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The Treasury

THE EFFECTIVENESS OF FEDERAL FISCAL POLICY: A REVIEW

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EXECUTIVE SUMMARY

Australia has experienced one of the fastest rises in public debt in the world since the Global Financial Crisis (GFC) and federal budget deficits have persisted for longer than previous fiscal stimulus episodes in the 1980s and 1990s. Subsequent fiscal repair has also been weaker and less than in the United States, United Kingdom, New Zealand and the Euro area.

This paper briefly introduces a range of alternative perspectives on the efficacy of fiscal stimulus as a macroeconomic policy instrument, including the loanable funds, Mundell-Fleming, dependent economy, Ricardian and intergenerational equity approaches. Each of these perspectives suggest fiscal stimulus has damaging offsetting effects that eventually minimise or neutralise its effectiveness in stabilising national income and employment.

The paper then examines how effective Australia's fiscal stimulus response to the GFC proved to be given the economy's robust banking system, floating exchange rate, openness to international trade and capital flows, and dependence on mineral exports to Asia. What prevented Australia from experiencing a technical recession at the critical juncture in 2008-09 was a combination of lower interest rates, a major exchange rate depreciation, strong foreign demand for mining exports, especially from China, and a then more flexible labour market.

There is no evidence fiscal stimulus benefited the economy over the medium term. Largely implemented after the worst of the GFC had passed, fiscal stimulus countered the effectiveness of monetary policy by keeping market interest rates higher than otherwise and therefore contributed to a strong exchange rate. This worsened Australia's international competitiveness and damaged industries in the internationally exposed sector, particularly manufacturing.

Although Australia's federal public debt to GDP ratio at close to 30 per cent is not high by OECD standards, it has been one of the fastest growing in the world. Unlike other advanced economies, it is mostly owed to foreign bondholders and has become a significant component of Australia's total foreign debt, unmatched by domestic asset accumulation. Public debt interest now exceeds budgetary outlays on each of the following programs — the Pharmaceutical Benefits Scheme, unemployment benefits, higher education and foreign aid — and could reach 1 per cent of GDP by 2020 on present fiscal settings.

The servicing cost on foreign debt incurred to fund unproductive budgetary outlays is a net drain on national income and future budgets, and could potentially spark a vicious circle of deficits and debt requiring emergency fiscal remedies if higher world interest rates combine with an interest risk premium arising from a credit rating downgrade.

Higher interest rates would also lower private investment, reducing potential future national income. Reducing foreign public debt would staunch the national income loss arising from public debt interest paid abroad. The scale of the fiscal consolidation effort required to improve the sustainability of federal public debt is around twice that currently projected.

Necessary fiscal consolidation focused on cutting government consumption would exert downward pressure on market interest rates in an environment where the influence of already low official interest rates has become constrained, lessen foreign investment in government bonds, lower the exchange rate, and hence lift international competitiveness. Fiscal repair can also be expected to lift business confidence, boost private investment and strengthen medium term economic growth.

For these reasons, reducing public debt should be a top priority of fiscal policy.

1. INTRODUCTION

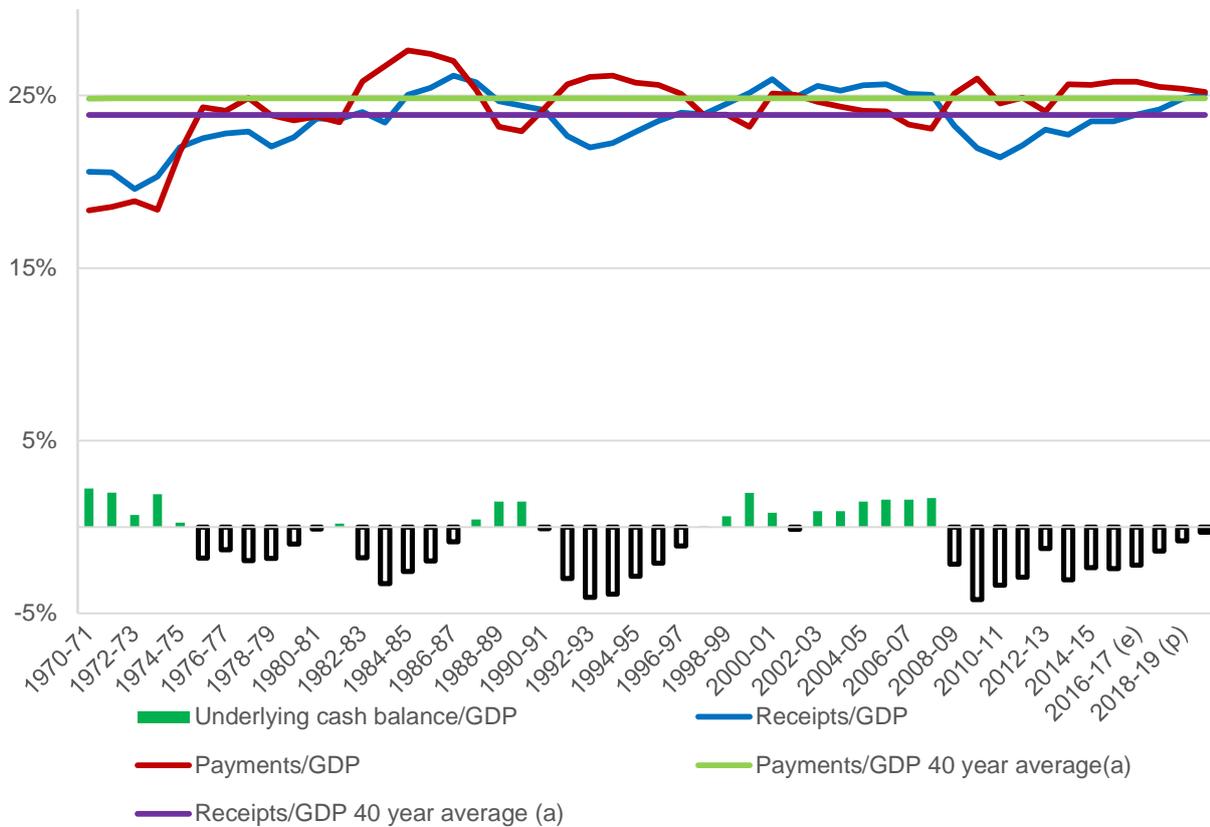
Over the past half century successive federal governments have routinely deployed fiscal policy to counter major economic downturns or recessions. Discretionary fiscal stimulus was implemented in the mid-1970s, early 1980s and early 1990s and, most ambitiously, in response to the GFC in 2008-10. Sizeable federal budget deficits emerged after each of the fiscal stimulus episodes as shown in Figure 1, the largest reaching 4.2 per cent of GDP in 2008-09, just above the 4.1 per cent deficit in 1992-93.

A notable historical exception was the Asian Crisis 1997-98, the first major geofinancial crisis in the financial globalisation era that began in the 1980s. There was no discretionary fiscal response to this external financial shock and monetary policy and the exchange rate successfully insulated the economy from recession.

Australia has also experienced one of the fastest rises in public debt in the world since the GFC with the budget deficits since on track to be the most persistent. Meanwhile, fiscal consolidation since then has fallen well short of that achieved in the 1980s and 1990s under former Treasurers Keating and Costello and budgetary repair has been weaker than in the United States, United Kingdom, New Zealand and the Euro area.

Major discretionary fiscal expansions engineered by past federal governments have not been adequately evaluated ex post. This is both puzzling and concerning given the huge fiscal costs involved and the lack of consensus in the academic literature about the effectiveness of fiscal activism in theory and in practice.

Figure 1 — Federal Government Spending, Revenue and Budget Balance



Source: Makin and Pearce (2016); based on data from Treasury Budget papers.

This paper next briefly canvasses alternative perspectives on the use of fiscal stimulus as a macroeconomic policy instrument. Section 3 then summarises the macroeconomic policy response to the GFC, focusing on the effectiveness of the 2008-12 federal fiscal stimulus. Section 4 examines the post GFC economic environment. Section 5 assesses the risks higher public debt poses in this context, and the fiscal consolidation needed to reduce federal public debt to sustainable levels. Section 6 highlights the macroeconomic benefits of budget repair focused on cutting government consumption in the medium to longer term. Finally, the paper concludes that reducing public debt should be the number one priority of fiscal policy.

2. PERSPECTIVES ON FISCAL STIMULUS

The role and effectiveness of fiscal policy remains a controversial topic, with ongoing debate centred on its effectiveness as a stabilisation instrument and the macroeconomic significance of public debt. Prior to the GFC, monetary policy was considered the most effective macroeconomic policy instrument for managing aggregate demand in the short run, less handicapped by lags than fiscal policy which was better assigned to longer term goals.

Fiscal stimulus in response to the GFC was inspired by the ideas of Depression-era economist John Maynard Keynes, which justify fiscal activism as a means of reducing unemployment, even though in

the academic literature, fiscal activism had been discredited in preceding decades by the Monetarist and New Classical schools.²

Keynes' General Theory (1936) was not general in its original form and was premised on a set of Depression conditions including a flawed banking system, a liquidity trap (interest rates near zero), ongoing deflation, and a prolonged collapse in international trade, none of which Australia suffered at the time of the GFC. Keynes' disciples in the 1940s and 1950s credited fiscal expansion with saving western capitalism.

