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Budget Deficits and the  
Dual Roles of Fiscal Policy

*Guay Lim, Tim Robinson and Viet Nguyen*

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## **ABSTRACT**

The federal budget has been in deficit since the Global Financial Crisis. This article draws attention to two key aims of fiscal policy - to smooth the business cycle and to promote a more equitable society. Since budget deficits are natural outcomes of the economic environment as well as reflections of fiscal policies to achieve social and economic goals, we argue that there are times when government deficits can be entirely appropriate. This is especially so when spare capacity in the economy exists. The current state of the economy means that running a deficit is to be expected, but some fiscal consolidation is appropriate in the near future. In this regard we provide an evaluation of how Australia's income distribution and spending on education and health compares internationally, discuss Australia's potential future infrastructure needs, its budgetary implications, and the public/private mix behind expenditures on innovation, investment and infrastructure.

Key words: budget deficit, stabilisation and equity

JEL codes: E6

## 1. Introduction

Fiscal policy is one of the two critical levers of macroeconomic policy – the other is monetary policy. Fiscal policy is mainly about taxes and government expenditures and the key summary number reported is the balance of the Budget (surplus or deficit). The most recent Budget 2016-17 forecast that a deficit will persist for a prolonged period. In this article, we review the Budget and the Deficit in the context of two key aims of fiscal policy.

The first is that government taxes and expenditures have an important role to play in stabilising the business cycle. While the question of the size of the deficit matters, it would be more appropriately assessed in the context of the overall state of the economy, past, present and future. A budget deficit may be inevitable, even desirable, at a time when economic growth is slow and unemployment high. For example, Australia undertook a sizable discretionary fiscal policy response to the Global Financial Crisis (GFC) and this policy contributed to Government debt increasing considerably, although this was from a low level and it remains small as a share of GDP compared to many nations.

Focussing on the relationship between the budget deficit and the business cycle draws attention to two aspects of the stabilisation role of fiscal policy. The first is that there are automatic stabilisers and the second is that there are temporary activist discretionary policies, undertaken to smooth the business cycle. The outcome of these effects on the Deficit is not unimportant (the servicing of the debt has long term implications), but for that reason, one need to abstract from the impact of cyclical developments on the deficit, and focus on the structural budget balance as this provides a better guide about the sustainability of current policies.

Australia presently has a structural deficit and an important factor influencing the budget in the medium term will be the demographic trends facing Australia. In particular, the ageing of the population is likely to increase health and pension expenditure (relative to GDP), while weighing on labour force participation, and hence Government revenues. Looking forward, Australia faces fiscal challenges in the coming years and some fiscal consolidation (budget repair) is appropriate in the near future.

This brings to attention the other important role of fiscal policy – that of meeting the objectives of promoting economic efficiency and social objectives such as the redistribution of income and wealth to promote income equality. In this brief, we will consider how Australia's personal (household) distribution of income and wealth compares internationally, and critically how public expenditure support to human capital accumulation and health compares with other high income (OECD) countries. However, since Australia is a federation and issues about stabilisation and equalisation have regional implications. We also discuss Australia's potential future infrastructure needs and its budgetary implications.

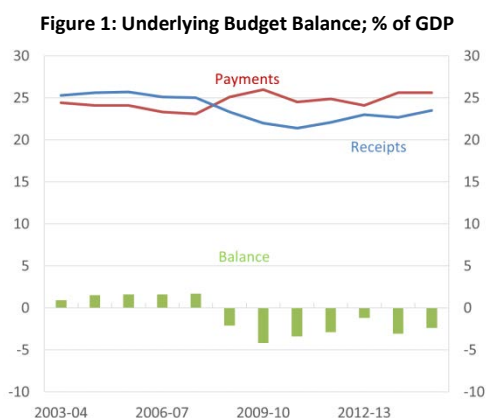
The Brief is organised as follows. Section 2 presents some information about expansionary/contractionary budgets and their relationship to the business cycle. Section 3 considers the state of income inequality in Australia, an international comparison of expenditures on education and health, comments about GST distribution and infrastructure expenditure. Concluding remarks are in section 4.

