goals

The power to tax needs to be marshalled by government to serve society's goals. Those goals will change through time.

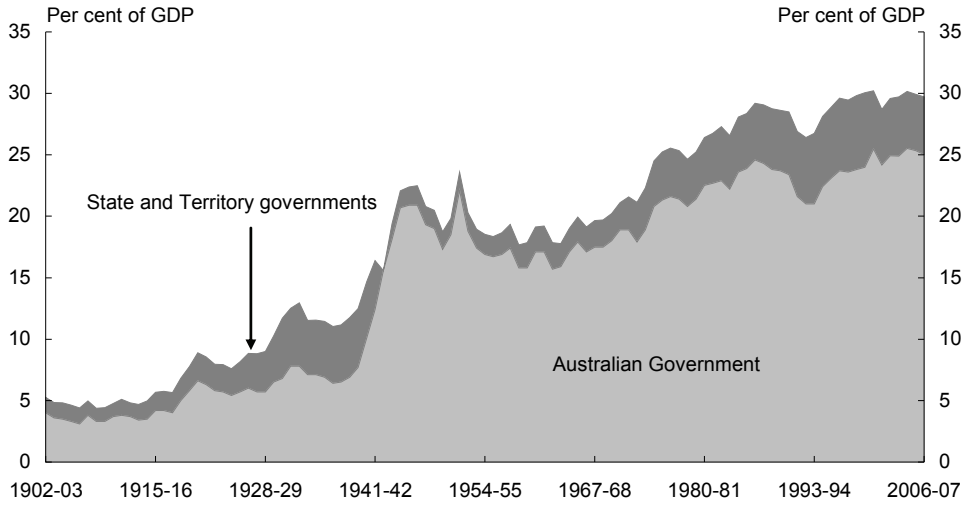
Of course, tax design is a highly constrained activity. Taxation raises revenue from a limited number of bases — land and other natural resources, labour, capital and consumption. And the size of these bases will differ from country to country and over time in ways over which governments might have very limited control. Their evolution will, however, have an impact on how a government chooses to raise revenue.

If we were able to ask Governor Hunter of the new colony of New South Wales why he introduced the very first taxes in Australia — taxes applying to imports — I suspect his answer would be, simply, that the colony had to finance the building of a new gaol because the old one had 'inexplicably' burnt down, private subscriptions had proved insufficient and Britain had refused further subsidies.

Australia's first taxes were levied to meet the challenges of those early days. They may also have been relatively efficient, equitable and simple, particularly since most of the revenue for the gaol came from import duties on alcohol — 'the more the citizens drank, the more money there was to control them' (Smith 1994).

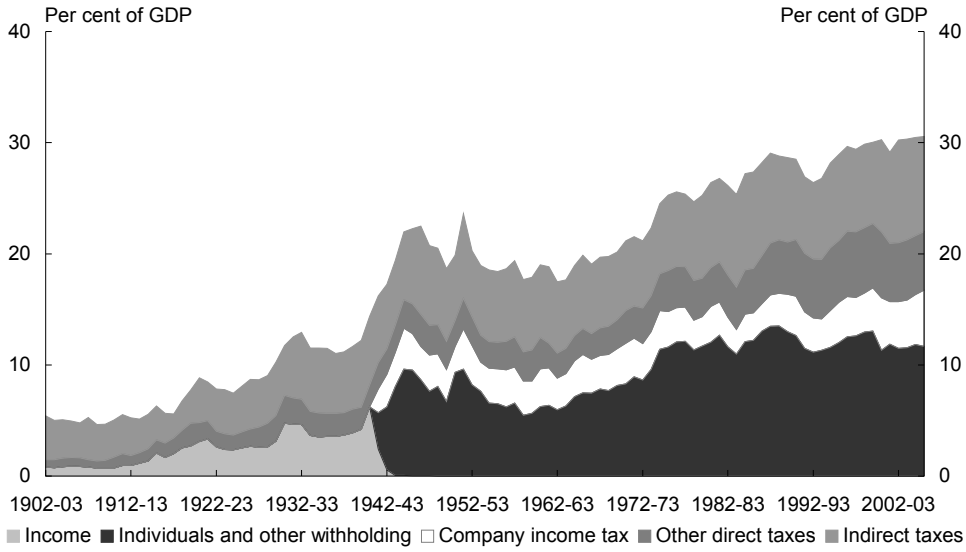
Import duties remained the major form of taxation until the funding needs of the First World War led to the introduction of federal income tax in 1915. The next major increase in taxation again occurred because of war when, in the 1940s, different State income taxes were consolidated and raised at the federal level. Expanding social programs in the mid-1970s, such as free university education and health care, led to a rise in direct taxation on business and individuals and — eventually, an increase in taxation overall as a share of GDP (Charts 1 and 2).

Chart 1: Australian Government and State taxation (1902–03 to 2006–07)



Source: Treasury (2008).

Chart 2: Composition of Australian tax revenue (1902–03 to 2006–07)



Source: Treasury (2008).

Now I am not saying that all of these policies were effective or desirable. For example, we now know a lot more about the detrimental economic effects of import duties. And some of today's challenges, such as environmental degradation, exploitation and species loss, are the consequence of past generations failing to face up to, or even being aware of, those challenges.

I am just making the point that tax policies of the past have tended to respond to the challenges of the times — even if they have done so in fits and starts, piecemeal ways, or only after long delays.

Policy change is difficult and the challenges society faces are relentless. Tax policy is a community concern. Successful tax policy means the community must understand, appreciate and generally support the reasons for tax reform.

There is, therefore, a case for setting out the challenges clearly — providing an opportunity for the tax reform argument to prove compelling. Even then, reform is not assured. But a tax reform proposition disassociated from the challenges the community feels it is facing has no hope at all.

Guarding against vested interests

Of course, we do need to guard against the inappropriate weighting of challenges and the self-interested offering of appropriate policy responses.

Consider, for example, our peculiar but long-standing acceptance of a monstrous challenge confronting our gold miners that justified extraordinary policy protection. Many of you probably wouldn't remember that income from gold mining was fully tax exempt in Australia until 1991. The concession was introduced because of fears for the international competitiveness of our gold industry in the face of rising costs and falling prices. Numerous reviews recommended removing the exemption, to improve the fairness and efficiency of the tax system. The 1985 draft White Paper also recommended its removal. But the final decision to remove it was not taken until 1988.

The Australian gold tax exemption lasted nearly 70 years, despite its having absolutely no support in tax theory. Long before its removal, it had become a source of embarrassment for Australian officials attending international tax policy conferences — we were the only OECD country that accorded a whole industry an exemption from tax (Monem 1999). Even so, its removal was highly controversial.

Tax reform is always difficult — even the things that are most obvious. That's probably because it almost always confronts sectional interest. And, as the gold tax episode illustrates, reform can be especially difficult when those sectional interests can be dressed up as a concern for exports and jobs.

Thus, consider the intense opposition to the rather innocuous proposition that a worker should pay tax on his or her remuneration even if it is not labelled 'wages' or 'salary'. Who on earth would think it sensible to levy tax on a worker whose bank account balance is enhanced by the receipt from her employer of a payment called a 'wage', but to not levy any tax at all on a worker whose bank account balance benefits

from the receipt from her employer of something called an 'expense payment'? Who on earth would consider it sensible that an executive who receives from his employer some part of his remuneration in the form of a Porsche motor vehicle and a holiday apartment on the Gold Coast should not be required to pay tax on that income?

Well, the fact is that until September 1985 all of Australia's governments had, apparently, thought these things sensible. Indeed, even after the Fringe Benefits Tax had been legislated, the then Opposition went to the 1987 election campaigning for its repeal.

Even though I had a deep personal involvement in the development of the FBT and its subsequent negotiation through the Parliament, I still find it hard to believe the intensity of the opposition to this rather obvious requirement of tax system fairness and integrity. Looking back, it seems incredible to me now that the Hawke Government was told by both the Australian motor vehicle industry and its own industry department that the FBT would lead to a complete shutdown of domestic production and the loss of hundreds of thousands of jobs in the automotive and related sectors of the economy. I find it incredible that such claims were made, yet I know it's true that they were.

Making a compelling case

To anybody who knows anything at all about tax policy, the idea that fringe benefits should be completely tax free appears simply absurd — not worth wasting time in discussion.

So why was the introduction of the FBT so difficult? A plausible explanation, I would suggest, is that until 1985 the case for taxing these forms of income had not been advanced in ways that the community would accept as constituting sensible responses to the challenges they saw themselves confronting. There had been neither a sufficiently clear articulation of those challenges, nor of the role that particular tax reform could play in helping to address them.

Patently, it wasn't enough simply to observe — as tax policy people had for many decades — that the absence of fringe benefits taxation offended basic equity and efficiency principles. Of course, once the challenges of the times had been communicated effectively, the need to address tax system fairness became a highly effective argument.

Changing taxes for changing times

The clear articulation of contemporary challenges can help secure community support for tax reform proposals. But it is also the case that better proposals are likely to

emerge from a considered identification and analysis of those challenges that are of most importance to community wellbeing. After all, it is those challenges that the tax system should be preparing to meet.

In its Consultation Paper, released more than a year ago (AFTS 2008), the Tax Review Panel outlined its thinking on what might be some of the more important challenges that should guide thinking about the future direction of Australia's tax system.

One of the more profound challenges confronting Australia is the ageing of the population. Other challenges identified by the Tax Review Panel include the pace, depth and shape of globalisation, especially associated with the re-emergence of China and India as global economic super powers; continued environmental degradation; and technological change.

The demographic challenge

The Treasurer will shortly be publishing a new intergenerational report that will provide updated demographic and fiscal projections. Without going into the content of that report, it will, as the Prime Minister has indicated in recent days, re-focus attention on the problem of population ageing.

The ageing of the population raises at least two major issues for the tax system.

First, the tax system needs to be prepared for the probability that, in order to finance the government-provided goods and services demanded by the community, revenue needs will grow strongly in the longer term. Generally, older people demand a lot more from governments — especially in health and aged care services — than younger Australians. Sure, policy reforms that improve the productivity of service delivery in age-sensitive sectors would ameliorate some of these expenses. But it would be prudent to plan on the basis that the tax system will, over time, have to generate revenues to meet substantially larger fiscal costs.

Second, marginal tax rates might need to be adjusted over time to ensure that they reflect the changing abilities and propensities to work of different cohorts at different times in their lives.

In theory, marginal tax rates should be lower where there are more people whose participation is most responsive to tax rates (see survey in Mankiw et al. 2009).

And it makes sense from an aggregate income perspective — and, therefore, from a fiscal financing perspective — to provide especially strong work incentives for those whose productivity is relatively high.

Older people are less likely to be in the workforce due to retirement or working less hours.

Tax policy design has to recognise a growing fiscal need for encouraging highly productive workers and increasing participation by being cognisant of the costs to the community of high marginal tax rates applying to particular groups of workers.

These are not merely abstract issues. The way in which we address them will have significant implications for our ability to ensure that a rapidly growing number of ageing Australians have the opportunity to live with security and dignity in retirement.

Globalisation

As a small, open, developed economy with substantial endowments of commercial natural resources, Australia could be expected to have a unique perspective on the attraction and retention of foreign investment.

Foreign capital generally makes us richer by increasing the demand for our workers, supporting higher wages, and transferring skills and knowledge. No country can tax what doesn't come to its shores, and nothing is compelled to come to its shores: as the world has globalised, internationally mobile capital has found more and more alternative destinations. It is not surprising that researchers would be finding increasing evidence that the economic burden of taxes on mobile capital (such as the company tax) most probably falls, in the long run, on the immobile factors of production — particularly labour — rather than being fully borne by the owners of capital (both domestic and foreign shareholders).

On the other hand, as Chapter 14 of the Consultation Paper released in December 2008 made clear, company tax partly taxes the profits extracted by foreigners from Australia's natural and immobile resource endowments.

What is particularly challenging for Australian policy makers is that most other developed countries do not face the same circumstances. Many developed countries are either large economies, for which capital might not be so elastic in supply, or have few exploitable natural resources remaining.

No country provides a ready-made blueprint for Australia's taxation of capital income. Like the Australian environment itself, the solutions are likely to be uniquely Australian.

Globalisation may also have implications for the taxation of mobile labour. While the real employment consequences of the global financial crisis are obviously highly significant, and will have a substantial impact on global migration flows in the short-term, the long-term trend is that increasing numbers of highly skilled people are operating in a global labour market.

Environmental degradation

Australia possesses a unique environment, which — despite the extinction of 115 species of flora and fauna in the last couple of centuries — remains rich in biodiversity. But our environment faces numerous challenges — too many to discuss them all here. Let me touch on a few. For obvious reasons, I will not be saying anything about climate change.

Currently, in Australia there are 612 flora species, 47 bird species, 39 mammal species, 16 frogs, 16 reptiles and 19 fish species that are listed as either critically endangered or endangered.[2]

The unsustainable extraction of water resources has resulted in significant environmental impacts such as the exposure of acid sulphate soils in the Lower Lakes of South Australia and the death of mature River Red Gums along the Murray River. It is also estimated that fish stocks in the Murray-Darling Basin are only 10 per cent of pre-European settlement levels.[3]

Additionally, vast areas of native vegetation have been cleared or degraded, resulting in adverse effects on biodiversity, soil and water quality and assisting in the spread of weeds, feral pests and diseases.

Invasive species — weeds, feral pests and diseases — impact on both the environment and agricultural production. Due to difficulties in estimating the value of environmental features to the Australian community, it is hard to estimate the full economic impacts of invasive species on the environment. And the impact of weeds, in particular, remains highly controversial, in part because of contributions from Peter Andrews and others who have been prepared to challenge accepted wisdom in this area. However, the impact on agriculture of birds, rabbits, wild dogs, mice, foxes and feral pigs has been estimated at $620.8 million per annum (Gong et al. 2009).

Clearly, these and other environmental challenges pose serious risks, not only to the Australian environment but also to our standard of living, now and in the future. In the past, the causes of many environmental problems were ignored — and the consequences of inaction have often been to the detriment of the wellbeing of Australians.

Historically, in Australia, when governments have sought to prevent environmental degradation it has been through direct regulation, such as restricting or banning

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2 *Environment Protection and Biodiversity Conservation Act 1999*, Species Profile and Threats Database. See: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.

3 Murray-Darling Basin Authority, Native Fish Strategy. See: http://www.mdba.gov.au/programs/nativefishstrategy.

certain activities or the use of certain products. While in some circumstances regulation may be an appropriate response, in other cases it can be a blunt instrument as it does not allow people and businesses to adjust their behaviour in the most efficient way.

However, we now have a greater understanding of environmental problems and their effects. We also have better technology which can allow governments to use different mechanisms to prevent environmental degradation.

In this sense, the theme of 'changing taxes for changing times' is apt as it may be appropriate to use environmental taxes to address some of the environmental challenges that we are facing today.

Technological change

Another key challenge is the continuing effect of technological change.

Technology affects both what people want from government and how the tax system can deliver it. What society wants from government may be represented as a demand for government-provided goods and services. For most government-provided goods and services, the price charged to the beneficiary is very low — often zero. For that reason, quantitative rationing of access is common; consider water, for example.

There are many examples of technology enhancing the quality — and, accordingly, the consumer value — of government-provided services. These sorts of technological advances translate into a higher demand for government-provided services. But they may also be very expensive technological advances. For example, there are likely to be many health procedures in the future that will extend and improve the lives of Australians, but which will likely be very costly.

Without higher levels of government expenditure, the consequence of improved health technologies is even greater rationing — in the form of longer and longer 'waiting times' — of government-provided health services.

In the past, the availability of more expensive health technologies has translated into higher levels of expenditure.

In 1969–70, expenditure on pharmaceuticals in Australia was $210 per capita in real terms. That figure wasn't exceeded over the next 20 years — that is, through to the end of the 1980s. Then a wave of innovation in the 1990s produced a range of new 'blockbuster drugs'. Largely as a result of this, spending on medication by government and by Australians out of their own pockets, increased to $678 per capita in 2007–08.

It's hard to predict when and where the next wave of technological breakthroughs will come. Yet history suggests that technological innovation in health care will fuel future

growth in government health spending, for both the Commonwealth and the States. That spending will have to be financed. And that will have implications for tax design. Consider, especially, the implications for state tax systems.

The States raise taxes from all four revenue bases — land and other natural resources, labour, capital and consumption (the last of these restricted heavily by the Constitution) — but usually with taxes — such as stamp duties, land and payroll taxes — levied on bases that have eroded over time and which, for that reason, do not always rate well against the axioms of efficiency, equity and simplicity.

Funding projected increases in state health expenditures from these taxes would have increasingly high social costs — a fact that should encourage the States, over time, to consider a substantial re-design of the taxes applying to their few tax bases.

It is worth noting that new technologies also offer prospects for raising revenues in less socially costly ways. For example, the ATO's recent pre-filling of parts of individual tax returns through various new technology enablers has freed many people from much of the paper work of meeting their personal tax obligations. And, without being specific, other technologies can be expected to facilitate the redesign of taxes in ways that will allow revenues to be raised at lower social cost. Accordingly, while new technologies are likely to expand the demand for government-provided goods and services, they also offer the prospect of those demands being financed in less costly ways.

Many people think of technological progress in terms only of physical items, such as computers and an ever-increasing variety of hand-held gadgets. But technological progress is also to be found in the way we think about issues.

Today, engineers have better tools for designing buildings than were available a century ago. These tools are largely conceptual — the technological improvement being in the way the engineers are trained and in what they know. Importantly, in engineering thinking the technological improvement is very likely to be a response to community challenges of the times.

In economic thinking too, including in tax economics, technological change is evident. And the adoption of those new technologies offers considerable benefits.

Especially in the area of tax policy design, the way we think has been influenced by the challenges we face. As Professor Alan Auerbach from Berkeley pointed out at the AFTS conference in Melbourne last year, when surveying future directions for tax theory, our thinking about environmental taxation and the taxation of global capital flows has advanced precisely because environmental problems and globalisation are

widely understood — among tax economists — to represent significant contemporary challenges (Auerbach 2009).

Perhaps the most significant shifts in thinking in recent times have been in respect of views on the tax bases that best support progressive taxation.

When I began studying tax economics, comprehensive income taxation was the technology standard. But that idea has, for some time now, been considered by most economists to be 'old thinking' — a bit of old technology. Looking at the recent work in this area, one can find arguments for taxing savings at a higher rate than labour, arguments for taxing savings at a lower rate than labour, arguments for subsidising saving and even arguments for taxing savings at age-dependent rates.

That might not seem like progress. But consider the idea that there remains almost no logical reason for taxing capital income at the same rate as labour (Auerbach 2009). That idea is simply revolutionary when put up against the current tax system. Yet it is becoming sufficiently fixed in academic thinking to appear quite conservative in those circles.

Conclusion

The dissemination of good ideas and their victory over bad ideas are forms of technological progress. But good ideas are not developed in the abstract. Good ideas are relevant to contemporary circumstances — even better if they anticipate future circumstances.

That is where you come in. The goal of the Australasian Tax Teachers Association is to improve the standard of tax teaching in Australasia. I therefore see this organisation and its members as being purveyors of the changes in thinking we need if we are to meet the challenges of the times.

I can see from some of the PhD topics presented at yesterday's workshop that many of you feel the same way. Topics ranged from climate change policy, to broadening the capital gains tax, to simplifying tax returns.

If he were alive today, Governor Hunter might even welcome the paper discussing the taxation of fatty foods — so long, perhaps, as the revenue were directed to funding hospitals!

I look forward to engaging with many of these policy ideas in the years to come.

Thank you for inviting me to be with you here today.

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The economic outlook and challenges for the Australian economy

Dr David Gruen
Executive Director (Domestic), Macroeconomic Group

Address to the American Chamber of Commerce, 19 February 2010

Introduction

It is traditional to start the New Year with optimism and a fresh outlook.

In 2010, Australians have earned a bit of optimism, after a difficult 2009.

Twelve months ago, along with the rest of the industrialised world, we were facing one of the most turbulent times for our economy in many decades.

Today, the threat of high unemployment and recession has receded.

With this more positive outlook we have an opportunity to think about some of the challenges further ahead.

While these challenges do not have the immediacy of those we have had to deal with over the past 12 months, they are no less confronting.

Short-term economic outlook

But first, a brief recap on the short-term economic outlook.

As you know, the Australian economy has performed better than anybody expected through the global downturn, growing by 1.2 per cent in the 2008-09 financial year. The labour market has also shown remarkable resilience, with the unemployment rate falling in the months of November, December and January, after hovering around 5¾ per cent since early 2009 (Chart 1). Last month's unemployment rate of 5.3 per cent is lower than any major advanced economy, with the exception of Japan.

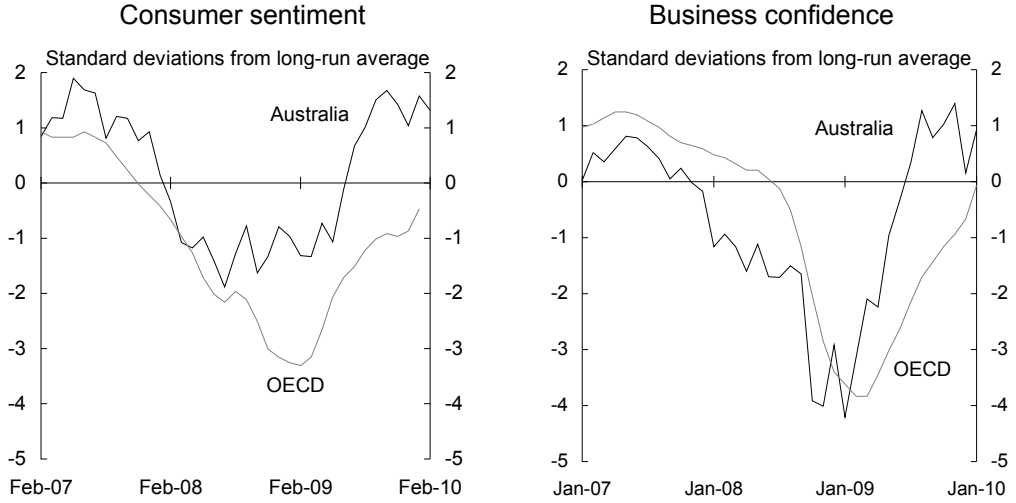
Chart 1: Australian unemployment rate

Source: ABS cat. no. 6202.0.

The Australian economy's resilience during this episode reflects, among other things, large and timely fiscal and monetary policy responses; solid demand from some of our major trading partners, particularly China; strong population growth helping to support demand in the domestic economy; and the underlying strength and robustness of our financial sector.

These factors together have inspired confidence locally, with measures of consumer and business confidence rebounding strongly (Chart 2).

Chart 2: Confidence

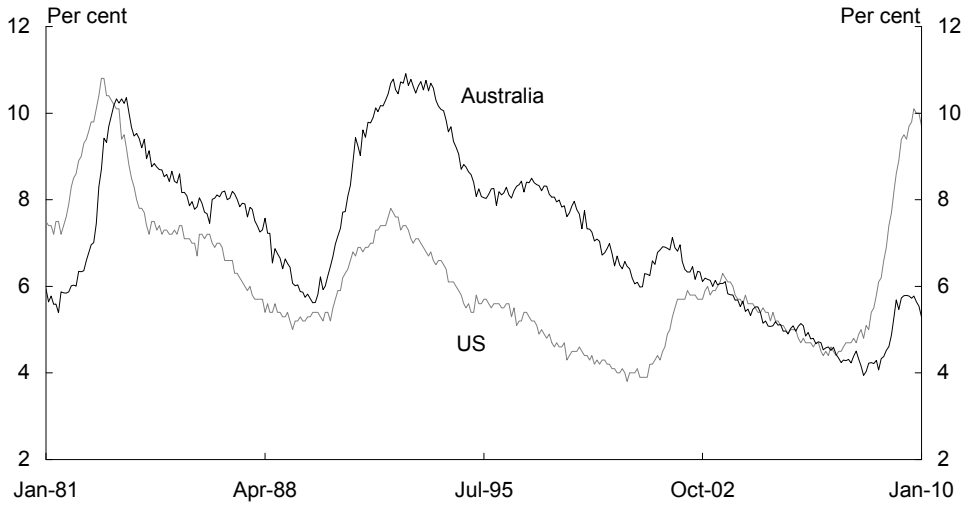


Source: Westpac-Melbourne Institute, National Australia Bank and OECD.

More generally, the Australian economy's resilience owes much to decades of economic reform — in economic policy, regulatory frameworks and governance. These have increased the flexibility of the economy, and strengthened its ability to withstand shocks.

The United States has not fared so well. As you know, economic conditions remain difficult there. Since the recession began in December 2007, more than 8.4 million people have lost their jobs, and the unemployment rate has risen significantly, standing at just below 10 per cent in January (Chart 3). While consumer confidence has begun recovering, and there are signs of output growth resuming, GDP is still around 2 per cent below its pre-recession level and the medium-term outlook remains challenging. Other advanced countries are in similar circumstances.

Chart 3: Unemployment rates



Source: ABS cat. no. 6202.0, Bureau of Labor Statistics and Thomson Reuters.

The medium-term outlook for Australia is much more favourable. Here, a sustainable recovery appears to be underway. Even so, global financial markets remain fragile and the continuing international fragility in financial systems and real economies argues for some caution.

Challenges ahead

I now want to turn to some challenges just over the horizon.

As you would be aware, the Australian Government recently released the 2010 intergenerational report, *Australia to 2050: future challenges*.

Australia's population is projected to reach nearly 36 million by 2050 — an increase of around 14 million.

This considerably larger population will also be much older than today's. The proportion of people of traditional working age (15 to 64 years old) will fall, with only 2.7 people of traditional working age to support each Australian aged 65 years and over by 2050. This is about half the number of workers supporting those aged 65-plus today.

The intergenerational report identifies three challenges.

The first challenge is that an ageing population implies slower economic growth. As the proportion of the population that is of traditional working age falls, the labour force participation rate is projected to fall (from above 65 per cent today, to below 61 per cent over the next 40 years), dampening workforce growth (Chart 4).

