STATEMENT 4: BENEFITING FROM OUR MINERAL RESOURCES: OPPORTUNITIES, CHALLENGES AND POLICY SETTINGS

This statement discusses the challenges and opportunities arising from Australia's strong terms of trade, and the policy responses needed to manage them.

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INTRODUCTION

Australia's natural resources have been an integral part of its economic development, providing a basis for higher living standards and also acting as a driver of economic and social change.

Australia stands to benefit from continuing strong global demand for its abundant mineral resources. The resulting higher terms of trade has the potential to significantly increase national income for the benefit of all Australians.

With these opportunities, however, come a number of challenges for the economy. These include added pressure on the economy's capacity, structural adjustment to allow labour and capital to be reallocated to best take advantage of the changes in relative prices and returns from the increased world demand for our resources, and — reflecting a rise in national investment — a relatively high current account deficit for an extended period.

Australia's strong performance during the global financial crisis allows these challenges to be tackled and opportunities to be built on from a position of strength. Institutional settings also provide greater flexibility in managing the stresses of major changes in the terms of trade, in contrast to the mixed experiences with previous booms in Australia's history.

On the other hand, previous experience in Australia and worldwide points to the risk that marked increases in natural resource wealth can undermine economic reform and sound fiscal policy: reducing the gains to national income and skewing their distribution.

The role of policy is to build on the strong starting point and to ensure that the Australian community shares in the benefits of Australia's mineral resources, including through a reform of tax arrangements. Policy making also needs to remain disciplined and continue to pursue a broad reform agenda to build the economy's capacity and flexibility, promote investment in a diversified economy, and enhance community wellbeing.

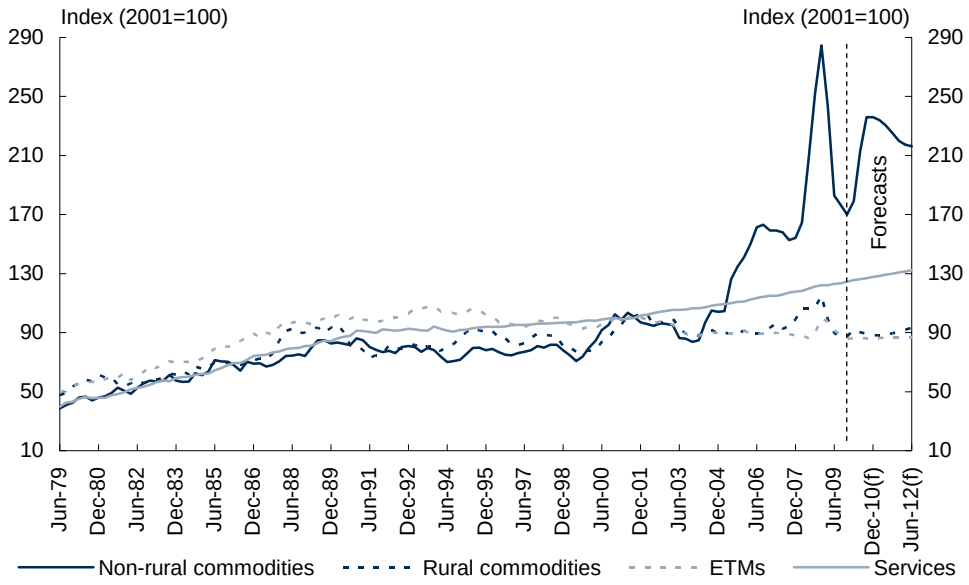
OPPORTUNITIES FOR AUSTRALIA

Significant opportunities are available to Australia as a result of abundant mineral resources, coupled with strong global demand and higher world prices for these resources since the early 2000s. There is reason to believe these opportunities will be relatively long-lasting given the potential for continued strong economic growth over the medium to long term in the world's two most populous nations, China and India, and the impact of that growth on global commodity demand. With the correct policy settings, these opportunities should result in higher national income, the benefits of which are broadly distributed in the community.

The prices we receive for our mineral resources have increased dramatically

Australia has received dramatically higher prices for its non-rural commodity exports since the early 2000s (Chart 1), interrupted recently by the impact of the global financial crisis. These higher prices have been driven by increased global demand for energy and metals.

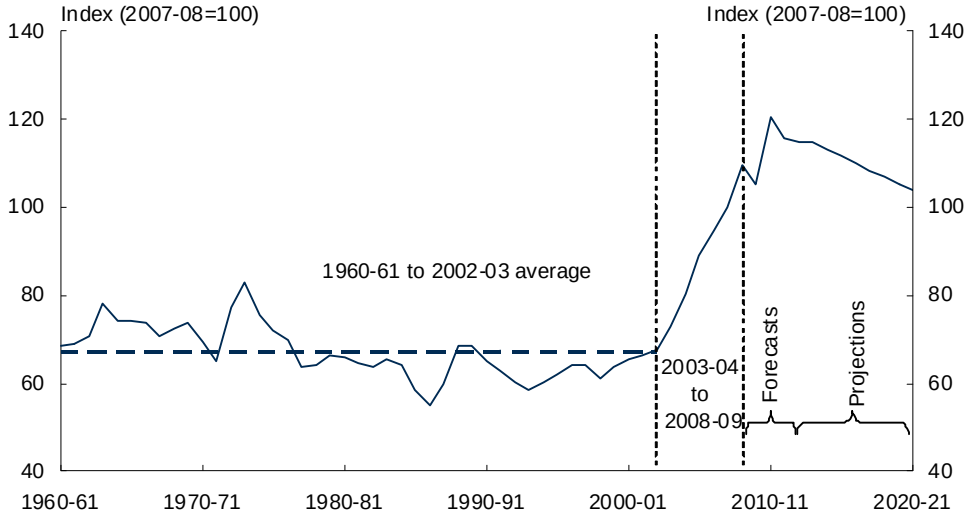
Chart 1: Export prices by goods and services



Note: Elaborately transformed manufactures (ETMs).
Source: ABS cat. no. 5302.0 and Treasury.

Higher mineral resource export prices, combined with reduced prices of imports (especially imports from low-cost producing countries in Asia), have translated into an improvement in Australia's terms of trade (Chart 2). An improved terms of trade provides for an increase in Australia's national income, creating an opportunity for an improvement in the wellbeing of all Australians.

Chart 2: Australia's terms of trade



Source: ABS cat. no. 5206.0 and Treasury.

Australia's terms of trade increased significantly over the course of the past decade, to peak initially in 2008-09 at over 60 per cent above its long-run average (1960-61 to 2002-03). While the terms of trade declined with the onset of the global financial crisis, they are forecast to reach a new peak in 2010-11 before declining slightly in 2011-12. The medium-term projections assume that the terms of trade will continue to decline, reflecting an anticipated increase in the global supply of non-rural commodities.

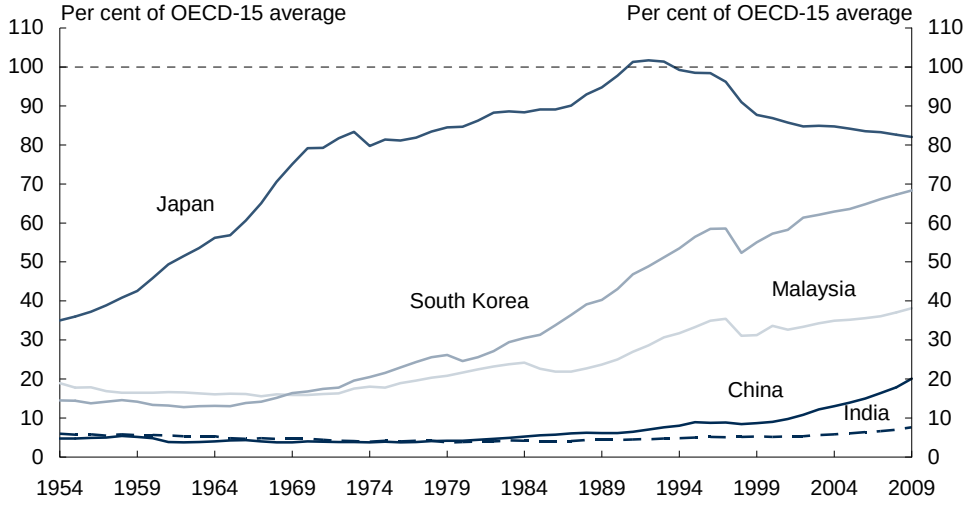
Demand is likely to remain strong

The process of economic convergence of China and India with more developed countries, and the prospect that their relatively strong economic growth and consequent demand for resources could well continue into the coming decades, means it is reasonable to expect that there will be a relatively slow unwinding of historically high non-rural commodity prices.