## 2. Budget deficits and the Australian Business Cycle

One of the major aims of fiscal policy is to smooth the business cycle. An example is that when there is spare capacity in the economy the government could run a deficit to support economic growth, dampening unemployment and thereby improving welfare.

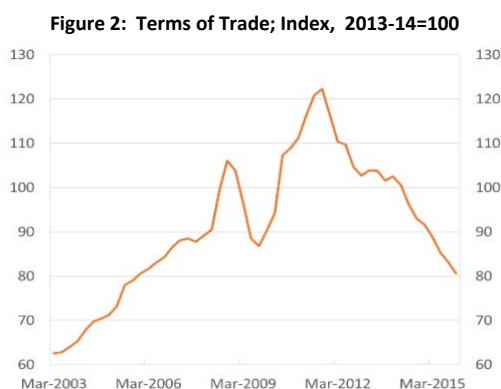
There are two aspects to countercyclical fiscal policy. One of them is known as **automatic stabilizers**. These essentially are aspects of the budget that endogenously respond to the economic cycle. An example is that when a slump in economic activity occurs, the number of people claiming unemployment benefits increases. Relatedly, tax revenue, such as corporate tax, may decline. Consequently, the budget will tend to move into deficit during downturns, independent of any policy decision by the government (Figure 1).

An important example of automatic stabilizers over the past decade has been the response of the budget to the terms of trade. Higher commodity prices directly impact on the federal budget primarily through company tax revenue. State governments also are affected through increased royalty payments. Coupled with the robust economic growth achieved following the downturn in the early 2000s, the upswing in commodity prices due to growth in demand from China assisted the federal Government with running a budget surplus. Alternatively, since 2011 commodity prices have moved sharply lower, reflecting increased supply together with lower steel demand, particularly from China. Due to these falls in commodity prices in December 2015 the terms of trade, the ratio of export to import prices, were around two-thirds of their level at their peak, and it weighed considerably on receipts (Figure 2). The onset of the GFC is another clear example where the role of automatic stabilizers is evident from lower-than-forecast taxation receipts.<sup>1</sup>



Note: Receipts subtract earnings from the Future Fund from 2005-06.

Source: [Budget 2016-17](#)



Source: ABS

**Activist fiscal policy** An important aim of activist or discretionary fiscal policy is to smooth the business cycle. It is sometimes known as Keynesian fiscal policy. Activist fiscal policy can be implemented in several ways, such as transfer payments, tax cuts or increased infrastructure spending, and the effectiveness of these different instruments differs. Reflecting its aim of smoothing the cycle, this policy usually is short-term in nature. Budget deficits therefore may reflect an explicit attempt to lessen a slump in activity.

Several issues potentially limit the effectiveness of activist fiscal policy. One is Ricardian equivalence, namely that households may recognize that government debt will ultimately have to be repaid (in the form of higher taxes), lessening any reaction today. Another, called crowding out, occurs if the policy leads to

<sup>1</sup> Taxation receipts in the 2008/09 Budget were forecast to be \$292.6 billion in 2008/09, and \$310.1 billion in 2009/10, whereas the actual receipts were \$273.4 and \$261.9 billion ([McDonald and Morling \(2011\)](#) and [Budget 2016-17](#)).

higher interest rates, dampening corporate investment. Practical limitations may also exist, such as it can be slow to implement, compared to monetary policy, which is why fiscal policy typically has medium-term objectives (except in crisis situations), with monetary policy instead focused on smoothing the cycle.

The GFC highlighted both that monetary policy alone cannot ensure financial stability, and that in extreme circumstances there is a need for activist fiscal policy to assist in macroeconomic stabilization. The response by Australian policymakers to the crisis had several components. One aspect was a rapid, sizable easing of monetary policy, and the exchange rate depreciated substantially. Measures were introduced to improve confidence in and the functioning of some financial markets. The sizable fiscal policy response included:

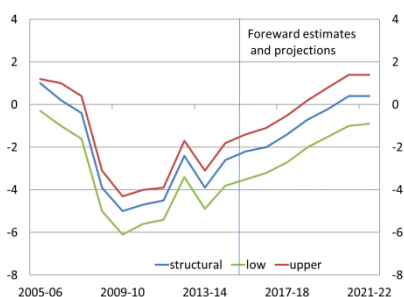
- The October 2008 *Economic Security Strategy* (\$10.4 billion), which included transfer payments to pensioners, carers and low to middle income households
- The February 2009 *Nation Building and Jobs Plan* (\$42 billion), which included investment in schools and further payments to low to middle income individuals and households, amongst other measures.