Chart 4: Historical and projected participation rates (people aged 15 and over)

Source: ABS cat. no. 6291.0.55.001 and Treasury projections.

Population dynamics explain one-half of the 0.4 percentage point gap between annual growth in GDP per capita over the next 40 years relative to the past 40 years — the other half being due to a technical assumption relating to productivity growth.

The second challenge is that working Australians will need to support an ageing population that, in part due to continuing technological advancements, is likely to be living longer. Men aged 60 in 2050 are projected to live an average of 5.8 years longer than someone aged 60 today, while women aged 60 in 2050 are projected to live an average of 4.8 years longer.

This is great news for Generation Y, but a sobering statistic for future budgets.

The greater publicly funded health, aged care and related expenditures to support Generations X and Y in their retirement years will need to come from a relatively smaller number of workers than we have today. On a 'no policy change' basis, a significant fiscal gap is projected.

The intergenerational report shows how the Government's fiscal strategy to constrain real expenditure growth contributes to reducing, without wholly eliminating, the projected fiscal gap.

The third challenge identified in the intergenerational report concerns the impact of climate change on ecosystems, water resources, agricultural production and weather patterns.

Against these challenges, there are three topics I want to say something about today:

- promoting economic growth by improving productivity and workforce participation;
- the implications of a growing population, particularly for infrastructure investment; and
- medium-term prospects for capital flows required to finance national investment.

For obvious reasons, I won't be saying anything about climate change on this occasion.

I'm sure all of you will have heard of the 3Ps — population, participation and productivity. These are the 'supply-side' components of real GDP, and real GDP per capita — they are the structural drivers of economic growth.

To recap, in explaining GDP per capita:

- population is the proportion of people of working age (15 and over);
- participation is the average number of hours worked by each of these working age persons; and
- productivity is average output per hour worked.

With growth in the first 'P' — working age population — slowing, real per capita GDP growth will have to come from the other two 'Ps'.

We can make some gains through increased participation — which I'll talk about a little later — but, of course, the key to higher real GDP per capita growth is higher productivity growth.

Increasing productivity growth

Productivity is driven by 'capital deepening' — more capital per worker — and by something called 'multi-factor productivity', which basically refers to the efficiency with which we organise labour, capital and natural resources in producing output.

Policy, institutional and regulatory frameworks can have a positive influence on both sources of productivity. The strong productivity growth of the 1990s and its observed slowing over the past decade are probably due to the strong productivity enhancing efforts of past reforms.

Appropriate price signals and incentives improve the decision making of firms, both with respect to business investment decisions and the development and adoption of new products and processes.

But not all worthwhile investments need be made by businesses. There are good reasons for governments also to invest directly in infrastructure, innovation and human capital. These reasons include markets for goods or services being incomplete, goods having public good characteristics, and there being positive 'spillovers' associated with the production of some goods or services.

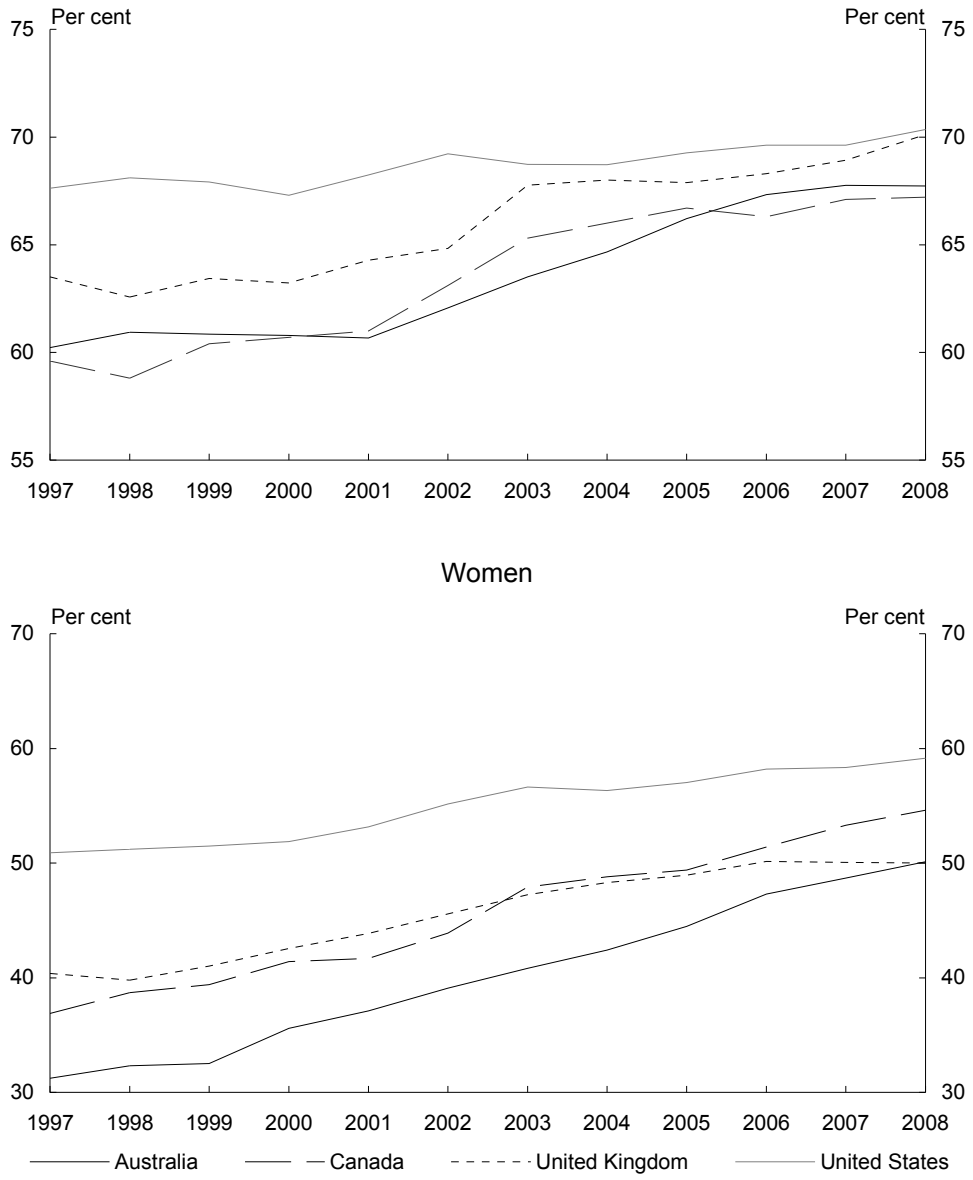
Well targeted investments in physical infrastructure can increase productivity by both increasing the capital stock and improving the efficiency of use of the other factors of production.

One of the lessons of our emergence from the recession of the early 1990s is that labour productivity growth will be faster if the factors of production are efficiently allocated. This has important implications for thinking about the consequences of an elevated terms-of-trade due to what looks like a relatively long-lived mining boom. In particular, the shares of the factors of production allocated to the resources sector will need to increase structurally. It is an open question whether, and in what way, there may be a role for government in facilitating this structural adjustment.

Improving participation

In the context of an ageing population, it will be important to ensure that there are incentives for people who are approaching retirement age to remain in the workforce. Australia's participation rate for 55-64 year olds is currently below that of comparable countries — including the United States, the United Kingdom, Canada and New Zealand (not shown in Chart) — suggesting significant room for improvement (Chart 5).

Chart 5: Participation rate
(aged 55-64)



Source: ABS cat. no. 6291.0.55.001 and OECD.

In addressing the challenges posed by the global financial crisis and global recession, Australian policy makers were well aware of the risk of higher unemployment discouraging workforce participation. Evidence from past recessions here and in other countries shows that when mature age workers lose their jobs they are more likely to withdraw early from the workforce. There is some evidence also that people who retire early — severing all connection with the workplace — find it especially difficult to

reintegrate with the labour market at a future point in time. Thus, both cyclical and cross-sectional evidence supports the case for mature age workers maintaining an attachment to the labour market.

According to the intergenerational report, if mature age participation rates for people aged 50 to 69 were to increase from a base case of 62 per cent in 2049-50 to 67 per cent, real GDP per capita would be 2.4 per cent higher in that year.

In addition to the macroeconomic consequences of workforce participation, there are significant wellbeing benefits for individuals who retain a connection to the workforce. These benefits include improved mental health and a considerably reduced risk of social exclusion.

Implications of population growth

Annual population growth has averaged 1.9 per cent over the past three years, up from 1.2 per cent over the preceding decade. Population and labour force growth are driven by natural increase (that is, the excess of births over deaths) and migration. As the fertility rate drops, the role of migration becomes relatively more important.

At the time of the last intergenerational report in 2007, the total fertility rate was 1.8 births per woman. While it has risen to almost 2.0 in 2010, the 2010 report projects that it will fall slightly to 1.9 by 2013 and remain at that level.

The rate of net overseas migration over the next 40 years is projected to average 0.6 per cent of the population per annum. This is not out of line with the experience of the previous 40 years, though it is somewhat less than the past several years.

As well as boosting the size of the working age population, skilled migration can enhance productivity — by raising the average skill level of the workforce — and participation — since skilled immigrants typically have positive employment outcomes.

Nonetheless, immigration and population growth more generally present policy challenges for Australian governments at all levels, especially in areas such as infrastructure provision.

As our population continues to grow, so does the need to add to the stock of economic and social infrastructure.

Historically, investments in Australia's energy, water, transport and communications infrastructure assets have been correlated with population growth. This is just as well,

of course. And it contains an important message for the future; a message to which I will turn in a moment.

But, as the mining boom has highlighted, it doesn't take rapid population growth to demonstrate that a lack of adequate infrastructure can lead to costly bottlenecks and congestion, eroding competitiveness and undermining productivity growth.

Investing in economic infrastructure is a form of capital deepening. It helps raise the productive capacity of the economy for that reason. But it also contributes to productivity by facilitating the production and distribution of goods and services.

It is equally important to ensure that existing infrastructure is efficiently and effectively utilised.

Australia is one of the most urbanised countries in the world; by 2020 more than 90 per cent of Australians will live in urban areas.

In terms of economic activity, Australia's major capital cities account for at least 65 per cent of GDP. So it is likely that the quality of our cities has a significant impact on national productivity growth.

As Australia's major cities continue to grow and expand, forward-looking urban planning and infrastructure management will be needed to support sustainable urban development and renewal.

Failure to invest appropriately in our cities could be costly, constraining growth through congestion, and imposing other economic and social costs.

Reforms to ensure strategic, co-ordinated planning of future infrastructure, and to encourage the efficient utilisation of existing infrastructure, could play a key role in avoiding these costs and in delivering economic benefits.

Infrastructure planning should also take account of the needs of an ageing population, including thinking about what might be required to facilitate the active workforce participation of an ageing workforce and to supply services to increasing numbers of older Australians.

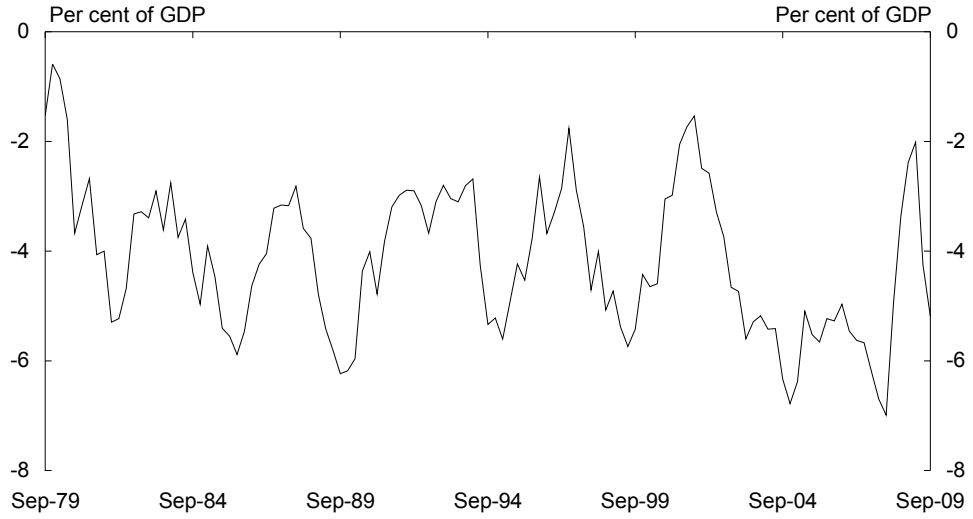
At present, younger people are attracted to education and employment opportunities in capital cities. Older adults represent a growing proportion of the population outside of the capital cities. If these patterns continue, the older population risks becoming increasingly distanced from both job opportunities and the workforce that will be required to deliver the services it needs.

Capital flows to finance a higher level of national investment

An important issue in thinking about the need for increased public and private investment is what it might imply for the balance between national saving and national investment, summarised in the current account deficit.

Since the resources boom began some six years ago, the current account deficit has averaged 5¼ per cent of GDP, compared with a 30-year average of around 4 per cent of GDP (Chart 6). That increase reflects a rise in national investment, which has been about 3¼ per cent of GDP higher than over the preceding decade. National saving has been nearly 1¾ per cent of GDP higher, on average, over the same period, funding more than half of the increase in national investment.

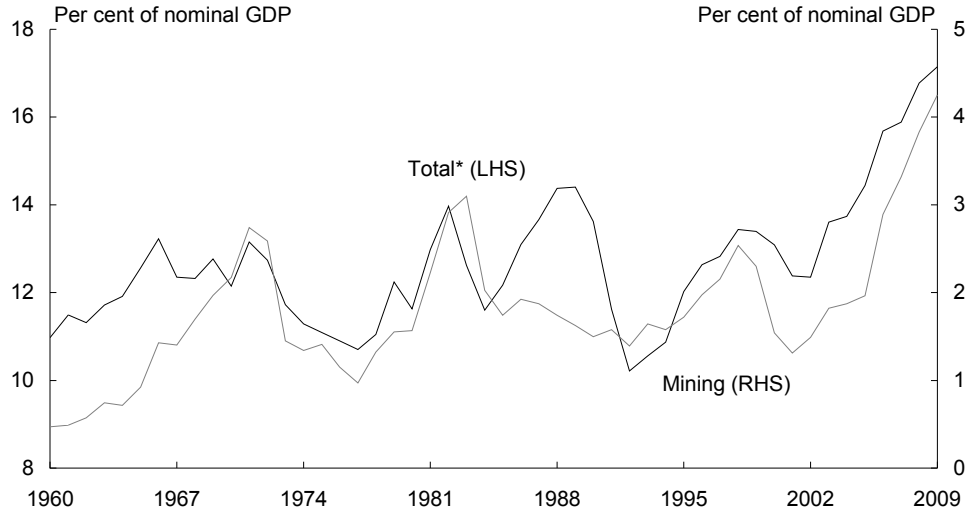
Chart 6: Current account balance



Source: ABS cat. nos. 5206.0 and 5302.0.

The largest contributor to the increase in national investment has been mining investment, which has risen from around 1½ per cent of GDP before the boom to 4¼ per cent of GDP last year (Chart 7). It may rise even further: the Reserve Bank of Australia has noted that investment in liquefied natural gas projects alone could plausibly rise by 2 per cent of GDP within the next few years.

Chart 7: Business investment



Note: * Excludes cultivated biological resources and second-hand asset transfers between the private and other sectors.
Source: ABS cat. no. 5204.0, 5206.0 and Treasury.

The demand for resources from China and India could see mining investment remaining high for an extended period — possibly for decades.

The other driver of higher investment has been infrastructure. Total investment in infrastructure-related industries — electricity, gas, water, transport and telecommunications — has risen by about 1½ per cent of GDP over the past five years.

Some of this infrastructure investment has been to service the resources sector, but faster population growth has also been a factor.

A useful way to think about what population growth alone implies for investment is to 'back out' the level of investment needed to keep the ratio of capital to output constant. This ratio has been fairly stable at around three over the past 30 years (that is, the value of capital is three times the value of output).

Population growth is projected to ease progressively over the longer term, which — other things equal — would reduce investment needs. However, average population growth over the coming decade is still projected to remain relatively strong, at about 1.5 per cent a year. This is 0.3 percentage points higher than its decade average before the resource boom. Thus, ignoring any change in labour productivity and workforce participation rates, investment would need to be nearly 1 per cent of GDP higher than before the resources boom, in order simply to keep the capital to output ratio constant.

National saving is presumably being influenced by several cyclical factors, including the income effects of the resources boom; the macroeconomic slowdown and asset price volatility; and the change in the stance of fiscal policy. There are also structural factors at play, including population ageing — with implications for both private saving and government budgets.

Projections of national saving are notoriously difficult — and are likely to be especially difficult at the present time. Even so, the pick-up in national investment in prospect is so marked that it seems likely that the current account deficit over the next several years will remain around the high levels of recent years, or possibly go even higher.

As I have noted, Australia's current account deficit reflects high and rising investment — and, in particular, investment to expand the capacity of the traded goods sector. This distinguishes Australia from most other countries with large current account deficits. In the United States and the United Kingdom, for example, rising current account deficits since the mid-1990s have reflected falls in the national saving rate, with the rate of investment being broadly unchanged.

Even so, the global financial crisis has challenged the assumption underpinning the 'consenting adults' view of the current account, emphasising how dependent that view is on the assumptions that global financial markets do not fail and borrowers with sound prospects can always obtain finance.

We now know that those assumptions are not always realistic. Nevertheless, the fact that Australia has come through the demanding stress test posed by the global financial crisis provides grounds for confidence that the risks are manageable. But, consistent with remarks made earlier in this address, it would be prudent to interpret that experience as emphasising also the importance of maintaining a strong track record in macroeconomic management, structural reform and financial regulation.

It is also worth bearing in mind the point made earlier, that 'capital deepening' from higher rates of investment should contribute to higher productivity and stronger economic growth, which in turn improves our capacity to service the associated increase in external borrowing.

Conclusion

The Australian economy has thus far proved remarkably resilient to the global financial crisis and the global recession. The near-term outlook is positive. Internationally, there remains much to be done to guard against the possibility of another crisis, including in the medium-term. For that reason, Australia's prospects support a somewhat guarded optimism.

Even so, it is timely to reflect on the medium to longer term challenges presented by an ageing and growing population and to formulate policy responses that might meet these challenges in sustainable ways.

Australia's current account deficit in a global imbalances context

Phil Garton, Matt Sedgwick and Siddharth Shirodkar[1]

This article looks at Australia's current account deficits in light of concerns about the role of external imbalances in the global financial crisis and the difficulties now facing a number of countries that have run large current account deficits in recent years. Australia is clearly differentiated from other deficit countries in that recent high deficits have been driven by rises in non-housing investment — mainly in response to high resource prices — while national saving has been increasing. This suggests that our deficits are less likely to reflect underlying imbalances in the economy.

It is plausible that Australia could maintain large inflows of foreign capital for some time, given resource demands from China and India. This would imply a further rise in our net foreign liabilities as a share of GDP. However, the trade balance adjustment that will be needed eventually to stabilise this share does not appear onerous, particularly as investment in the resources sector will boost future export supply.

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1 The authors are from Macroeconomic Policy and Domestic Economy Divisions, the Australian Treasury. This article has benefited from comments and suggestions provided by Dr David Gruen, Tony McDonald, Robert Seaton, James Kelly and Helen Wilson and assistance from Danial Gaudry. The views in this article are those of the authors and not necessarily those of the Australian Treasury.

Introduction

Australia's current account deficit (CAD) has attracted considerable debate over the past three decades. The rise in the CAD from the early 1980s became a central focus for policymakers during that decade. High CADs were seen as a source of macroeconomic vulnerability and a constraint on economic growth. It was generally agreed that both macroeconomic and microeconomic policies should be directed at reducing the CAD.

In the early 1990s this consensus began to be challenged by the 'consenting adults' view that the CAD should not be seen as a problem if it is based on private saving and investment decisions that are not subject to significant policy distortions. Over time this view increasingly became accepted as the CAD remained high without much sign of adverse implications. The shift towards a more relaxed view of the CAD was assisted by improved macroeconomic policy and structural reforms that enhanced confidence that the preconditions for the 'consenting adults' view were met. A sign of this change is that the rise in the CAD to around historically high levels since the resources boom began six years ago has not generally been seen as cause for alarm.

However, the global financial crisis challenges the assumption implicit in the 'consenting adults' view that financing will always be available and financial markets never fail. Indeed the crisis seems to have confirmed earlier fears that external imbalances across major economies presented a risk to global macroeconomic stability — with many observers identifying these large global imbalances as a key cause of the crisis. In the wake of the crisis a number of deficit countries are facing significant adjustments that are likely to entail a shift to lower CADs. In contrast, Australia seems likely to continue to run large deficits to finance investment in the resources sector.

Against that background, this article examines the factors underpinning Australia's CADs and compares Australia's situation to those of other countries that have also had large current account deficits in recent times. It also examines the implications of continued CADs for our net foreign liabilities and the size of external adjustment that might be required for long-run sustainability.

Definitions and concepts

Balance of payments accounting defines the current account balance as the sum of the trade and net income balances. In a direct sense, Australia's CAD reflects the fact that imports and income paid to foreign residents exceed exports and income received from abroad. However, the CAD can just as validly be thought of in two other ways:

- acquisition of Australian assets by foreigners exceeds Australian acquisition of foreign assets; and
- domestic investment exceeds saving by Australian residents.

The saving-investment perspective is often the most useful as it recognises that the CAD reflects economy-wide factors. This helps to identify influences that can be overlooked in focussing on external transactions. For instance, it may seem counter-intuitive that the rise in Australia's terms of trade in recent years has been associated with a widening CAD, given its direct effect is to reduce the trade deficit. From a saving-investment perspective this is not surprising, as resultant high profits in the resources sector could be expected to lead to a surge in investment.

A saving-investment perspective also emphasises that the current account is best viewed in inter-temporal terms. Saving and investment are means of increasing future consumption by diverting output from current consumption. Hence, CADs can be considered optimal if they are consistent with achieving an optimal consumption path.

For instance, CADs that finance higher levels of productive investment can raise the economy's future output potential, allowing higher levels of consumption over time. Running CADs when income is unusually low or investment is unusually high also allows consumption to be smoothed over time.

Also important is foreign investors' willingness to finance CADs, which will depend on their confidence that liabilities will be serviced at face value in the long run. Technically, this requires that the borrowing country satisfy its inter-temporal budget constraint by generating future trade surpluses equal in present value terms to its current net foreign liabilities.[2] In other words, foreign liabilities must ultimately be serviced by a net flow of goods and services to foreign creditors. This transfer represents the real resource cost of foreign borrowing.

In practice, it is difficult to define when a country is at risk of breaching its inter-temporal budget constraint, as this depends on the evolution of the trade balance into the indefinite future. Whether a borrowing country continues to service its liabilities also depends on its willingness to make the necessary adjustments, and not only on its capacity. For these reasons, emphasis is often placed on the concept of sustainability.

Sustainability means that a country could satisfy its inter-temporal budget constraint without the need for a large adjustment in the future, which is a more stringent criterion. Large adjustments require a substantial rise in output relative to spending, which may be difficult to achieve. They may also require depreciation of the borrowing country's currency, imposing losses on foreign investors if liabilities are denominated in that currency. A common metric for assessing sustainability is the size of the trade balance adjustment needed to stabilise net foreign liabilities as a share of GDP.

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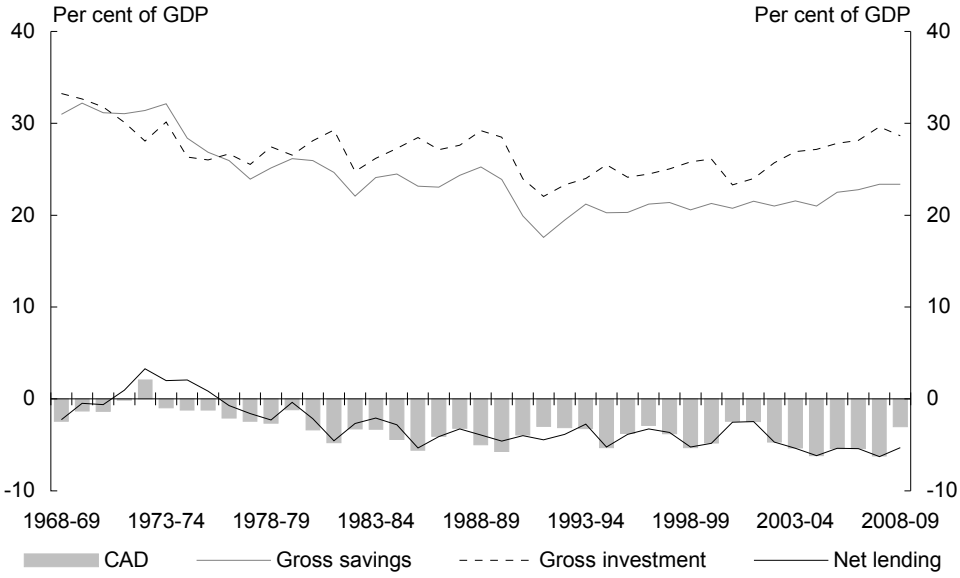
2 The responsibility for servicing private sector liabilities lies with the issuer of the liability, rather than the country collectively. The aggregate inter-temporal budget constraint for a country is the sum of the budget constraints for each resident.

Evolution of Australia's current account, national saving and investment

Australia's current account has been in deficit for most of its history, and consistently over the past three decades (Chart 1). The deficit widened from the early 1980s, averaging around 4 per cent of GDP over this period, compared to an average of 1½ per cent of GDP over the preceding two decades. The CAD has widened further since the start of the resources boom, averaging 5¼ per cent of GDP over the past five years.

Chart 1: Gross saving, gross investment, net lending and the CAD



Source: ABS cat. no. 5204.0.
Note: Differences between the current account balance and net lending (saving less investment) reflect statistical discrepancies.