Yet later critics of Keynesianism have argued it was not fiscal activism that ended the Great Depression, but that it was prolonged, especially in the United States, by a contraction of liquidity, policy induced investment uncertainty, and a large scale retreat to international trade protectionism. Crude Keynesian theory also assumes economies are closed to international trade and capital flows when, on the contrary, Australia is heavily reliant on exports and imports and foreign funds to finance its domestic investment.

More fundamentally, Keynesian fiscal theory neglects the consequences of large budget deficits and rising public debt. In contrast, all theoretical counterarguments to Keynesian theory hinge on the negative repercussions that budget deficits and public debt have on the wider economy. The main alternative perspectives are summarised below.

1. In the classic loanable funds approach, fiscal stimulus crowds out private investment because the take up of public debt instruments, including by commercial banks, diverts funds from more productive private investment. The open economy extension of this approach provides a rationale for the twin deficits hypothesis. To the extent that fiscal stimulus increases government or private spending, it reduces national saving relative to investment, which raises foreign borrowing and widens the current account deficit.³
2. According to the Mundell-Fleming approach if the government implements a relatively large fiscal stimulus in an open economy like Australia with a floating exchange rate, there is upward pressure on domestic interest rates, foreign capital pours in to purchase bonds issued to fund the budget deficit, and the nominal and real exchange rates appreciate.⁴ Exchange rate appreciation worsens international competitiveness, reducing exports and raising imports, thereby crowding out net exports. Hence, this perspective provides another rationale for the 'twin deficits hypothesis.'

Not only does this framework imply using fiscal stimulus is relatively ineffective, it pits fiscal policy against monetary policy as a stabilisation instrument. See Box 1.

2 See for instance Lucas and Sargent (1979).

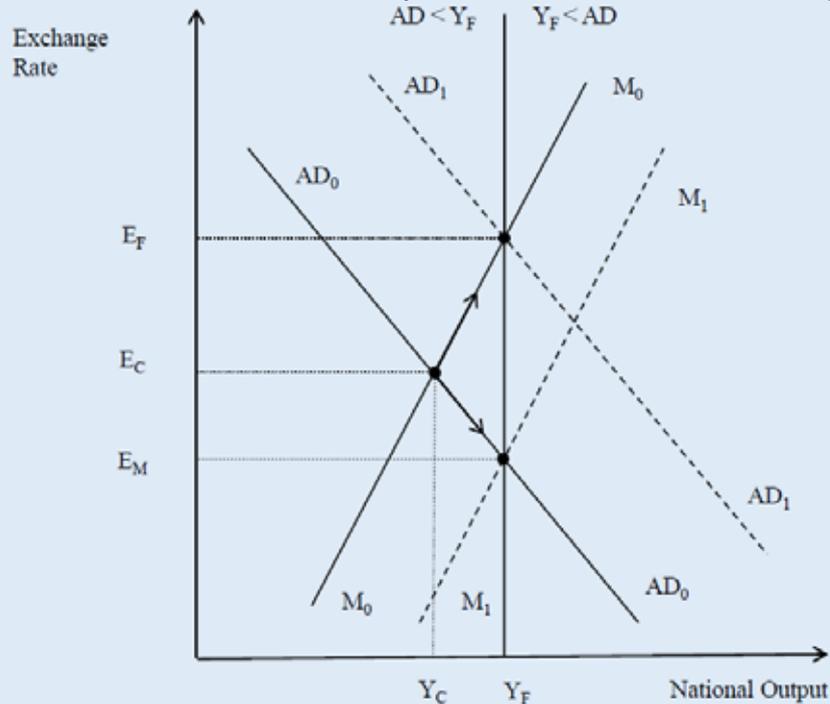
3 Chinn and Prasad (2003), Makin and Narayan (2013) and Makin, Narayan and Narayan (2014) provide evidence in support of the link between the fiscal and external deficits.

4 Born et al (2013) and Ilzetzki et al (2013) provide evidence in support of the Mundell-Fleming approach.

Box 1- Fiscal versus Monetary Stimulus as a Short Run Stabilisation Instrument

How fiscal stimulus works against monetary stimulus in an open economy like Australia can be illustrated with reference to Figure B1. This textbook framework depicts equilibrium in the real sector of the economy, reflected in the AD schedule, and equilibrium in the monetary sector, reflected in the MM schedule.⁵ Presume in the wake of an external shock like the GFC that the economy's GDP, shown as Y_C , is initially at an equilibrium below the full employment level of GDP, shown as Y_F .

Figure B1 — Fiscal versus Monetary Stimulus to Restore Full Employment



If fiscal stimulus in the form of higher government spending, reduced income taxes, or higher income transfers is well targeted, and assuming no Ricardian effects, the AD schedule shifts rightward to raise GDP from Y_C to the full employment level of GDP at Y_F . However, in the process, upward pressure would be exerted on domestic interest rates and so the exchange rate appreciates, rising from E_C to E_F . This crowds out net exports, consistent with the 'twin deficits' hypothesis.⁶ If instead of fiscal stimulus, monetary policy was sufficiently eased, the MM schedule reflecting domestic liquidity conditions, shifts right. Interest rates fall causing capital outflow, and the exchange rate depreciates from E_C to E_M . From the recessed level of GDP, Y_C , full employment national income can therefore in theory be restored to Y_F solely by expansionary monetary policy improving international competitiveness via sustained real exchange rate depreciation.

3. The relationship between budget and trade (and current account) deficits can also be explained with reference to the dependent economy approach based on the dichotomy between internationally tradable and non-tradable goods and services.⁷ The real exchange rate is here defined as the relative price of non-tradables to tradables, $R = \frac{P_N}{P_T}$. A rise in this ratio worsens international competitiveness.

⁵ Makin (2017) derives this framework.

⁶ If, as often assumed, capital mobility is perfect, the MM schedule is vertical and fiscal stimulus has no net effect on GDP. Hence government spending fully crowds out net exports.

⁷ This approach was pioneered by Australian economists Swan (1956) and Salter (1960).

Higher government spending, other things the same, increases demand for domestically produced goods and services that are not internationally tradable. Examples are increased public spending on the provision of social welfare, health, general public services or school halls. Such spending raises the prices of non-tradable goods and services in the economy, relative to the prices of internationally tradable goods and services. This appreciates the real exchange and worsens competitiveness, which draws resources away from the tradable sector, again crowding out net exports.⁸

4. Fiscal stimulus also has implications for household and business confidence. It supposedly counters the effects of a sharp fall in household and business confidence that Keynes termed “animal spirits”. Yet, there is a contradiction in this argument insofar as business confidence is subsequently negatively affected by the uncertainty that fiscal deficits, and how they will be repaired, creates. Such ‘regime uncertainty’ is inimical to asset price recovery, private investment and future economic growth.⁹
5. Relatedly, from a longer term perspective, Ricardian Equivalence proposes that the prospect of increased income taxation to repay future public debt stemming from stimulus-induced budget deficits crowds out private consumption as households save more to meet future tax liabilities. On the other hand, households are likely to save less if budget surpluses imply tax cuts.¹⁰ In a similar way, business wary of future tax obligations may retain more earnings for this purpose instead of investing.
6. Finally, there is the intergenerational equity argument focused on the public debt legacy that stems from fiscal stimulus. This perspective simply proposes that it is unfair for future generations to repay the public debt incurred by the present generation via higher future taxes or cuts in government services.¹¹

If fiscally induced domestic spending raises national output by more than the spending itself, so-called fiscal multipliers are greater than unity and fiscal stimulus can be deemed effective, at least in the short run. Many studies premised on Keynesian assumptions and behavioural relationships have estimated multipliers since the crisis using different econometric techniques with mixed results.¹² Most show some positive effect in the short run, though in the longer run multipliers can turn negative when taxes rise to repair the budget deficit.¹³

The above theoretical perspectives suggest multipliers which measure the extent to which a cut in either taxes, increase in transfers, or rise in spending leads to a rise in national income are small, zero or even negative.

8 Makin and Ratnasiri (2015) provides evidence that government spending has been the most significant factor worsening Australia’s competitiveness by this measure.

9 See Higgs (1997) for related discussion.

10 Makin and Narayan (2010) provide evidence of public-private saving offset in Australia from 1980 to 2008 between 0.7 and near unity.

11 Buchanan (1958) elaborates.

12 See Auerbach et al (2010), Auerbach and Gorodnichenko (2013), Cogan et al (2010) Nickel and Tudyka (2014) and Heim (2016) amongst many other empirical papers.