Additionally, there was the Nation Building package orientated towards infrastructure investment in December 2008 (\$4.7 billion). In total, these policies constituted more than 4 per cent of 2008 GDP and the fiscal response was the third largest in the OECD ([Li and Spencer 2016](#) and [Leigh 2012](#)). The policies were quickly implemented and temporary in nature.

The effectiveness of such policies has been the subject of considerable debate (e.g. [Taylor 2009](#)), with a wide range of estimates of fiscal multipliers in the literature (for a recent survey see [Conen et al 2012](#)). Focussing on Australia, [Leigh \(2012\)](#) found using a phone survey that a significant portion of the Australian transfer payments were spent. Using a modelling approach [Li and Spencer 2016](#) also found these payments supported activity and that this was to a similar extent as the easing of monetary policy.

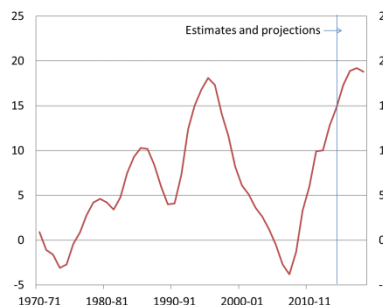
**Structural Budget Balances** While smoothing the business cycle is one of the aims of fiscal policy, in assessing the sustainability of current policies it can be useful to abstract from the consequences of the cycle for the budget. These are known as the structural budget balance, and were estimated to be a deficit of 2.6 per cent in 2014-15, and to only slowly move towards surplus (Figure 3) ([Budget 2016-17](#)).<sup>2</sup> Consequently, net public debt was forecast to rise further as a share of GDP (Figure 4). While these levels of debt are high relative to recent Australian history, they are low by international standards (see [Castelnuovo 2015](#)). A potential concern, however, is whether they would increase the cost of activist fiscal policy in the case of another downturn.

Figure 3: Structural Budget Balance Estimates (% GDP)



Source: [Budget 2016-17](#).

Figure 4: Net Public Debt (%GDP)



Note: Break in 1999-2000.; Source: [Budget 2016-17](#).

<sup>2</sup> The Parliamentary Budget Office (PBO) analysed the key drivers of the structural budget between 2002-03 and 2011-12, and found that the sequence of personal tax cuts and a fall in excise and custom duties (as a share of GDP) were important contributing factors to a decline in receipts relative to GDP ([PBO 2013](#)).

### 3. Fiscal Policy and Inequality

Another important aim of fiscal policy is to promote income equality. Australia has both a progressive tax system<sup>3</sup> where higher marginal tax rates are imposed on higher income earners and an active transfer system (i.e. welfare payments to low income earners) to bring about a more equitable distribution of income/wealth. Australia's commitment to this aim implies that there may be times (such as when unemployment is high) when running a budget deficit is highly appropriate and desirable.

Income tax in Australia is the most important revenue stream in the Budget. A closer look at the decomposition of expenditures in the budget papers reveal that, since the early 2000s, about 9 per cent of GDP is spent annually for social security and welfare purposes. In real per capita terms, welfare payments increased from about \$3,900 in 1993 to just over \$6,300 in 2015. The latest Budget includes a boost to social security and welfare which is largely due to the transition to the full National Disability Insurance Scheme. It also gives a small tax cut for middle-income earners (by raising the upper limit of the second highest tax bracket from \$80,000 to \$87,000).

[Greenville, Pobke and Rogers](#) (2013) have examined the effect of taxes and transfers on various households and how they have affected changes in the distribution of income. Recognising that income across individuals/households varies for lots of reasons (differences in abilities, opportunities and inheritances) as well as affected by changes in the economic, social and demographic environment they examined the changes in income inequality since the late 1980s. They concluded that while there have been wide-spread economic gains, they have not been uniform, noting specifically that growth for the top half of the distribution (above the median) has been greater than for the bottom half in both absolute and proportionate terms. The general conclusion is that income inequality in Australia has risen (see the study for details).