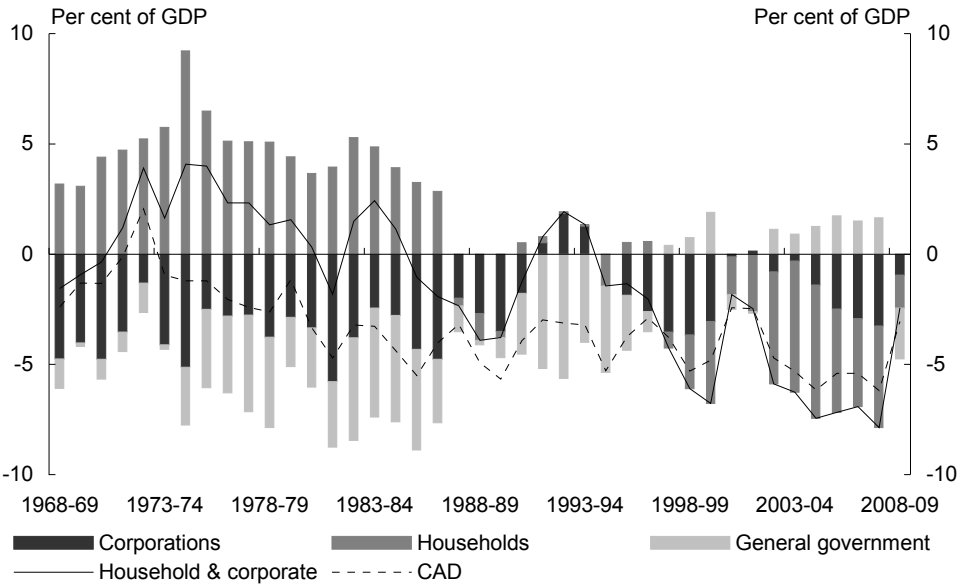
The initial widening of the CAD in the 1980s reflected mainly a rise in national investment as a share of GDP. Following the early 1990s recession, however, both investment and saving shifted down as shares of GDP. This meant that the long-term rise in the CAD up to the middle of the current decade could be attributed to a fall in the national saving rate. The national saving rate through the 1990s and early 2000s was more than 4 per cent of GDP below late 1970s levels.

In contrast, the recent widening of the CAD has reflected a rise in investment, which has averaged 3¼ per cent of GDP higher over the past five years than its average level over the preceding ten years. National saving has also increased in this period, averaging 1¾ per cent of GDP higher than over the preceding ten years. This implies that domestic saving has funded about half of the recent increase in investment.

Net lending by sector

From a sectoral perspective, the widening of the CAD since the early 1980s is explained by a turnaround in the net lending position of households, who were net lenders up to the late 1980s but have become consistent net borrowers since the late 1990s (Chart 2). Net borrowing by general government was a major factor from the mid-1970s to the mid-1990s, but this sector has been generally a net lender since the late 1990s. As a result the CAD has been largely driven by private sector net borrowing since the mid-1990s, whereas in the earlier period it was mainly public sector-driven.

Chart 2: Net lending by sector



Source: ABS cat. no. 5204.0.

Chart 2 also shows that general government and corporate/household net lending normally move in opposing directions over the course of the economic cycle. It is important to abstract from these cyclical effects in considering structural influences on the CAD.

Economic downturns are associated with weakening private investment and consumption, so that corporate and household net lending increases (or net borrowing falls). Conversely, government net lending declines during economic downturns as a result of the automatic fiscal stabilisers and discretionary policy responses to support the economy. However, the reduction in government net lending normally only offsets partially the increase in household and corporate net lending, so that the CAD falls as a share of GDP during economic downturns. That is, the decline in government net lending moderates the cyclical fall in the CAD that would otherwise occur due to a sharper contraction in aggregate spending.

National saving

Underlying both the turnaround in household net lending and the long-term fall in the national saving rate has been a long-term decline in the household saving rate since the mid-1970s. There are a number of issues concerning the measurement of household saving that suggest the measured fall in the household saving rate exaggerates the actual fall (see Treasury 1999 for a detailed discussion).

One factor has been the long-term shift to incorporation of small businesses. As unincorporated business are part of the household sector, this has shifted business saving that was formerly counted as household saving into corporate saving. This suggests that household and corporate saving are better considered together, particularly as corporations are directly or indirectly owned by households (apart from the portion owned by foreign residents). The fall in combined saving over the long-term is around one-third less than the fall in household saving.[3]

The fall in the combined saving rate is partly due to the effect of inflation on interest receipts and payments. Conceptually, the inflation component of interest represents a repayment of principal rather than an income or expense. This factor artificially boosted measured saving in the 1970s when inflation was high and the private sector was still a net creditor.

Part of the measured fall in saving may be due to statistical discrepancies between income-side and expenditure-side measures of GDP. The discrepancy was over 2 per cent of GDP in the mid-1970s, suggesting that the high saving rate at this time may partly reflect over-estimation of income and/or under-estimation of consumption.

Even taking account of these factors, it is still clear that private saving (as conventionally defined) has fallen since the early 1980s.

A key cause of this fall is likely to have been the deregulation of the financial sector from the early 1980s. Deregulation and subsequent financial innovation have reduced previous constraints on the supply of credit, enabling people to borrow to smooth consumption and purchase dwellings and other assets. High saving rates before financial deregulation may have been an inefficient response to credit constraints that prevented households from achieving their preferred consumption paths.

Another (somewhat related) contributor to lower private saving has been growth in asset prices, particularly for housing, which comprises over half of household assets.

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3 It would be preferable to consider total private saving, excluding public corporations. However, National Accounts data do not separately identify public financial corporations and only identify public non-financial corporations from 1988-89 onward.

Capital gains reduce the need to save out of current income in order to accumulate wealth, but are not included in the conventional definition of saving.[4] House prices grew much faster than household incomes between 1997 and 2003, and this may explain much of the fall in the household saving rate over this period.

Since 2004-05 the household saving rate has begun to rise again. The reasons for this are not yet well understood, but may be related to strong growth in incomes arising from the resources boom. If households perceive part of their incomes as temporary then they are likely to save a higher share of income in order to smooth consumption over time.

National investment

Chart 1 showed that average levels of investment as a share of GDP fell during the 1970s but have recovered significantly over the current decade. The earlier fall in national investment is likely to reflect three factors:

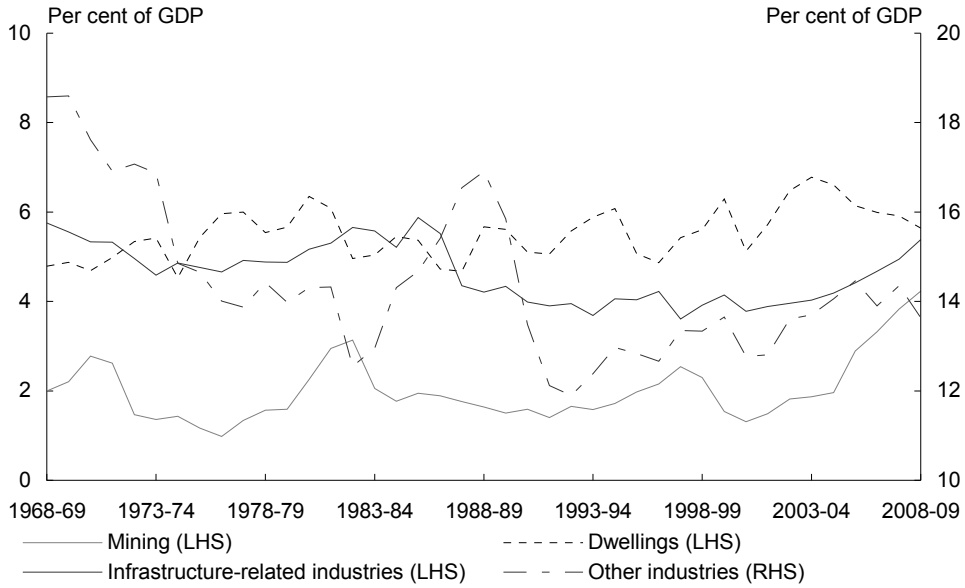
- a fall in population growth from an average rate of 2.2 per cent in the 1960s to only 1.3 per cent over the following three decades, reducing the level of investment needed to maintain a given ratio of capital to output;
- structural changes that have increased the share of output coming from service industries, which are generally less capital-intensive; and
- a rise in interest rates due to high inflation during the 1970s and 1980s, which continued until low inflation credibility was re-established from the mid-1990s.[5]

This fall in real interest rates from the mid-1990s fuelled strong growth in dwelling investment in the late 1990s and early 2000s (Chart 3). Since the housing market correction in 2004, dwelling investment has fallen back closer to 1990s levels as a share of GDP.

4 The Australian Bureau of Statistics publishes an alternative measure of household saving that includes capital gains and losses. This measure is more volatile, but shows a generally rising trend from 1991-92 to 2006-07, before falling sharply due to asset price falls over the past two years.

5 Prior to financial deregulation many interest rates were subject to controls that kept real interest rates low (or even negative). This meant that effects on investment occurred instead through credit rationing.

Chart 3: Composition of gross fixed capital formation



Notes: Infrastructure-related industries are electricity, gas, water and waste services; transport, postal and warehousing; and information media and telecommunications.
Source: ABS cat. no. 5204.0.

Since 2004-05 the main contributor to rising national investment has been mining investment, which has surged in response to high commodity prices arising from strong demand from China and other emerging economies. Mining investment has expanded by around 2½ per cent of GDP since the onset of the resources boom, contributing to most of the increase in national investment as a share of GDP over this period.

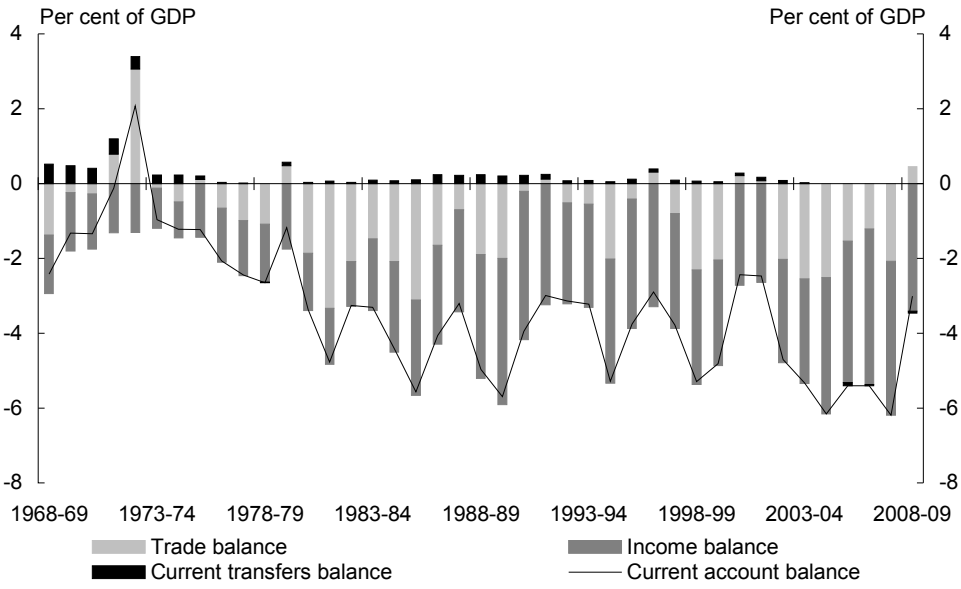
The other key contributor to the recent rise in national investment has been infrastructure. Total investment in infrastructure-related industries — electricity, gas, water, transport and telecommunications — has risen by nearly 1½ per cent of GDP over the past five years. This growth reflects increased demands for infrastructure arising from both the expansion of the resource sector and recent strong population growth, as well as some catch-up from past underinvestment.

These increases in the rate of investment will expand the nation's capital stock, which will boost future productivity and GDP. Provided the returns on investment exceed the cost of capital, this will raise future national incomes (notwithstanding the cost of servicing foreign borrowing to finance the investment).

Trade and net income balances

From a trade and income balance perspective, it is notable that the net income deficit now accounts for around three-quarters of Australia's CAD (Chart 4).[6] This means that the CAD reflects mainly interest and dividends paid to foreign investors in Australia (net of income received on Australian investment abroad) rather than an excess of imports over exports. The rise in the net income deficit over time reflects the cost of servicing Australia's growing accumulation of net foreign liabilities.

Chart 4: Composition of the current account balance



Source: ABS cat. no. 5302.0.

Australia has also had a consistent deficit on trade, with only occasional small surpluses since the mid-1970s. The trade balance is more volatile than the net income balance, due to the effects on imports and exports of domestic and international economic conditions and exchange rate fluctuations. Over longer periods the trade deficit shows no clear trend, averaging around 1½ per cent of GDP since the early 1980s.

6 The very small balance on current transfers relates to current payments such as donations and workers' remittances that are not in exchange for goods or services.

International comparisons of the CAD, national saving and investment

Australia has a relatively high CAD compared to most other developed countries, which reflects a relatively high level of investment rather than low saving (Table 1). Australia's national investment rate has been significantly higher in recent years than that of any of the major (G7) economies. Our national saving rate is now close to the OECD average. It has been much higher than saving rates in the US, the UK and New Zealand, which have also had consistent CADs in recent times.

Table 1: Saving, investment and current account balances for key OECD countries

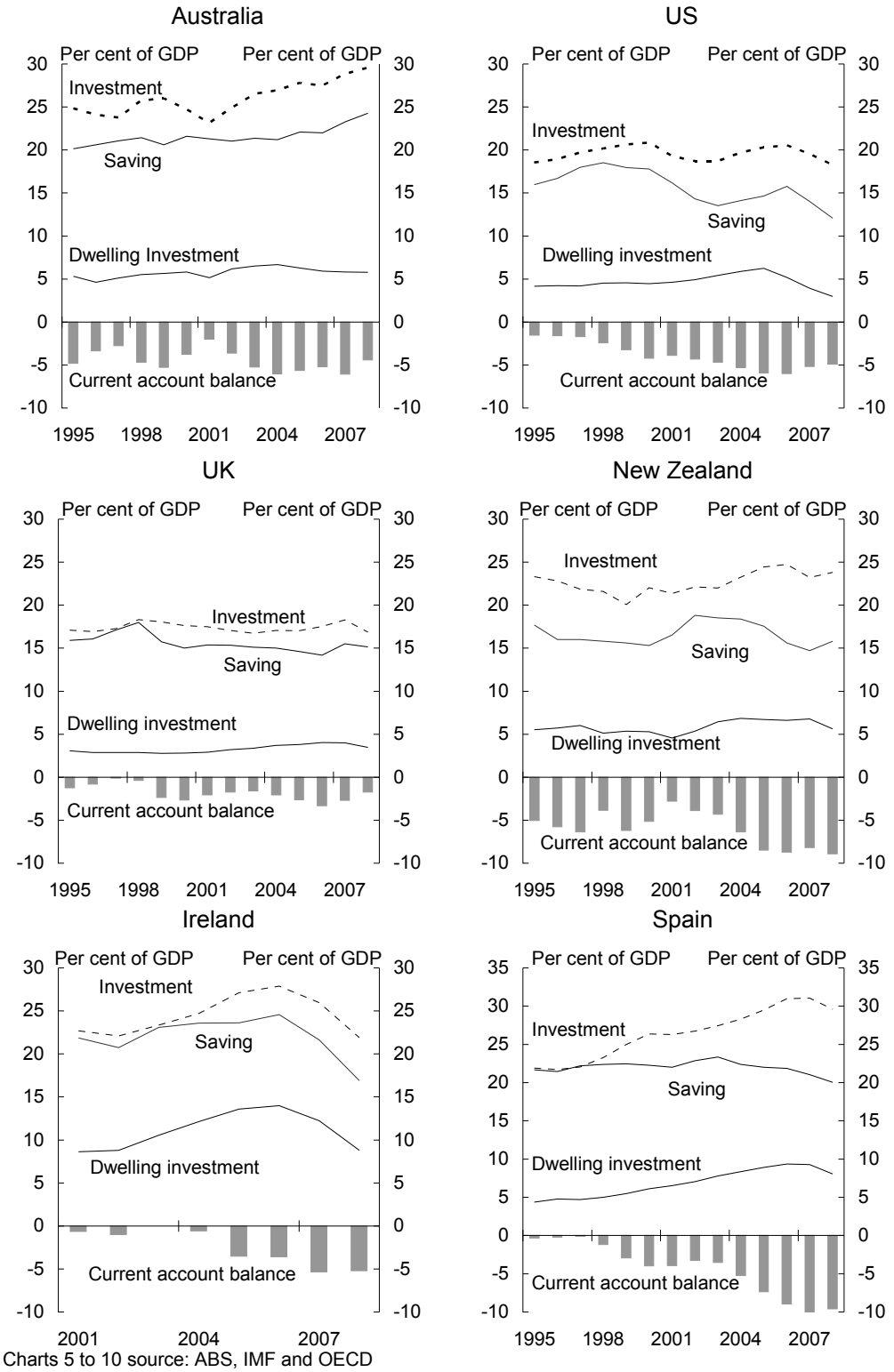
	Per cent of GDP					
	Gross Saving (ave 2004-08)			Gross Investment (ave 2004-08)	Current Acc. Balance (ave 2004-08)	Net Foreign Liabilities 2008
	General govt	Other	Total			
Australia	**3**	**19**	**22**	**27**	**-5.6**	**58**
Canada	2	22	24	22	1.4	0
US	-3	17	14	20	-5.5	24
Japan	-4	31	27	24	3.9	-51
Germany	-1	25	24	18	6.0	-25
France	-2	21	19	21	-0.7	18
UK	-1	16	15	17	-2.5	3
NZ	6	10	16	24	-8.1	73
Italy	-1	21	20	21	-2.2	20
OECD average			**22**		**-1.0**	
G7 Average	**-1**	**21**	**20**	**20**	**0.1**	**-2**

Notes: Averages are simple averages. Saving less investment may not equal the current account balance due to statistical discrepancies. For comparability, data are on the old System of National Account (SNA) 93 basis. The ABS recently moved to the new SNA08 international standard ahead of most other countries. SNA08 treats spending on R&D and defence weapons platforms as investment, significantly raising both saving and investment levels.
Source: ABS, IMF, OECD and SNZ.

Charts 5 to 10 compare the evolution over time of current account balances, saving and investment for Australia and a number of other OECD countries that have experienced persistent and/or widening deficits.

Australia stands out as the only country in this group that has experienced rises in both saving and investment rates over recent years. In contrast, widening CADs in the US and UK since the late 1990s have reflected falls in saving rates, with no increase in investment rates. A fall in the saving rate also accounts for a substantial part of the widening of New Zealand's CAD since the early 2000s, although its investment rate has also increased over this period.

Charts 5 to 10: Net lending and current account balance for selected countries

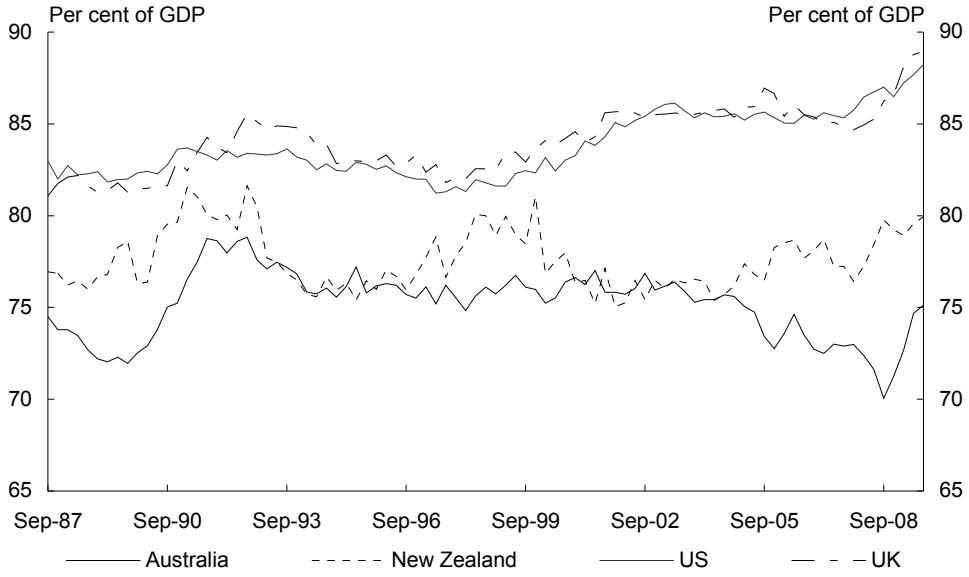


Charts 5 to 10 source: ABS, IMF and OECD

An increase in the CAD that reflects a fall in the saving rate implies that increased foreign borrowing is being used to finance higher current consumption at the expense of future consumption. A fall in the saving rate may be appropriate to smooth consumption over periods when national income is low relative to its expected future path. However, a persistent fall in the saving rate may be an indication that CADs are not optimal.

Chart 11 shows that Australia's CADs have not been used to finance higher consumption by households and governments. Indeed consumption in Australia is relatively low as a share of GDP, and this share has been falling in recent years. This is in marked contrast with the US and the UK, where consumption as a share of GDP has increased significantly since 1997. The consumption share of GDP has also risen in New Zealand in recent years.

Chart 11: Total consumption as a share of GDP



Source: ABS and OECD.

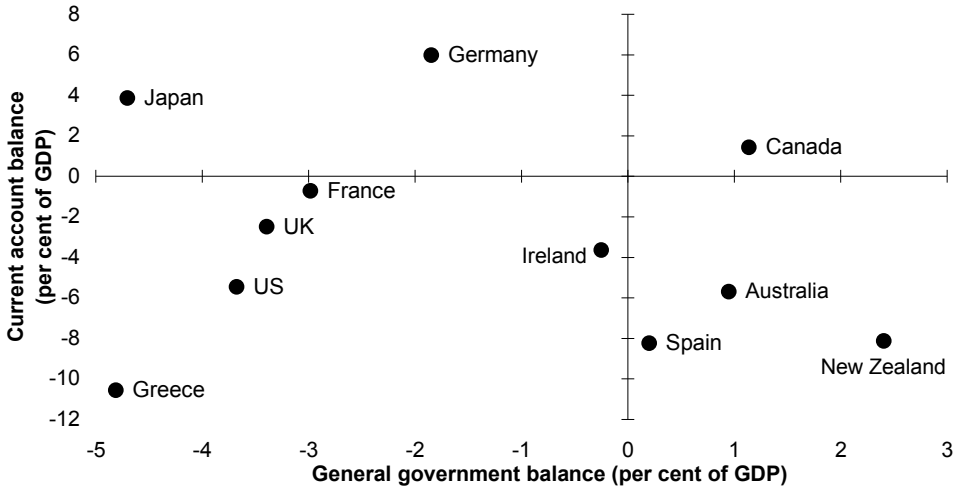
In contrast, an increase in the CAD to finance higher investment need not come at the expense of future consumption, provided the investment yields a rate of return sufficient to cover the cost of capital. However, this condition may not be met if investment decisions are distorted by government policies or over-exuberant market behaviour (asset price bubbles).

In the cases of the two other deficit countries shown here — Ireland and Spain — the widening of CADs over the past decade did reflect (until recently) increasing rates of investment. In contrast to Australia, however, this was due primarily to rises in dwelling investment. High dwelling investment appears to have been associated with

bubbles in housing markets in these countries. From peak levels, house prices have fallen by over 30 per cent in Ireland and by around 10 per cent in Spain (while there has been no sustained fall in Australian house prices).

Another factor distinguishing Australia from many other current account deficit countries is our strong fiscal position (Chart 12). CADs in a number of countries — the US, the UK, Greece, Portugal and several Eastern European countries — have been underpinned in part by large fiscal deficits. Australia, New Zealand, Spain, Ireland and Iceland have been in significant fiscal surplus in recent years, although the latter three economies have now experienced particularly sharp cyclical fiscal deteriorations. Notwithstanding the effect of the global financial crisis, government finances in Australia remain sound.

Chart 12: Current account and general government financial balances (average 2004-2008)



Note: Australian general government financial balance is the average for fiscal years 2003-04 to 2007-08.
Source: ABS, IMF and Treasury.

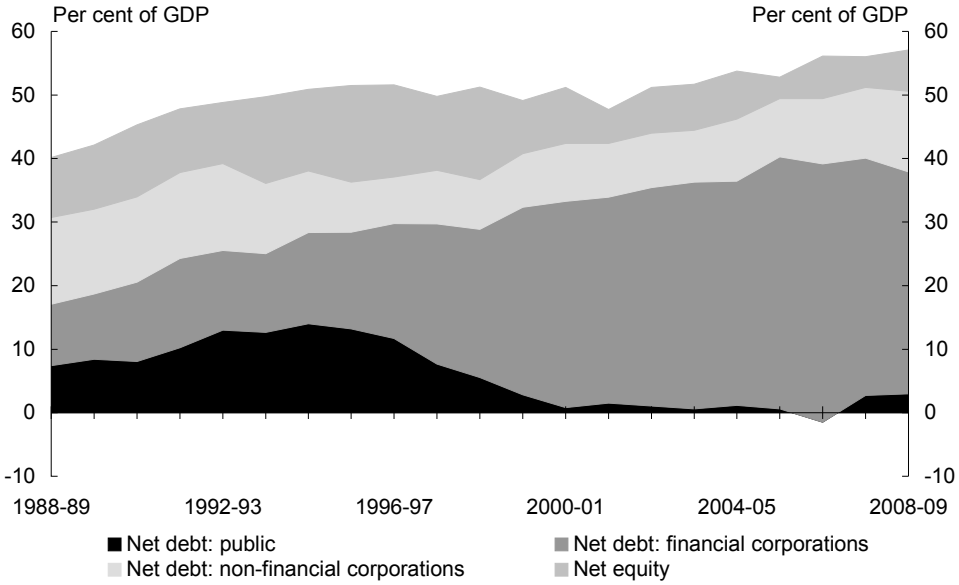
In summary, Australia's current account position differs in important respects from those of other OECD countries with persistent current account deficits over recent years:

- higher CADs in Australia have been due to high and rising investment rather than low or declining saving (indeed our national saving rate has been rising);
- higher investment has been to expand productive capacity, particularly in the export sector — it has not reflected over-investment in housing associated with a house price bubble; and
- Australia has maintained a sound underlying fiscal position.