13 See for instance Mountford and Uhlig (2009), Uhlig (2010), and Guest and Makin (2014).

3. THE MACROECONOMIC POLICY RESPONSE TO THE GFC

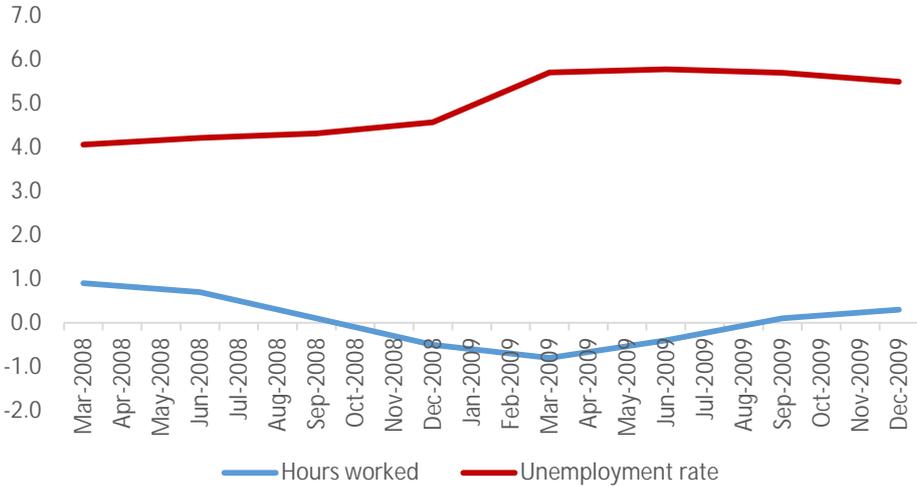
3.1 The Global Financial Crisis

The collapse of Lehman Brothers bank on Wall Street in September 2008 precipitated the financial storm that became known as the Global Financial Crisis with commercial banks in North Atlantic economies at its epicentre.¹⁴ Australia’s banking system remained relatively sound throughout the crisis, greatly assisted by necessary federal government intervention to underwrite deposits and bank borrowing. This was in contrast to the systemic banking problems in the United States and within the banking sectors of the United Kingdom and numerous European economies. Equity values, commodity prices and the Australian dollar all fell sharply in response to the external shock.

The crisis was initially transmitted from North Atlantic economies to the Australian economy through Australia’s highly internationally integrated financial markets and collapse in non-mining investment rather than via a slump in demand for exports. The United States and United Kingdom, the only non-Asian trading partners in Australia’s top ten export destinations, accounted for less than 10 per cent of the economy’s total exports.

The subsequent domestic impact of the asset price collapse on investment and the real economy was severest in the December quarter of 2008 and March quarter of 2009. There was a fall in hours worked throughout the GFC episode and unemployment peaked at 5.8 per cent, much lower than the 10 per cent unemployment reached in the United States, and considerably below unemployment rates in previous recessions. This reflected the high degree of labour market flexibility at the time. See Figure 2.

Figure 2 — Unemployment and Hours Worked during the GFC (per cent)



Source: Australian Bureau of Statistics, Australian National Accounts, Cat 5206.0

At the time of the GFC, the mining sector was experiencing an unprecedented boom driven by strong demand from Australia’s Asian trading partners, especially China. This greatly boosted mining investment and employment, mineral exports, national income, and state and federal government revenues.

14 Taylor (2009) details underlying causes of the GFC.

Both monetary policy and fiscal policy were deployed to counter the real impact of the crisis. The Reserve Bank cut the official interest rate soon after the crisis hit by three per cent and the exchange rate depreciated substantially, by around a third against the US dollar, contributing to a sharp turnaround in international competitiveness. This large competitiveness gain boosted net exports, assisted by strong demand from China for Australia's coal and iron ore.

The GFC fiscal stimulus involved a mix of new public expenditure on school buildings, social housing, home insulation, limited tax breaks for business, and income transfers to select groups.¹⁵ Stimulus packages were announced and implemented in the December 2008, March 2009 quarters and ran into subsequent quarters. See Table 1 for details.

Table 1 Major Fiscal Stimulus Measures (\$b)

	2008-09	2009-10	2010-11	2011-12
<u>Transfers</u>	20.44	4.22	1.78	1.59
Economic Security Strategy	9.55	0.65	0.07	0.00
Nation Building & Jobs Plan	10.49	1.72	0.00	0.00
Pensions	0.39	1.86	1.71	1.59
<u>Direct Expenditure</u>	4.52	21.93	17.27	4.91
Economic Security Strategy	0.12	0.07	0.00	0.00
Nation Building Package	0.88	1.95	0.39	-0.19
Nation Building & Jobs Plan	2.04	16.19	10.03	1.67
Infrastructure	1.48	3.72	6.85	3.43
<u>COAG Reforms</u>	3.50	1.78	2.23	3.57
COAG funding package	3.50	1.78	2.23	3.57
TOTAL	28.46	27.93	21.27	10.07

Source: Australian Government (2009)

These fiscal measures were credited with saving Australia from a technical recession, defined narrowly as two subsequent quarters of negative real GDP growth.¹⁶ However, fiscal stimulus induced foreign investors to take up newly issued relatively high yielding government bonds whose AAA credit rating further enhanced their appeal. This contributed to exchange rate appreciation and a subsequent competitiveness loss as Figure 3 suggests.

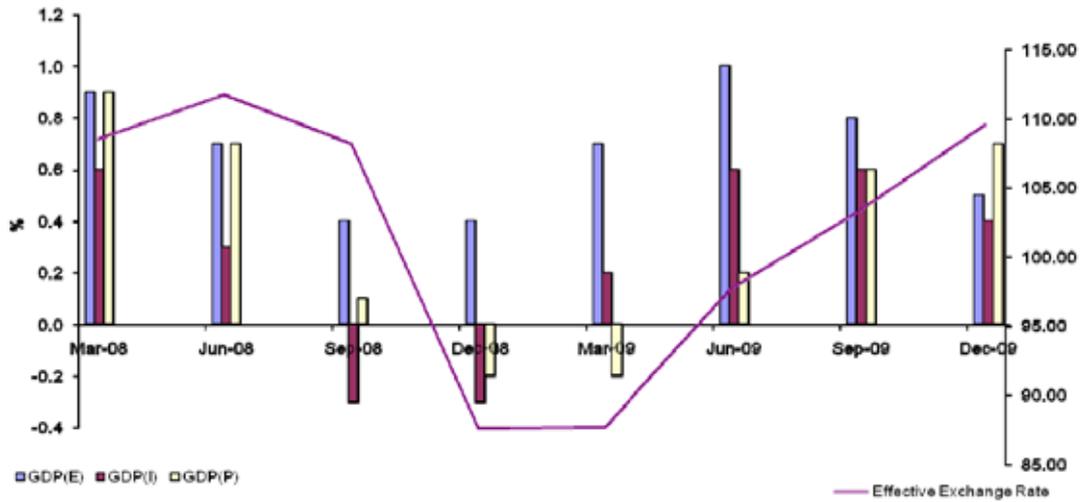
Worsened competitiveness in turn reduced the viability of substantial parts of manufacturing, including the motor vehicle sector. Treasury predicted in the 2009-10 Budget papers that, reflecting the stimulus

15 The Building the Education Revolution (BER) program was the key element of the Nation Building package. See Makin and Humphries (2014) for further discussion.

16 While no recession occurred according to the GDP(A) measure, GDP(P), GDP(E), real national income which accounts for the change in Australia's international purchasing power due to terms of trade fluctuations and real GDP per capita showed two successive quarters of negative growth.

spending, the economy would grow at an unrealistic 4.5 per cent in 2012-13, yet actual growth was only 2.4 per cent that year, and has averaged only 2.6 per cent since the GFC.

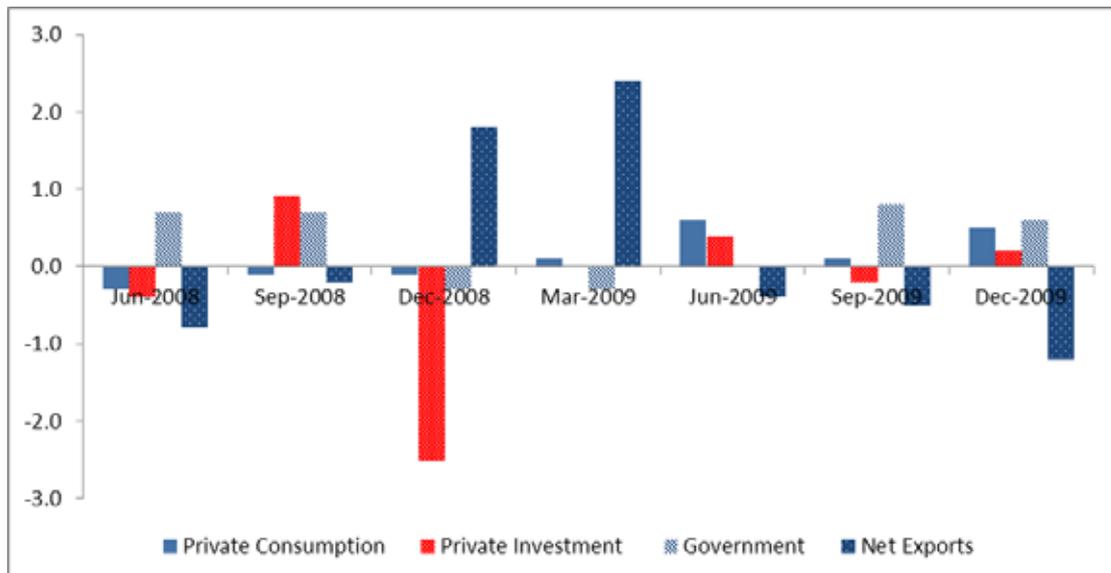
Figure 3 — Australia’s GDP and Effective Exchange Rate, Mar 2008 — Dec2009



Source: Makin (2010); based on data from Australian Bureau of Statistics, Australian National Accounts, Cat 5206.0 and Reserve Bank of Australia Statistics, Table F15.

A closer examination of the expenditure measure of GDP reveals that in the March 2009 quarter net exports prevented this measure going negative after a negative December 2008 outcome. A trade balance turnaround, not higher household consumption buttressed by cash transfers and other government spending, was therefore mainly responsible for the positive March quarter GDP outcome and for Australia avoiding technical recession. See Figure 4.