China's development has resulted in it being the major source of demand growth for mineral resources (ABARE 2010). Since the onset of economic reform around thirty years ago the Chinese economy has enjoyed sustained and rapid economic growth, with a marked catch-up in per capita incomes against more developed countries (Chart 3). India has also enjoyed solid economic growth since it began liberalising its economy in the mid-1980s, and has started to reduce its large income gap with other more developed countries (OECD 2010a).

As China's and India's economies have significant remaining potential for catch-up, their continued growth, barring policy reversals or shocks to their economies, is also likely to underpin relatively strong global demand for non-rural commodities. However, such growth will not necessarily be smooth, and recent events demonstrate that even as it continues commodity prices can still be volatile.

Chart 3: Catch-up in GDP per capita: China and India, 1954-2009



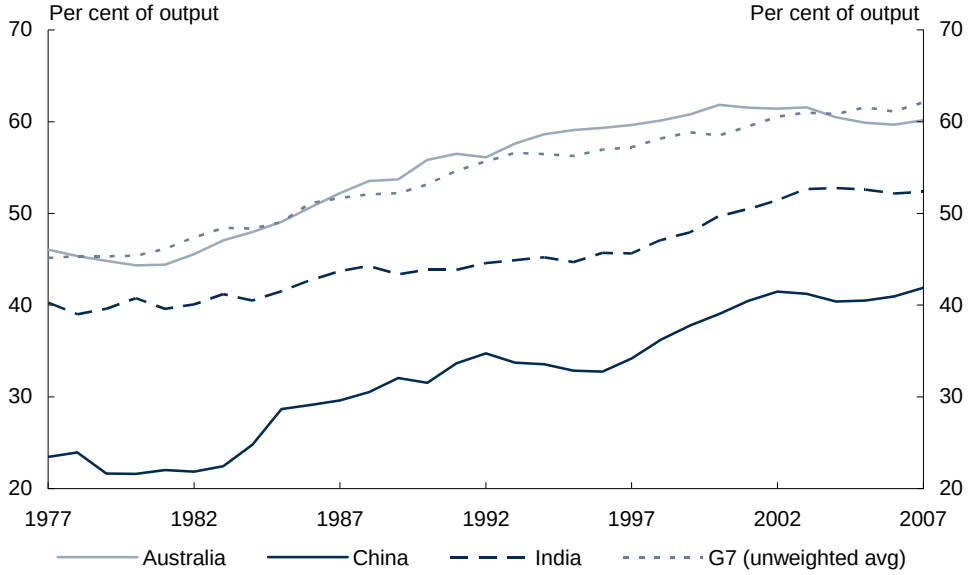
Note: GDP per capita is in 2009 US$ (converted to 2009 price levels with updated 2005 PPPs). The OECD-15 average is a simple average of Australia, Austria, Belgium, Canada, Denmark, Finland, France, Iceland, Ireland, Netherlands, Norway, Sweden, Switzerland, the United Kingdom and the United States.
Source: The Conference Board Total Economy Database and Treasury.

Aggregate GDP figures alone, however, tell only part of the commodity demand story. The structure or composition of economic activity, and how it changes as an economy grows, is also important (Menzie 1995; IMF 2006a).

In countries with low incomes per capita, consumption of metals and energy (coal, oil or gas) is typically low. But as a country industrialises and urbanises, incomes rise and the consumption of metals and energy typically also rise: in this stage, resource consumption may rise in line with GDP. Industrialisation in China and India is reflected in the high levels of investment and rapid urbanisation in both countries. The urban population shares in China and India in 2009 were respectively around four and two times higher than in 1950. Continued rapid urbanisation in both countries is expected, with urban population shares expected to grow to 73 per cent in China and 54 per cent in India by 2050 (United Nations 2010).

However, once industrialised and urbanised, raw material consumption per person may stabilise or even begin to decline, despite the potential for further GDP catch-up. At higher incomes, growth typically becomes more services-driven and the growth in the use of metals per capita tends to stagnate. Growth in the services sector's share of total output is a near-universal phenomenon in developed countries (Chart 4).

Chart 4: Services share of total output

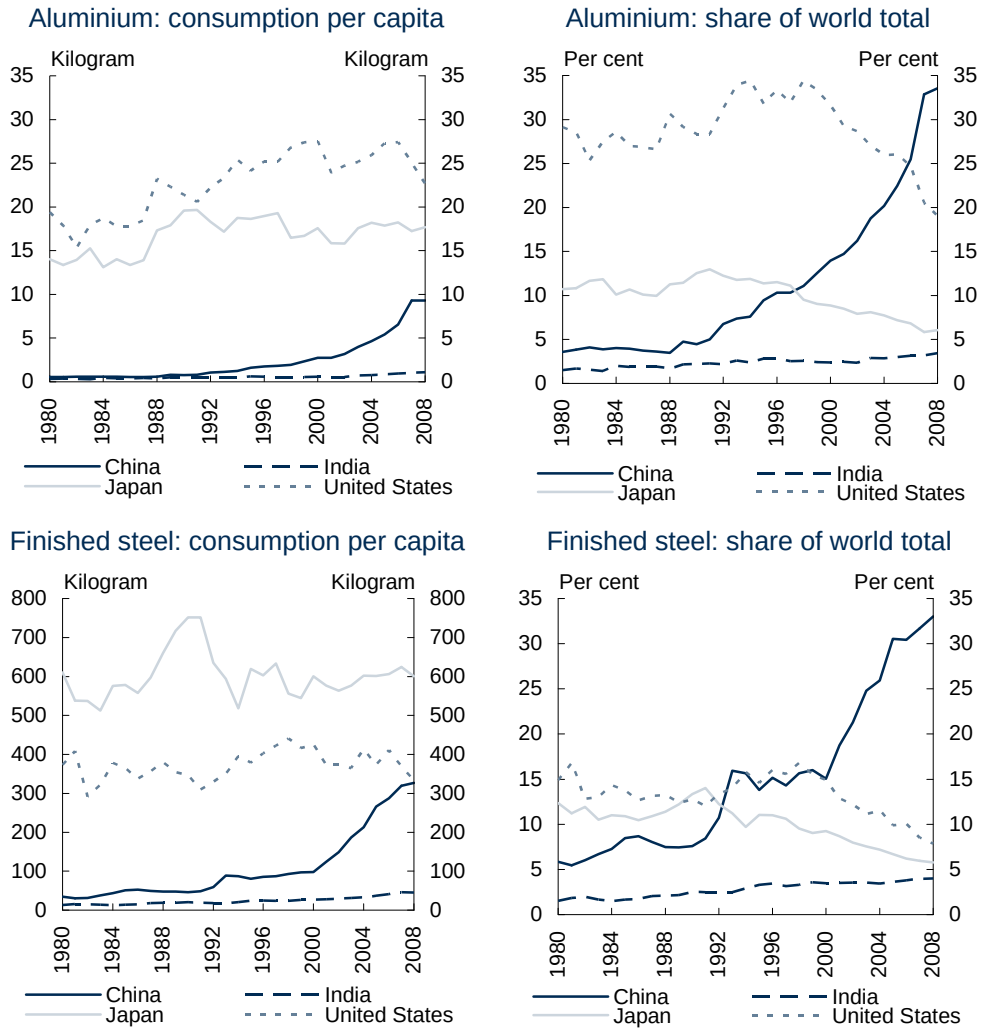


Note: Data for Australia, China and the G7 have been annualised, India uses fiscal year data, data for Japan ends 2006 and Canada ends 2004. For China, data from the tertiary sector proxies the services sector. For India, data are from GDP by industry in current prices with '1999-00 as the base year'.
Source: EU KLEMS database, CEIC China database, CEIC Asia database and Treasury.

As they are in the industrialisation and urbanisation stage of their development, the potential for substantial catch-up by China and India in non-renewable commodity consumption remains, though this may be less than the potential GDP catch-up.