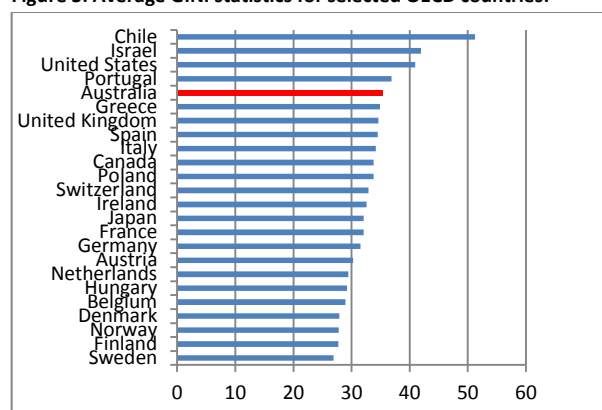
Table 1 shows three measures of income inequality - the Gini measure, and the shares of income going to the top and bottom quintiles (broad income group classified by the World Bank). Statistics for Australia lie within the range for other high-income OECD countries and Figure 5 shows for example, where Australia's Gini sits relative to a select 24 OECD countries. Taking a 10-year average, the Gini coefficient for Australia is 35.3 (where 0 corresponds with perfect equality) and the shares of income going to the top (bottom) quintiles are respectively: 38.5, 7.0 (World Bank estimates).

**Table 1: Measures of Income Inequality: Mean (standard deviation)**

	GINI	Top 20%	Bottom 20%
High income (OECD)	33.89 (3.96)	41.68 (3.25)	7.46 (0.98)
High income (non-OECD)	40.77 (2.50)	46.89 (2.07)	5.62 (0.64)
Upper-Middle Income	44.46 (2.93)	50.46 (2.27)	5.23 (0.75)
Lower-Middle Income	41.76 (3.27)	48.35 (2.69)	5.95 (0.71)
Lower Income	42.51 (3.68)	49.37 (3.10)	6.09 (0.77)

Source: World bank Statistics: 2003 – 2012

**Figure 5: Average GINI statistics for selected OECD countries:**



Source: World Bank Statistics: 2003 – 2012, mean values

<sup>3</sup> The current tax-free threshold for resident individuals is \$18,200, and the highest marginal rate for individuals is 45%.

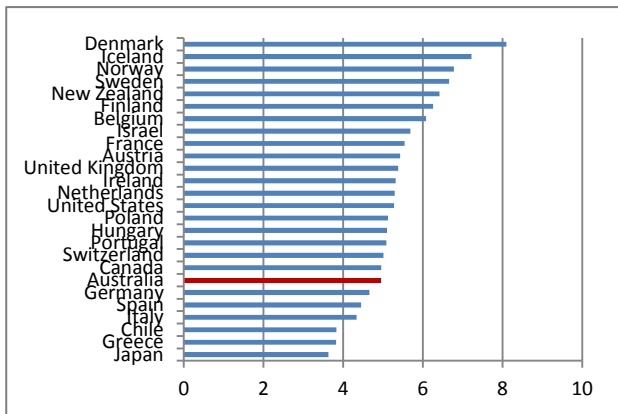
## Expenditure on Education and Health

While Australia’s direct measures to help the disadvantaged are consistent with a commitment to promote income equality, assessing the budget deficit solely on these expenditures while necessary, is not sufficient. Expenditures on education and infrastructure have more broad-based effects on income inequality because, put simply, investment in physical and human capital builds capacity and enables a broader distribution of economic gains. Exactly how the increased productivity and skill base affect the relationship between income inequality and economic growth depends on the stage of economic development.<sup>4</sup> In a nutshell, if the benefits of larger physical stocks and higher educational levels are not wide-spread, income inequality could worsen. Thus reviewing the budget deficit in the light of fiscal policy to promote income inequality also requires an assessment of expenditure on education and infrastructure.