Figure 4 — Contributions to GDP(E) 2008-10



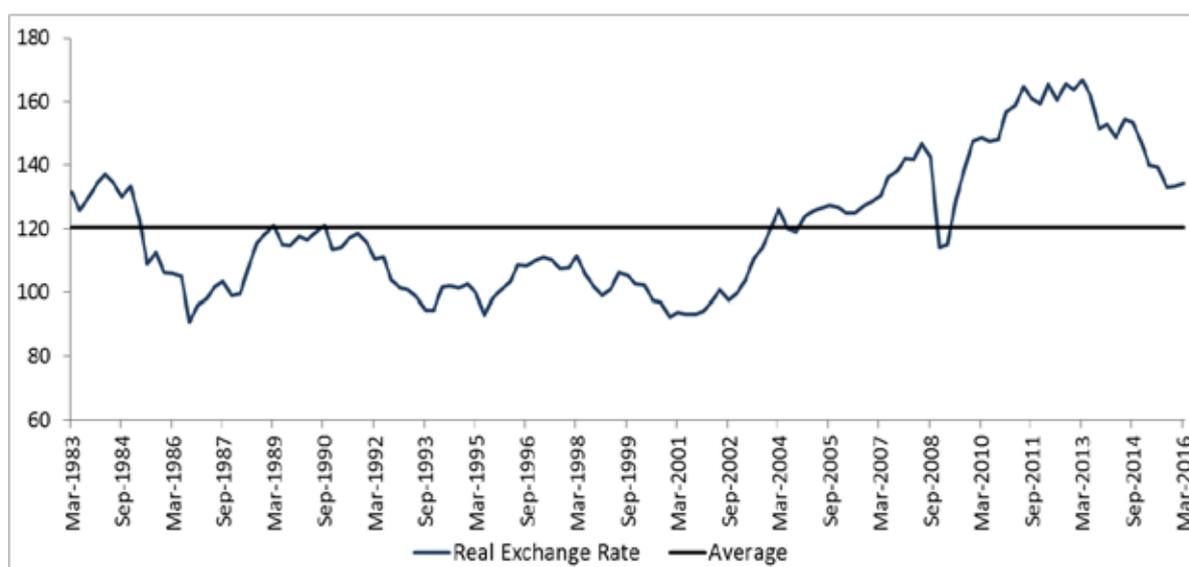
Source: Australian Bureau of Statistics, Australian National Accounts, Cat 5206.0

Government spending continued to rise as a proportion of GDP yet only after the worst of the crisis had passed. This put upward pressure on interest rates and sustained the strong reversal of the exchange rate depreciation. Real exchange rate appreciation, strengthened by a rebound in commodity prices,

was prolonged by historical standards post GFC and significantly above the long run average, as conveyed in Figure 5.

As predicted by the Mundell-Fleming and dependent economy approaches, this worsened industry competitiveness contributed to major job losses, not gains, in manufacturing and tourism. Also note from Figure 5 that the significant nominal depreciation at the height of the crisis only briefly brought the real exchange rate down to around its long run average.

Figure 5 — Australia's Real Exchange Rate, 1983-2015



Source: Reserve Bank of Australia (available at www.rba.gov.au/statistics)

3.2 Was Fiscal Stimulus Effective?

In sum, fiscal stimulus was not primarily responsible for saving the Australian economy from a narrowly defined recession in the March quarter of 2009, but a combination of lower interest rates, a major exchange rate depreciation, strong foreign demand for mining exports, especially from China, and a then more flexible labour market.¹⁷ Fiscal stimulus later weakened the economy by strengthening the exchange rate and reversing the contribution net exports made to aggregate demand.

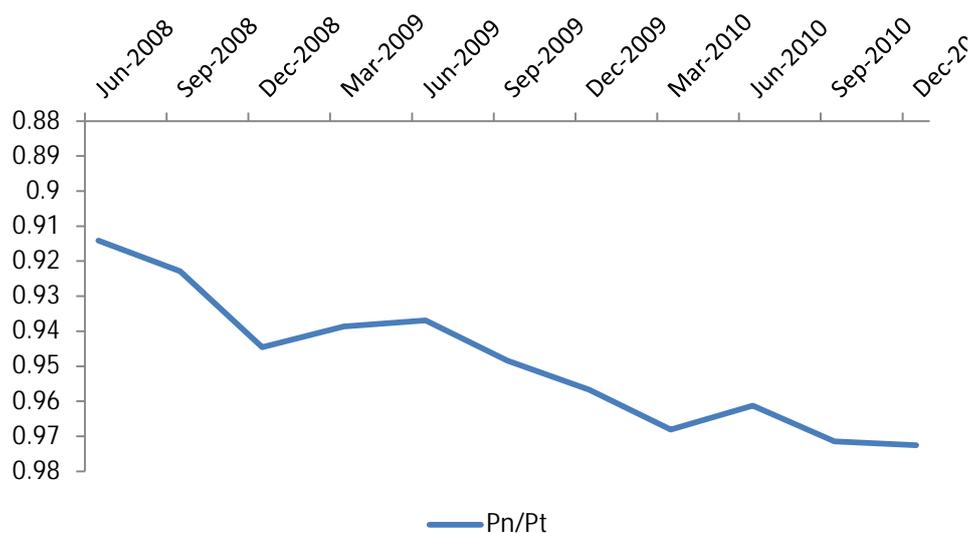
Domestic fiscal policy was not the only macroeconomic policy influence on the exchange rate however. Commodity prices quickly rebounded post GFC and rose until the end of 2011. Quantitative easing by central banks, notably by the United States Federal Reserve and Bank of England, whose economies had distressed banking systems, also contributed to Australia's competitiveness problem.

Although the Reserve Bank had sharply lowered the official interest rate at the beginning of the crisis, there was considerable scope for further lowering until fiscal stimulus obviated this policy option. By putting upward pressure on interest rates, fiscal stimulus prevented a sustained depreciation of the exchange rate, contrary to what occurred during the Asian financial crisis of 1997-98.

Meanwhile, consistent with the dependent economy perspective, the ratio of non-tradables prices to tradables prices, an alternative competitiveness measure, subsequently worsened after fiscal stimulus was implemented. See Figure 6. This acted to increase imports and draw resources away from tradable sector production.

¹⁷ Makin (2010a; 2010b) elaborates.

Figure 6 — Worsening of Competitiveness — Non-tradables to Tradables Prices



Source: Reserve Bank of Australia, Statistics, CPI Table G2, available at <http://www.rba.gov.au/statistics/index.html>

In sum, the nature of Australia's fiscal stimulus was misconceived because it emphasised transfers, unproductive expenditure such as school halls and pink batts, rather than tax relief and/or supply side reform, as occurred for instance in New Zealand where marginal income tax rates were reduced, infrastructure was improved and the regulatory burden on business was lowered. The scale of spending was unnecessarily large and subsequently proved counterproductive by working against keeping interest rates and the exchange rate lower for considerably longer, as occurred during the Asian crisis.¹⁸

A more specific claim is that Australia's fiscal stimulus response saved 200,000 jobs based on Treasury modelling of the long run empirical relationship between GDP and employment. However, a key factor that contributed to the unemployment rate not exceeding 6 per cent, compared to unemployment reaching over 10 per cent in the early 1990s recession, was the highly flexible labour market due to the Work Choices policy operative at the time of the GFC.

Commodity prices quickly rebounded in 2010-11, soon after the worst of the GFC had passed, to reach new record highs. At that time, a cut in government spending would have been the most appropriate fiscal response to boost business confidence and take upward pressure off the exchange rate.

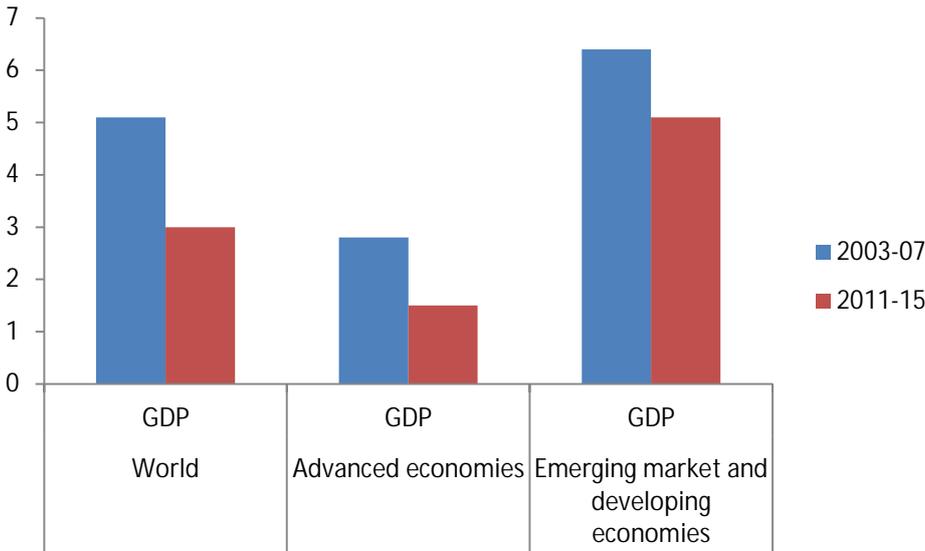
18 Intertemporal dynamic stochastic general equilibrium (DSGE) modelling of the global economy by McKibbin and Stoeckel (2009) predicted fiscal stimulus would have an initial effect on GDP, but that the impact of higher real interest rates on investment and on net exports (via higher real exchange rates in advanced economies that stimulated relatively more) offsets this effect in subsequent years.