China's and India's growing share of world demand for mineral resources, and further potential for growth, can be seen by consumption trends for aluminium (Chart 5). The remaining scope for catch-up in consumption by China is less apparent for steel — the production of which uses iron ore and black coal — with China's consumption per capita now around that in the United States, though still less than in Japan. However, as measured consumption includes steel used to produce goods for export, underlying domestic consumption of steel in China is likely to be significantly less than in the United States.

Chart 5: Aluminium and finished steel consumption



Source: ABARE, Steel Statistics Yearbooks and Treasury.

Supply will respond over time

The starting point for Australia's ability to profit on a sustained long-term basis from higher non-rural commodity prices is its abundance of mineral resources. For many minerals, Australia's resource reserves rank highly by world standards and their indicative life is considerable (Table 1).

Australian and global supply of mineral resources can be expected to respond to the higher prices, albeit with a lag. Some supply response is already evident. Australia is presently in the early stages of a supply response to price signals that preceded the global financial crisis. The Australian Bureau of Agricultural and Resource Economics is projecting a significant increase in the global supply over the medium term

(ABARE 2010). This response is consistent with the projected decline in the terms of trade in the medium term.

Table 1: Mineral resource exports, indicative resource life and ranking

Mineral resources	Exports 2008-09($m)	Export shares(%)	Indicative life years at 2008(a)	World ranking at 2008(b)
Black coal	54,698	33.9	90	6
Iron and steel	35,602	22.0	70	3
Gold	16,146	10.0	30	2
Aluminium	10,932	6.8	85	2
LNG (Gas)	10,086	6.2	60	14
Crude oil and condensate	8,755	5.4	10	(c)
Copper	5,863	3.6	85	2
Nickel	2,656	1.6	130	1
Zinc	1,858	1.2	35	1
Manganese	1,406	0.9	20	4
Uranium	990	0.6	125	1
Others	12,538	7.8		
Total mineral resource exports	161,532	100.0		

(a) Indicative life for a commodity is calculated as the stock of the accessible economic demonstrated resource (EDR) relative to annual production for that commodity or the relevant raw commodity.
(b) The world ranking is based on the EDR in Australia compared to that in other countries.
(c) The ranking is not available. Australia's reserves of crude oil and condensate accounted for 0.6 per cent of the world total in 2008.

Note: The data for crude oil and condensate and for LNG (Gas) are based on economic demonstrated resources, which for these two commodities is equivalent to accessible economic demonstrated resources.
Source: ABARE, Geoscience Australia and Treasury.

During periods of weak or moderate demand, mineral resource prices tend to reflect the marginal cost of production. A cyclical upturn is often preceded by a period of underinvestment which prevents supply from adequately responding to improved conditions in a timely manner, resulting in significant temporary price increases. Sustained periods of strong prices can generate investment in the resource sector, which is responsive to long-run price expectations (Grant et al. 2005).

The rate at which supply responds depends in part upon implementation lags from investment decision to supply. These include the time needed for exploration, approval, financing and regulatory compliance, as well as the construction of the mine and its associated supply-chain.

Long-run price expectations can also drive a reassessment of the size of global mineral reserves that are recoverable at an economically viable rate. Strong price signals encourage greater investment in exploration activities and new discoveries. Engineering improvements also add to global reserves by increasing the economic viability of marginal resource endowments. However, technological and other productivity improvements can also be offset by a long-term decline in the quality of resource deposits.

Further, greater political and social stability can create more favourable conditions for mineral exploration investment, leading to an increase in the stock of world mineral

reserves. For example, improvements in the political and economic landscape in many Latin American countries have led to increased mineral exploration, investment and production (Kesler 2007). Freight cost barriers are also falling with recent large investments in global shipping (ABARE 2010).

The prices of many commodities declined in the decades leading up to the 2000s (IMF 2006a). A strong supply response and a secular improvement in extraction technology would be consistent with the view that the relative price of many commodities would continue to decline in the long run (Harvey et al. 2010). However, other theories, based principally on concerns over resource depletion, support an alternative view that relative commodity prices will trend upwards over time (Giurco et al. 2010). Other studies have also found slight upward or downward historical trends in commodity prices, with outcomes sensitive to the choice of period over which a trend is considered reflecting the volatility of commodity prices (Frankel 2010).

Prices may remain elevated for some time

Given the above considerations it is difficult to forecast or project long-term commodity prices and the terms of trade. Nevertheless, there are reasonable grounds — in particular, an expectation that global demand will continue to grow strongly for an extended period — to believe that the terms of trade and mineral resource prices will be sustained at high levels for some time. This depends however on the timing of the supply response and the marginal cost of extraction.

CHALLENGES FOR THE ECONOMY

The opportunities provided by the increased worth of Australia's mineral resources together with the associated supply response will also give rise to a number of challenges for the economy as it adjusts over time to the changes in relative prices.

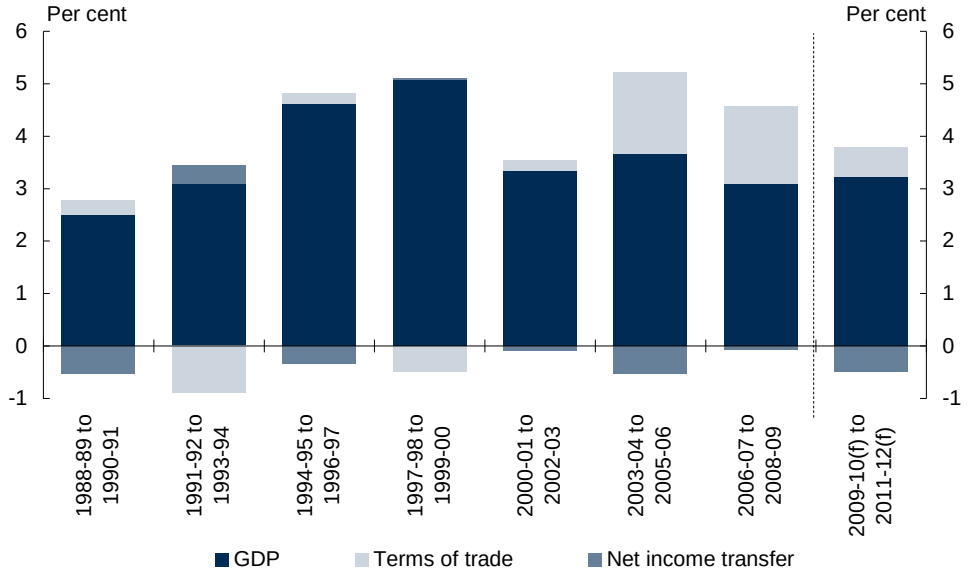
The principal challenges include: ensuring that Australia has institutional and policy settings that make the most of its natural resource endowments; facilitating the adjustments that will arise as labour and capital shift to sectors and regions connected with the mining sector; dealing with tests of the economy's capacity over the next few years; and a current account deficit that is likely to remain relatively high for an extended period.

Converting resource wealth into sustained wellbeing for all Australians

As the terms of trade rose during the 2000s reflecting the increased worth of Australia's exports, gross national income increased at a much faster rate than GDP (Chart 6). Stronger growth in national income relative to domestic production reflects a strong positive effect from changes in the terms of trade, partially offset by an increase in net income transfers to foreigners (including in respect of their ownership of mining

companies operating in Australia).[1] The expected terms of trade improvement in the forecast period will see a further increase in national income relative to GDP.

Chart 6: Components of real gross national income growth



Source: ABS cat. no. 5206.0 and Treasury.

While the direct effect of higher commodity prices is to increase Australia's national income, natural mineral wealth and increases in such wealth do not always convert into higher sustained growth or wellbeing overall. Not all resource-rich countries have been able to translate resource wealth into sustained economic performance, and there may be some costs associated with natural resource wealth (see Box 1: Natural resource curses and their causes). But while many resource-rich countries have at times lagged behind in economic performance, others such as Australia have done relatively well.

The cross-country evidence highlights sound institutions and policy responses as key explanations for why some resource-rich countries have had better outcomes than others (Mehlum et al. 2006; Boschini et al. 2007; Frankel 2010). This gives strong support to the notion that, with the right institutions and policy settings, it is possible to not just escape the curse from natural resource windfalls, but to prosper from them.

1 None of the conventional national account measures of annual production or income, even net measures that adjust for depreciation of the capital stock, take account of the depletion of non-renewable resources (Stiglitz et al. 2009). However, while estimates of this nature are experimental, the ABS does provide separate estimates of the value of the depletion in subsoil assets (ABS 2010).