Evolution of Australia's net foreign liabilities

The counterpart of inflows of foreign capital to finance CADs has been a steady rise in Australia's net foreign liabilities, from about 40 per cent of GDP 20 years ago to nearly 60 per cent of GDP in 2008-09 (Chart 13). This is the net effect of larger rises in gross foreign assets and liabilities, which reflect Australia's increasing integration with global financial markets. As a share of GDP, Australians' holdings of foreign assets have tripled from around 30 to 90 per cent over two decades, while foreign holdings of Australian assets have doubled from around 70 to over 140 per cent.

Chart 13: Australian net foreign liabilities as a per cent of GDP



Source: ABS cat. no. 5302.0.

The rise in net foreign liabilities has come from a steady rise in net foreign debt, which accounts for around 90 per cent of net foreign liabilities in 2008-09. Net equity liabilities have fallen as a share of GDP over the past decade. This reflects mainly increased Australian investment in foreign equities, which has shifted us from being a net importer of equity capital in the past to a net exporter over the current decade (although we became a net importer again in 2008-09).

The rise in net foreign debt has come from increased net borrowing by financial corporations, particularly since the mid-1990s. Financial corporations now account for three-quarters of net foreign debt. This has been partly offset by a reduction since the mid-1990s in net foreign debt of the public sector (including public enterprises), which accounted for less than 10 per cent of total net foreign debt in 2008-09.

The evolution of a country's net foreign liabilities as a share of GDP is described by the identity:

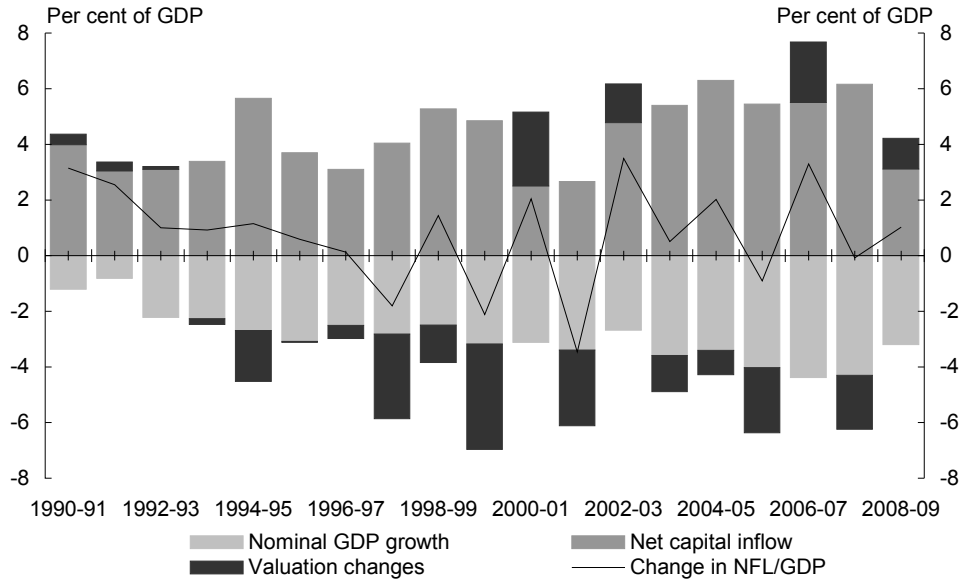
$$nfl_t - nfl_{t-1} = cad_t - \frac{g_t}{1+g_t} nfl_{t-1} - v_t$$

Where *nfl, cad* and *v* are net foreign liabilities, the CAD and net valuation gains as shares of GDP and *g* is the annual rate of nominal GDP growth. This equation shows that the extent to which CADs translate into growth in net foreign liabilities depends on nominal GDP growth and net valuation gains.[7] The higher are these offsetting factors, the larger is the CAD that can be sustained before net foreign liabilities grow faster than GDP.

Chart 14 shows that nominal GDP growth and valuation gains have often substantially offset the effect of CADs. This was particularly true over the period from 1996-97 to 2001-02 when net foreign liabilities fell slightly as a share of GDP. In recent years, strong growth in nominal GDP as a result of rising terms of trade has helped to moderate the impact of higher CADs on the ratio of net foreign liabilities to GDP (indeed, this ratio has been stable over the last two years).

7 Net valuation gains or losses reflect changes in the value of foreign assets and liabilities due to changes in asset prices, exchange rates and other adjustments. Price changes are mainly due to changes in equity prices: Australia makes net gains when growth in the value of our foreign assets outweighs growth in the value of Australian assets held by foreigners. Exchange rate effects reflect changes in the Australian dollar value of foreign assets and liabilities denominated in foreign currencies (including foreign equity assets). Australia has a net foreign currency asset position, so we gain when the Australian dollar depreciates.

Chart 14: Contributions to changes in net foreign liabilities as a share of GDP



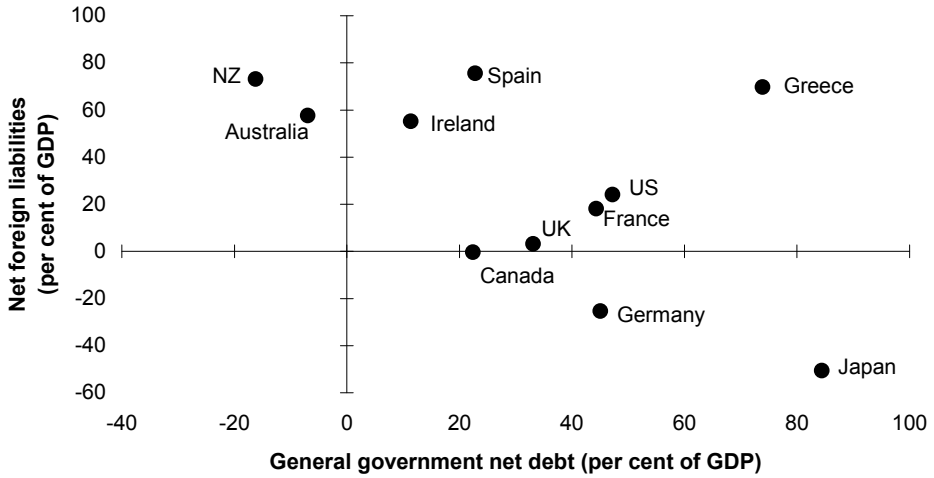
Source: ABS cat. no. 5302.0.

International comparison of foreign liabilities

Australia has a high level of net foreign liabilities compared to most other advanced countries, reflecting our long history of CADs (Chart 15). Australia's average CAD has been similar to that of the United States over recent years, but the US has much lower net foreign liabilities as it began to run persistent CADs only in the 1980s. Similarly, the United Kingdom has maintained a net foreign asset position due to past surpluses, despite running CADs over recent years.

Australia is not, however, an outlier. Several OECD economies have similar or higher net foreign liabilities as a share of GDP. Australia and New Zealand are distinguished from this group on account of their stronger government net debt positions.

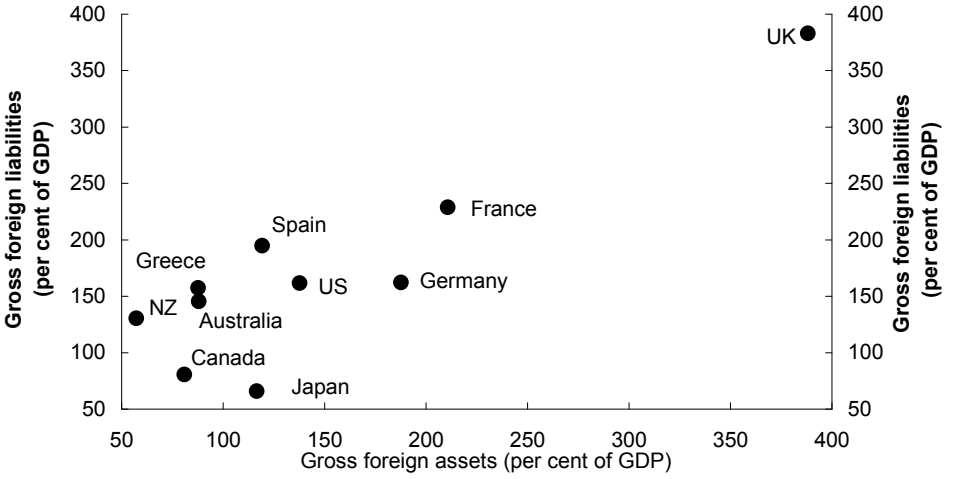
Chart 15: Net foreign liabilities and general government net debt for selected OECD countries (2008)



Note: Australian data are as at the end of 2007-08.
Source: IMF and ABS cat nos. 5302.0 and 5512.0.

Another important dimension is the size of gross foreign assets and liabilities. The extent of a country's exposure to shocks from global financial markets is a function of its gross positions, and not only of its net liabilities. It is notable that Australia (along with Canada and New Zealand) has significantly lower gross foreign assets and liabilities as a share of GDP than most other advanced economies (Chart 16).

Chart 16: Gross foreign assets and liabilities for selected OECD countries (2008)



Note: Not shown is Ireland, which had gross foreign assets and liabilities exceeding 1100 per cent of GDP.
Source: ABS and IMF.

Outlook for Australia's net foreign liabilities

Continued demands for resources created by development in China and India raise the prospect that investment and the CAD could remain at high levels for an extended period. This raises the question of how much further Australia's net foreign liabilities might grow as a share of GDP, and what might be required to stabilise this share at some point.

Ignoring valuation changes and assuming nominal GDP growth of 5½ per cent, a constant CAD of 4.1 per cent of GDP (the past 30-year average) would see net foreign liabilities exceed 70 per cent of GDP after 20 years. If CADs were to remain instead at their 5-year average of 5.2 per cent of GDP then net foreign liabilities would reach 85 per cent of GDP after 20 years.

These increases would be smaller if nominal GDP growth was higher or if Australia continued to benefit from net valuation gains. If nominal growth was ½ a percentage point higher, accumulation of net foreign liabilities would be reduced by around 4 per cent of GDP in each scenario. If net valuation gains were to continue at their average for the past 20 years of 0.6 per cent of GDP per annum, growth in net foreign liabilities would be reduced by 8 per cent of GDP.

Long-run sustainability requires that net foreign liabilities eventually stop growing faster than GDP, although this need not occur for some time. The trade balance that would stabilise net foreign liabilities at a given share of GDP is given by the following equation (for derivation see Garton 2007):[8]

$$tb = nfl \times \frac{(r^L - g)}{(1+g)} - fa \times \frac{(r^A - r^L)}{(1+g)}$$

Here *tb, nfl* and *fa* are the trade balance, net foreign liabilities and gross foreign assets as shares of GDP and r^L and r^A are average rates of return (including both investment income and valuation gains) on gross foreign liabilities and assets.

The intuition behind this equation is that the burden of servicing net foreign liabilities can be met in three ways: through nominal GDP growth reducing the burden of previously-accumulated liabilities, through excess returns on foreign assets and through trade surpluses. The higher are nominal GDP growth and the return on assets, relative to the rate of return on liabilities, the less the need to run trade surpluses.

8 If rates of return on assets and liabilities are equal this reduces to the more commonly used form: $tb = nfl \times (r - g)/(1+g)$.

Past averages may provide a plausible guide to future relativities between these variables. While the rate of return on Australia's foreign liabilities has exceeded GDP growth in the past, we have received an even higher rate of return on our foreign assets (Table 2).[9] If maintained, this excess return would allow Australia to sustain small trade deficits rather than having to move eventually into trade surplus.

Table 2: Sustainable trade balances under alternative assumptions[(a)]

		20 year average
Nominal GDP growth (per cent)		6.3
Rate of return (per cent) on:		
Foreign assets		9.6
Foreign liabilities		7.5
Liability return less GDP growth		1.2
Asset return less liability return		2.1
Trade balance (% of GDP) to stabilise NFLs at:	**60 per cent of GDP**	**90 per cent of GDP**
Based on past relativities	-1.0	-0.6
Liability return 1 per cent higher	0.4	1.0
Without excess asset return	0.7	1.1

(a) Calculations assume unchanged gross foreign asset share of GDP.

Based on past relativities, a sustained trade deficit of 1 per cent of GDP would stabilise net foreign liabilities at their current share of GDP over the long term. The trade deficit has averaged 1.2 per cent of GDP over the past five years, so this would imply a relatively modest adjustment. Exports and imports are each around one-fifth of GDP, so a fall in the trade deficit of 0.2 per cent of GDP could be achieved with a ½ per cent rise in exports and a ½ per cent fall in imports.

As net foreign liabilities are likely to grow faster than GDP in the immediate future a key question is whether this would mean a significantly larger trade balance adjustment in the longer term. Table 2 shows that even if the ratio of net foreign liabilities to GDP was to rise by half, the required trade balance adjustment would rise by only 0.4 per cent of GDP.[10]

9 This reflects in part the fact that equities are around half of Australia's foreign assets but only one-third of our liabilities. Equities provide a higher rate of return than debt, so this would imply a higher rate of return on assets (all else equal). Another factor may be investments in fast-growing emerging economies, which should yield relatively high rates of return. While this entails greater risk on the asset side, the average long-run return should still be higher.

10 Conversely, a moderate change in the trade balance can make a large difference to the share of GDP at which net foreign liabilities eventually stabilise. This is why it is possible for a moderate adjustment to stabilise net foreign liabilities eventually at their current share of GDP, even though continued trade deficits at recent levels would imply a large increase in this share.

These calculations assume that the past is a good guide to the future. As the future is uncertain, it is worth considering the implications of less favourable future relativities. If the rate of return on foreign liabilities was to rise by 1 percentage point, holding nominal GDP growth and asset returns constant, the required adjustment would increase by 1.4 per cent of GDP, requiring a shift into trade surplus of 0.4 per cent of GDP.

This would still be a manageable adjustment if it occurred over a reasonable period of time: for instance, it could be achieved with a 4 per cent rise in exports and a 4 per cent fall in imports. At least part of the required future adjustment to the trade balance is likely to occur as a matter of course. This is because the massive investment to expand productive capacity in the mining sector will yield a long-term increase in export supply that should reduce the trade deficit over time.

Australia's situation can be compared with that of the United States, whose trade deficit in recent years has averaged around 5 per cent of GDP. The US has a much larger trade deficit, even though its CAD has been similar in size to Australia's, as it still has a small net income surplus. This means that the US is likely to need a much larger trade balance adjustment to stabilise its net foreign liabilities as a share of GDP.[11]

The US faces additional challenges because external adjustment is harder to achieve in larger and more closed economies. Trade as a share of GDP is about one-third smaller in the US than in Australia, so proportionally larger changes in exports and imports are needed for a given shift in the trade balance. The size of the US economy also means that its own adjustment is likely to cause an adverse shift in its terms of trade, making adjustment even harder (Obstfeld and Rogoff, 2004).[12]

Conclusion

In light of the concerns about external imbalances following the global financial crisis it is important to bear in mind that current account imbalances are not inherently problematic. Whether deficits are optimal depends on whether the underlying decisions on investment and saving are optimal. This is essentially a question of inter-temporal optimisation: are CADs consistent with achieving a path of consumption over time that maximises the wellbeing of Australians?

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11 The US has also earned an excess rate of return of its foreign assets over time. Using a similar approach to that outlined above, Kouparitsas (2005) estimated that the US could sustain a trade deficit of 1.4 per cent of GDP.

12 Adjustment requires either a fall in US demand or an increase in US supply of tradeable goods, both of which suppress US export prices. The demand affect arises from 'home bias', which means that a fall in US demand disproportionately affects US-produced goods.

Against that criterion, Australia's large CADs in recent years, and the prospect that these could continue for some time, do not appear to be a cause for concern. Increased external borrowing is financing investment, mainly in the resources sector, that is likely to yield high rates of return and will expand export supply capacity. In these circumstances we could expect external borrowing to raise the wellbeing of Australians and to be readily serviced. Although net foreign liabilities are likely to grow significantly as a share of GDP, the size of the trade balance adjustment needed to ensure long-run sustainability appears readily achievable.

Reliance on external borrowing — particularly short-term borrowing — does entail risks; particularly, in the event of disruption to global financial markets. Nevertheless, the fact that Australia has come through the demanding stress test posed by the global financial crisis provides grounds for confidence that the risks are manageable.

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New estimates of the relationship between female labour supply and the cost, availability, and quality of child care

Xiaodong Gong, Robert Breunig and Anthony King[1]

This paper summarises new evidence from two Treasury working papers on the responsiveness of female labour supply to child care costs, availability, and quality. In one study, we drew on lessons from the literature and new detailed data to provide new estimates of the labour supply elasticity with respect to child care price for married women with young children. We found that, in contrast with previous Australian estimates, the cost of child care does have a statistically significant and negative effect on the labour supply of married mothers. This finding supports policy that reduces the costs of child care to encourage maternal labour supply. In a second study, we focused on the non-price factors and examined the impacts of subjective measures of the availability, quality, and affordability of child care on mothers' labour supply. We found that, after controlling for other factors, in geographical areas with higher reports of difficulty with availability and quality (and affordability), women with young children work fewer hours and, in particular, are more likely to work part-time instead of full-time.

1 Xiaodong Gong and Anthony King are from the Tax Analysis Division, the Australian Treasury. Robert Breunig is a consultant to the Australian Treasury and an associate professor at the Australian National University. This article has benefited from comments and suggestions provided by Laura Llewellyn, Maryanne Mrakovcic, Matthew Toohey and Leo Vance. The views in this article are those of the authors and not necessarily those of the Australian Treasury.

Introduction

One of the key questions which must be considered when shaping child care policies is how child care costs, availability and quality affect parents' labour supply. Current child care policies in Australia are founded on the view that high costs, poor quality and lack of availability of child care would be barriers preventing mothers from participating in the labour force. However, the degree of responsiveness of Australian women's labour supply to child care costs has been a matter of some debate. There is a view that the level of responsiveness is very low or negligible for all women with young children (slightly higher, but still very low, for sole parents). This view, largely based on a limited Australian empirical literature, runs counter to anecdotal evidence, is inconsistent with the evidence from broadly comparable overseas countries (which generally shows higher child care costs leading to reduced labour supply by women with young children), and is arguably counter-intuitive. A second observation is that the evidence on the relationship between labour supply and non-price factors such as the quality and availability of child care is limited in Australia.

Two new studies undertaken in Treasury have shed some light on these issues. In one study (Gong, Breunig and King 2010), we review the literature on the responsiveness of women's labour supply to child care costs, before providing new estimates of this labour supply elasticity with respect to gross child care price[2] for married women. Our study uses an alternative method and new data from the 'in-confidence' version of the Household, Income and Labour Dynamics in Australia (HILDA) Survey[3]. In a second study (Breunig and Gong 2010), which focuses on non-price factors, we analyse data on the responses to qualitative questions about problems which families may have experienced with the availability and quality (and affordability) of child care. We study whether these responses, aggregated at different geographical levels, have a relationship with mothers' labour supply. This article summarises the main findings from these two studies. The focus is on married women, as sample sizes limit the scope for separate analysis of sole parents.

The paper is organised as follows. In the next section we summarise findings from the review of the Australian and international literature on child care and labour supply, identifying some reasons why the labour supply responsiveness to child care costs in

2 It is important to distinguish between the gross and net child care prices of child care (see Box 1).

3 This paper uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings and views reported in this paper, however, are those of the authors and should not be attributed to either FaHCSIA or the Melbourne Institute.

Australia may have been underestimated previously. In the third section, we present and discuss our new estimates of the labour supply elasticity with respect to gross child care price. In the fourth section, we briefly summarise the main findings from Breunig and Gong (2010) on the relationship between mothers' labour supply and child care availability and quality. Conclusions are drawn in the final section.

The literature on child care elasticities

Before considering the findings from the review of estimates of women's labour supply elasticities with respect to child care costs, it is useful to define just what these elasticities are, including the distinction between gross and net child care price elasticities (see Box 1).

Box 1: Gross and net child care price elasticities

The elasticity of labour supply with respect to child care price is defined as the percentage change in hours worked (labour supply) for a one per cent change in the child care price. The elasticity may be specified with respect to the gross or net price of child care.

- The gross price of child care is the price charged by the child care provider.
- The net price of child care is the price charged by the child care provider less any entitlements that the user has to government child care assistance.

It is usually assumed in economic theory that households use net prices as instruments in their decision making. Thus, a net price elasticity would be the measure that better describes the basic labour supply responsiveness to changes in the cost of child care. (A qualification does emerge, though, if the provision of assistance with child care costs comes much later than when the costs are actually paid — as has been the case with some components of Australian child care assistance at certain times. In that case, households may in fact respond partly to gross prices).

A net child care price elasticity is, however, harder to estimate than a gross child care price elasticity. This is mainly because the net child care price is endogenous: it varies with labour supply and child care usage. As a result, gross price elasticities are far more commonly estimated, and the elasticity estimates discussed in this article are gross price elasticities.

A key point to note about gross child care price elasticities is that their estimated value will be specific to the policy settings for child care assistance at the time. Estimates of net price elasticities would be expected to show the same picture of sign and significance as the gross price elasticity estimates reported here, though would be expected to be a bit lower in magnitude.

Table 1 presents a summary of estimated labour supply elasticities with respect to child care price from the Australian and international literature. First of all, we observe that the estimates of the child care price elasticity of labour supply are spread across a wide range. For example, estimates of the elasticity of employment range from zero to -0.92. Nevertheless, estimates from most of the international studies are negative and statistically significant, with the average around -0.34. This provides evidence of an economically significant negative relationship between labour supply and child care costs. The Australian estimates of elasticities are quite different to the international estimates. They are at the lower end of the spectrum and, in fact, none of the Australian estimates are significantly different from zero.

Table 1: Estimates of labour supply elasticities[(a)] with respect to gross[(b)] child care price from the Australian and international literature

	No. of studies	No. of estimates around zero	Estimated elasticity		
			Mean	Min	Max
Elasticity of employment					
			Married mothers		
International	10*	0	**-0.34**	-0.92	-0.04
Australian	3	2	**-0.01**	-0.02	0
All	13	2	**-0.27**	-0.92	0
			Sole parents		
International	4*	1	**-0.29**	-0.58	0
Australian	2	0	**-0.12**	-0.19	-0.05
All	6	1	**-0.23**	-0.58	0
Elasticity of hours worked					
			Married mothers		
International	4	0	**-0.34**	-0.74	-0.12
Australian	3	2	**-0.01**	-0.02	0
All	7	1	**-0.20**	-0.74	0
			Sole parents		
International	1	0	**-0.16**	-0.16	-0.16
Australian	2	0	**-0.11**	-0.16	-0.05
All	3	0	**-0.12**	-0.16	-0.05

(a) The elasticity of employment refers to the percentage change in the employment rate. The elasticity of hours worked refers to the percentage change in hours worked, including the employment changes covered by the elasticity of employment.

(b) The elasticities from one study, the Australian estimates by Rammohan and Whelan (2005), are not strictly gross price elasticities; rather, they are somewhere between gross and net price elasticities.

* In one study, elasticities for two subgroups are reported.

Investigation of the methodological and data aspects of the various elasticity estimates led us to conclude that the Australian literature suffers from problems stemming from the use of limited data on child care usage and price, and also from some shortcomings in modelling approaches. In particular, the way in which child care price has been

included in the labour supply model in previous Australian research is potentially problematic, provides an important qualification to the Australian estimates of child care cost elasticities, and is likely to be a reason why a relationship with labour supply has previously not been found.

The Australian econometric literature is small — four papers by two sets of authors, which amounts to two approaches. In the first approach (Doiron and Kalb 2005; Kalb and Lee 2008), the modelling used child care prices averaged at the state level. Since prices within a state, particularly between metropolitan and other areas, are likely to vary considerably, this has the effect of adding a large amount of measurement error into the data. State-level prices are not likely to capture the local market price to which households react when making child care and labour supply decisions. In the second approach, Rammohan and Whelan (2005 and 2007) followed Connelly (1992) and calculated the 'hourly child care price' as the total household child care costs incurred for all children using child care divided by the hours worked by the mother. However, this provides a problematic measure of the child care price because it varies with hours worked, even if the true child care price is constant. By construction, it is correlated with the variable it is intended to explain (hours worked), which means that it is endogenous and regression results will be unreliable.

Small sample sizes may also be a factor in the statistical insignificance of the Australian elasticity estimates. For example, Rammohan and Whelan (2005 and 2007) used a sample of 1,138 married women drawn from the second wave of HILDA, of whom only about 190 paid for child care.

New estimates of child care elasticities

The conclusions from the literature review that data and modelling issues may have affected previous Australian studies prompted us to undertake new estimates of child care elasticities for married women with young children, using improved data and alternative techniques to measure child care costs.

Data and method

Our estimates are obtained from a 'classic' labour supply model and based on pooled data from the latest three waves of the 'in-confidence' version of HILDA, covering the period from 2005 to 2007. The 'in-confidence' data allow for far more detailed treatment of child care costs than previous studies. Apart from using the much larger sample that is now available, the main difference in the approach from previous studies is that we use a more precise measure of child care price.

We calculate hourly child care prices by dividing the child care expenditure per child by the hours of child care used by that child, rather than the hours worked by the mother. This departs from the approach followed by Rammohan and Whelan (2005 and 2007) in two ways: first, our price is a per child care hour price rather than a per hour worked price and, second, we calculate a price per child instead of a household average over all children. To minimise the influence of other factors related to individual choices such as quality of care, we use the average of our constructed prices at a regional level (Labour Force Survey Regions as defined by the Australian Bureau of Statistics), rather than the more aggregate state averages used by Doiron and Kalb (2005) and Kalb and Lee (2008).

Results

Our estimates are presented in Table 2. The estimated elasticity of employment with respect to gross child care price for an 'average' married mother with young children is -0.3, and the corresponding elasticity of hours worked is -0.7. That is, on average, if the gross child care price increases by 1 per cent, the employment rate of married mothers with young children would be expected to decrease by 0.3 per cent, and, overall, the hours worked by married mothers with young children would be expected to decrease by 0.7 per cent. Both estimates are statistically significant. The estimate for the elasticity of employment is close to the international mean, in contrast with previous Australian estimates (see Table 1). The estimated elasticity of hours worked is at the higher end of the international estimates. However, most studies do not report an elasticity of hours worked. Where they do, it is usually the case that the magnitude of the hours worked elasticity is greater than that of the employment elasticity.