4. THE CURRENT ECONOMIC ENVIRONMENT

4.1. The Global Context

In the five years before the GFC average world economic growth was close to 5 per cent per year, but has since averaged around 3 per cent, with average growth in advanced economies falling proportionately more than in emerging economies. See Figure 7.

Figure 7 — World Economic Growth (per cent per annum)



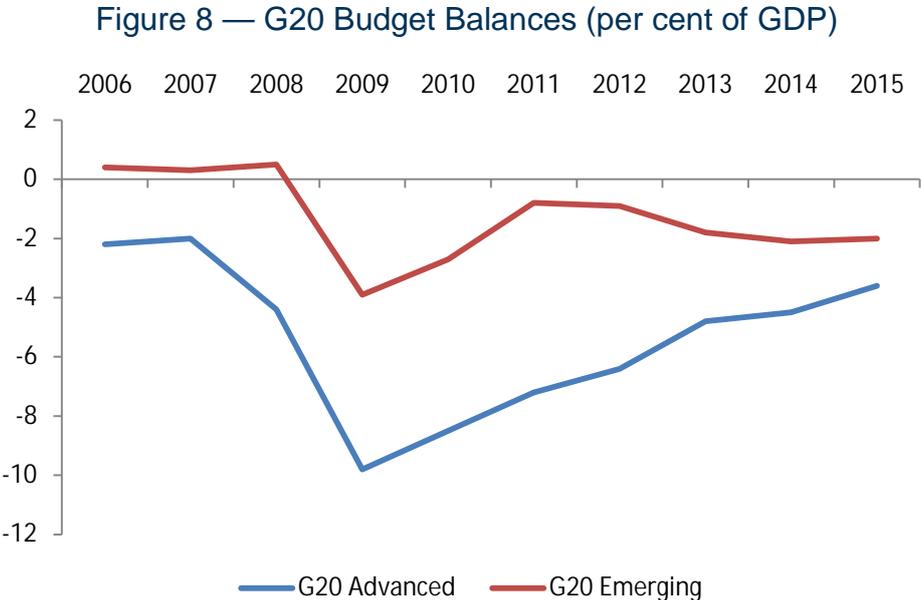
Source: IMF World Economic Outlook

This growth deceleration has been due to numerous factors. First, trade protectionism via opaque means such as countervailing duties and anti-dumping action, has slowed international trade, a key driver of world growth.¹⁹ Second, China’s pre-crisis growth rate of around 10 per cent per annum proved unsustainable in light of the world trade slowdown, China’s company indebtedness and non-performing loans in its banking sector. Third, commercial banks in advanced economies have lent less freely post GFC due to increased financial regulation and greater risk aversion, which has constrained private investment.

Finally, fiscal stimulus failed to deliver as G20 governments expected, instead leaving a legacy of high public debt. Public debt rose very sharply by historical standards in most advanced economies, notably in Australia, the US, UK, the Southern European economies and Japan due to the combined effects of fiscal stimulus, revenue falls and, in the cases of the United States and United Kingdom, Treasury bank bailouts.

19 See World Bank (2015) for related discussion.

Figure 8 shows the extent to which budget balances in G20 economies deteriorated post-GFC, with G20 advanced economies experiencing larger fiscal deficits on average than G20 emerging economies, which had been in surplus pre-GFC. Average budget deficits of G20 advanced and emerging economies exceed those before the crisis which implies public debt continues to rise globally.²⁰



Source: IMF Fiscal Monitor

In addressing fiscal deficits governments have generally favoured higher taxes rather than reduced public spending. Taxation revenue has risen as a proportion of GDP in G20 advanced economies post GFC, especially in Europe, accounting in part for the region’s barely positive growth. Meanwhile, government spending is generally higher than before the GFC.²¹

4.2. The Australian Context

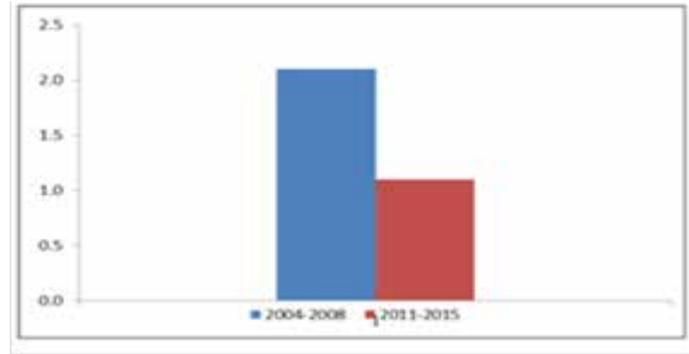
Reflecting the global slowdown, the Australian economy post crisis has performed at half pace on an annual GDP growth per capita basis compared to the pre-GFC years.²² Per capita GDP growth grew at an average of close to 1 per cent between 2011 and 2015 whereas it averaged over 2 per cent in the five year period preceding the crisis. See Figure 9.

20 Makin (2015) elaborates.

21 IMF Fiscal Monitor (2016)

22 GDP is the most widely used indicator of the economy’s performance, but with an expanding population, GDP per capita is a better measure of macroeconomic progress.

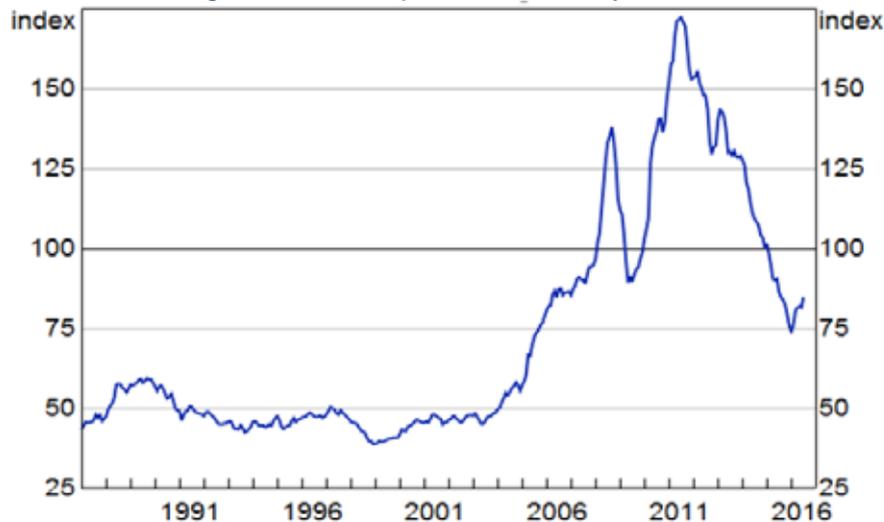
Figure 9 — Australian GDP Per Capita Before, After the GFC



Source: Australian Bureau of Statistics, Australian National Accounts, Cat 5206.0

The end of a commodity price super-cycle (see Figure 10) has also contributed to lower national income, especially according to the terms of trade adjusted real national income measure. Lower commodity prices contributed to a weaker exchange rate and partially alleviated Australia's international competitiveness problem.²³

Figure 10 — Export Commodity Prices



Source: Reserve Bank of Australia, Statistics, www.rba.gov.au/statistics/

5. AUSTRALIA'S PUBLIC DEBT

Australia's public debt growth post GFC ranks amongst the highest in the G20.²⁴ Ongoing budget deficits and rising public debt have contributed to economic weakness in numerous ways. The alternative perspectives on fiscal stimulus outlined above help explain how Australia's fiscal predicament has contributed to the economy's failure to return to trend growth, contrary to the assumption Treasury made frequently in the wake of the fiscal stimulus measures of 2008-10.

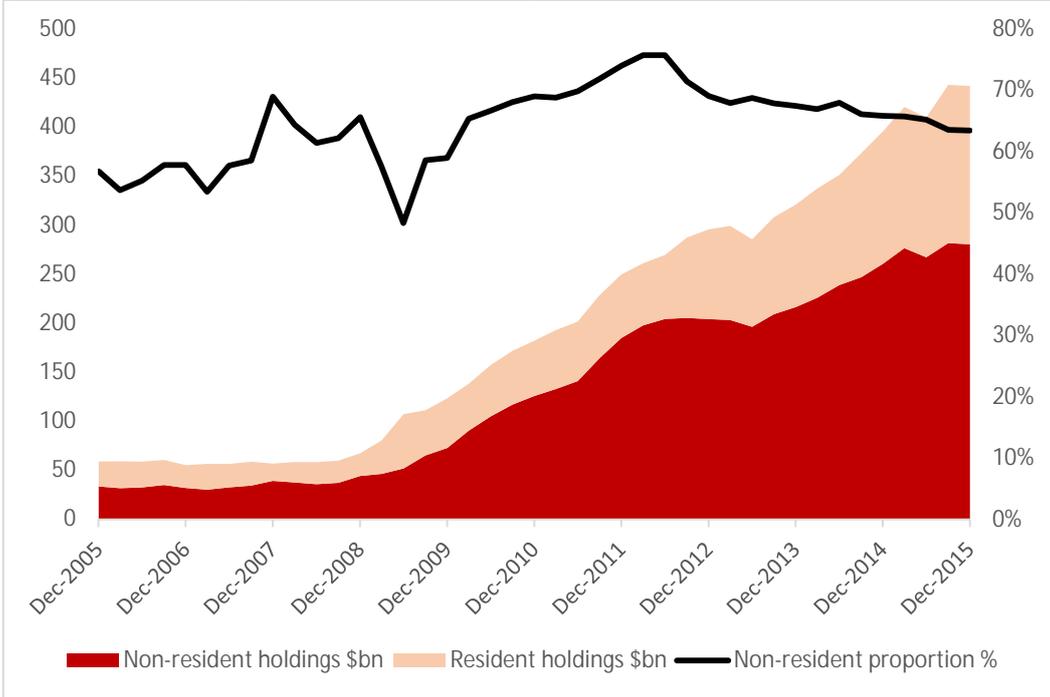
Although Australia's public debt to GDP ratio at close to 30 per cent is not high by OECD standards, unlike other advanced economies, the bulk of around two thirds at federal level, is owed to foreign

23 See Makin (2014) for further discussion.

24 See Mauro and Zilinsky (2016).

entities.²⁵ See Figure 11. Foreign public debt also now comprises a significant part of Australia’s total foreign debt which stands at over 55 per cent of GDP in net terms.