Box 1: Natural resource curses and their causes

'Natural resource curse' is the term given to the observation that for many countries endowments of oil or other natural resource wealth are associated with lower economic growth than otherwise (Sachs and Warner 2001; Auty 2001). A natural resource curse may also be thought of in terms of its negative impact on political, social, or environmental outcomes (Goodman and Worth 2008). There is an extensive body of literature on the causes of, and policy responses to, the natural resource curse (see Frankel 2010 and Sturm et al. 2009 for recent reviews). Some of the causes documented include the following:

- High commodity price volatility, by leading to income volatility, can adversely affect economic growth (Van der Ploeg and Poelhekke 2007).

- Endowments of commodities, particularly oil, can encourage rent-seeking and corruption that have significant negative effects on the quality of domestic institutions (Sala-i-Martin and Subramanian 2003; Van der Ploeg and Arezki 2007) and democratic processes (Collier 2007).

- The effect of natural resource windfalls on government revenues has the potential to hamper the quality of policymaking. In the absence of a sound fiscal policy framework, this effect can lead to an improper management of public surpluses, for example through pro-cyclical fiscal policies and unproductive spending (Auty 2001), as well as delays to important economic reforms (Auty 2003).

- Specialisation in natural resources can be detrimental to growth if it leads to reduced incentives to develop non-resource parts of the economy that may generate spill-over benefits (Auty 2001; Stevens 2003). For further detail, see Box 2: Dutch disease and de-industrialisation.

Importantly, the literature finds that it is not inevitable that resource rich-countries will be worse off than other countries. For the handful of resource-rich OECD countries like Australia, resource endowments have had a positive effect on GDP per capita (Boulhol et al. 2008). There are also examples of developing countries, such as Botswana, that have benefited from resource endowments (Iimi 2006).

A sustained improvement in the terms of trade will require structural adjustments in the economy

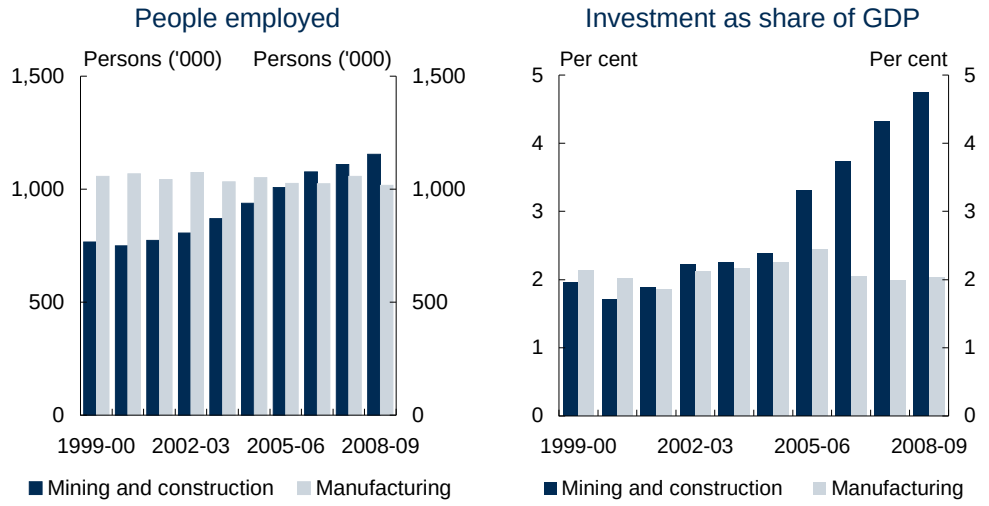
In the long run, sustained higher mineral resource prices will lead to an expansion in the mining sector and related parts of the construction and manufacturing industries, and an increase in national income. For an economy near capacity, this will require a relative decline in other sectors, especially those that are trade-exposed (see Box 2: Dutch disease and de-industrialisation). This premise, often referred to in Australia as

the 'two speed economy', may present itself as different industries and regions growing at different speeds.

The evidence from recent years points toward the start of these adjustments. However, it is important to note that the structural implications of the terms of trade are not the only adjustments shaping the Australian economy. For example, a sustained increase in the working age population would in part offset these structural adjustments.[2] Also, the growth in the services sector, which dwarfs the mining sector as a share of output, is a near-universal phenomenon in developed countries — representing the other side of the growth composition story (OECD 2005).

Higher mineral resource prices raise the rate of return on mining investments, inducing greater investment in mining to expand supply capacity. The increased competition for labour from mining (and related parts of the construction sector) puts pressure on other sectors. As expected, the employment and investment shares in mining and construction have increased significantly since the early 2000s (Chart 7).

Chart 7: Growth in mining and construction employment and investment



Source: ABS cat. no. 6291.0.55.003, 5204.0 and Treasury.

As Australia's terms of trade improve with higher export prices, increased profitability of Australian mining investments attracts capital inflows, causing the exchange rate to increase (Chart 8). The pressure exerted on import competing and non-mining export industries is one of the means by which economic resources are freed up for use by the mining and mining-related sectors (Garton 2008).

2 This is an important implication of the Rybczynski theorem (Rybczynski 1955).

Box 2: Dutch disease and de-industrialisation

The potential for rapid growth in the value of mineral exports to have structural implications for the economy was pointed out by Gregory (1976). Subsequently, the term 'Dutch disease' was used by *The Economist* in 1977 to refer to the adverse effect on Dutch manufacturing of North Sea oil and gas discoveries (The Economist 1977).

A rise in the terms of trade emanating from a rise in the price of commodities due to a demand shock and resource boom affects the Australian economy in two ways: through a resource movement effect and a spending effect (Corden and Neary 1982).

The *resource movement effect* is the rise in the demand for labour and capital in the commodities sector which leads to a shift in factors of production toward that sector and away from the lagging tradeable sector and (initially) the non-tradeable sector.

The *spending effect* occurs as a result of the extra income generated by the commodities boom. This increases the demand for non-tradeable services, which in turn raises the demand for labour in the non-tradeable service sector, attracting labour away from the manufacturing sector. As a result of the increased demand for non-tradeables, their price increases relative to the price of tradeable goods — that is, there is an appreciation of the real exchange rate.

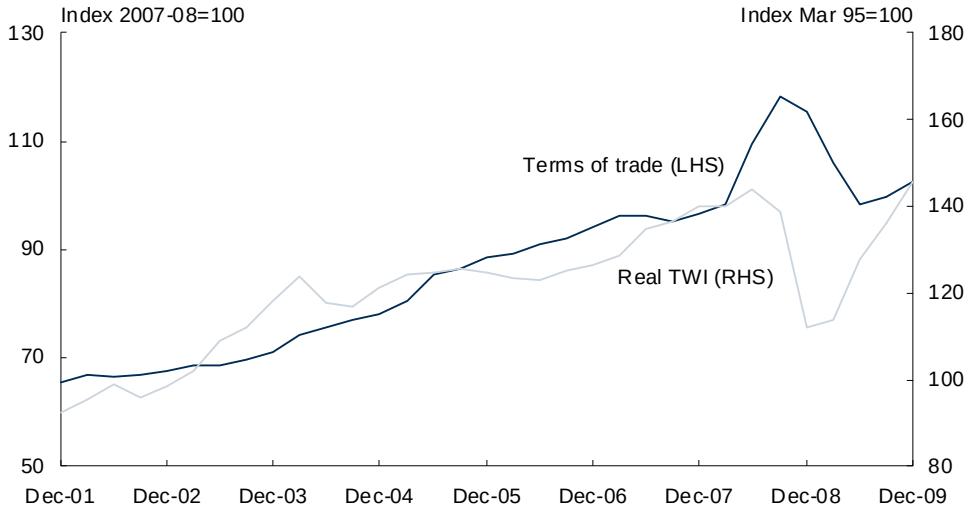
Where capital can be imported and the employment share of the commodities sector is very low, the principal source of adjustment in an economy will occur as a result of the spending effect, including through government spending on non-tradeables such as retail services and health.

A policy concern associated with Dutch disease is that a temporary increase in commodity prices (or short-lived resource stocks) leads to a sharp but temporary appreciation in the real exchange rate (which can occur even under a fixed exchange rate regime). As a result, when commodity prices normalise or when resources are depleted, tradeable sectors that have disappeared might not simply reappear. This concern is compounded if government spending does not adjust back to pre-boom settings.