Table 2: Estimated labour supply elasticities[(a)] with respect to gross child care price for married women with children under the age of 13 years: Australia, 2005-07

	Gross child care price elasticity
Employment	-0.3 [-0.42, -0.15]**
Hours worked	-0.7 [-0.98, -0.32]**

(a) The elasticity of employment refers to the percentage change in the employment rate. The elasticity of hours worked refers to the percentage change in hours worked, including the employment changes covered by the elasticity of employment.

Notes: ** Significant at 5 per cent level. 95 per cent confidence intervals are in brackets.
Elasticities are calculated for a married woman with the average probability of being employed (or the average hours worked) and average level of family private income (excluding her own earnings).
Source: Estimated using HILDA data, see text.

Box 2: New estimates of child care price elasticity

The key finding is that, in contrast with previous Australian estimates, the cost of child care does have a significant and negative effect on the labour supply of married mothers with young children.

In terms of orders of magnitude:

- the estimated elasticity of employment with respect to gross child care price for an average married mother with young children is -0.3, and the corresponding elasticity of hours worked is -0.7.
- that is, on average, if the gross child care price increases by 1 per cent:
  - the employment rate of married mothers with young children would be expected to decrease by 0.3 per cent; and
  - the hours worked by married mothers with young children would be expected to decrease by 0.7 per cent.

It is important to note that these elasticity estimates are specified with respect to a change in the gross price of child care (as, generally, are the earlier Australian estimates). The modelling does implicitly take account of the translation of the gross price through child care assistance to net price, though the econometric estimation technique generates a gross price elasticity. The elasticity estimate, therefore, is specific to the policy settings at the time the data were gathered (2005 to 2007).

One particular question of interest regarding these elasticity estimates is whether the level of responsiveness to child care prices varies with income: either the mother's earnings (or potential earnings) or family income. The econometric techniques used for these estimates do not, however, allow a direct answer to this question. The estimates for 2005 to 2007 do show that mothers' labour supply responses to a change in child care price vary with the family's private income (excluding her own earnings). But what this means in terms of underlying responsiveness depends in part on the translation of gross price changes to net price changes, which will vary with family income due to the means-tested nature of child care assistance. Estimation of net price elasticities would provide a better basis for understanding the relationship with income, although this work does suggest that a significant relationship between child care price and labour supply could be expected to hold across a range of incomes.

Validation

Besides the standard testing of the econometric equations used to generate the Treasury estimates, further validation has been undertaken to help us understand the difference between these estimates and the earlier Australian estimates. Specifically, can the difference be attributed to the different estimation techniques (in particular, the enhanced treatment of child care price) or could it simply relate to the fact that the estimates refer to different time periods and use different samples of data? As noted above, a gross price elasticity is specific to policy settings, and these have changed between the two periods in question.

This question has been addressed by applying our technique and the Connelly technique (used by Rammohan and Whelan) to two time periods: 2002 to 2004 and 2005 to 2007 (the former period corresponds to that of the previous Australian estimates). A strength of our estimates is their use of more detailed child care data that are now available. These data are not available to the same extent for the earlier period, which means that our technique can not be fully applied to the earlier period. But it can be applied to a subset of the population; couples with at most one child under school-age and at most one school-aged child. This subset, termed the 'restricted sample' is about half the size of the full sample. The comparison here uses the restricted sample for both 2002 to 2004 and 2005 to 2007, and also uses the full sample for 2005 to 2007. The results are shown in Table 3.

Table 3: Validation: estimates of Australian employment elasticities[(a)] with respect to child care price using alternative techniques and for two time periods (married women with children under the age of 13 years)

	Estimation approach	
	Our approach	**Connelly approach**
Restricted sample (b)		
2002-04 (c)	-0.1*	0.06
2005-07	-0.2**	0.02
Full sample		
2005-07	-0.3**	-0.01

(a) Elasticities are calculated for a married woman with the average probability of being employed (or the average hours worked) and average level of family private income (excluding her own earnings).
(b) The 'restricted sample' includes only those couples with at most one child under school-age and at most one school-aged child.
(c) The child care price index used is the ABS Gross Child Care Price Index for 2005 to 2007, but the CPI for 2002 to 2004 (as the specific ABS child care price index is not available for this earlier period).

Notes: ** Significant at 5 per cent level.
* Significant at 10 per cent level.
Source: Estimated using HILDA data, see text.

Table 3 shows that our approach results in estimates of negative elasticities for both the 2002 to 2004 and 2005 to 2007 periods, which are statistically significant. It also shows that the Connelly approach does not reveal any significant relationship between the price of child care and mothers' employment for either period or sample. This supports the view that the approach used is likely to be a key reason why a relationship between child care price and labour supply has not been found previously.

Impact of child care availability, quality, and affordability on women's labour supply

Besides cost, the availability and quality of child care are also likely to affect parental decision-making over child care usage and labour supply, but empirical evidence in Australia which comprehensively investigates these multiple aspects of child care is scarce. In the second study covered by this article, Breunig and Gong (2010) have filled some of this gap by examining the relationship between subjective assessments of child care availability, quality, and affordability on women's labour supply using data from the sixth wave of the HILDA Survey (referring to 2006, the most recent data available at the time of the work).

In the HILDA Survey, people who used or had considered using child care were asked a set of questions about eight aspects of the availability, quality and costs of child care. For each question, they were asked to rate on a scale of zero (no difficulty) to ten (a great deal of difficulty) the level of difficulty faced in obtaining child care.

As the responses to these questions would have been correlated with individual preferences and the decision to work or not work, they can not be included in a standard labour supply model. Our approach, instead, was to estimate a labour supply model including the 'local' average responses to the questions of all other people in the 'local' area who answered the question, while leaving out the response of the person whose labour supply was being modelled. We find evidence that in geographical areas with higher reports of difficulty with availability and quality (and affordability), after controlling for other factors, women work fewer hours and, in particular, are more likely to work part-time instead of full-time.[4] We considered four different levels of geographical aggregation for the analysis: Statistical Local Area (SLA), Labour Force Region (LFR), Statistical Division (SD) and Major Statistical Region combined with Section of State (MSR/SOS). The results are robust to the level of aggregation used, with SD providing the highest level of statistical significance in most of the cases.

4 Breaking the population down, however, we found no effects for sole parents though this could well be attributed to the limited sample size.

Conclusions

Child care is an active policy area that has seen a number of initiatives over recent years to improve the affordability, supply and quality of child care. There are two main forms of assistance for families to meet the costs of child care: Child Care Benefit (CCB) and the Child Care Rebate (CCR). CCB was introduced in 2000 as a means-tested payment providing assistance with the costs of up to 50 hours of approved care per week, and replaced two earlier payments. In 2007 the rate of CCB was increased by 10 per cent over and above annual indexation. CCR was originally introduced in 2005 as the Child Care Tax Rebate (CCTR). It began as a non-refundable tax offset, payable annually, which covered 30 per cent of out-of-pocket child care expenses up to a then maximum of $4,000 per child. Changes in 2007 and 2008 saw the CCTR transformed into a transfer payment, now covering 50 per cent of out-of-pocket expenses, payable quarterly, and with the maximum rebate increased considerably from the then $4,354 to $7,500 per child (CCTR was renamed Child Care Rebate in 2009). One measure to address the supply of child care was the removal in 2006 of caps on the number of outside school hours care and family day care places. Most recently, the quality of child care has been a focus of attention. In 2009 the Council of Australian Governments (COAG) agreed on a National Quality Framework to be implemented progressively from 2010. This will include increased staff to child ratios, new staff qualification requirements, and a new transparent quality rating system.

Our research on labour supply elasticities with respect to the price of child care finds that the approach taken in the previous Australian econometric literature — in particular, the manner in which the price of child care has been calculated — and data limitations may have contributed to the view that women's labour supply is not responsive to the price of child care.

Using an enhanced calculation of the price of child care, our new estimates suggest that the cost of child care does have a significant negative effect on the labour supply of married mothers with young children. This is in stark contrast with previous Australian estimates but well in line with the international evidence from comparable countries. The robustness of these new estimates has been supported by also applying the new approach to the earlier time period (2002 to 2004) that had provided the basis for the previous estimates of Australian elasticities. It is important to note that these elasticity estimates are specified with respect to a change in the gross price of child care (as generally are the earlier Australian estimates) which means that the elasticity estimates are specific to the policy settings at the time the data were collected.

The study on availability, quality, and affordability of child care supports the view that, in addition to costs, non-price aspects of child care may also be important factors affecting women's labour supply. We find that higher levels of reported difficulty with availability, quality, and affordability of child care in a geographical area, after

controlling for other factors, are associated with women working fewer hours and, in particular, being more likely to work part-time instead of full-time.

The research summarised in this article has used new data and techniques to advance our empirical understanding of the relationship between child care and women's labour supply. But these are still early steps. There would be scope for further improvement of the estimates covered in this research, with the availability of better data. There are also unanswered questions concerning, for example, any particular behaviour of sole parents, how the responsiveness of labour supply to child care costs varies with income, the role of informal child care, net price elasticities, and changes over time. The availability of better data has been an important element in the new research reported here, and further steps in this area of research will similarly benefit from continuing improvement in available child care data. In addition, alternative approaches that take explicit account of the tax and transfer system and allow the calculation of the net price elasticity may provide more insights into the relationship between labour supply and child care.

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Managing manna from below: sovereign wealth funds and extractive industries in the Pacific

Martin Gould[1]

A key challenge for developing countries endowed with natural resources is to transform those resources into sustained improvements in living standards. A number of Pacific island countries have utilised sovereign wealth funds (SWFs) to manage government revenue from exhaustible natural resources with the aim of improving development outcomes. Experience in the region has been mixed — some SWFs have aided intergenerational equity and macroeconomic stability while others have struggled to bring about improvements in wellbeing.

This paper examines the past and present SWFs of Kiribati, Nauru, Timor–Leste and Papua New Guinea. In doing so, it draws out some lessons for policymakers considering the use of SWFs in managing resource revenue in developing countries. Principles for successful SWFs are identified, including strong transparency, public support for the SWF, integration with the national budget and professional investment management.

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1 The author is from International Finance and Development Division, the Australian Treasury. This article has benefited from comments and suggestions provided by Dan Devlin, Kate Glazebrook, Jason Harris, Christopher Johns, Simon Kerr, David Martine, Tony McDonald, Neil Motteram, Ian Nicholas, Penny Philbrick and Brett Winton. The views in this article are those of the author and not necessarily those of the Australian Treasury.

Introduction

On 8 December 2009, at a ceremony in the Papua New Guinea (PNG) capital Port Moresby, PNG LNG joint venture partners publically agreed to proceed with a US$18.3 billion commercialisation of gas reserves in the Highlands region. This will be the largest resource project in PNG history and is likely to boost government revenue substantially. East of PNG, in Solomon Islands, around 15 companies are exploring the country's gold, copper and nickel deposits, although substantial revenue from mining is still some years away. Timor–Leste,[2] on the other hand, is already receiving significant revenue from oil and gas production. In 2009, tax and royalties from hydrocarbons financed around 90 per cent of the central government's budget, making Timor–Leste one of the most oil dependent countries in the world (IMF 2009c). And throughout the Pacific, numerous countries may allow seabed mining over the coming years as technology advances.

While the revenue flows from such projects present important opportunities to improve living standards, fully capitalising on natural resource extraction in developing countries is challenging. In the Pacific, a number of countries have established sovereign wealth funds (SWFs) to manage resource revenue in the hope of converting natural resource wealth into improved wellbeing.

This article will examine these SWFs and draw out lessons for policymakers considering resource revenue management in the Pacific. It begins by examining the policy challenges posed by natural resource extraction, many of which SWF arrangements aim to mitigate. The next section classifies the different types of SWFs, with a focus on natural resource funds. The past and present SWFs of Kiribati, Nauru, Timor-Leste and PNG are then analysed, the diverse outcomes providing lessons for policymakers. The article ends by advancing some policy principles for the use of SWFs in the Pacific.

The potential consequences of exhaustible natural resource extraction in developing countries

Perhaps paradoxically, developing countries with abundant non–renewable natural resources like minerals and hydrocarbons, on average have lower rates of economic growth and worse development outcomes than those without (Sachs and Warner 1995, Mehlum et al. 2006 and van der Ploeg 2007). While mining and oil production should provide much needed income and foreign investment to capital scarce economies,

2 For ease of reference, this paper will include Timor–Leste in the term 'Pacific'.

often the negative externalities of such projects mean the net effect on development is deleterious (Collier 2007).[3]

The term 'resource curse' is often used to group a number of impediments to economic development that are associated with natural resource extraction in developing countries.

First, large revenue flows to the central government from resource projects often weaken the links between citizens and their state. When governments can rely on one sector or a limited number of projects to supply a large portion of its revenue, the incentive to promote broad wealth creation, which can then be taxed, is reduced. Moreover, when citizens are lightly taxed their incentive to hold governments accountable is diminished (OECD 2008). Empirically, there is a strong correlation between poor governance and natural resource wealth in developing countries (Ades and Di Tella 1999).

Second, depending on the structure of the economy, the extraction and export of natural resources can cause the local currency to appreciate, making other export sectors less competitive. Compounding this, input prices rise as resource companies and the non–traded sector (which benefits from the spending of higher incomes in the local economy) bid up the price of wages and property (Corden 1984). This effect, commonly called 'Dutch Disease',[4] is a predictable response to changes in the local economy — exchange rate changes help move factors in the economy to their most productive use.

Dutch Disease can be a challenge for developing countries however, as non–resource exports are often conducive to broad based economic growth. Agriculture, services and manufacturing, as opposed to resource extraction, are relatively labour intensive and thus draw more people into the formal economy. Dutch Disease can interrupt this process and can be particularly harmful if the internal reallocation of production factors is temporary — commodity prices fluctuate, mineral projects end and oil wells dry up. The combination of a weakly developed private sector, rigid or incomplete markets and low human capital often mean displaced labour is unable to secure other opportunities, making reallocation costly. Limited social safety nets can also mean assistance with the transition is not provided.

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3 This is in contrast to OECD countries where 'endowments in natural resources … have a significant positive effect on GDP per capita' (OECD 2008).

4 This term was coined by *The Economist* (1977) in response to the macroeconomic problems experienced by the Netherlands following the commercialisation of the country's gas reserves. This phenomenon is also known as the 'Gregory effect' due to the work of Australian economist Robert Gregory (1976).

Third, the volatility of commodity prices can impair the ability of resource revenue dependent governments to plan expenditure over the medium term. Commodity price fluctuations can also expose economies with large resource sectors to painful shocks that institutions in developing countries often struggle to respond to effectively.

Fourth, sudden, substantial, unevenly distributed increases in wealth can fuel internal grievances, leading to violent conflict over royalties, or sustain pre–existing conflicts (Hodler 2006). Finally, negative environmental effects of natural resource extraction, if not properly mitigated, can damage other industries such as agriculture.

Despite the seriousness of these challenges some countries have harnessed resource riches to lift long–term economic growth. One method often advanced to counter many of the potential negative consequences of natural resource extraction in developing countries, particularly weakened accountability, Dutch Disease and revenue volatility, is to save revenue in a SWF.

Classifying SWFs

'Sovereign wealth fund' is a broad term used to describe a special purpose government–owned fund that manages and/or invests government savings, usually separate from the state's budget (Devlin and Brummitt 2007).[5] SWFs have increased in popularity over the last 30 years with some estimates putting the total asset holdings of SWFs between US$3.9 trillion and US$5.3 trillion (Truman 2008, IFSL 2009).

This paper will focus on SWFs funded by revenue from natural resource extraction. Commonly called non–renewable resource funds (NRFs), they account for around 70 per cent of SWFs. SWFs funded by 'surplus' foreign exchange reserves, the proceeds of privatisation, development assistance and/or general fiscal surpluses account for the remaining 30 per cent (Truman 2008 and IFSL 2009).

NRFs can be divided into two broad categories: stabilisation funds and saving funds (Davis et al. 2001). Although most NRFs play both a stabilisation and saving role, this categorisation reflects the fact that the majority of funds prioritise one function over the other.

The primary aim of **stabilisation funds** is to reduce the impact of resource revenue volatility (normally due to commodity price volatility) on the government's budget. The increase in fiscal stability can also simplify the operation of monetary policy.

5 The International Forum of Sovereign Wealth Funds notes that SWFs exclude 'foreign currency reserve assets held by monetary authorities for traditional balance of payments or monetary policy purposes, state–owned enterprises in the traditional sense, government–employee pension funds, or assets managed for the benefit of individuals' (IWG 2008).

When commodity prices or resource revenues are 'high', flows into the stabilisation fund increase and when mineral revenues are 'low', the fund is drawn down. Ideally, the uncertainty and volatility of resource revenue is transferred to the fund, allowing budgetary spending to be insulated from commodity price fluctuations.

A number of strategies or rules can be employed to govern the operation of stabilisation funds. The fund may receive inflows when prices or revenue exceed a reference value, which may be fixed or calculated on the basis of future price forecasts. The fund may make transfers to the budget when revenue or prices fall below the reference price. The required accumulation and permissible depletion may also be dependent on the size of the fund at the time. Rules governing maximum or minimum balances may also apply.

In the Pacific, PNG's now defunct Mineral Resources Stabilisation Fund can be characterised as a stabilisation fund and the current commodity revenue trust funds also have stabilisation objectives. Their operation is outlined below.

The main goal of **saving funds** is to set aside resource revenue for future consumption or investment. As minerals and hydrocarbons are exhaustible resources, saving funds can enable future generations to benefit from the extraction, by converting finite revenue into a long–term financial flow. This is particularly important when natural endowments are limited or of a one–off nature.

The manner in which revenue is saved and then transferred to the budget differs across funds. Flows into saving funds may be based on a prescribed share of resource revenue or of total revenue. Other funds rely on a yearly, fixed nominal contribution or voluntary contributions from government in years of fiscal surplus. Conversely, all resource revenue may flow into the fund, before a portion is transferred to the state's budget.

Similarly when it comes to expenditure, saving funds can have different rules. Yearly withdrawals may be a nominal amount or a portion of the fund's current and/or future value (the latter relying on price and production forecasts). Conversely, the fund may simply finance any budget shortfall. Guidelines can be directed at short-term stabilisation objectives by allowing withdrawals to cover revenue downturns, recessions or natural disasters (Davis et al. 2001).

In the Pacific region, saving funds are found in Timor–Leste and Kiribati. In the past, Nauru also employed a saving fund.

The Kiribati Revenue Equalisation Reserve Fund

Kiribati, a nation of atolls and one island spread over a stretch of the Pacific Ocean about the size of Western Europe, has a population of around 100,000. The economy is dominated by the public sector which provides two thirds of all paid employment. Output is hampered by the country's remoteness and lack of fertile land, although income per capita is boosted by remittances and fishing licence fees. The local currency is the Australian dollar.

Phosphate mining began on Banaba Island around 1900 after Kiribati was colonised by Britain. In 1956, the colonial administration established the Revenue Equalisation Reserve Fund (RERF). The Fund received revenue from phosphate mining royalties until phosphate deposits were exhausted in 1979 (ADB 2008).

The Government of Kiribati, as both the trustee and beneficiary, has complete control over the RERF. The Reserve Fund Committee, chaired by the Minister of Finance and staffed by public servants, has management responsibility for the Fund. The RERF is held offshore and is currently split 70:30 between bonds and equities. Exchange rate risk is reduced by investments in more than 20 currencies, including the US dollar, the Japanese yen and the euro (IMF 2009a).

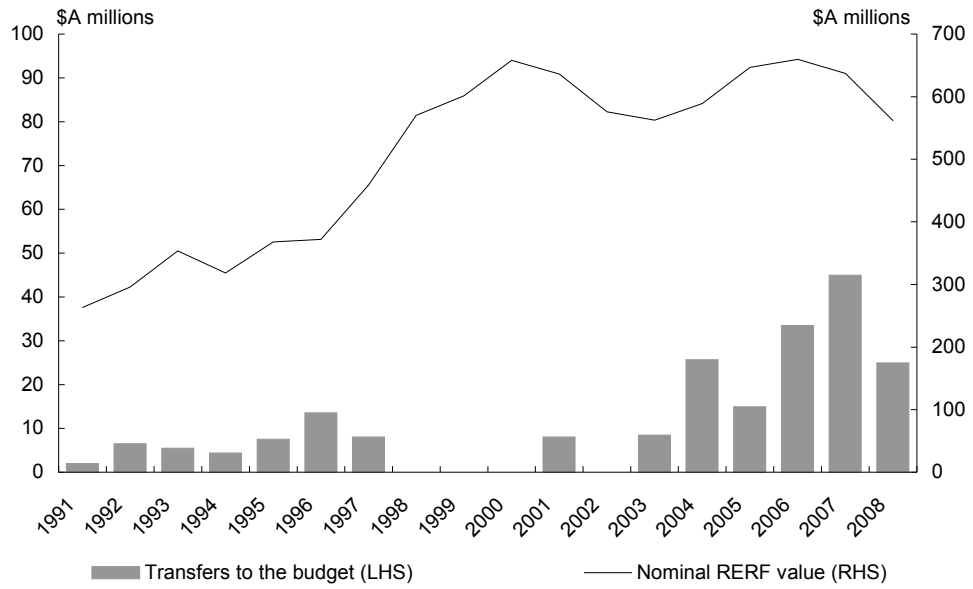
The Kiribati budget and the RERF are fully integrated — fiscal surpluses are added to the fund and any budget shortfalls are financed via drawdowns. While there are no rules on withdrawal limits, in 1996 Parliament agreed in principle to hold the real per capita value of the RERF constant (then A$4,700).

Since independence in 1979, Kiribati has generally maintained a culture of strong fiscal management (ADB 2008). During periods of solid economic growth, the fiscal position generally improves, and windfall revenue is normally saved. As a result the value of the RERF has grown to A$560 million in 2008 (Chart 1).

Withdrawals from the fund were minimal between 1980 and 2000 (IMF 2009a). Returns were generally reinvested and the RERF benefited significantly as equity prices climbed in the 1990s. The Fund rose more than 40 per cent in real terms between 1996 and 2000.

This century, fiscal management has been more mixed. Significant withdrawals from the RERF began in 2004 and averaged A$30 million (20 per cent of GDP) annually to 2008. The seeds for such large drawdowns were sown in the 1990s when temporary revenue increases from fishing licences were used to grow the public service and increase subsidies to public enterprises. As domestic revenue has fallen, the Government has increased withdrawals from the RERF (IMF 2009a).

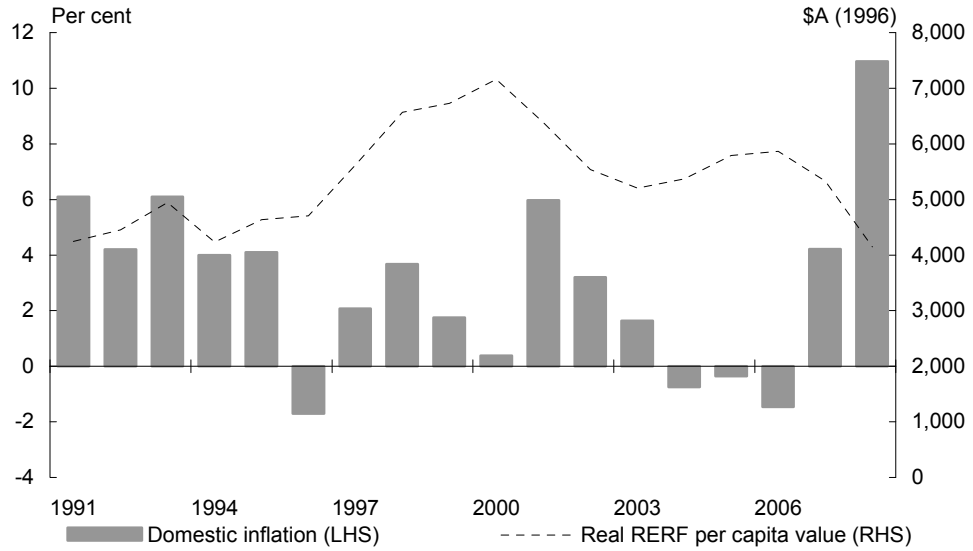
Chart 1: RERF balance and withdrawals[(a)]



(a) Detailed data before 1991 could not be obtained.
Source: Graham 2005, ADB 2008 and IMF 2009a.

Increased drawdowns and equity market falls, combined with significant domestic inflation due to high international food and fuel prices in 2008, have reduced the real per capita value of the RERF. After peaking at more than A$7000 (in 1996 dollars) in 2000, the real per capita value has fallen to around A$4000 (Chart 2). While management of the fund has, on the whole, been strong, the IMF projects that if the trend over the last five years persists the RERF will be depleted by 2030 (IMF 2009a).

Chart 2: Real per capita value of the RERF (1996 $A) and inflation



Source: Graham 2005, IMF 2009a, IMF 2009d and Treasury estimates.