Figure 11 — Foreign, Domestic Holdings of Australian Government Securities

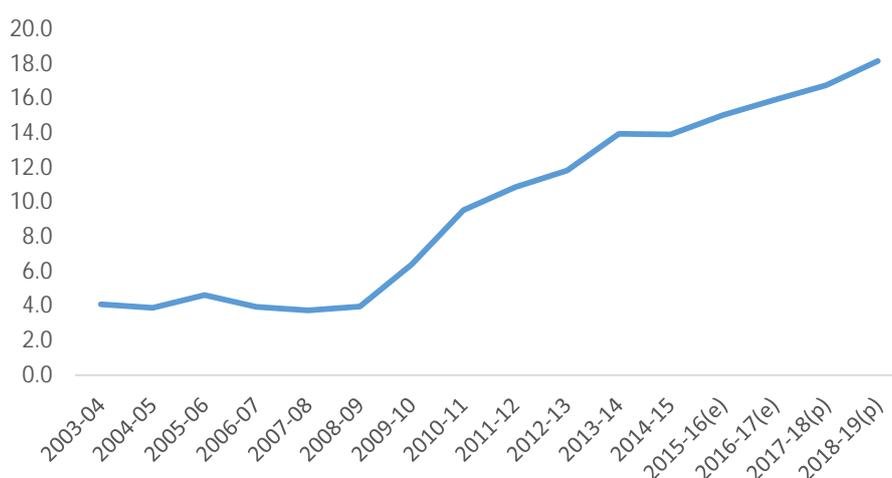


Source: Makin and Pearce (2016); based on data from ABS 2016c; Australian Office of Financial Management, www.aofm.gov.au

Interest paid by the federal government on its outstanding debt was under \$4 billion before the GFC yet could reach \$20 billion, or one per cent of GDP, by the end of the decade. See Figure 12. The servicing cost on foreign debt incurred to fund unproductive expenditure is a net drain on national income and on future budgets, and could potentially spark a vicious circle of deficits and debt if world interest rate rises combine with an interest risk premium that eventuates from a credit rating downgrade.

25 Federal public debt measures subsequently cited in this paper are in net terms. Makin and Pearce (2014) discusses post-GFC State and Territory public debt.

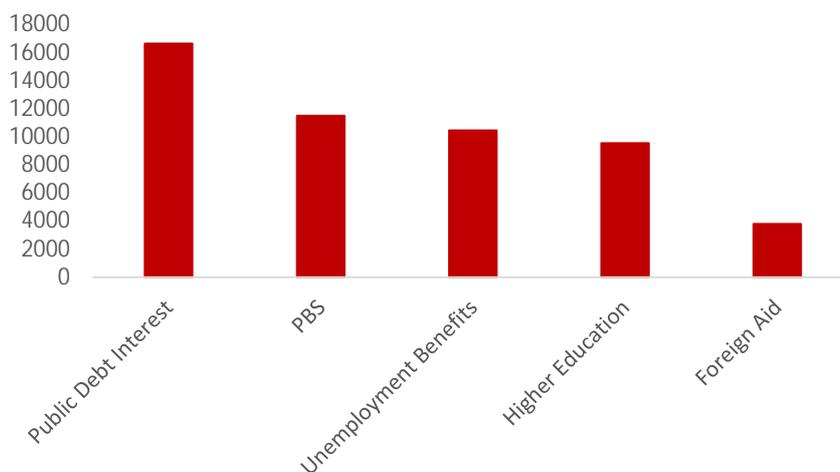
Figure 12 — Public Debt Interest on Australian Government Securities (\$ billion)



Source: Australian Treasury, Mid-Year Economic and Fiscal Outlook, Table D1

Around two thirds of this public debt interest (PDI), one of the fastest growing outlay items in the federal budget, is paid to foreign bondholders. PDI is 4.3 times Australia’s foreign aid outlays, 1.7 times higher education spending, 1.6 times unemployment benefits and 1.4 times spending on the Pharmaceutical Benefits Scheme (PBS) for 2016-17.²⁶ See Figure 13.

Figure 13 — PDI Compared to Other Major Expense Items, 2016-17



Source: Treasury Budget Papers 2016-17

5.1 The Government Balance Sheet and Creditworthiness

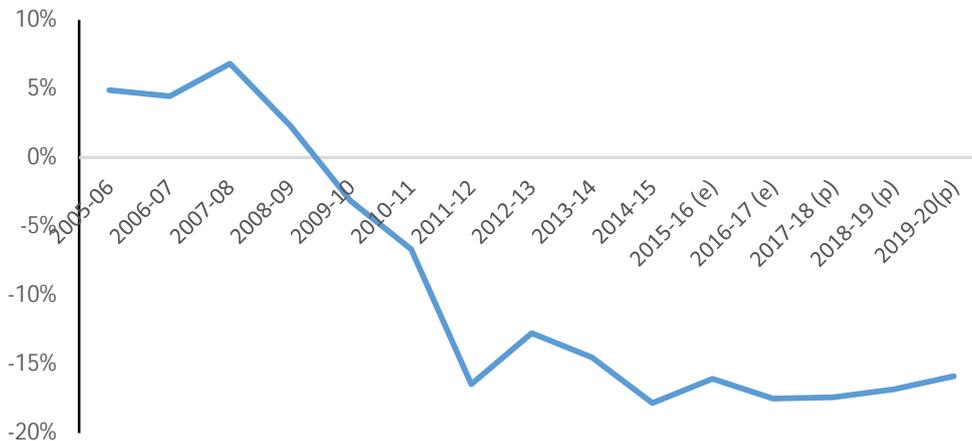
Government balance sheets measure public sector asset and liability positions. The difference between them, net worth, reflects fiscal performance over time. Public debt worsens the government’s balance sheet if unmatched by public assets in the form of productive infrastructure. The bulk of federal government spending is on transfers and services that yield no economic return, such as social security and welfare, (the single biggest expenditure category), health, general public services, and defence.

²⁶ Ironically, this annual income transfer abroad, to be paid in perpetuity unless public debt is reduced, exceeds the original cost of the one-off cash transfers central to the first fiscal stimulus package in 2008-09.

Hence, federal government borrowing to fund these outlays worsens the government’s balance sheet as there are no matching asset items.

The federal government’s net worth, which includes the assets of the Future Fund, has deteriorated substantially since the GFC. Due to escalating public debt it has been significantly negative since 2009-10. See Figure 14.

Figure 14 — Deterioration of Federal Government Net Worth



Source: Treasury Budget Papers 2016-17

Australia is one of 12 economies in the world with AAA credit rating. In the Asia-Pacific region, only Singapore and Canada rate as highly. The federal government was last downgraded from AAA to AA- in 1986 after a major currency crisis when its public debt to GDP was 24 per cent compared to the present 28 per cent. Notice of another credit rating downgrade would have the following macroeconomic effects.

First, interest rates on government bonds would rise to reflect a higher risk premium, though to what extent would depend on the bond market’s reaction, which is difficult to predict. If the risk premium was for instance 30 basis points, public debt interest would rise annually by another \$1.5 billion as the federal government’s gross debt nears \$500 billion.

Second, the downgrade would affect the entire interest rate spectrum, feeding through to rates faced by State governments and the major banks on overseas borrowings, ultimately affecting mortgage and commercial loan rates. Third, confidence would be affected, dampening business investment, construction, and private consumption. Moreover, world interest rates are likely to rise in coming years, thereby further increasing PDI paid abroad and subtracting more from national income.