If the commodity price increase is sustained and resource life long-lasting, the policy concern is to facilitate structural change to take advantage of the sustained terms of trade improvement, and not to obstruct it. However, this still might lower long-term growth if the expanding industry does not generate the same extent of positive spillovers as the contracting industry (Gylfason et al. 1999).

This highlights the fact that even though it is difficult to predict, the extent to which an improvement in the terms of trade is sustained can have a strong bearing on the appropriate policy responses.

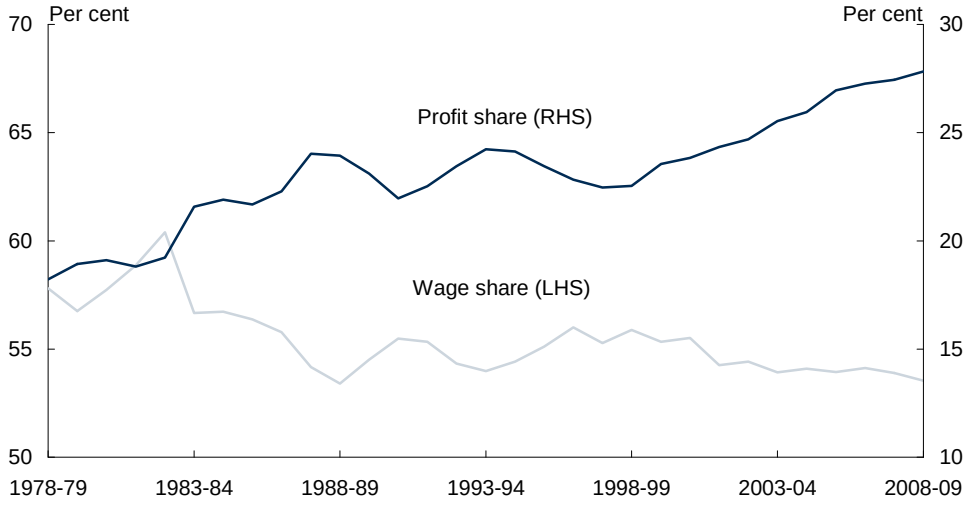
Chart 8: Real exchange rate and the terms of trade



Note: Trade-weighted index (TWI).
Source: ABS cat. no. 5302.0 and RBA.

Consistent with the growth of inputs, the volume of mineral resource production has also increased since the early 2000s. However, the rate of growth of outputs for mining so far is relatively restrained, reflecting both the depletion of existing sites and fields and time lags in mining investment generating increased output (Gruen and Kennedy 2006; Productivity Commission 2009). There has also been continued growth in both manufacturing and service exports and outputs over the same period.

Chart 9: Profit and wage share of total factor income



Note: The profit share excludes returns in respect of dwellings owned by persons and profits of the general government, and the wage share is for non-farm compensation of employees.
Source: ABS cat. no. 5206.0 and Treasury.

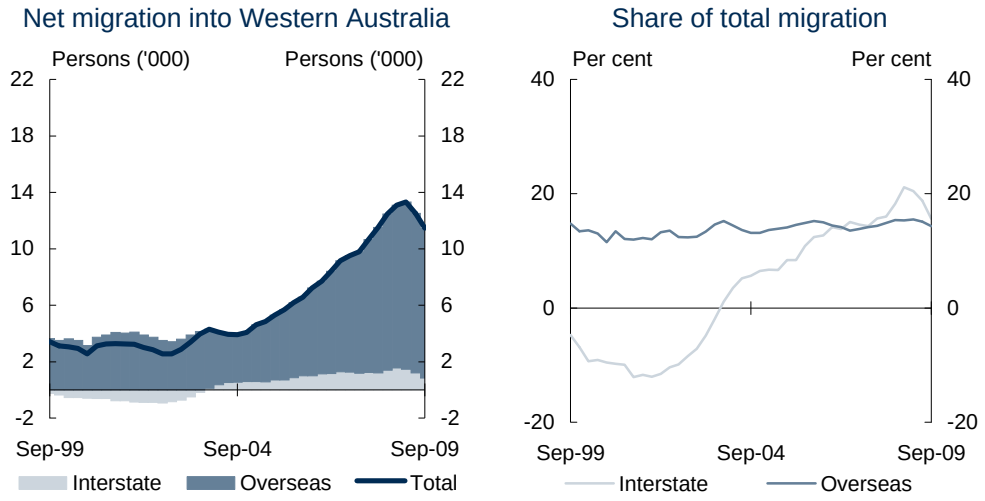
As the mining sector is highly capital-intensive, its expansion relative to other sectors can also be expected to result in an increase in the profit share of income. The profit share reached a high point of around 28 per cent in 2008-09 while the wage share has declined in the last decade (Chart 9).

While the rapid growth in the mining sector has been temporarily interrupted by the impact of the global financial crisis, the mining sector's expansion would be expected to increase the demand for labour in Western Australia and Queensland where mining activity is largely concentrated.

Prior to 2008, this increase primarily presented itself in existing residents increasing their participation and hours worked. Between June 2002 and June 2008, the full-time equivalent employment to working-age population ratio increased from around 51 per cent to 55 per cent in Queensland and from around 52 per cent to 57 per cent in Western Australia. These increases are large compared to the rest of Australia, for which the ratio increased from around 49 per cent to 51 per cent over the same period.

The increased demand for labour has also been reflected in changes in relative wage levels between States (see Statement 2, Chart 11). Workers would be expected to move in response to changes in relative wages and differences in employment rates between regions. Studies have found evidence of labour moving between States in response to state-specific employment shocks, but with the full adjustment taking up to seven years (Debelle and Vickery 1998; McKissack et al. 2008). During the 2000s, a resource driven change in migration flows between States was evident for Western Australia, reflecting the greater importance of mining for that State's economy (Chart 10).

Chart 10: Migration into Western Australia[(a)]



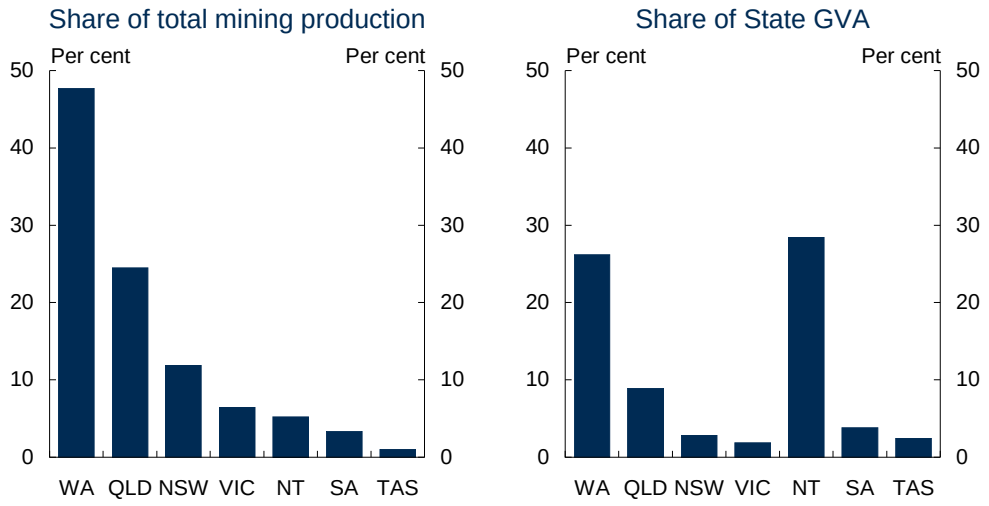
(a) Data are a four-quarter moving average.
Source: ABS cat. no. 3101.0 and Treasury.

While the mobility of labour between regions is constrained by individuals taking account of the family and social costs of moving (though this could be less relevant for international migrants once they had decided to migrate), constraints can also arise from imposts such as conveyancing stamp duties that increase the financial cost of relocation. The supply responsiveness of other markets, in particular residential housing, is also relevant. In the 2000s, the relative increase in median house prices in Brisbane and Perth may have acted as a brake on migration to those States.

Ensuring income gains from higher terms of trade are distributed appropriately

Australia's mining resource production is concentrated in Western Australia and Queensland, and is of most importance to the Northern Territory and Western Australian economies (Chart 11).