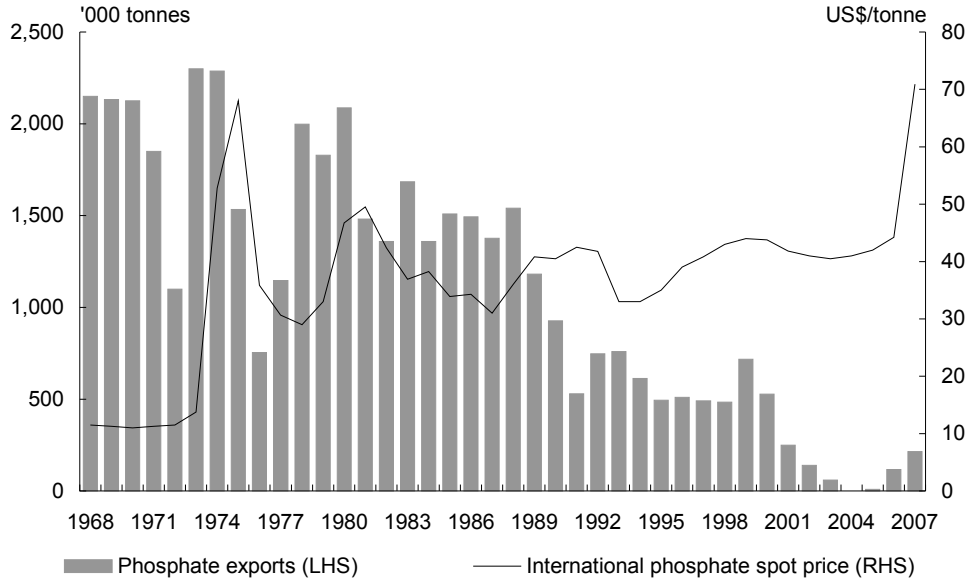
The Nauru Phosphate Royalties Trust

Nauru, a 21 square kilometres nation in the Pacific Ocean, is the world's smallest independent republic. The 10,000–strong population resides on the green rim of the island which circles a large, heavily–mined phosphate deposit. The economy is dominated by government activity, including a large state–owned enterprise sector. As in Kiribati, the Australian dollar is the local currency.

At the time of independence in 1968, the Nauru Phosphate Royalties Trust (NPRT) was established to hold revenue from phosphate mining. The NRPT was composed of four funds, established for separate reasons: the Long–Term Investment Fund, the Land Owners' Royalty Trust Fund, the Housing Fund, and the Rehabilitation Fund. While formally the NRPT and the state's budget were separate, in practice there was little distinction.

The first twenty years of nationhood saw phosphate production average around 1.6 million tonnes annually. Production fell from the late 1980s and the mine closed in 2003 (Chart 3). The mining of secondary deposits began in late 2005 but significant additional costs mean production is highly dependent on prices (Cox 2009).

Chart 3: Nauru phosphate exports and the world phosphate price



Source: Hughes 2004 and IMF.

The fall in phosphate exports in the 1990s brought with it fiscal deficits, as government revenue fell and expenditure continued to increase (Hughes 2004). While data on the NPRT are difficult to obtain, its value is estimated to have declined from A$1.3 billion in 1990 to A$300 million in 2004 (Toatu 2004). The Nauruan government also

borrowed, at high interest rates, against the NPRT to finance public expenditure. The NPRT is currently being wound–up; the few remaining assets will be transferred to landowners. Nauru's public debt now sits at A$869 million, around 30 times GDP (Government of Nauru 2009).

The exhaustion of proceeds from phosphate mining was achieved through many channels. Governance of the NPRT was particularly poor and many private fortunes were made from the mismanagement of the fund (Hitt 2000 and Hughes 2004). The investment strategy of the NPRT saw most phosphate revenue invested in international property, rather than fixed–income assets or equities. These investments saw significant losses in the 1990s and Nauru's property portfolio was seized by receivers in 2006 as the country's debts rose. In addition to investment losses, much phosphate revenue was lost to low quality expenditure rather than investments in productivity–increasing physical or human capital.

Timor–Leste

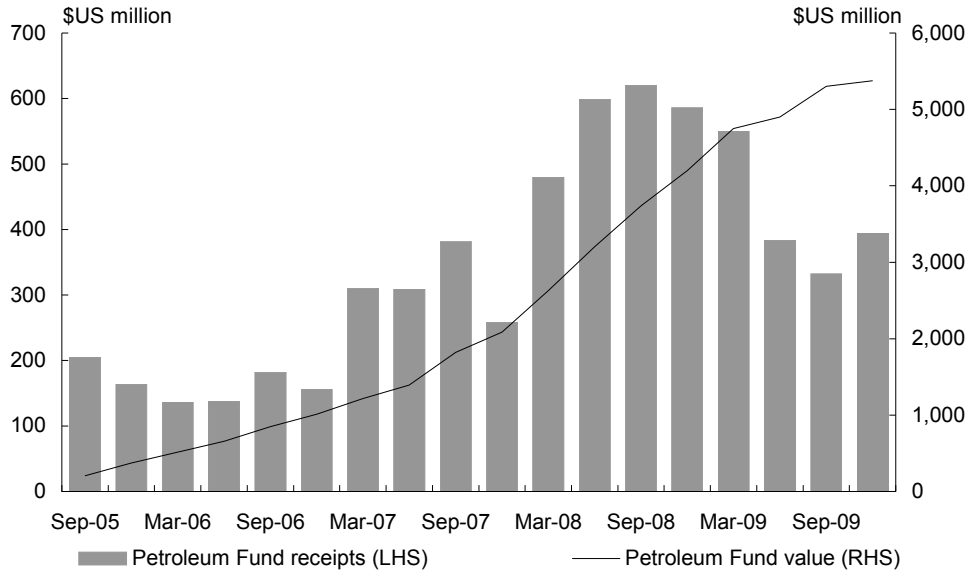
Timor–Leste, located 600 kilometres northwest of Darwin, is one of the world's youngest nations, achieving full independence in 2002. The economy is dominated by an offshore oil and gas sector eight times bigger than all other sectors combined. The non–oil economy is concentrated on subsistence agriculture and government consumption and investment. The US dollar is used as the local currency. On many measures, Timor–Leste is the one of the poorest countries in the Asia Pacific region.[6]

The introduction of large–scale oil production in 2004 resulted in significant revenue increases for the Timor–Leste government — over 2006–2008 average annual revenue from oil and gas was equivalent to 320 per cent of non–oil GDP.

The Petroleum Fund was established in August 2005 to manage oil and gas revenue and is administered by the Timor–Leste Banking and Payments Authority (BPA) (effectively the central bank). Royalties and tax revenue from the oil and gas sector are automatically deposited in the Fund. At the end of 2009 the Fund was worth US$5.4 billion or more than 8 times non–oil GDP (Chart 4).

6 While GDP per capita is relatively high due to oil production, non–oil GDP per capita on a purchasing power parity basis is $800, well below Kiribati ($2,484), Solomon Islands ($2,610) and the Pacific island average ($3,070) (World Bank 2009). Timor–Leste is ranked 158 out of 179 countries on the Human Development Index (UNDP 2009).

Chart 4: Petroleum Fund receipts and value



Source: Timor–Leste BPA.

All investments are currently made in developed country government bonds, although legally 10 per cent of the fund may be invested in equities.[7] The average annual rate of return on funds invested has not been enough to maintain the domestic purchasing power of the Fund (IMF 2009c). This has caused some to call for investment diversification but to date there have been no moves in this direction.

The Petroleum Fund has numerous processes in place to foster transparency. The BPA and the Government publish quarterly and annual reports respectively on the Fund's revenue, investment strategy and performance, and transfers to the national budget. Recently, the BPA has introduced monthly reporting and the minutes of meetings of the Investment Advisory Board are made public. Timor–Leste has also committed to the Extractive Industries Transparency Initiative (EITI)[8] and in late 2009 published its first EITI report detailing oil and gas revenue received in 2008.[9] Timor–Leste is a

7 Most holdings are in US Government fixed interest instruments although recently the Fund has branched out into government bonds from Australia, the Euro zone, Japan and the United Kingdom.

8 The EITI is a coalition of governments, companies and civil society groups which aims to improve governance in resource–rich countries through the verification and full publication of company payments and government revenue from oil, gas and mining.

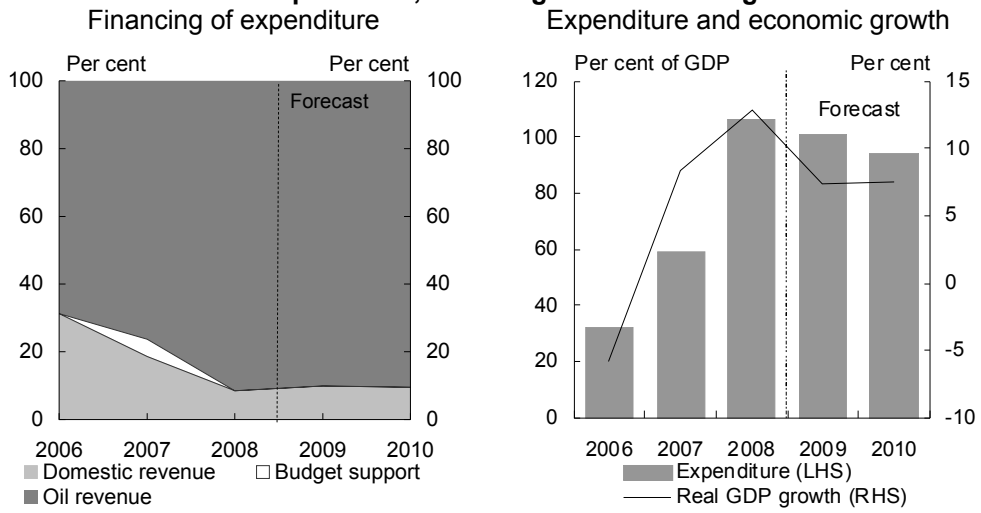
9 Timor–Leste currently has Candidate Country status under EITI. The next step is to have the country's EITI reporting 'validated' by an independent assessor, at which time the country becomes EITI 'compliant'. The Government has indicated it expects to begin the compliance process shortly. Currently only two countries are recognised as EITI compliant.

member of the International Forum of Sovereign Wealth Funds and has indicated its intention to implement the Santiago Principles (IAB 2008).[10]

In the absence of extenuating circumstances, the Government is unable to withdraw more than the Estimated Sustainable Income (ESI) annually from the Fund. The ESI is designed to ensure a constant steam of revenue from the Fund in perpetuity and is set at 3 per cent of petroleum wealth (calculated as the balance of the Fund plus the net present value of future petroleum revenue). If the government wishes to withdraw more than the ESI it must provide a 'detailed explanation to parliament of why it is in the long–term interests of Timor–Leste'.[11]

Transfers from the Petroleum Fund finance around 90 per cent of the national Government's budget and have allowed expenditure to rise to 100 per cent of non-oil GDP. Strong growth in government expenditure has helped increase annual economic growth to an average 9 per cent over 2007–2009 (Chart 5).

Chart 5: Expenditure, financing and economic growth



Source: IMF 2009c.

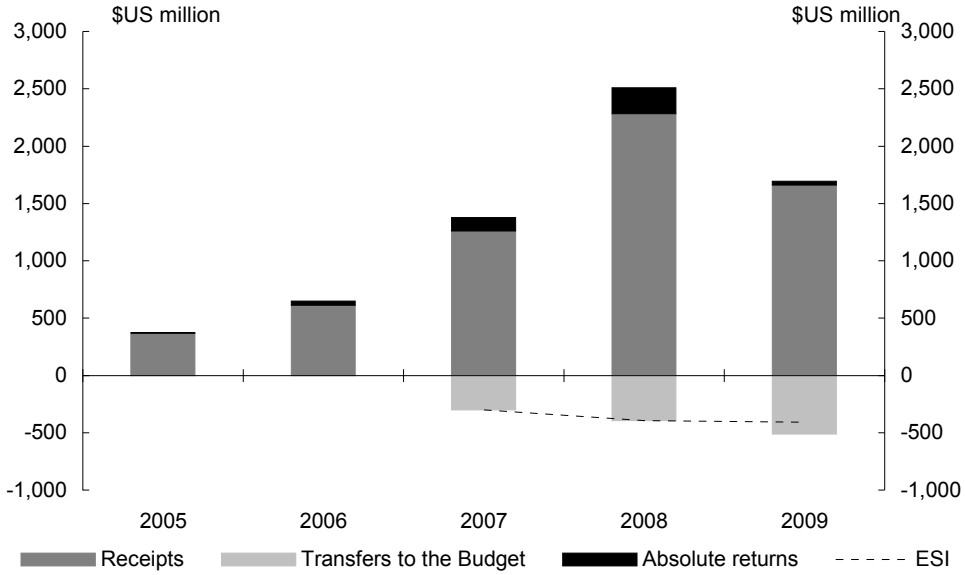
Over the last three years, the Timor–Leste Government budgeted to withdraw more than the ESI from the Petroleum Fund, but difficulties with budget execution in 2007 and 2008 kept drawdowns at the sustainable level. In 2009, the Government withdrew US$512 million from the Petroleum Fund, US$77 million less than approved by

10 The Generally Accepted Principles and Practices for SWFs, the Santiago Principles, were published by the International Working Group of Sovereign Wealth Funds in 2008. The 24 voluntary principles reflect appropriate governance and investment practices for SWFs (IWG 2008).

11 East Timor Petroleum Fund Law No. 9 /2005.

Parliament, but above the ESI of US$408 million (Chart 6). The 2010 Budget aims to return withdrawals to a sustainable level.

Chart 6: Petroleum Fund receipts and withdrawals



Source: Timor–Leste BPA.

The significant value of the Petroleum Fund, juxtaposed with Timor–Leste's pressing development needs, has increased pressure on the Government to draw down more than the ESI from the Fund. Theoretically, there may be strong case for investing more oil and gas revenue in Timor–Leste's physical and human capital; with such a low capital base, the social returns from such expenditure could be higher than the financial returns the Petroleum Fund can achieve (Collier et al. 2009).[12]

At this time, however, public service capacity is uneven, constraining the state's ability to deliver productivity–increasing capital works. Inefficient government expenditure could also slow the rise of Timor–Leste's nascent private sector by inflating wages and pushing up construction costs.[13]

12 The geology of Timor–Leste means the country is also likely to benefit from other oil and gas projects in the future (IMF 2009c).

13 Dutch disease effects are less of a concern in Timor–Leste as the country's currency is the US dollar and a significant portion of government expenditure is dedicated to imports.

Papua New Guinea

Papua New Guinea (PNG), located to the north of Australia, gained independence in 1975. GDP per capita is low relative to other Pacific island nations and the majority of country's 6.8 million people rely on subsistence agriculture. The formal sector is dominated by resource extraction, primarily gold, oil and copper. PNG's mineral wealth has seen it use two different methods of revenue management.

Mineral Resources Stabilisation Fund

The PNG Mineral Resources Stabilisation Fund (MRSF) was established in 1974 following commencement of production at the Panguna copper mine on Bougainville. The aim of the Fund was to reduce the impact of mining revenue volatility on the budget (Parsons and Vincent 1991).

Tax, royalty and dividend payments from all mining and oil enterprises were placed in the MRSF rather than in consolidated revenue. The Fund's capital was then used to finance the budget. The MRSF was held in the Bank of PNG (the central bank), not invested, and was managed by selected departmental secretaries (Duncan et al. 1995).

The 1974 Act establishing the Fund specified a complex formula to decide the maximum rate of yearly withdrawal. Relying on price and production forecasts, the likely financial flows into the MRSF over five years were projected. The maximum withdrawal for the current year was the maximum amount that could be sustained, in terms of real purchasing power, over the following five years, based on the forecast MRSF income.

As anticipated, revenue into the Fund was highly volatile. Contrary to the Fund's purpose however, so were transfers from the MRSF to the Budget (PEB 1987). Most importantly, forecasting sustainable withdrawals proved difficult — the estimated sustainable drawdown rose from K31 million in 1978 to more than K80 million in 1981 before dropping to around K20 million in 1983 (Chart 7) (Duncan et al. 1995).

Chart 7: MRSF income and transfers under original withdrawal rules

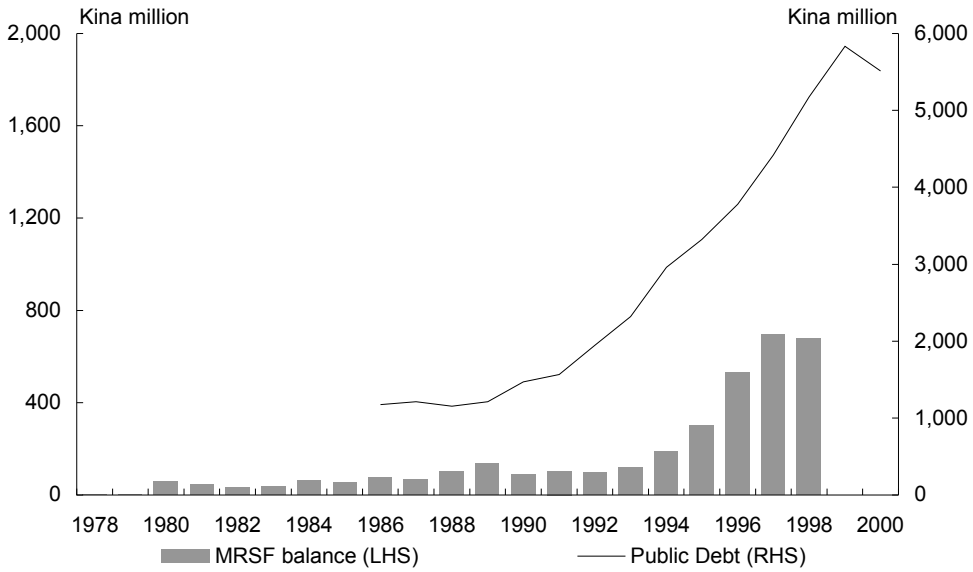
Source: Parsons and Vincent 1991 and AusAID 1995.

Amendments to the MRSF Act in 1986 further reduced the utility of the Fund by allowing the government to drawdown as much of the MRSF as it wished. Even when the Fund was growing in value, the PNG government borrowed heavily, reducing its net asset position severely (Sugden 2005) (Chart 8).[14]

The Fund was effectively closed in 1999, with the final balance used to reduce the country's ballooning debt. Thereafter, inflows matched outflows keeping the balance at zero and the MRSF remained in nothing but name.

14 From 1990 to 1998 the MRSF balance grew K587 million while the government borrowed K1,099 million from the central bank and K704 million from commercial banks. The net asset position of the PNG Government as of 1998 was a domestic debt of K1,795 million and not the saving of K677.3 million recorded in the MRSF.

Chart 8: MRSF balance and public debt (1978–2000)



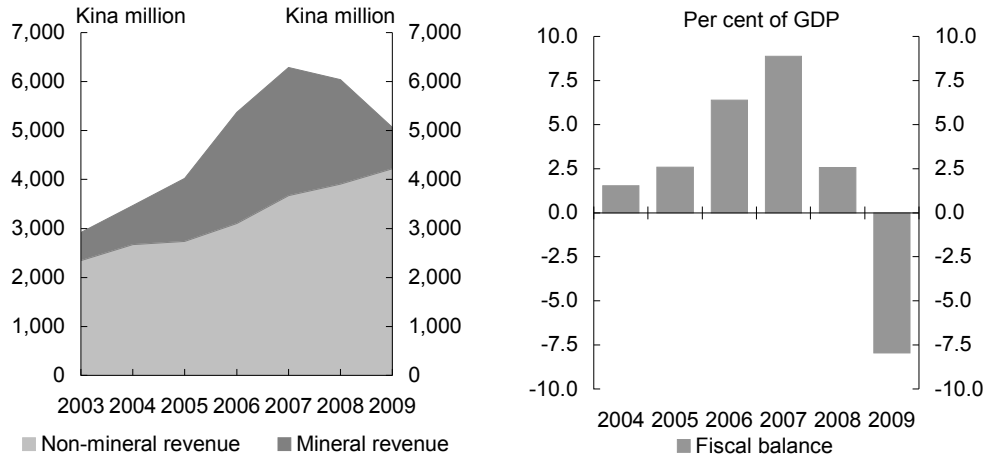
Source: Parsons and Vincent 1991, AusAID 1995 and Bank of PNG.

The public trust funds

Due to the mid–2000s commodity price boom, PNG Government revenue more than doubled from 2003 to 2007 on the back of a near fivefold increase in mineral revenue. In response, the PNG Government ran budget surpluses for five consecutive years, peaking at around 9 per cent of GDP in 2007 (Chart 9). While a portion of the surpluses were dedicated to paying down unfunded superannuation liabilities and public debt,[15] the majority was saved in trust funds. This approach was codified in 2008 in the Government's Medium Term Fiscal Strategy (MTFS).

15 Public debt, much of it external, fell 13 per cent. This, in concert with a strongly growing economy, lowered the debt to GDP ratio from 60 per cent in 2004 to 32 per cent at the end of 2008.

Chart 9: PNG Government revenue and fiscal balance[(a)]



(a) Fiscal balance on the IMF Government Finance Statistics basis. 2009 data are based on annualised forecasts from the 2010 PNG Budget except trust fund expenditure which is actual January to September data.

Source: Government of PNG 2009, Treasury estimates.

Rather than using one fund, PNG saved fiscal surpluses in multiple trust funds. When placed in trust, revenue was assigned to an expenditure project or sector and, as a result, did not receive further allocative scrutiny when spent. While the trust funds had a short–term saving objective, their main goal was to smooth expenditure and therefore improve spending quality and aid macroeconomic stability. PNG fiscal policy worked countercyclically over 2005 to 2008 as the economy expanded strongly, with trust fund savings peaking at around K3 billion (15 per cent of GDP) in mid–2008.

Due to lower commodity prices, PNG mineral revenue fell 60 per cent in 2009, pushing total revenue down 17 per cent. Government expenditure increased, however, as around half of trust fund balances were drawn down.[16] While fiscal policy appeared to overshoot in 2009, trust fund savings ensured government expenditure did not fall as the global recession spread and economic growth slowed.

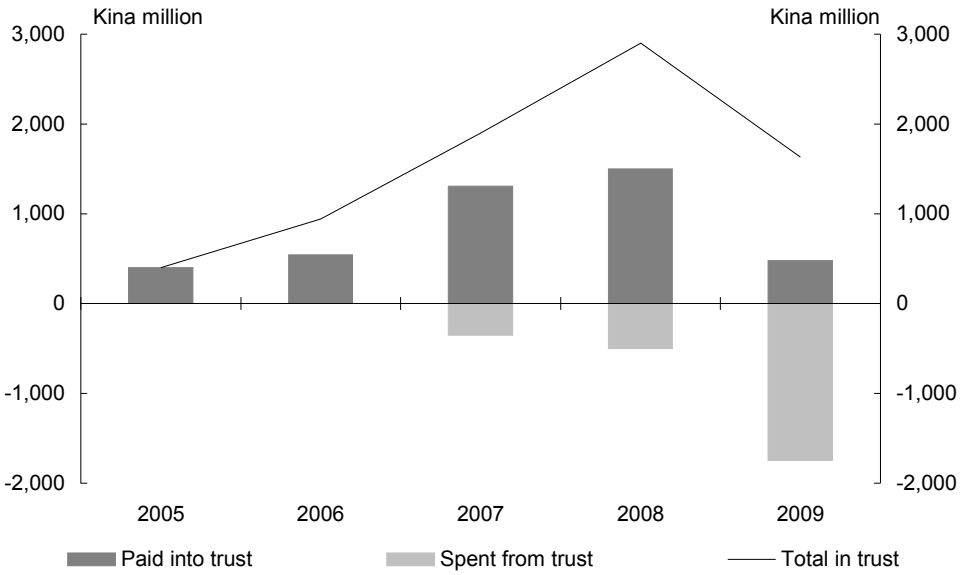
PNG's trust fund management provides an insight into the issues that can be faced when managing the impact of natural resource extraction. Faced with limited domestic options, a significant number of the Government's trust funds were (and continue to be) held at local commercial banks earning less than 1 per cent interest. Concurrently, the central bank issued bonds at much higher interest rates to absorb excess liquidity, in part to sterilise its intervention against significant exchange rate appreciation.[17] As a

16 Expenditure from trust funds in 2009 appears to be inconsistent with the Government's MTFS. In the year to September, a net 5.8 per cent of GDP was spent from trust funds. The MTFS limits expenditure from trust to 4 per cent of GDP per year.

17 The central bank allowed the exchange rate to appreciate from mid–2008.

result, the commercial banks were able to use the trust funds to purchase central bank bonds, achieving significant low risk returns. Moreover, the central bank's bond issuance did not fully sterilise its increased foreign reserves, boosting credit growth at a time when the economy was expanding strongly (IMF 2009b).

Chart 10: PNG trust funds[(a)]



(a) All figures are annual except 2009 are which year to September.
Source: Government of PNG 2009, Treasury estimates.

PNG's experience with trust funds is also a reminder that revenue management must be coupled with efforts to strengthen public financial management more broadly to ensure resource revenue translates into improved development outcomes. Trust fund expenditure is increasingly taking place at the district level where limited implementation capacity has meant resources are not being devoted to much needed capital works (IMF 2009b, Pendene 2010). In addition, the 2010 PNG Budget notes that no financial or project reporting has been provided for over half of the expenditure from trust accounts over January to September 2009.[18]

Lessons and principles

The mixed record of countries in the Pacific using SWFs to manage natural resource revenue is illustrative. Utilising resource revenue to improve development outcomes is difficult, and what works in one country will not necessary work in another. Despite this, lessons from past experience, and the work of the International Forum of

18 See Volume 1, Chapter 3 of the 2010 Budget (Government of PNG 2009).

Sovereign Wealth Funds, can inform a set of general principles that should increase the chance of success with SWFs in the Pacific.[19]

First, it is important that any SWF be considered in the context of a wider macroeconomic and fiscal framework — the opportunity costs of establishing a SWF can be significant. The higher a county's public debt burden, for example, the greater the case for devoting resource revenue to debt retirement.[20] For Pacific island countries, which often face high borrowing costs, the savings made on debt retirement will regularly exceed the returns on revenue saved in a SWF. Alternatively, in Pacific island countries with managed exchange rates, windfall revenue could be added to the central bank's foreign reserves to assist in currency interventions, and possibly prevent a balance of payment crisis. Finally, the state may have the capacity, at least if resource revenue is forecast to rise slowly, to spend the revenue effectively as it is accrued and achieve a higher social rate of return than the financial rate of return available to a SWF.[21]

Second, if a SWF is to be established, it should have a clear, widely agreed upon purpose. As experience in the Pacific shows, SWFs can serve different goals, from reducing revenue volatility to increasing intergenerational equity. Regardless of the particular aim, popular understanding and support of the SWF's purpose can increase the degree of public oversight and improve accountability. It can also limit ad-hoc changes to the fund's objectives.