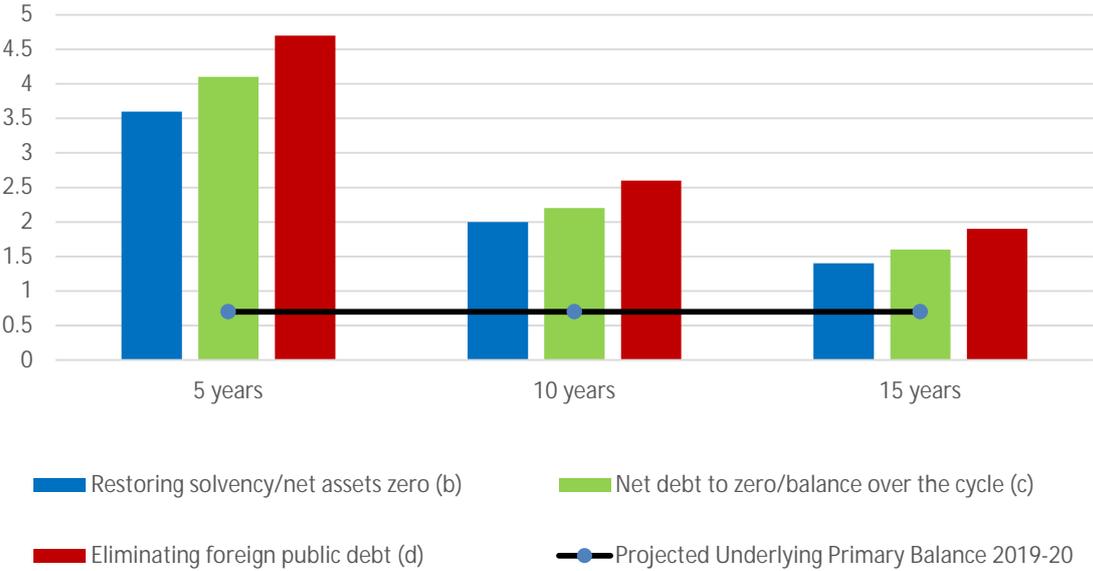
5.2 Reducing Federal Public Debt

Public debt can only be reduced by running budget surpluses that enable debt retirement, thereby improving the government’s net worth position and lowering Australia’s foreign public debt exposure. According to the Commonwealth Charter of Budget Honesty 1998, the federal government is also supposed to achieve budget surpluses on average over the course of the economic cycle. Substantially higher primary budget surpluses are needed to meet the objectives of (i) restoring net worth to zero (ii)

eliminating foreign debt and (iii) balancing the budget over the cycle. The more urgent the need to meet these objectives, the higher federal budget surpluses have to be.²⁷

For instance, to restore net worth within 10 years, budget surpluses would persistently have to run at 3.6% of GDP for 5 successive years, or 2% of GDP for 10 successive years. To eliminate foreign public debt, primary budget surpluses would persistently have to run at 4.7 % of GDP for 5 years or 2.6% for 10 years. To balance the budget over the cycle, primary budget surpluses would persistently have to run at 4.1% of GDP for 5 years or 2.2% for 10 years, over twice the primary balance projected by Treasury on current budget settings. See Figure 15.

Figure 15– Budget Surpluses Required for Targeted Public Debt Levels



Source: Makin and Pearce (2016)

6. PERSPECTIVES ON FISCAL CONSOLIDATION

Fiscal consolidation on this scale is generally thought to have a negative macroeconomic impact. For instance, reflecting the Keynesian argument that cutting government spending reduces aggregate demand in the short run, it is frequently asserted that budget repair achieved this way would worsen economic conditions.

Yet there are theoretical grounds for believing that fiscal consolidation can improve subsequent macroeconomic performance over the medium to longer term.²⁸ Just as fiscal stimulus has negative repercussions according to the perspectives canvassed above, fiscal repair has corresponding positive

27 Makin and Pearce (2016) exposts the methodology for estimating primary budget surpluses required to reduce debt to targeted levels.

28 Alesina, Favero and Giavazzi (2015) examine fiscal consolidation programs in 16 OECD economies over a 30 year period and find that output losses associated with expenditure reduction are on average zero, whereas tax-based adjustments are associated with deep and lasting recessions. Earlier studies that provide international evidence that fiscal consolidation can improve economic performance include Cogan et al (2013), Giavazzi, Jappelli and Pagano (2000), and Gupta et al (2005).

repercussions. These occur through a number of channels, although the nature of the fiscal consolidation, specifically whether it involves (i) cutting government consumption, (ii) cutting government investment, (iii) cutting government transfers, or (iv) raising taxes, is critical.

In this context, a distinction can be made between “good” and “bad” fiscal consolidation in terms of its macroeconomic impact. Good fiscal repair involves cutting unproductive government spending, including program overlap between different tiers of government. On the contrary, bad fiscal repair involves cutting productive infrastructure spending, or raising taxes that distort incentives to save and invest.

Consistent with the loanable funds perspective outlined above, a cut in government consumption raises public and national saving relative to national investment, which reduces foreign borrowing. In turn, this stems a rise in foreign public debt, reduces public debt interest that would otherwise be paid abroad, and hence results in a national income gain. See Box 2.

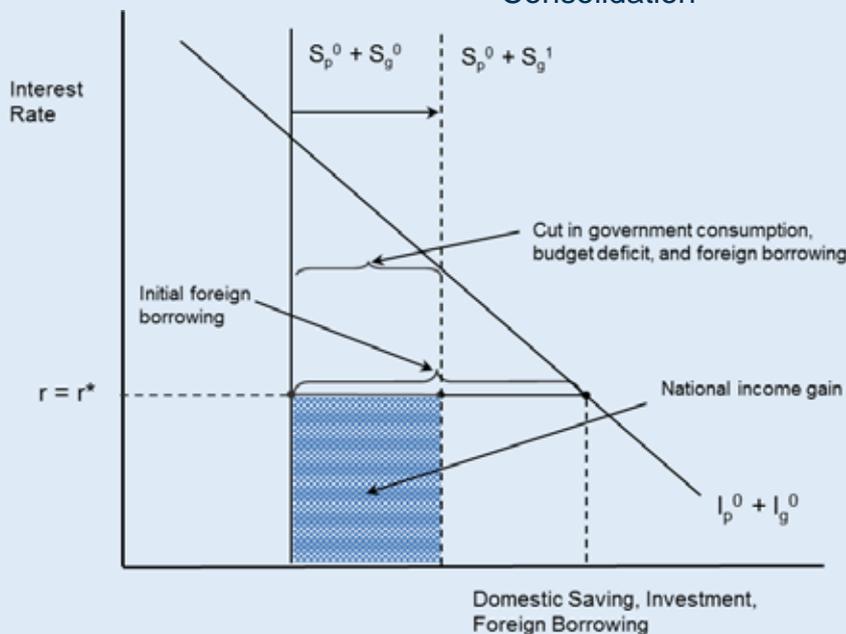
Box 2 — Fiscal Consolidation, the External Deficit and National Income

The link between fiscal and external account deficits can be explained with reference to aggregate saving, investment and capital flows. Private saving is national disposable income less private consumption. That is, $S_p = (Y_d - T - C_p)$ where Y_d is national disposable income, T is income taxes, net of transfer (including welfare) payments and C_p is private sector consumption. Public saving is the difference between taxes less public consumption. That is, $S_g = (T - C_g)$ where C_g is public consumption. Total domestic saving is the sum of private saving and public saving,

$$S = S_p + S_g = (Y_d - T - C_p) + (T - C_g)$$

If saving is unresponsive to domestic interest rate, r , domestic saving can be depicted by the vertical supply schedule in Figure B2 which is fixed for a given level of national income, and total consumption. Total domestic investment is private investment (I_p) which is negatively related to the real interest rate, (r), plus public investment, (I_g), assumed to be autonomous. If the economy is small and capital mobility is high, the domestic long term interest rate is set by the world interest rate (r^*).

Figure B2 — Reduced Foreign Borrowing and National Income Gain from Fiscal Consolidation



Consider the effects of fiscal consolidation by means of a cut in public consumption. A fall in C_g implies a rise in public saving and hence rightward shift of the total saving schedule. With unchanged total investment, this implies a reduction in foreign borrowing. This reduced borrowing implies a saving in public debt interest paid abroad which improves national income by the shaded area.

According to the Mundell-Fleming perspective, cutting government consumption puts downward pressure on domestic interest rates, lowers capital inflow and hence the exchange rate, which improves international competitiveness.²⁹ Business confidence should also improve, increasing private investment, which increases the capital stock and raises economic growth in the medium term.³⁰

Reducing public investment in the form of productive infrastructure is bad fiscal repair because it slows potential growth in the economy's capital stock on the supply side of the economy.³¹ So are permanent income tax increases which are contractionary insofar as they reduce household consumption spending and aggregate demand. In addition, income tax increases limit future growth by reducing work effort on the supply side of the economy. Meanwhile, increasing taxes on business reduces firms' capacity to pay higher wages and invest more, and provides an incentive for local and resident multinational firms to relocate operations abroad.

In sum, there is a large number of possible fiscal consolidation paths to achieve a targeted public debt ratio at a point in the future. Not only is the means by which fiscal deficits are reduced to achieve a given debt level, either via tax increases or spending cuts, the timing of fiscal consolidation is also critical. General equilibrium modeling for instance shows the timing of particular forms of consolidation significantly influences the scale of any cumulative output loss.³²

7. CONCLUSION

Prior to the GFC, fiscal policy had ceased to operate as a short term stabilisation instrument. It had been assigned the longer term goals of raising public saving to reduce reliance on foreign borrowing and asset accumulation via the Future Fund to meet future contingencies, notably superannuation liabilities. On both theoretical and operational grounds, monetary policy was considered more effective in managing aggregate demand in the short run.

Yet fiscal stimulus was used aggressively, and ultimately ineffectively, in response to the GFC centred on North Atlantic economies. This was in contrast to the macroeconomic policy response to the Asian crisis. At that time, fiscal policy remained relatively inert despite heavy trade exposure to Asia at the time, compared to relatively small trade exposure to the North Atlantic region during the GFC. Monetary policy during the Asian crisis assumed the lead role, and prolonged exchange rate depreciation insulated the economy from that external financial shock by boosting international competitiveness.