Chart 11: Mining production and value added shares, 2007-08



Note: GVA is gross value added at basic prices. The ACT is excluded as there is insignificant mining production.
Source: ABS cat. no. 8155.0, 5220.0 and Treasury.

However, the benefits of mining production are distributed more broadly. Part of the income gains from higher commodity prices accrue to households through their shareholdings in mining companies (directly, or indirectly through superannuation funds). Part of the gains also accrue to government through resource charges or taxes, and where these revenue gains accrue disproportionately to particular State governments, fiscal equalisation arrangements allocate those gains among all State and Territory governments. The overall tax-transfer system in Australia further acts to spread the gains, as does the reallocation of resources within the economy.

Whether the community in general shares sufficiently in the wealth arising from Australia's natural resource endowments depends critically on whether resource

charges or taxes reflect an appropriate price for the right to use or extract those resources. Currently, governments have generally allowed private firms to extract non-renewable resources in return for a charge, typically per unit of production or percentage of price, regardless of actual production costs. These charges have not kept pace with the increased profitability of Australia's resource deposits.

Over the recent period of rising mineral resource prices the community's share in the increased value of its resources, received through existing resource taxes and royalties, has declined. The effective resource charge has more than halved, from an average of around 34 per cent of resource profits over the first half of the 2000s to less than 14 per cent in 2008-09 (Commonwealth of Australia 2010a).

A continuing mining boom will test the economy's capacity

The outlook — outlined in Statement 2 — is that the Australian economy is returning to more normal levels of capacity utilisation. A return to full capacity will increase any short- to medium-term stresses from adjusting to the relative strength of the mining and related sectors.

As discussed in Budget Paper No. 1 in the 2008-09 Budget, changes in the supply of and demand for particular skills in aggregate and within regions are normal features of market economies (Commonwealth of Australia 2008). With flexible and competitive markets, these changes will be reflected in relative wage movements which assist labour markets for those skills, or in particular regions, to eliminate shortfalls over time.

However, even with a flexible labour market, adjustment processes do not always happen quickly, leading to a short-term shortage for particular skills. For example, workers can take time to respond to the new wage rates, and there may be considerable time lags associated with the movement of labour between States. Long-lasting skills shortages, however, are an indicator of institutional or other rigidities that impede price signals and adjustment mechanisms.

Infrastructure constraints in some areas have also emerged over the past decade from the sharp increase in world demand for Australia's mineral resources. The long-lived nature of infrastructure assets makes it inevitable that they will have difficulty coping with an unexpected — or temporary — surge in demand. However, any persistent bottlenecks could suggest the need for a policy response.

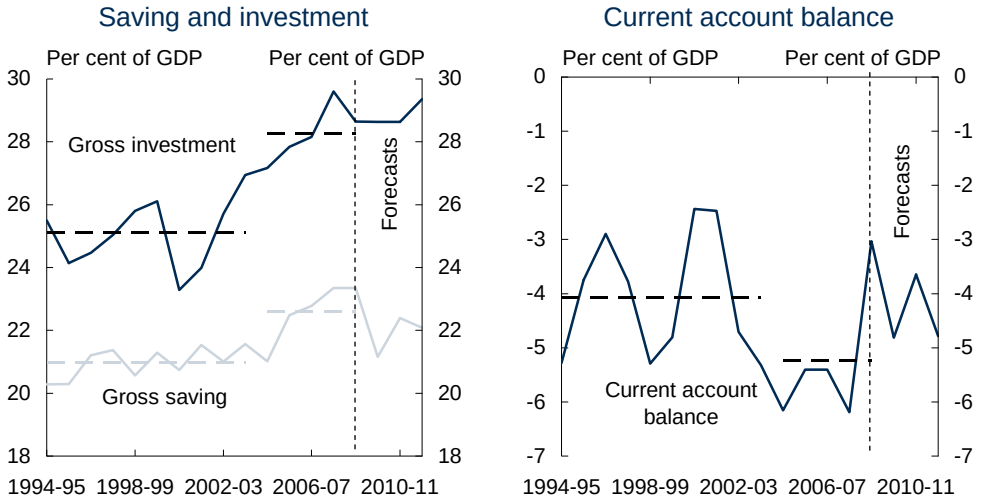
Effective policies to expand capacity or address infrastructure bottlenecks should encompass both efficient investment by the private and public sectors and efficient utilisation of existing capacity. Well-functioning markets with effective price signals are necessary to support such policies.

Implications for the current account deficit

The current account deficit reflects the excess of national investment over national saving, which must be funded from foreign savings. Sustained high mineral resource prices imply a need for high levels of national investment over an extended period (Garton et al. 2010). An increase in national investment would expand the productive capacity of the resource sector, as well as meet housing and infrastructure needs arising from population growth (explained in part by the strength of the resource sector). As saving is unlikely to rise to the same extent, Australia's current account deficit is likely to be relatively high, on average, over an extended period.

Impacts on investment and the current account have been evident since the mining boom began. The current account deficit has averaged 5¼ per cent of GDP since 2004-05, compared with its average over the preceding 10 years of 4 per cent of GDP (Chart 12). That increase reflects a rise in national investment, which has been about 3¼ per cent of GDP higher than over the preceding 10 years. National saving has been around 1½ per cent of GDP higher, on average, over the same period, funding about half of the increase in national investment.

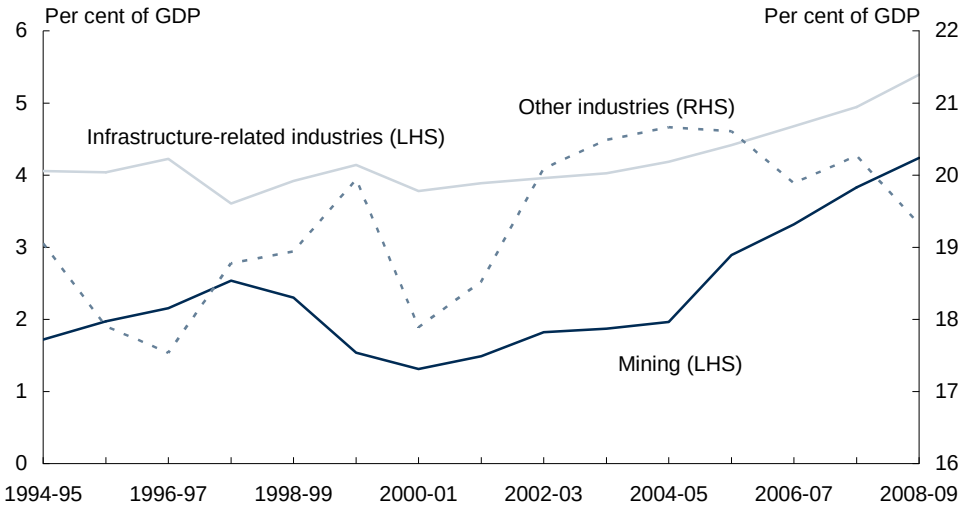
Chart 12: Gross national saving, investment and current account balance



Note: The current account balance may not be equal to saving less investment due to statistical discrepancies. Discrepancies over the forecast period largely reflect the substantial discrepancy in 2008-09.
Source: ABS cat. no. 5204.0, 5302.0 and Treasury.

The largest contributor to higher national investment has been mining investment, which has risen from around 1¾ per cent of GDP before 2004-05 to 4¼ per cent of GDP in 2008-09 (Chart 13). Mining investment as a share of GDP may rise even further: investment in liquefied natural gas projects alone could plausibly increase to around 3 per cent of GDP by 2013-14. This further rise in investment, together with the assumed easing in commodity prices over the projection period, suggests that the current account deficit might be expected to rise again as a share of GDP after 2011-12.

Chart 13: Gross fixed capital formation by industry



Note: 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 and Treasury.

High current account deficits do not necessarily indicate a macroeconomic imbalance. Provided the underlying investment and saving decisions are well-based and not distorted by government policies or over-exuberant market behaviour, resultant current account deficits would simply reflect a higher level of profitable investment opportunities (IMF 2006b). The fact that Australia's recent high current account deficits reflect increases in mining and infrastructure investment distinguishes us from many other countries where increased deficits over recent years have been driven by either falls in national saving rates or over-investment in housing associated with house price bubbles (Garton et al. 2010). This increase in investment will raise future productivity and output growth. As long as returns on investment exceed the cost of capital, this will raise Australian incomes (notwithstanding the cost of servicing foreign borrowing).