Government expenditure on education has fallen in recent years, from about 2.7 per cent of GDP in 2009/10 to 1.9 per cent of GDP in 2014/15. We see from Figure 6, that taking all government expenditure (federal and states) into account Australia’s expenditure on education as a percentage of GDP is at the lower end of the spectrum.

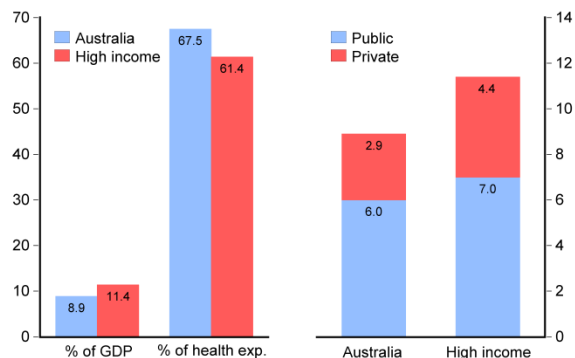
Education and health are two important expenditure items in the Budget (about 7.4 and 15.7 per cent of total expenses, respectively in the 2014/15 Budget and about the same in Budget 2016/17). Given that Australia has an ageing population it is worth noting that Commonwealth expenditure on health has been creeping up from 3.6 per cent of GDP in 2000/01 to 4.1 per cent of GDP in 2014/15. On average, over the years: 2004-2013, World Bank statistics comparing total government (Commonwealth and states) expenditure on health for Australia with other high income countries show that: total health expenditure in Australia (expressed as a per cent of GDP) is less than that of other high-income countries (9 to 11 per cent); but expressed as a share of total health expenditure, Australia’s public spending on health is 67 per cent compared to 61 per cent (Figure 3).

Figure 6: Government expenditure on education as % of GDP



Source: World bank Statistics: 2004 – 2013, mean values

Figure 7: Health expenditure (% of GDP and total expenditure)



Source: World bank Statistics: 2004 – 2013, mean values

<sup>4</sup> In an influential paper, [Galor and Moav \(2004\)](#) argue that, as an economy develops (i.e., transition from being a developing to being an advanced economy), the relationship between growth and inequality can be assessed by comparing the relationship between the marginal productivity of physical capital and that of human capital – the capital-skill complementarity. The theory was investigated empirically by [Chambers & Krause \(2010\)](#), and the pertinent result is that when large physical capital stocks and high education levels are present, the marginal effect of inequality on growth becomes insignificant.



## Disparity across the States and Territories

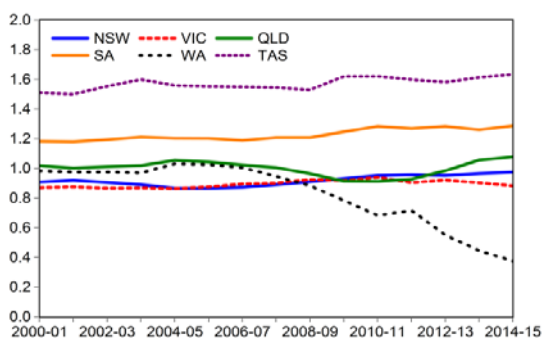
Discussion about fiscal policy and inequality tends to be focused on persons or households. However, since economic activity across the States is not uniform, issues about regional equality (and stabilisation) are also an important aspect of the Budget. There are various manifestations of how the Budget manages to “equalise” regional disparities.

On the revenue side, the federal government receives taxes (from individuals and companies) as well as revenue from the GST. State governments can raise revenues (through for example, land tax, motor vehicle tax and royalties) but a large proportion of State revenue comes in the form of financial support from the federal government. There are two types of financial payments: (1) payments for specific purposes and (2) general revenue assistance (of which the distribution of GST revenue accounts for the majority). The former type of payments is to support state governments’ cost in areas such as health, education, skills and workforce development, housing, infrastructure. These payments usually have conditions attached and are distributed relatively equally across states (accounting for around 20 per cent of all state governments’ revenue in 2014-15). In contrast, the distribution of GST revenue is unconditional and the states may spend according to their budget priorities.