Third, withdrawal guidelines should be adopted. The manner in which funds are withdrawn from the SWF will depend on its purpose. For example, Kiribati, which is unlikely to benefit from significant natural resource revenue again, has aimed to maintain the real per capita value of the RERF so that it can contribute to the budget in perpetuity. Although unsuccessful, the PNG MSRF was established to reduce revenue volatility and a drawdown formula that reflected this was established.

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19 The Santiago Principles, as promoted by the International Forum of Sovereign Wealth Funds, place particular emphasis on SWF governance and sound investment practices (IWG 2008).

20 Repaying domestic debt and external debt can have different macroeconomic effects. In particular, retiring domestic debt can add to liquidity if financial institutions use those funds to lend to private customers.

21 There are two other options for spending resource revenue, although both are less likely to be suitable in the Pacific islands. Firstly, Price et al. (2008) note that at times of surplus in OECD countries, 'cutting taxes, especially those that are most distortive and detrimental to growth, [can] improve the growth potential of the economy.' In the Pacific, pressing expenditure needs and concerns around already narrow tax bases count against such a policy response. Secondly, direct disbursement of resource revenue to citizens in developing countries is thought to improve government responsiveness (Moss and Young 2009). In the Pacific, incomplete population records and (in some countries) an uneven acceptance of the state's right to redistribute wealth would make the implementation of such a policy difficult.

Regardless of the purpose of the SWF, in most cases, withdrawal rules that encourage saving during periods of strong revenue growth and help smooth revenue fluctuations during downturns are preferable (Perry 2003). Both the MSRF and the Petroleum Fund were/are procyclical, transferring more revenue to the budget when commodity prices are high and less when they are low. The PNG trust funds, on the other hand, were used relatively countercyclically.

Fourth, in addition to guidelines governing the amount that can be withdrawn annually to finance the budget, other fiscal rules, such as limiting borrowing against the SWF or building up substantial public debt could help to preserve the net value of the state's resources (Davis et al. 2001).

Fifth, the SWF should be integrated with the national budget. While it may be tempting to establish alternative expenditure institutions to bypass the low public service capacity in some Pacific island countries, duplicating public financial management processes is unlikely to address the reasons for poor government effectiveness. All withdrawals from the SWF should go through the normal budget process, allowing policymakers to consider the state's resources in their entirety. Such an approach needs to be accompanied by broader efforts in budgetary oversight. In the Pacific, the Timor–Leste and Kirbati SWFs provide good examples of budget integration. Strong budget oversight can also mitigate risks of the resource revenue being spent multiple times.

Sixth, the SWF should be held offshore if resource extraction is thought to be temporary or where the revenue could adversely interfere with the conduct of monetary policy. In such instances, holding resource revenue offshore can reduce upward pressure on the exchange rate, mitigating risks of Dutch Disease by ensuring the otherwise large financial inflows into the domestic economy are carefully managed. Holding the SWF offshore can also increase investment options — financial markets in the Pacific generally offer only limited investment opportunities suited to SWFs.[22] Both the Timor–Leste and Kiribati SWFs hold their assets offshore, taking full advantage of global financial markets.

Seventh, professional investment management is necessary to ensure the SWF achieves solid returns, diversifies risk and is not open to manipulation. The state should set a clear investment policy that reflects its risk appetite, including a target rate of return. Generally, investments should be in financial instruments rather than local projects to reduce the chance the SWF will act as a second arm of expenditure policy.

22 Holding the SWF offshore has the added advantage, if a developed jurisdiction is chosen, of increasing the chance of long–term legal predictability.

Finally, transparency around the operations of the SWF is vital (IWG 2008). Regular reporting of receipts, investment decisions and returns, and transfers to the budget support public oversight and help to prevent revenue misuse. Additional auditing of revenue as it flows into the SWF under the EITI guidelines provides further oversight and gives positive signals to international investors about anti–corruption efforts. The Timor–Leste transparency guidelines are a good example of what can be achieved in this area.

Conclusion

This paper has argued that Pacific island countries face challenges converting natural resource wealth into improved social outcomes. SWFs have been utilised to help meet some of these difficulties. The experience in the Pacific allows general principles for improved SWF management to be drawn.

Each country, however, will have different needs and goals, necessitating different institutional systems for managing natural resource revenue. Priority should be given to ensuring SWF transparency and professional investment management if risks centre on reduced government accountability and corruption. Where Dutch Disease effects may be expected, the SWF can be held offshore. Withdrawal rules and other fiscal guidelines can assist in reducing waste and the impact of expenditure on inflation if the main concern is to mitigate weakening of government effectiveness.

Yet despite the utility of SWFs, they are not a panacea. The institutions and rules established to manage resource revenue are only as strong as the political culture supporting them. And even if SWFs are employed effectively, capitalising on natural resource wealth in the Pacific requires improvements in many other areas including physical infrastructure, government service delivery, private sector conditions and human capital formation.

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Key themes from Treasury's Business Liaison Program

As part of Treasury's Business Liaison Program, staff met with 29 organisations in five cities during February 2010. Treasury greatly appreciates the commitment of time and effort by the organisations that participate in the program.

Overall, there was a more optimistic outlook. Government stimulus and state spending initiatives had supported activity during the downturn. Organisations in sectors supported by stimulus reported only a relatively mild impact from the global financial crisis, while others experienced a contraction in activity, but were buoyed by recent improvements in trading conditions. The mining sector is more confident about a sustained recovery, although there are emerging signs of skills pressures in the sector. The outlook for the property and the retail sectors was more subdued.

Trading conditions

On the whole, trading conditions and business confidence have improved in recent months, with a sense of optimism about the outlook for the domestic economy. However, particularly in the retail sector, the mood was more cautious with concerns about the near-term outlook flowing from the unwind of stimulus.

The mining sector is benefiting from higher commodity prices. While this has been tempered by the Australian dollar, some organisations were sanguine about growth prospects for the global economy, and bullish about the demand from China. The medium-term prospects for the sector had strengthened considerably, with signs that significant new investment is set to ramp up from later this year.

Construction sector contacts indicated that the economic stimulus and significant state public works programs were helping to support activity. However, some in the property sector had been hit hard by the global financial crisis, with a sharp decline in property sales. That said, public infrastructure and education spending has been core to maintaining activity in the construction sector. For others, the First Home Owners Boost (FHOB) supported activity, but developers are now seeing demand moderate with the wind-back of the FHOB.

Outside of the public sector, and a small number of major projects in the mining sector, there was little new building construction work entering the pipeline. While some organisations anticipate a recovery in non-residential construction next year, deferrals remain high. Many organisations had relied on the Building the Education Revolution (BER) program to support activity during that period of weakness. There are signs of improvement in the residential property sector, with interest rates yet to impact significantly on sales. Some developers reported improving conditions, but are waiting for investors to return to the market to replace the momentum provided by the FHOB.

There was a similar theme in the retail sector, with some businesses having done well despite the downturn, but others were more subdued about the prospect for a recovery in profits. More than one organisation noted that price reductions during the downturn had trained shoppers to expect discounts, and that there are signs that this attitudinal shift is continuing.

A return to better seasonal conditions, particularly in eastern Australia, had boosted confidence in the agricultural sector, with firming expectations of a successful winter crop. However, grain inventories remain elevated, which is leading to a weaker outlook for prices.

Business credit and investment

Business confidence and investment intentions had improved significantly, pointing to a prospective recovery in private sector activity commencing in the second half of 2010. Part of this could be driven by a resumption of basic maintenance investment that had been deferred during the downturn.

While access to credit is stabilising, organisations reported that they were still experiencing constraints.

The residential property sector is still finding it harder to obtain credit for medium and high density developments, with lenders still requiring high pre-sales targets. Developments have slowed or stopped due to the difficulty in accessing credit. For some organisations, access to finance has improved, but terms remain onerous, compared to the pre-crisis period.

Some organisations had focused on reducing debt during the downturn.

On the investment front, while some capital expenditure had been delayed in response to the global financial crisis, this was seen as temporary and more typical capital expenditure profiles were expected by 2010-11. Overall, while business activity was not yet back to pre-crisis levels, major resources firms had maintained their capital expenditure despite the global downturn, and are well placed to capitalise on the recovery in commodity prices and global growth. Others have large projects in the pipeline, with spending figures yet to translate into economic activity.

Capacity issues

Capacity constraints are not presently an issue for liaison contacts. Some organisations reported that they have been operating with considerable spare capacity.

That said, the mining sector reported emerging signs of skilled labour shortages in some specialised occupations.

Employment and skills

In line with the positive trading conditions, the outlook is for increased employment in the resources sector. Some in the sector are returning to high levels of activity after experiencing relatively mild effects from the downturn. For others, large contracts are driving recruitment.

In the property sector, there had been some retrenchments and even surplus labour during the downturn. The BER has supported employment in the construction sector, and has been effective at supporting places for apprentices.

Prices and wages

Liaison contacts noted that higher borrowing costs remain an issue for business. There was no evidence of other significant cost increases, which was consistent with the extent of spare capacity although higher commodity prices were expected to flow through in the future, particularly in the construction sector. The strength of the Australian dollar had put downward pressure on prices in recent months.

Ted Theodore: the proto-Keynesian

John Hawkins[1]

'Red Ted' Theodore served an interrupted term as treasurer in Scullin's government during the Great Depression. He took office days before the Wall St crash. He was well read in economics, and was an early advocate of Keynesian ideas. However, the Scullin government was impeded by a hostile Senate, a recalcitrant Commonwealth Bank and a divided Labor Party, which made it extremely difficult for Theodore to implement his policies. In addition, corruption allegations led Theodore to stand aside as treasurer during a crucial period. Losing his seat at the subsequent election, Theodore then pursued a successful business career.

Source: National Library of Australia.

1 The author formerly worked in the Domestic Economy Division of the Australian Treasury. This article has benefited from discussions with Selwyn Cornish and Alex Millmow. The views expressed are those of the author and not necessarily those of the Australian Treasury.

Introduction

Edward 'Red Ted' Theodore's political career was one of great promise unfulfilled. Many regarded Theodore as our greatest treasurer[2] and a poll of historians rated Theodore as the 'best prime minister we never had'.[3] Mary Gilmore rated him as one of the seven greatest living Australians.[4] Theodore was particularly admired for his intelligence and knowledge of economics and finance. The conservative premier Bertram Stevens described him as 'the coolest, best and most experienced financial brain in the southern hemisphere'.[5]

Kim Beazley Snr (1966) called Theodore 'Australia's first significant Keynesian'. What were then regarded as his heretical views became orthodoxy.[6] As well as economic expertise, he had business acumen, which enabled him to rise from being a mine worker to being a mine owner. By the end of his life he was described as 'the closest that Australia had come to producing the Great Gatsby'.[7]

He had a justified reputation as a hard man but 'combined the power of the old-time AWU organiser with the flexibility of the cultured intellectual'.[8] His weakness was an 'inexplicable incapacity to appreciate the psychology of the men among whom he worked'.[9] In particular, he appeared unaware of the jealousy towards him within the Labour movement. He has been called 'the quintessential loner' and 'an enigma' who would not 'let anyone know what touched him deeply'.[10]

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2 This was the view of Ben Chifley — cited by Crisp (1960, p. 42), Sir Leslie Melville (1993) and economic historian and depression chronicler Boris Schedvin (1970, p. 119). Even his bitter rival Jack Lang (1962, p. 158) concedes 'Theodore was a natural for treasurer'. Treasury officials reportedly rated Bruce and Theodore as the best treasurers of their age, according to Edwards (1965, p. 59) and K Page (1983). Cain (1987b, p. 15) remarks that Theodore is 'widely regarded as one of the cleverest Australian to hold the position'.

3 Walker and Koutsoukis (2001). Whitlam agreed; 'Of Australian parliamentarians who never held the highest office, Evatt alone overshadows Theodore in stature and significance'; foreword to Young (1971, p. viii).

4 *The Home*, 1 March 1924, p. 66.

5 Cited in *Sydney Morning Herald*, 5 September 1945, p. 7. To give another of many examples of praise from the conservative side of politics, Bruce called him 'most competent, a magnificent speaker and a good administrator'; Edwards (1965, p. 445). Among historians, C Hughes (1972, p. 363) regards him as 'one of the most powerful and creative minds to turn to politics in Australia'.

6 For example, looking back in his retirement Menzies (1967, p. 120) commented 'there was a strong case for deficit-budgeting in a period of depression; we have all come to accept this'.

7 Historian Geoffrey Bolton, cited by Fitzgerald (1994, p. xvii).

8 Ross (1977, p. 95).

9 Denning (1937, p. 31). A similar view is put by Young (1971, p. 19) and Schedvin (1970, p. 120).

10 Hughes (1972, p. 363), Clark (1987, p. 319) and Packer (1949, p. 5).

His career before politics

Edward Granville Theodore was born on 29 December 1884 at Port Adelaide to a Romanian immigrant wharf labourer and an English immigrant. He attended local schools and did some labouring jobs before heading for the Western Australian goldfields in 1900. From there he moved to the Abrolhos Islands and then to Broken Hill. By 1906 he had moved to Chillagoe, in the hinterlands of Cairns, where he toiled as a mine labourer and prospector. Miners with whom he worked recalled his incessant reading. In 1909 he married Esther Mahoney. Theodore was a founder of the Amalgamated Workers' Association of North Queensland and its first secretary. When it merged with the Australian Workers' Union in 1913, Theodore served as its state president from 1913 to 1916.

Treasurer and premier of Queensland

In October 1909, aged only 24, Theodore won the Queensland Legislative Assembly mining seat of Woothakata (from 1912 Chillagoe). He worked hard to improve his rhetoric and studied finance in the parliamentary library.[11] He was rewarded with a rapid rise. When T J Ryan became leader in September 1912, Theodore became his deputy. In June 1915, Ryan led Labor into power and Theodore was treasurer, deputy premier and minister for works. In May 1916, Theodore took to the national stage as acting premier at the premiers' conference.

Theodore's approach to the state budget was described as 'orthodox'[12] but the new government sought to promote competition by establishing government-owned enterprises ranging from 'cattle stations and butchers, timber and sugar mills, banking and insurance services, even an hotel'.[13] It also had ambitions to break up land monopolies and reform industrial legislation, although these faced considerable opposition in an upper house of members appointed for life. With a drought sapping revenues and a desire to expand the rail network, Theodore introduced new taxes on companies in his first state budget on 13 October 1915.

In August 1919, Theodore introduced the Unemployed Workers Bill, providing for establishment of an Unemployment Council to study the issue and devise policies to combat it. The central thrust was to time public works projects for periods of slack demand. It also allowed for a levy on companies to fund unemployment insurance.

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11 Fitzgerald (1994, p. 39) remarks that even while an itinerant miner, 'wherever he went he joined a library and read whatever he could' and once in parliament, 'he devoted his spare time to studying finance'. He later built up a substantial library of books on economics after moving to a larger house in 1916; Simpson (1931).

12 Cain (1990); Clark (1975, p. 28).

13 Cain (1990). See also Murphy (1978) on Theodore as state treasurer.

While blocked by the upper house, it was an important assertion of a new principle. Theodore declared 'every citizen of the state has a right to get work'.[14] These ideas foreshadowed the attitudes he would adopt as federal treasurer a decade later.

In October 1919, when Ryan resigned to enter federal politics, Theodore became premier at the age of 34 and remained treasurer.[15] In 1922, Queensland became the only state to pass legislation to abolish its upper house, which enabled Theodore to pass legislation providing for unemployment benefits, broader workers' compensation, organisation of rural marketing and funding of relief work by local governments.[16]

When UK investors were critical of his radicalism, Theodore became the first Australian premier to raise funds in the New York money market. However, these funds proved more expensive and Theodore later compromised some policies to secure further funds from London.

In October 1921, Brisbane hosted the Labor Party national conference. The future prime minister Jim Scullin supported a motion establishing the objective of the party as 'the socialisation of industry, production, distribution and exchange'. Theodore unsuccessfully moved an amendment limiting nationalisation to 'those agencies … which are used under capitalism to despoil the community', but later succeeded in having the conference adopt the 'Blackburn interpretation' that the policy's extent was only 'for the purpose of preventing exploitation'. Theodore explained the need to control the instruments of credit and supported the nationalisation of banks.[17] He expressed sympathy for farmers, 'the most indispensable worker in the community' and expressed concern about the 'rural exodus' to the cities.[18]

At Labor's national conference in 1924 Theodore successfully moved to have put in the platform a call for the 'Commonwealth Bank to be developed on the lines of a central reserve bank, while retaining its ordinary and savings bank functions', notwithstanding the ongoing commitment to bank nationalisation.[19] Theodore

14 *Queensland Parliament Hansard*, 2 September 1919, p. 502.
15 From March 1920 to February 1922 he transferred the treasurer's job to deputy premier John Fihelly.
16 Higgins (1954, pp. 26-8).
17 Murphy (1978). However, as Anstey (1939) notes, at this time 'Theodore on banking and credit questions was radical but not radical enough' for Scullin.
18 Theodore (1922, p. 3).
19 Robinson (1986, p. 138) and Murphy (1978, p. 336).

regarded Page's 1924 central banking legislation as 'an emasculation of the central bank', putting it under the control of private banks.[20]

After winning Labor preselection for the federal seat of Herbert, Theodore resigned as premier in February 1925 and MLA in September, but to all-round surprise narrowly failed to win the federal seat. Theodore moved to New South Wales, winning the NSW seat of Dalley at a by-election in January 1927. He was cleared of allegations that he paid the former member, William Mahony, to resign.

First term as Australian treasurer

Theodore's speeches as a backbencher were mainly on economic matters. His arrival was welcome as while Treasurer Page was vulnerable on financial issues there was no Labor members with the technical ability to put him under pressure.[21] Theodore attacked Page for supporting cuts in wages and reductions in tariffs. In February 1929, Theodore was unanimously chosen as deputy leader, and was acting leader for two months while Scullin was ill.[22] After Labor defeated the Bruce government in October 1929, Theodore, who had been campaign director, became treasurer and deputy prime minister. He relaxed after the election win by reading a book on economics at a picnic.[23]

Cain (1990) pens the following portrait of Theodore as a new treasurer:

> 'carefully attired, aloof, grave and measured in manner, the new treasurer stood out in a parliament where his air of brooding strength and confident grasp of the world at large intimidated colleagues and foes alike … Theodore was a solitary man. In the comfortable library of his Kirribilli home were gathered works ranging from economics and history to philosophy and literature. Proud and relentlessly self-improving, already prospering from investments and multiplying his contacts in the business world, he had moved far in style and circumstances from the working man he once was'.

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20 Theodore (1925, pp. 2, 9). He regarded it as part of the Bruce-Page Government's 'pandering to the plutocrats'; Theodore (1925, p. 16). Notwithstanding this criticism, Page made strenuous efforts in 1923 and 1924 to get Theodore to switch sides; Young (1971, p. 43).

21 Young (1971, p. 74).

22 He had been surprisingly beaten by one vote in a ballot for the deputy's position in April 1928, perhaps being regarded as too ambitious; Love (1990, p. 377). Anstey (1939) says there was no truth in rumours Theodore had tried to dislodge Labor leader Charlton in 1927. There was press speculation that Theodore rather than Scullin might be chosen by the Labor Party as their prime minister; *Sydney Morning Herald*, 15 October 1929, p. 11.

23 According to reminiscences by his former campaign manager reported in R. Fitzgerald (1994, p. 228) and Laughren (1994).

Theodore stood out as a probing treasurer; 'whereas most inter-war treasurers were content to 'approve' a recommendation or otherwise, Theodore examined every clause in detail and commented extensively on any provision that needed alteration or clarification … he found himself in the unique position of having a firmer theoretical and practical grasp of the situation than his senior treasury officials'.[24]

The Treasury Secretary from 1926 to 1932 was James Heathershaw, an accountant who, partly due to illness, could not play a strong role in developing economic policy responses to the depression.[25] His deputy Henry Sheehan, also an accountant but with more relevant experience and better health, could make a larger contribution and succeeded to the Secretary's role in 1932.[26]

Theodore assumed the responsibilities of treasurer at a time when many observers, especially overseas, had serious concerns about the state of the Australian economy.[27] Australia was particularly vulnerable given the importance of wool and wheat exports, whose prices had collapsed, and the reliance on overseas capital.[28] The UK bankers and investors had become concerned about the build-up of Australian debt during the 1920s, and the increase in tariffs and end of assisted immigration from the UK made things worse. The London market had effectively closed to Australian government borrowers after January 1929. Given there was a statutory requirement that 25 per cent of the note issue be backed by gold, current account deficits not matched by capital inflows were deflationary.

Moreover, a mere two days after he became treasurer, Wall Street crashed and an already tepid economy was on its way into the Great Depression.[29] In October 1929, Brigden prepared a note forecasting a 10 per cent drop in national income in 1930, one of the earliest macroeconomic forecasts.[30]

Within weeks of taking over as treasurer, Theodore had revised Page's last budget, dropping the amusement tax and raising income taxes on high incomes. On 21 November 1929, Theodore accused the previous administration of concealing

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24 Schedvin (1970, p. 119).
25 Schedvin (1970, p. 88), Treasury (2001, p. 28) and Page (1983, p. 250).
26 Treasury (2001, p. 35), Schedvin (1970, p. 88), Melville (1993) and Cornish (1988) all describe Sheehan as the Government's chief adviser on economic matters during the depression.
27 *The Economist* described it as having 'a dangerous element of insecurity palpable to the eye of the most casual observer'; 19 October 1929, p. 706. Markwell (2000) describes the reservations Keynes, in his role as investor, held about Australia.
28 Schedvin (1970).
29 The Great Depression is well described, and compared with the current experience, in Gruen and Clark (2009) in the previous *Roundup*.
30 Brigden (1929). The note included some multiplier effect. Brigden made public his views in *Sydney Morning Herald*, 7 December 1929.

Australia's financial problems and revised the budget estimate for 1929-30 from Page's estimate of a surplus of £0.4 million to a deficit of £1.2 million. Presenting it to parliament, he argued the Bruce-Page government 'had greatly understated the expenditure requirements and over-estimated the probable revenue'.[31] However, he ended on an optimistic note; 'if we are blessed with good seasons, our troubles will soon disappear, and we shall commence a new era of progress and prosperity'.[32]

Theodore was already uncomfortable about the pro-cyclicality of conventional approaches to fiscal policy, noting that capital works spending 'tends to grow in times of prosperity and to diminish in times of depression'.[33] Labor figures such as Frank Anstey advocated credit expansion and this was debated in caucus as early as November 1929.[34] At this time Theodore adopted orthodox measures to balance the budget; raising tariffs and cutting public works.[35]

The economic and other strains appeared to be taking more of a toll on Scullin than on his treasurer, and by early 1930 there were rumours Scullin may step down in favour of Theodore.[36] Scullin announced that Theodore would be acting prime minister while he went to Europe to attend the Imperial Conference, removing himself from the domestic political scene for over four months.[37]

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31 *Hansard*, 21 November 1929, p. 111. He had earlier said the Bruce-Page government had 'left the Treasury empty'; cited by Scullin, *The Argus*, 4 November 1929, p. 7.

32 *Hansard*, 21 November 1929, p. 119. Theodore realised he may need to take controversial measures. He doubted the Senate would be obstructionist, but warned of a double dissolution if it were; *Sydney Morning Herald*, 16 October 1929, p. 16.

33 *Hansard*, 21 November 1929, p. 114. Scullin elaborated on this argument in a speech, commenting that 'the general tendency of treasurers is to curtail their expenditure on public works whenever there is a period of industrial depression. This has the effect of aggravating the whole position. If the problem of unemployment were tackled on scientific lines the public works policy of the Commonwealth as a whole would be formulated so that during times of general industrial depression there would be an impetus to work of this character with a corresponding curtailment of it during times of general industrial prosperity'; *The Argus*, 4 November 1929, p. 7.

34 Fitzgerald (1994, p. 239), Anstey (1939).

35 At a caucus meeting in May 1930 Yates moved 'that the Government arrange to have £20 million available through the Commonwealth Bank for the purpose of supplying the wants of the states and commonwealth for public works', but Theodore in the chair opposed it as 'not practicable'; *Caucus Minutes* 14 May 1930, in Weller (1975, pp. 371-2).

36 Cook (1971, p. 191).

37 While there were important duties there, Denning (1937, p. 180) suggests Scullin was 'cracking under the strain' and partly went for a respite.

Central banking reform

As early as December 1929 Theodore had outlined to cabinet a proposal for a reconstruction of the Commonwealth Bank.[38] In January 1930 it was agreed to appoint a committee of four economists including Copland and Wickens to report on 'present restricted credit and the cause thereof'.

Theodore's *Central Reserve Bank Bill* of April 1930 was influenced by Keynes' writings in the 1920s. Hugh Armitage at the Commonwealth Bank worked with Theodore on it.[39] The opposition-controlled Senate failed to pass it after they referred it to a select committee, which did not report until December.[40] The bill would have separated central banking functions from the Commonwealth Bank into a separate Central Reserve Bank, to be managed by a board consisting of a governor, two deputy governors, the treasury secretary and five other directors, retiring in rotation 'who are or who have been actively engaged in agriculture, commerce, finance, industry or labour'.[41] (The remainder of the Commonwealth Bank would then be able to compete freely with the private banks for ordinary banking business, an aspect that did not appeal to the private banks.[42]) The Central Reserve Bank would have control of the note issue, and banks would be required to hold reserves with it and supply it with information on their operations. The Bank would be empowered to buy and sell exchange and securities and make advances. These provisions are very similar to the

38 Cabinet minutes for 16 December 1929 in Crisp papers, National Library of Australia, MS 5243/20/156. Theodore agreed with those who argued 'the Commonwealth Bank as a central bank had definitely failed to arrive'; *The Economist*, 26 October 1929, p. 756.