That said, large current account deficits do expose us to risks in the event of a reversal in capital inflows. The global financial crisis has highlighted the potential for global financial markets to fail and for access to finance to be disrupted. These risks are mitigated by a range of factors (IMF 2006b), including the fact that our deficits are investment-driven, our healthy fiscal position and flexible exchange rate, extensive hedging of foreign exchange exposures and a robust financial system. However, the potential for external financing to create macroeconomic vulnerability requires ongoing management (see Box 3: Managing the challenges with the current account deficit).

Box 3: Managing the challenges with the current account deficit

Foreign investors' willingness to continue financing large current account deficits over a long period owes substantially to Australia's strong track record in macroeconomic management — in particular, a strong fiscal position — and structural reform. Maintaining fiscal discipline and a continued focus on microeconomic reform will be central to limiting external financing risks. Microeconomic reforms can improve the efficiency of investment and ensure that capital is allocated to its most efficient uses. Providing assurance that borrowing is used for productive purposes, that yield adequate economic returns, promotes confidence that foreign liabilities will be serviced readily.

Boosting national saving so that more of our future investment needs can be financed domestically will also help to reduce current account financing risks. Australia's system of compulsory superannuation savings has contributed significantly to national saving since it commenced in 1992, providing a growing pool of stable financing for investment currently worth $1 trillion. *A Tax Plan for Our Future* announced measures to build on this successful reform, including an increase in the superannuation guarantee rate from 9 to 12 per cent over time. These measures are expected to boost national saving by a further 0.4 per cent of GDP by 2035 (Commonwealth of Australia 2010b).

The Government's medium-term fiscal strategy will also help ensure adequate national saving. Achieving surpluses on average over the medium term means that the Australian Government will not be contributing to the current account deficit over time: indeed, surpluses will contribute to financing investment in the rest of the economy.

Financial regulation is another key element in managing risks, as around 70 per cent of Australia's external financing since the mid-1990s has been intermediated through the financial sector. In the lead-up to the global financial crisis, inflows of foreign capital into a number of countries helped fuel a build-up of risk exposures in the financial system. More robust prudential regulation helped keep the Australian financial system largely free of these problems. A challenge will be to ensure that a renewed mining boom does not give rise to imbalances in asset and credit markets.

The quality of financial regulation internationally is also critical in limiting Australia's exposure to external financing risks. During the recent crisis Australian financial institutions were affected by the closure of offshore funds markets, which stemmed from regulatory failures overseas. A key focus of Australia's involvement in the G-20 is to strengthen global financial regulation. G-20 Leaders have tasked the Financial Stability Board with developing and implementing new global standards on financial regulation, including stricter capital and liquidity requirements. Another key priority for the G-20 is the Framework for Strong, Sustainable and Balanced Growth, which aims to secure agreement on policies to promote a sustained global economic recovery without the imbalances that contributed to the global financial crisis. This will help reduce the risk of external shocks that could adversely affect Australia's external financing.

SOUND POLICY SETTINGS

Australia's institutional settings — which include a market-determined exchange rate, medium-term monetary and fiscal policy frameworks as well as a flexible labour market — have given the economy the flexibility needed to deal with different economic shocks and helped to largely avoid problems that arose in previous terms of trade booms (Gruen 2006). As commodity prices rose during the 2000s, these settings acted as a shock absorber, muting the expansionary effects of the terms of trade on the aggregate economy, allowing resources to reallocate, and moderating inflation pressures.

To take full advantage of the opportunities and meet the challenges of the improved terms of trade, we need to build on these strong policy foundations. Doing so will involve:

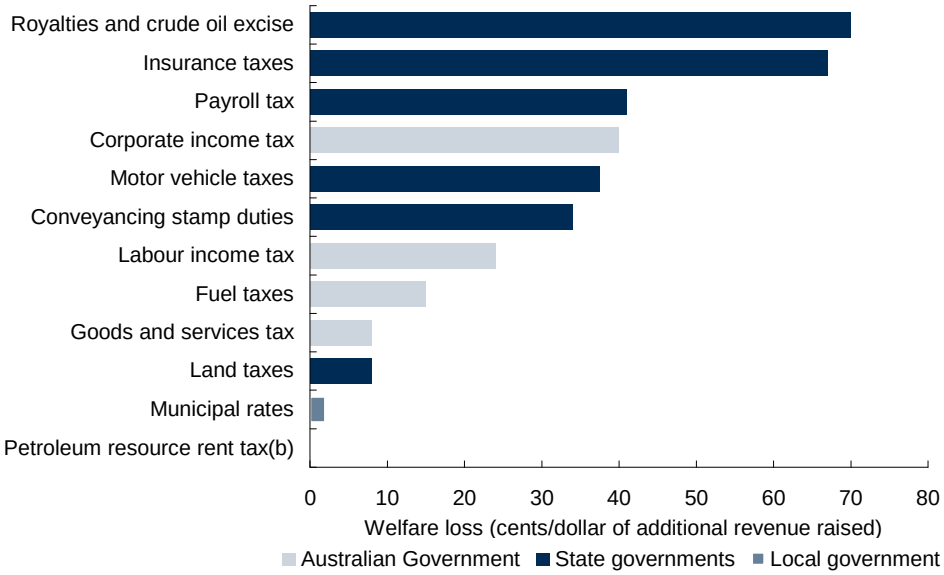
- undertaking tax reform to support productivity and allow other sectors of the economy to grow;
- applying an appropriate fiscal policy response to terms of trade shocks;
- better distributing the benefits of Australia's increased resource wealth over time by improving superannuation arrangements for individuals; and
- pursuing reforms more broadly and making productive investments, to encourage a diverse and skilled economy and expand economic capacity.

A tax system that encourages growth across the economy

As owners of natural resources on behalf of the community, Australian governments have a responsibility to ensure that the community shares in the benefits from the sale of Australia's non-renewable resources. In Australia, governments have generally allowed private firms to extract non-renewable resources in return for a charge that has not kept pace with the increased value of Australia's resource deposits. This has resulted in Australia forgoing some of its potential national income gain from the stronger terms of trade.

The current charging arrangements also distort investment and production decisions, further lowering the community's return from its resources. Analysis commissioned by the Australia's Future Tax System review found the most inefficient taxes levied in Australia include mining royalties and crude oil excise; a number of state taxes including insurance taxes, payroll tax and stamp duties; and company income tax (Chart 14).

Chart 14: Marginal welfare loss from a small increase in selected taxes[(a)]



(a) The welfare loss from varying each tax has been assessed using the KPMG Econtech MM900 general equilibrium model of the Australian economy. The welfare loss is the loss in consumer welfare per dollar of revenue raised for a small (5 per cent) increase in each tax, simulated individually. It is measured as the amount of lump sum compensation required to restore the representative consumer's level of satisfaction (utility) to its original level, after returning the revenue raised by the tax to the consumer as a lump sum transfer. The extent of such compensation reflects the distorting effect of the tax on the economy.

(b) The petroleum resource rent tax is modelled as a pure rent tax giving rise to a zero welfare loss. In practice, a small increase in this tax could be expected to induce some welfare loss because it is not a pure resource rent tax with full loss offset. However, it would be expected to rank as one of the most efficient taxes in the chart.

Source: KPMG Econtech, produced for the Review of Australia's Future Tax System.

An inefficient tax results in lower GDP because it induces people to change their work, investment or saving decisions. For example, every additional dollar of revenue raised from royalties is estimated to cost the community around 70 cents because miners reduce their investment and output.

Encouraging investment and jobs in the mining sector

The Government will reform the taxation of Australia's non-renewable resources, with a uniform resource rent tax — the Resource Super Profits Tax (RSPT) — to apply to Australia's non-renewable resources from 1 July 2012 (Commonwealth of Australia 2010b). The RSPT will be payable at a rate of 40 per cent on the realised value of all resource deposits, with the exception of projects within the scope of the Petroleum Resource Rent Tax, for which opt-in arrangements will be developed in consultation with industry.

Under the RSPT, the States will be able to continue to levy royalties. However, the Australian Government will provide a refundable credit for state royalties paid. The credit will be available at least up to the amount of royalties imposed at the time of

announcement, including scheduled increases. Refunding royalties will allow the States to continue to collect a stable stream of revenue from royalties, while removing the distorting effects they have on investment and production.