The share of the GST pool for each state is determined by its population share weighted by its assessed relativity.<sup>5</sup> Figure 8 shows how the assessed relativities of the major states have changed as population<sup>6</sup> and economic conditions have changed. In 2014-15, the share of GST revenue going to Western Australia constituted less than 10 per cent of total WA government revenue. In contrast, Tasmania and South Australia’s assessed relativities have been above those of other states and rising. In 2014-15, the shares of GST payment in these state governments’ revenue were: SA (30 per cent), Tasmania (37 per cent).

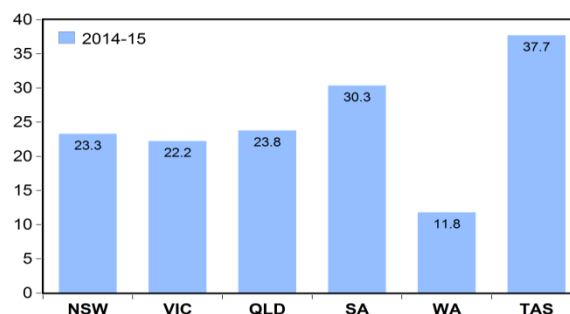
These differences reflect the relative abilities of the state governments to raise revenues. As the economy undergoes a transition in its sources of growth following the mining boom some re-calibration of these assessed relativities will be necessary.

Figure 8: Assessed Relativities



Source: Commonwealth Government Final Budget Outcome

Figure 9: GST payment as share of state government revenue (%)



Source: ABS and Commonwealth Government Final Budget Outcome

<sup>5</sup> Assessed relativities for all the states are provided by the Commonwealth Grant Commission. It is based on the States’ and Territories’ relative ability to generate revenue and services. Specifically, a state’s per capita GST requirement is the difference between its per capital expense and its per capita revenue (generated through land tax, motor tax or royalties, etc.). This per capita GST requirement is then compared against the GST requirement at the national level to determine the state’s relativity.

<sup>6</sup> With respect to population, it is worth noting that, over the last fifteen years, net migration accounted for around 17 per cent of current resident population in Western Australia and Queensland compared to 12 per cent in Victoria, 7 per cent in New South Wales, 6 per cent in South Australia and 3 per cent in Tasmania.

## Innovation, Investment and Infrastructure

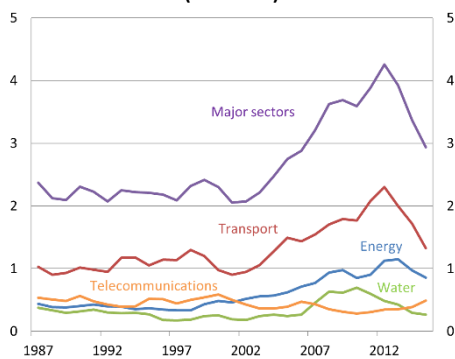
Innovation has clearly become an important platform for change. In December 2015, the Government announced a \$1.1 billion National Innovation and Science Agenda to support innovation (Budget 2016/17 includes continued investment in this agenda). A number of measures to incentivise and reward innovation have been discussed including a review of R&D Tax Incentive and spending. On this point, we note that Australia's expenditure on R&D has increased from about 1.5 per cent of GDP in the mid 1990s to about 2.2 per cent in the early 2000s. This is about the average for the OECD countries which ranged from under 1 per cent for countries like Chile, Greece, Portugal to over 3 per cent for countries like Sweden, Japan, Finland and Israel (World Bank estimates, average of 10 years: 2004-2013).

Turning to infrastructure, private and public (state and federal) construction work in the major infrastructure sectors (transport, energy, telecommunications and water) increased considerably as a share of GDP from the early 2000s, but has fallen in recent years (Figure 10).<sup>7</sup> This trend primarily reflects the transport industry, although a similar, but less pronounced, pattern is evident in the energy industry. One factor influencing the growth of transport investment has been the mining boom (e.g. the construction of harbours). Construction work by the private and public sector have in recent years been broadly comparable in magnitude (Figure 11). This, however, masks a trend towards public construction work being increasingly done by the private sector.