39 Schedvin (1970, pp. 86, 173) and Giblin (1951, p. 109). Schedvin (1970, p. 86) suggests that a bill drafted for Page in 1928 formed the basis for Theodore's bill. A letter to Armitage on 8 February 1930 refers to the Attorney-General's Department working on a Reserve Bank Bill and a Commonwealth Bank Bill; RBA S-d-13. Armitage writes to Heathershaw on 15 April 1930 informing him of progress in drafting the bill, and noting that Theodore 'has been through this memorandum and made his annotations'; RBA Archives S-d-13.

40 An influential voice pushing the opposition to do this was the head of the largest private bank, Alfred Davidson; Schedvin (1998, p. 342). See Hawkins (2010) for a further discussion of the select committee.

41 Young (1971, pp. 110-1).

42 Theodore had earlier expressed reservations about turning the Commonwealth Bank into a purely central bank if this meant it could no longer compete with the private banks; *The Economist*, 26 October 1929, p. 757. But keeping the retail operations was not just seen as making the bank both a player and an umpire, but also meaning that the Commonwealth Bank held similar, illiquid, assets as the private banks and so was not well placed to support the private banks in a crisis; Cornish (2007, pp. 7-8), Cornish (2010, pp. 5-6) and Harvey (1927). The private bankers generally were supportive of a central bank in principle, but this seems to be partly motivated by the idea of converting the Commonwealth Bank from an active competitor to a neutral umpire – they conspicuously refer to the Commonwealth Bank becoming a central bank and dropping its trading operations rather than a new central bank being established in addition. These fears may have been amplified when the Commonwealth Bank Bill of May 1930 seemed to set it up for more vigorous competition; Holder (1970, p. 653).

arrangements ultimately established in 1960 and in large measure still applying today.[43] Much informed opinion found the bill unobjectionable.[44]

The powerful chair of the Commonwealth Bank, Sir Robert Gibson, wrote to Theodore expressing the Board's opposition and calling for a delay.[45] As well as his generally conservative stance, Gibson was likely opposed to a reduction in his own power as he would not have been appointed as chair of both the Central Reserve Bank and the Commonwealth Bank. The scope for the Labor Government to appoint the head of the new central bank was a concern to conservatives generally, who saw in Gibson a doughty defender of 'sound finance'.

A forced hiatus on the backbench

In July 1930, Theodore stood down from cabinet after the conservative Queensland government established a royal commission into accusations that the Mungana mine in which he had an interest was sold to the Queensland government at an inflated price while he was premier.[46] While the commission found against Theodore, no criminal charges were laid, denying Theodore the chance to clear his name. At a subsequent civil case in August 1931, a jury acquitted Theodore.

Theodore spent some of his time on the backbench developing his thoughts on economic policy, notably through discussions with Professor Irvine.[47] Theodore moved from a relatively orthodox to a more radical line, which could be described as Keynesian before Keynes.[48]

Anticipating that Theodore would only be on the backbench for a short while, Scullin took on the treasurer's position himself, with Joe Lyons as assistant treasurer.[49] In practice Lyons was acting treasurer for most of the time Scullin had the post as Scullin was in Europe. With Theodore now unavailable, James Fenton became acting prime minister.

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43 A short history of central banking in Australia is provided by Cornish (2010).

44 *The Economist* (5 April 1930, pp. 767-8) described it as 'an attempt to put an end to a long-standing anomalous situation … there is no obvious weakness in these proposals'.

45 Gibson to Theodore, 6 February 1930, RBA S-d-13.

46 Anstey (1939) claims that Theodore told him Scullin had requested he stand down.

47 Irvine had been the first professor of economics at the university of Sydney. McFarlane (1966), Hart (1967, p. 72) and Kennedy (1988, p. 294) refer to his discussions with Theodore. Cain (1987b) suggests NSW MP and economist Clarry Martin, a student of Irvine, may have helped Theodore with his speeches, but the biography of Martin by White (1986) has no suggestion of this.

48 This was over six years before the publication of Keynes' *General Theory*, but Theodore had read and been influenced by the *Treatise on Money*. It is not known whether he had read other works by Keynes, such as *Can Lloyd George Do It?,* that presaged the ideas of the *General Theory* in a simpler and shorter form.

49 See the essay on Scullin in the following issue of *Economic Roundup* for further information.

As well as leaving for Europe, Scullin made two other decisions which proved controversial within the Labor Party. When the Bank of England suggested a mission to Australia to examine public finances, Scullin approved but it is unclear whether caucus had even been informed.[50] The mission was led by Otto Niemeyer.[51] Scullin also renewed Gibson's term as Commonwealth Bank chairman. Contrary to some claims, Theodore denied any involvement.[52]

Theodore later claimed that had he not been forced to resign he might have been able to persuade the commercial banks to adopt a more expansionary lending policy.[53]

The battle of the plans begins

At the Melbourne premiers' conference in August 1930, Fenton and Lyons and the premiers subscribed to Niemeyer's plan to cut wages and government spending and balance budgets. In New South Wales Jack Lang won an election by repudiating the Melbourne agreement, raising the political pressure on the Scullin Government further.

Lyons consulted prominent economists such as Giblin and Copland and then took a plan to caucus for a 10 per cent cut in wages, a supertax on property income, a 20 per cent appreciation and an expansion of credit. Lyons moved in caucus to make the Government's policy 'free exchange rates, stabilisation of internal prices by monetary control, reduction of interest rates and provision of credits for industry, and that every effort shall be made by the government to induce the Commonwealth Bank to carry out such policy.'[54] An amendment seconded by Theodore sought to direct the Commonwealth Bank to create sufficient credit to finance the government and provide for £20 million for works programmes, and was carried 26-14.[55] (This proposal is sometimes termed the Gibbons plan — see Table 1 below for a comparison of the plans.)

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50 Fitzgerald (1994, p. 241). Cook (1971, p. 231) believes caucus had not been told. See Millmow (2004), Attard (1992) and the essay in this series on Scullin for further discussion.

51 Niemeyer had a distinguished career, finishing first in the 1906 civil service entrance exam ahead of Keynes (and thereby forcing Keynes to join the Indian office rather than Treasury), but had been associated with Churchill's disastrous move to return the pound to its pre-war parity with gold in 1925.

52 Questioned at a public meeting, Theodore said 'No doubt Mr Scullin had good reason for not changing the chairman at that time. I do not know the reason'; *Sydney Morning Herald*, 17 January 1931, p. 17. Cook (1931, p. 211) suggested Theodore reluctantly agreed with Scullin's wish.

53 Interview in August 1934, reported in Maclaurin (1937, p. 44).

54 *Caucus Minutes*, 28 October 1930 and Weller (1975, p. 391).

55 *Caucus Minutes*, 30 October 1930 and Weller (1975, p. 395).

A few days later Fenton read to caucus a letter from Scullin apparently supporting Lyons' position.[56] Initially, this was not sufficient to sway caucus, which resolved that the Government should continue to push the Commonwealth Bank. Fenton and Lyons said that 'in view of the vote that they would consider their position'.[57] Reconsidering, to avoid a party split, caucus agreed to defer the matter until Scullin returned.[58]

In October Theodore denounced the Lyons plan in parliament and supported more expansionary measures in caucus and in published articles such as Theodore (1930). His biographer opines 'Theodore was Lyons' intellectual superior and as such able to comprehend new theories that alarmed Lyons' more orthodox and cautious mind'.[59]

In December 1930, Curtin and Chifley successfully moved to have the Labor Party appoint a committee to formulate a clear monetary policy. The committee was to include Curtin himself, the radical Anstey, Theodore and conservatives Fenton and Lyons, and with the power to co-opt other members as necessary.[60]

Theodore's second term as treasurer

When Scullin returned from London in January 1931, he persuaded caucus to reinstate Theodore. Lyons and Fenton felt this was inappropriate as Theodore had not been cleared, and resigned from the ministry.

Theodore espoused reflation at the February 1931 Premiers' Conference. His plan drew on discussions with economists Giblin (whom Theodore appointed acting statistician), Copland, Dyason and Irvine, although none would probably have supported it in total. Giblin (1931) also provided Theodore with what may have been the first official estimates and forecasts of Australian national income. Giblin's early work on the multiplier may have inspired Theodore, whose March 1931 paper to caucus said 'every one hundred additional men employed upon productive work would necessitate the employment of two hundred additional men in the factories, shops and transport services'.[61]

The Theodore plan was a 'middle way' between the deflationist plan and the Lang plan of repudiation (Table 1).[62] Theodore spoke eloquently of the need to counteract

56 *Caucus Minutes*, 6 November 1930; Weller (1975, p. 396).
57 *Caucus Minutes*, 6 November 1930, Weller (1975, p. 397).
58 Love (1990, p. 416).
59 Hart (1967, p. 72).
60 *Caucus Minutes*, 10 December 1930; Weller (1975, p. 407).
61 Caucus minutes, 2 March 1931, in Weller (1975, p. 416).
62 The Theodore plan is summarised in Weller (1975, pp. 416-8). It was approved by caucus 32-12; *Caucus Minutes* 2 March 1931; Weller (1975, p. 418).

'the complete breakdown of the monetary system'. Theodore aimed to get wholesale prices back to their average 1925-1929 level.[63] He quoted international economists such as Keynes, Cassel and Hobson and local economists such as Brigden and Wickens in his speech. Theodore felt conservative economists and bankers were excessively wedded to maintaining parity between the Australian pound and sterling, which he dubbed a 'conservative fetish'.[64]

Theodore played a prominent role in negotiations for merger of the Government Savings Bank of NSW and the Commonwealth Bank's savings bank arm.[65]

63 His thoughts were influenced by a note by Copland, Dyason and Giblin (1930).
64 *Sydney Morning Herald*, 17 January 1931, p. 17.
65 This was 'regarded as a triumph for Mr Theodore'; *Round Table*, no 86, March 1932, p. 410.

Table 1: Battle of the plans

	Neimeyer plan (Melbourne agreement)	Stabilisation (Economists') plan	Lyons (Sheehan) plan	Gibbons (Theodore) plan	Theodore plan	Lang plan	Premiers' plan
	August 1930	Sept 1930	Oct 1930	Oct 1930	Feb/March 1931	Feb 1931	June 1931
Government spending	cut	cut	cut but expand public works	increase public works	expand unemployment relief; some other cuts		cut by 20% (12½% for pensions)
Taxation		raise on property income	raise on property income				raise income and sales taxes
Interest rates		lower	lower	lower	lower	lower	lower
Exchange rate	unchanged	devalue 20%	free	devalue	devalue	goods standard	unchanged
Public sector wages	cut	cut by 10%	cut by 2½ to 15 per cent	cut high salaries only	cut (stable in real terms)		cut by 20%
Private wages	cut	cut by 10%					cut by 20%
Government debt					special tax on interest	defer interest	voluntary conversion but with tax penalty
Bank credit		expand	expand	expand	expand		expand

Major sources for Table 1:
Niemeyer plan: Schedvin (1970, pp. 182-3);
Stabilisation plan: Schedvin (1970, p. 222), Copland, Dyason and Giblin (1930), Copland, Giblin and Wood (1930, pp. 179-86), Copland, *The Argus*, 27 October 1930, p. 9.
Lyons plan: Schedvin (1970, p. 190) and *Sydney Morning Herald*, 3 October 1930, p. 11.
Gibbons plan: Schedvin (1970, p. 192) and Weller (1975, p. 391).
Theodore plan: Weller (1975, pp. 416-8).
Lang plan: Schedvin (1970, p. 228);
Premiers' plan: Schedvin (1970, p. 249) and Shann and Copland (1931).

The Fiduciary Notes Bill

Cabinet approved Theodore's Fiduciary Notes Bill in March 1931. It envisaged an issue of £18 million, with £1 million a month being used to support employment and £6 million for farmers. In April 1931 the Senate rejected the Bill.[66]

Theodore quoted from Keynes' *A Treatise on Money* in his speech. Theodore had the first copy of this in Australia as his friend WS Robinson had arranged for a copy to be sent to Theodore as soon as it was published in 1930.[67] Theodore prophesised that the book 'will stand for fifty years'. This was uncannily accurate; 1980 was about when Keynesianism was (temporarily) eclipsed by monetarism.[68]

The Battle of the Plans continues

The Premiers' Plan was developed by four of Australia's leading economists: Copland, Giblin, Melville and Shann. It was hailed by many overseas commentators as a good example of governments listening to economists.[69] Melville (1971) rejects Schedvin's characterisation of the Premiers' Plan as passively following the market, arguing that the authorities could have kept deficit budgets and used controls to fix the exchange rate and not cut wages.

Theodore was ahead of Keynes in what came to be called Keynesian thinking. At the time Keynes himself praised the Premiers' Plan as having 'saved the economic structure of Australia'.[70] Nonetheless, Keynes argued against some aspects, such as the nominal wage cuts.

In February 1931 the Arbitration Court reduced the basic wage by 10 per cent. This move, supported by most economists, was intended to be a cut in *real* wages, but consumer prices soon dropped by a similar amount. The exchange rate was also devalued in 1931.

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66 Interestingly, Theodore would have been less constrained had Page's original 1924 proposal been enacted. Page's draft had a provision whereby control of the note issue could be resumed by the Treasury by proclamation, but this was amended away by the Senate; Giblin (1951, p. 20).

67 Fitzgerald (1994, p. 278) and Laughren (1994). This probably put Theodore ahead of Australia's professional economists: Cain (1987a, p. 5) says the book '… did not begin to register in Australian academic discussion until the second half of 1931'. Most reviews of it did not appear until 1933. See Markwell (2000) for a discussion of Keynes' influence on Australian economists.

68 Keynes developed the ideas in the *Treatise* in his *General Theory* in 1936, which became much better known.

69 Millmow (2002).

70 Keynes (1932, p. 94).

Sir Robert Gibson wrote in February 1931 that the Commonwealth Bank would cooperate if wages, pensions and social benefits were reduced, and in April told Theodore that the Commonwealth Bank would provide no further assistance to the Government, leaving it no choice but to resign, default or agree to the deflationary Premiers' Plan.[71] It took Scullin and Theodore hours to convince a majority in caucus and they only won over Labor's national executive by 7 votes to 5, but in the end the Premiers' Plan was adopted in June 1931.

The July 1931 budget continued the implementation of the Premiers' Plan. It increased sales tax, cut public service salaries maternity allowances and pensions. A big drop was expected in direct tax collections. Theodore's speech was unenthusiastic but he rallied somewhat near the end, calling the budget 'a policy of internal financial rehabilitation which, though drastic in its incidence, is at any rate equitable in its effects on the various sections of the community'.[72]

Electoral oblivion

Lyons had opposed Theodore's reappointment as treasurer, ostensibly because Theodore had then not yet been 'cleared' of the Mungana accusations, but perhaps also motivated by personal ambition.[73] Lyons (along with Fenton) left the Labor Party and aligned with the opposition in a new fusion to form the United Australia Party. A group of Lang supporters split off from Labor and now held the balance of power. Although Theodore was cleared of the Mungana accusations in a civil trial, the Lang Labor party continued their attack on him. In November 1931 they accused Theodore of corruption in the distribution of unemployment relief. When Scullin refused to initiate an inquiry, the rebels joined with Lyons' United Australia Party to bring down the Scullin government. At the subsequent election, Labor was reduced to 14 seats, with Theodore among the seven ministers to lose their seats.[74]

Life after parliament

Theodore resisted subsequent entreaties from Curtin, Chifley and others to re-enter politics.[75] He initially stayed active in public affairs. In 1932 he led a committee which

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71 Gibson's letter and Theodore's reply are reproduced in Shann and Copland (1931, pp. 44-56).

72 *Hansard*, 10 July 1931, p. 3746.

73 This question is discussed in the forthcoming essay in this series on Lyons.

74 Opposed by a Langite Labor candidate, Theodore's share of the vote dropped from 78 per cent in 1929 to 20 per cent. A key issue was the Mungana accusations. Lang's supporters parodied a popular song of the time by singing 'Yes, we have no Munganas' at Theodore's campaign rallies; *Round Table*, no. 86, March 1932, p. 416.

75 Even Lyons raised the possibility of him returning to serve in a 'composite cabinet'; Fitzgerald (1994, p. 384).

pointed out that a handful of banks possessed 90 per cent of business in 'a virtual money trust'.[76] Theodore's committee argued for nationalisation of private banks with compensation, and a Commonwealth Bank with a majority of the board appointed by an incoming government but with some officials remaining to provide continuity.

But gradually he turned his attention from public policy to business. He joined with Frank Packer to take over the struggling AWU paper, *The World*. Forming a company called Consolidated Press, they later launched the *Australian Women's Weekly*, and revitalised the *Daily Telegraph*. In the mid-1930s Theodore was living in Fiji running a gold mining company.[77]

It has been suggested that Lyons put aside earlier differences and asked Theodore to return to Australia in March 1939 to co-ordinate defence preparations or an economic policy co-ordinating body, but Lyons was dead before it could be arranged.[78] Menzies considered appointing Theodore to head the Loan Council.[79] Curtin brought Theodore back to government as director of the Allied Works Council, skilfully organising resources for war-related projects from 1942 to 1944.

After a major heart attack in 1948, Theodore resigned the chairmanship of Consolidated Press. He died of heart disease on 9 February 1950, survived by his estranged wife and four children.

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76 Theodore et al (1932, p. 9). In a later individual paper, Theodore (1933, p. 179) argued that 'the power vested in the controllers of monetary policy transcends in many respects the power vested in government and in parliaments' and the private banks do not wield this power in the public interest.

77 Ironically, given that when treasurer he had said 'gold has a fictitious value because a majority of the stupid people in the world have chosen to make it currency'; *Sydney Morning Herald*, 5 September 1945, p. 7.

78 *Sydney Morning Herald*, 5 September 1945, p. 7. The Financial and Economic Committee, a distinguished group of economists led by Giblin, lobbied Lyons in 1939 for Theodore to co-ordinate economic policy on the Committee's advice; Maddock and Penny (1983, p. 30).

79 *Sydney Morning Herald*, 5 September 1945. In a speech on 4 September 1940, Evatt claimed 'When Mr Theodore was willing to assist in Australia's financial organisation and Mr Spender has suggested his name to the conference of State Premiers, Mr Menzies allowed Mr Theodore to be rebuffed, humiliated and almost insulted. It would seem probable that Mr Menzies did not want the assistance of a man of brains'; cited by Hazlehurst (1979, p. 192). A contrary account by Cain (1990) has Theodore's appointment blocked by the Country Party, leading an exasperated Menzies to say 'give up this deplorable habit of throwing stones at great men'.

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What's new on the Treasury website

The Treasury's website, www.treasury.gov.au, includes past issues of the *Economic Roundup*. Some of the other items posted on the website since the previous issue of *Roundup* that may be of interest to readers are listed in the following section.

Speeches

To Build, Or Not To Build: Infrastructure Challenges in the Years Ahead and the Role of Governments — Address by Dr Ken Henry to the Conference on the Economics of Infrastructure in a Globalised World

http://www.treasury.gov.au/contentitem.asp?NavId=008&ContentID=1763

This speech, entitled, 'To Build, Or Not To Build: Infrastructure Challenges in the Years Ahead and the Role of Governments', was given by Dr Ken Henry AC to the Conference on the Economics of Infrastructure in a Globalised World: Issues, Lessons and Future Challenges on 18 March 2010.

The Australian Financial System — Emerging from the Global Financial Crisis — Address by Dr Ken Henry to the Count Financial Canberra Conference

http://www.treasury.gov.au/contentitem.asp?NavId=008&ContentID=1754

This speech, entitled, 'The Australian Financial System — Emerging from the Global Financial Crisis', was given by Dr Ken Henry AC to the Count Financial Canberra Conference on 15 March 2010.

The Value of the Environment — Address by Dr Ken Henry AC to the Environment Business Australia Forum

http://www.treasury.gov.au/contentitem.asp?NavId=008&ContentID=1747

This speech, entitled, 'The Value of the Environment', was given by Dr Ken Henry AC to the Environment Business Australia Forum on 4 March 2010.

Publications

Intergenerational Report 2010

http://www.treasury.gov.au/igr/igr2010/default.asp

This is the first intergenerational report of the Rudd Government. In addition to assessing the fiscal and economic challenges of an ageing population, this report also includes a comprehensive discussion on environmental challenges and social sustainability.

Recent Developments in the residential mortgage-backed securities market

Michael Bath, Vijay Murik and David Ziegler

http://www.treasury.gov.au/contentitem.asp?NavId=035&ContentID=1771

This paper discusses the recent developments in the residential mortgage-backed securities market.

Tax Expenditures Statement 2009

http://www.treasury.gov.au/contentitem.asp?NavId=035&ContentID=1719

The Tax Expenditures Statement provides details of concessions, benefits, incentives and charges provided through the tax system (tax expenditures) to taxpayers by the Australian Government. The publication of information on the Australian Government's tax expenditures is a requirement under *the Charter of Budget Honesty Act 1998*.

This statement lists around 340 tax expenditures and, where possible, reports the estimated pecuniary value or order of magnitude of the benefit to taxpayers over an eight year period, from 2005–06 to 2012–13.

The tax expenditures in this statement reflect all announced policies applying up to the date of finalisation of the *Mid–Year Economic and Fiscal Outlook 2009–10*.

Strengthening statutory unconscionable conduct and the Franchising Code of Conduct

http://www.treasury.gov.au/contentitem.asp?NavId=035&ContentID=1744

On 3 March 2010 the Hon Dr Craig Emerson MP, released an expert panel report entitled, 'Strengthening statutory unconscionable conduct and the Franchising Code of Conduct'.

The report is the result of work conducted by an expert panel consisting of Professor Bryan Horrigan, Mr David Lieberman and Mr Ray Steinwall. The panel was appointed on 27 November 2009 by Minister Emerson to consider whether two specific proposals for amending the law of unconscionable conduct provisions would assist in clarifying its effect. The panel was also asked to examine particular behaviours of concern in the franchising sector.

The proposals arose out of the Senate Economics Committee report on 'the need, scope and content of a definition of unconscionable conduct for the purposes of Part IVA of the TPA' for a further inquiry. The expert panel engaged in an extensive public consultation process in developing its report.

Working Paper Series

2010–01: The Added Worker Effect and the Discouraged Worker Effect for Married Women in Australia

Xiaodong Gong

http://www.treasury.gov.au/contentitem.asp?NavId=049&ContentID=1749

This paper investigates both the added worker effect (the labour supply responses of women to their partners' job losses) and the discouraged worker effect (workers withdrawing from the labour market because of failed searches) for married women in Australia, with the emphasis on the former. We focus on the partners' involuntary job loss experiences, and analyse women's labour market activities in the periods before and after their partners' job loss. By estimating fixed effects labour supply equations using the first seven waves of data from the HILDA Survey, we find a significant added worker effect in terms of increased full time employment and working hours. The findings also suggest that it is harder for the female partners of males who have recently lost jobs to enter the labour market than for those already working to increase their working hours to compensate for lost income incurred by their partners' job loss. We also find the effect to be persistent in that, one year after the partners' job loss, more of those women would still like to work longer hours than they actually were. By investigating the relationship between self-assessed job-finding probability on job-seekers' subsequent labour force participation, and by studying the relationship between labour force participation of all married women and the regional unemployment rate, we also find a substantial discouraged worker effect.

Consultations

http://www.treasury.gov.au/content/consultations.asp?ContentID=1013&titl=Reviews,%20Inquiries%20%26%20Consultations

Treasury conducts many consultations on behalf of the Government. The following consultations are open for public comment:

- GST — Cross Border Transport Services: Exposure Draft Legislation — Revised Version

- GST — Exemption for global roaming by visitors to Australia
- Options Paper — Unfair Terms in Insurance Contracts
- Consultation Paper — Audit Quality in Australia : A Strategic Review
- Review of Australia's superannuation system

Other

Australia and the International Financial Institutions 2007–2008

http://www.treasury.gov.au/contentitem.asp?NavId=036&ContentID=1704

This publication reports on Australia's interaction with the International Monetary Fund, Asian Development Bank and the World Bank during the 2007–2008 financial year.

Pocket Guide to the Australian Tax System

http://www.treasury.gov.au/contentitem.asp?NavId=035&ContentID=866

Provides notes on the breakdown between Commonwealth Government, State and Local Government tax revenue, the tax breakdown, major tax expenditures, history of tax instruments, income tax rates, GST and excise rates.

Past editions of *Economic Roundup*

A full index to articles published in *Economic Roundup* was included in the Spring 2006 edition. Details of articles published in recent editions are listed below:

Issue 4, 2009

New paradigms to measure progress

Fiscal policy: more than just a national budget

What have we learnt? The Great Depression in Australia from the perspective of today

Key themes from Treasury's Business Liaison Program

Earle Page: an active treasurer

Issue 3, 2009

Standard Business Reporting — an idea whose time starts now

Labour force participation and the influence of educational attainment

The Australian Treasury's fiscal aggregate projection model

Raising the level of productivity growth in the Australian economy

Key themes from Treasury's Business Liaison Program

SM Bruce: the businessman as Treasurer

Copies of these articles are available from the Treasury. Written requests should be sent to Manager, Domestic Economy Division, The Treasury, Langton Crescent, Parkes, ACT, 2600. Telephone requests should be directed to Mr Chris McLennan on 02 6263 2756. Copies may be downloaded from the Treasury web site http://www.treasury.gov.au.

Sources of economic data

The following table provides sources for key economic data. Australian Bureau of Statistics (ABS) data can be obtained over the internet at http://www.abs.gov.au. The Reserve Bank of Australia information is available at http://www.rba.gov.au. Similarly, OECD information is available at http://www.oecd.org. Information on individual economies is also available via the IMF at http://www.imf.org.

International economy	
Output, current account balance, interest rates and consumer price inflation	OECD Main Economic Indicators
National accounts	
Components of GDP, contributions to change in GDP	ABS cat. no. 5206.0
Incomes, costs and prices	
Real household income	ABS cat. nos. 5204.0 and 5206.0
Wages, labour costs and company income	ABS cat. nos. 5204.0, 5206.0, 5676.0 and 6345.0
Prices	ABS cat. nos. 6401.0 and 5206.0
Labour market	ABS cat. no. 6202.0
External sector	
Australia's current account, external liabilities and income flows	ABS cat. nos. 5368.0, 5302.0 and 5206.0