The Australian government's fiscal response to the GFC subsequently weakened the economy by contributing to the dollar's strength, and by creating pervasive policy uncertainty about how the budget would be repaired. Prolonged overvaluation of the exchange rate seriously worsened Australia's international competitiveness and harmed industries in the tradable sector, especially manufacturing.

Federal government spending, unlike State government spending, is overwhelmingly recurrent, including a large social welfare component which does not generate a return to the government to service the debt incurred to fund it. Fiscal consolidation focused on reducing recurrent government spending would exert downward pressure on market interest rates, lower foreign take up of

29 Technically, if capital mobility is perfect, net exports rise fully to the extent of reduced public consumption.

30 See Beetsma et al (2015).

31 Infrastructure projects should be assessed using cost-benefit analysis, and by comparing prospective rates of return to funding costs. Makin (2015a) elaborates.

32 See McKibbin and Stoeckel (2012) for further detail.

government bonds, weaken the exchange rate and lift international competitiveness. At the same time, revenue neutral tax reform would improve productivity and growth in the long run, particularly company tax cuts that raise the economy's capital stock.

Fiscal repair of this kind would also lift business confidence, boost private investment and strengthen medium term economic growth. Reducing foreign public debt would also stem the national income loss from unrequited interest paid abroad. Failure to turn around the public debt driven deterioration of the federal government's balance sheet significantly increases the chance of a downgrade by the major credit rating agencies. Past experience shows that once the AAA rating is lost, a prolonged period of prudent budgeting is needed to restore it.

For this reason, and given the macroeconomic benefits that it potentially bestows, fiscal consolidation focused on reducing government recurrent spending, combined with revenue neutral tax reform, should be the top fiscal priorities.

REFERENCES

- Alesina, A., Favero, C. and Giavazzi, F. (2015) "The Output Effect of Fiscal Consolidation Plans" *Journal of International Economics*, 96, S1, 19-42.
- Auerbach, A. and Gorodnichenko, Y. (2013) "Fiscal Multipliers in Recession and Expansion" in Alesina, A. and Giavazzi, F. (eds) *Fiscal Policy After the Financial Crisis*, University of Chicago Press, Chicago.
- Auerbach, A., Gale, W. and Harris, B. (2010) "Activist Fiscal Policy" *Journal of Economic Perspectives* 24 (4), 141-164.
- Australian Bureau of Statistics (2016), *Australian National Accounts: National Income, Expenditure and Product*, Cat no 5206.0
- Australian Bureau of Statistics (ABS) (2016) *Government Finance Statistics, 2013-14*, Australia, 5512.0
- Australian Government (2015), *Mid-Year Economic and Fiscal Outlook 2015-16*, Canberra
- Australian Government (2014), *Charter of Budget Honesty Act 1998 No. 22, 1998 as amended 2014*
- Australian Government (2009), *Government Senators Minority Report on Stimulus Package* available at http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Completed_inquiries/2008-10/eco_stimulus_09/report/d01
- Australian Office of Financial Management, www.aofm.gov.au
- Barro, R. (1989) "The Ricardian Approach to Budget Deficits" *Journal of Economic Perspectives*, 3, 37-54.
- Beetsma, R., Cimadomo, J., Furtuna, O. and Giuliodori, M. (2015) "The Confidence Effects of Fiscal Consolidations" Working Paper Series No 1770, European Central Bank.
- Born, B., Juessen, F. and G. Muller (2013) "Exchange Rate Regimes and Fiscal Multipliers" *Journal of Economic Dynamics and Control* 37, 446-465.
- Chinn, M. and Prasad, E. (2003) "Medium Term Determinants of Current Accounts in Industrial and Developing Countries: An Empirical Exploration" *Journal of International Economics* 59, 47-76.
- Cogan, J., Taylor, J., Wieland, V. and Wolters, M. (2013) "Fiscal Consolidation Strategy" *Journal of Economic Dynamics and Control*, (37), 404-421.
- Cogan, J., Cwik T., Taylor J., and Wieland, V. (2010) 'New Keynesian versus Old Keynesian Multipliers' *Journal of Economic Dynamics and Control*, 34(3), 281-295.
- Fleming, J. (1962), "Domestic Financial Policies Under Fixed and Under Floating Exchange Rates", *IMF Staff Papers*, 12, 369-80.
- Giavazzi, F. and Pagano, M. (1990) "Can Severe Fiscal Contractions Be Expansionary: Tales from Two Small European Economies" in O. Blanchard and S. Fischer (eds) *NBER Macroeconomics Annual*, NBER, Chicago.
- Giavazzi, F., Japelli, T. and Pagano, M. (2000) "Searching for Non-linear Effects of Fiscal Policy: Evidence from Industrial and Developing Countries" *European Economic Review*, 44, 1259-1289.

Gupta S., Clements, B., Baldacci, E. and Mulas-Grenados, C. (2005) "Fiscal Policy, Expenditure Composition, and Growth in Low-Income Countries" *Journal of International Money and Finance* 24(3):441-463.

Guest, R. and Makin, A. (2013) "The Dynamic Effects of Fiscal Stimulus in a Two Sector Open Economy" *Review of Development Economics* 17(3), 609-626.

Heim, J. (2016) "Do Government Stimulus Programs Have Different Effects in Recessions or by Type of Tax or Spending Program?" *Empirical Economics* 51, 1333-1368.

Higgs, R. (1997) 'Regime Uncertainty: Why the Great Depression Lasted So Long and Why Prosperity Resumed after the War', *The Independent Review* 1(4), 561–90.

Ilzetzki, E., Mendoza, E., Végh, C. (2013) "How Big (Small?) are Fiscal Multipliers?" *Journal of Monetary Economics* 60 (2), 239–254.

International Monetary Fund (2015) *Fiscal Monitor, Now Is the Time Fiscal Policies for Sustainable Growth*, April, IMF, Washington DC

Lucas, R. and Sargent, T. (1979) "After Keynesian Economics" *Federal Reserve Bank of Minneapolis Quarterly Review*, Spring, 1-16.

Makin, A. (2017) *International Money and Finance*, Routledge, London.

Makin, A. (2015a) "Expansionary versus Contractionary Government Spending" *Contemporary Economic Policy* 33 (1), 56-65.

Makin, A. (2015b) "Has Excessive Public Debt Slowed World Growth?" (2015) *World Economics* 16(4), 235-267.

Makin, A. (2014) *Australia's Competitiveness: Reversing the Slide* (2014) Minerals Council of Australia, Canberra.

Makin, A. (2010a) Did Fiscal Stimulus Counter Recession? Evidence from the National Accounts" *Agenda* 17 (2), 5-16.

Makin, A. (2010b) "How Should Macroeconomic Policy Respond to Foreign Financial Crises?" (2010) *Economic Papers* 29, 2, 1-10.

Makin, A. and Humphries, J. (2014) "Reviewing the Review of a Fiscal 'Stimulus' Program" (2014) in S. Prasser and H. Tracey (eds) *Royal Commissions and Public Inquiries: Practice and Potential*, Connor Court, Ballarat.

Makin, A. and Narayan, P. (2013) "Re-examining the 'Twin Deficits' Hypothesis: Evidence from Australia

Makin, A. and Narayan, P. (2011) "How Potent is Fiscal Policy in Australia?" *Economic Papers* 30(3), 377-385.

Makin, A., Narayan, P. and Narayan, S. (2014) "What Expenditure Does Anglosphere Foreign Borrowing Fund?" *Journal of International Money and Finance* (with P & S Narayan) 40 (1), 63-78.

Makin, A. and Pearce, J. (2016) "Fiscal Consolidation and Australia's Public Debt" *Australian Journal of Public Administration* (forthcoming)

Makin, A. and Pearce, J. (2014) "How Sustainable is Sub-national Public Debt in Australia?", *Economic Analysis and Policy*, 44, 364–375

Makin, A. and Ratnasiri, S. (2015) "Competitiveness and Government Expenditure: The Australian Example" *Economic Modelling* 49, 154-161

McKibbin W, and A. Stoeckel (2012) "Global Fiscal Consolidation" *Asian Economic Papers*, Vol 11, No 1, pp. 124-146.

McKibbin, W. and Stoeckel, A. (2009) "Modelling the Global Financial Crisis" *Oxford Review of Economic Policy*, 25 (4), 581-607.

Mauro, P. and Zilinsky, J. (2016) *Reducing Government Debt Ratios in an Era of Low Growth*, Policy Brief, Peterson Institute for International Economics, Washington DC, July.

Mountford, A. and Uhlig, H. (2009) 'What Are the Effects of Fiscal Policy Shocks?', *Journal of Applied Econometrics*, 24(6), 960-992.

Mundell, R. (1963) "Capital Mobility and Stabilization Policy Under Fixed and Flexible Exchange Rates." *Canadian Journal of Economics and Political Science*, 29,4, 475–85

Nickel C. and Tudyka, A. (2014) "Fiscal Stimulus in Times of High Debt: Reconsidering Multipliers and Twin Deficits" *Journal of Money, Credit and Banking*, 46, 7, 1313–1344.

Reserve Bank Australia, *Financial Statistics*, www.rba.gov.au/statistics

Uhlig, H. (2010) "Some Fiscal Calculus" *American Economic Review Papers and Proceedings*, May, 30-34.

Salter, W. (1959) "Internal and External Balance: The Role of Price and Expenditure Effects" *Economic Record* 35, 226-238.

Swan, T. (1960) "Economic Control in a Dependent Economy" *Economic Record*, 36, 51-66.

Taylor, J. (2009) *Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis*, Hoover Institution Press.