Australia's infrastructure needs presently appear to be considerable (see [Infrastructure Australia](#) (IA) 2016). Looking forward, population growth in the major capital cities will sizably contribute to increased demand for infrastructure services, with sectors such as transport and telecommunications expected by Infrastructure Australia to grow faster than GDP ([IA 2015](#)).

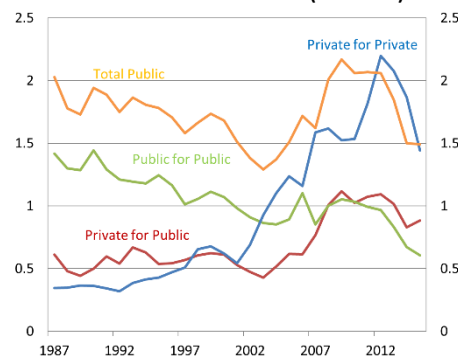
Improving Australia's infrastructure is a priority of the current government. Increasing public infrastructure expenditure will put pressure on the Budget, but it is appropriate given the long-term pay-offs. It is important, however, that cost-benefit analysis be used to evaluate and prioritise projects and that data be made available to evaluate the efficiency of their delivery. Private funding of infrastructure may lessen these budgetary pressures, but the allocation of risks between the private and public sectors needs careful scrutiny. Increased use of user pays pricing, particularly in transport, is another potential source of funding, which also encourages efficient usage (see [IA 2015](#) and [Productivity Commission](#) (2014)).

Figure 10: Construction Work Done by Major Infrastructure Sectors (% of GDP)



Source: ABS, authors' calculations.

Figure 11: Construction Work Done for the Major Infrastructure Sectors: Public and Private (% of GDP)



Source: ABS, authors' calculations.

<sup>7</sup> Figures 10 and 11 were prompted by [Commonwealth of Australia \(2016\)](#).

#### 4 Concluding Remarks

The federal budget has been in deficit since the GFC. The main point we want to emphasise is that Government deficits can be entirely appropriate. The first rationale is that, in a period where spare capacity exists, such as is likely at the present, a deficit is to be expected, in part reflecting the operation of automatic stabilizers.<sup>8</sup> Aggressively trying to balance the budget when the economy has spare capacity is likely to be counterproductive.

Governments also engage in activist fiscal policy, especially when an economy is in crisis, such as the sizable fiscal policy response during the GFC which undoubtedly added to the size of government debt. Although the Australia government debt to GDP ratio is low compared internationally, a continuing sequence of deficits rightly raise questions about future debt service and with it the sustainability of policies.

For that reason, one need to abstract from the impact of cyclical developments on the deficit, and focus on the structural budget balance as this provides a better guide about the sustainability of current policies. Australia presently has a structural deficit and an important factor influencing the budget in the medium term will be the demographic trends facing Australia. In particular, the ageing of the population is likely to increase health and pension expenditure (relative to GDP), while weighing on labour force participation, and hence the Government revenues. Looking forward, Australia faces fiscal challenges in the coming years and some fiscal consolidation (budget repair) appears appropriate in the near future.

A focus of discussions of fiscal policy should be whether the announced policies are sufficient or how best to bring about fiscal consolidation. Near-term fiscal consolidation, however, is made difficult by the current state of the Australian economy. Recent economic signals have been mixed – for example, the unemployment rate has fallen, but wage and price inflation is low. This economic environment also makes related important discussions about whether fiscal policy is meeting its medium-term objectives difficult.

Nevertheless, an important aim of fiscal policy is to meet the economic goals of efficiency and other social objectives. In this article we have drawn attention to income inequality in Australia and how it compares internationally. We have also compared public sector spending on health and education and drawn attention to the public/private mix behind expenditures on innovation, investment and infrastructure. While the devil is in the details when it comes to discussing various packages proposed, these longer-term strategic initiatives to promote growth (employment) and income equality deserve as much attention as that paid to the budget bottom line – the size of the Deficit. Keeping an eye on longer term strategic goals is especially important when faced with the immediate problem that spare capacity exists and income inequality has risen.

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<sup>8</sup> It must also be noted that the converse also happens. The mining boom generated robust economic growth which resulting in budget surpluses and which allowed the government to give a sequence of personal income tax cuts.

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