The RSPT only taxes economic rents, or 'super profits'. Super profits reflect the rents attributable to the mineral resource and other location-specific rents, and also firm-specific rents arising from firm attributes such as know-how.

This is in stark contrast to the current royalty arrangements which deter investment and reduce jobs, as royalties apply no matter how profitable a project might be. Only projects generating high returns will pay more tax compared to current arrangements. However, new highly profitable projects will remain attractive to investors: the RSPT only takes 40 per cent of the super profits that would otherwise go to shareholders.

More marginal mines that currently pay royalties may not earn sufficient profits to be net payers of the resource rent tax, so they will have an incentive to expand. Marginal prospective mines will pay less under the RSPT than under royalties, and so a disincentive to invest in some new projects will also be removed.

As the RSPT is more responsive than royalties to changes in profitability it will also act in a counter-cyclical fashion, collecting more revenue during booms and less when prices are subdued.

Exploration incentives, as influenced by company income tax arrangements, will also be improved through a new Resource Exploration Rebate. The rebate will provide significant cash flow benefits to small, pre-profit exploration companies. Currently, these smaller companies face a competitive disadvantage because they have little taxable income against which to deduct their exploration expenditure.

Notwithstanding the greater expected net revenues, Australia will remain an attractive place for mining projects, given the economically efficient design of the RSPT, the exploration rebate, Australia's stock of mineral resources and Australia's stable business environment for long-term investment.

In the long term, the reforms to resource taxation will lead to more investment and jobs in the resource sector. According to independent modelling by KPMG Econtech, commissioned by the Australian Treasury, the reforms to the taxation of Australia's non-renewable resources are estimated to result in around a 4.5 per cent increase in investment, a 7 per cent increase in employment and a 5.5 per cent increase in output in the resource sector in the long run. Overall, KPMG Econtech projected that resource

taxation reforms could lead to an increase in GDP of around 0.3 per cent in the long run.[3]

It should be noted that the modelled analysis is sensitive to the assumptions used, particularly the degree of capital mobility. However, differing assumptions would only affect the size of the efficiency gains and not their direction. In the long run, the assumption of perfect capital mobility is likely to hold as used in the KPMG Econtech modelling.

Allowing other sectors to grow — a lower company income tax rate

The Australia's Future Tax System review outlined how the structure of the tax system can affect economic growth (Australia's Future Tax System 2009). Recent work undertaken for the OECD shows that in terms of the major tax bases, company income tax has the largest adverse effect on economic growth, followed by personal income taxes, consumption taxes and land tax (Johanssen et al. 2009). Taxes which are less efficient at raising revenue are levied on bases which can move or change to escape the tax.

Consequently, the Australia's Future Tax System review recommended having a lighter tax burden on more mobile bases, such as investment — particularly in the context of continued globalisation — and taxing less mobile bases (such as resource rents) more heavily.

Australia's company income tax rate is high compared to other OECD countries of similar size. In 2009, Australia's 30 per cent company income tax rate was around 5 percentage points higher than the average for small- to medium-size OECD economies (Chart 15). In our region, economies such as Hong Kong, Singapore, Taiwan and Vietnam have much lower rates of company income tax.

The Government will use part of the revenue from the RSPT to fund a cut in the company income tax rate to 28 per cent. A lower company income tax rate will improve incentives to invest in Australia, boosting the capital stock available for Australians to work with. Greater capital intensity will lead to higher labour productivity and therefore higher real wages for Australian workers, ensuring the benefits of a strong economy are widespread.

Cutting the company income tax rate will also help sectors other than mining to attract investment and grow.

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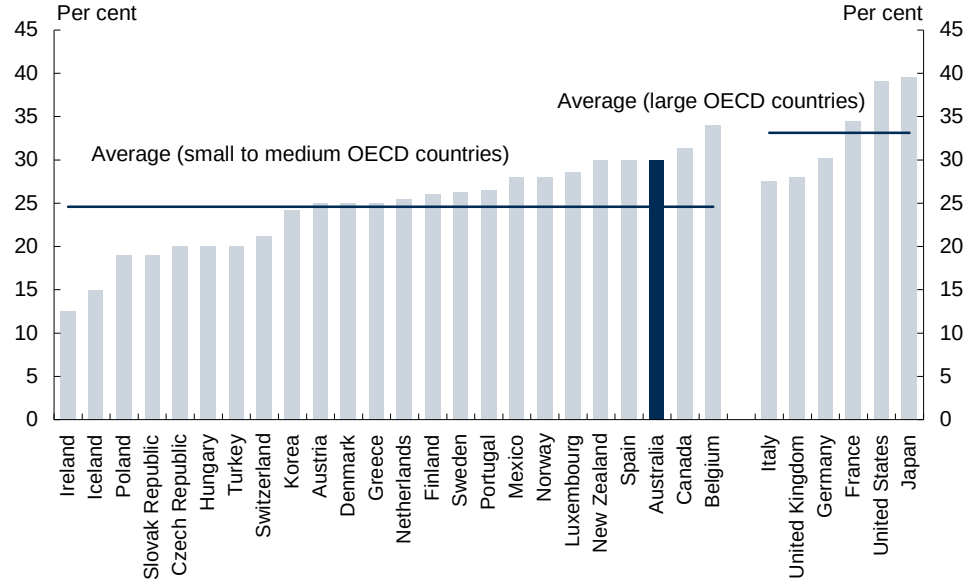
3 The Australian Treasury provided the Government's policy parameters for tax reform to KPMG Econtech which then independently modelled their economic effects. KPMG Econtech was not involved in policy development.

Chart 15: Statutory corporate tax rates, OECD countries 2009



Source: OECD Tax Database.

In the KPMG Econtech modelling, the potential long-run gain to total output from reforms to resource taxation and reducing the company income tax rate to 28 per cent is projected to be around 0.7 per cent. Real household consumption is projected to be 0.4 per cent higher. The modelling also estimates that real wages would be around 1.1 per cent higher than otherwise in the long run.

The most important driver of the long-run increase in GDP and real wages is the increase in the capital stock, as a result of increased investment, improved resource allocation and the associated increase in labour productivity and labour demand. For example, total investment is projected to be around 2.1 per cent higher in the long run.

Fiscal policy responses to terms of trade shocks

The appropriate fiscal policy response to a rise in the terms of trade depends on its expected duration. Although it is difficult to distinguish between commodity price cycles that are permanent (or relatively long-lasting) and those which are temporary, there are a number of principles which can help shape fiscal policy under both circumstances.

Should a rise in the terms of trade be temporary, those parts of revenue and government expenditures that move with the economic cycle (the automatic stabilisers) should be allowed to operate freely — generating a budget surplus (IMF 2006b). Increased expenditures should be avoided, as these may risk a structural deterioration in the fiscal position.

The short- to medium-term accumulation of surpluses will help provide the necessary fiscal space to run deficits during periods of below-trend growth, and is consistent with the principles of fiscal sustainability. This would also see fiscal policy exerting a restraining influence on economic activity, thereby supporting monetary policy.

While there is unavoidable uncertainty about how mineral prices will evolve, it is likely that a substantial part of this increase in income flowing from the terms of trade will be sustained for a relatively long time. The accumulation of surpluses under this scenario is likely to be more prolonged — implying a structural improvement in the fiscal position over the medium to longer term.

In addition to managing the challenges presented by our strong terms of trade, enhancing economic growth is a longer term objective of fiscal policy. In the medium to longer term, the Government's fiscal policy will help ensure that resources are allocated to their most productive uses, and will provide the ability to invest in welfare-enhancing drivers of productivity and growth.

Saving the benefits of improved resource revenues for the future

A structurally higher fiscal position can present its own challenges. Persistent budget surpluses can make the task of maintaining fiscal discipline and directing revenue to uses that are of lasting benefit more difficult (OECD 2008). Debates for managing natural resource wealth often suggest that commodity tax revenues be invested in a sovereign wealth fund which, among other things, aims to distribute the benefits of resource endowments over a long period of time.

The Government's decision to fund changes to superannuation out of RSPT receipts shares similar goals with many sovereign wealth funds around the world — namely to invest the benefits of our resources over a long period. These changes provide an additional superannuation contribution of up to $500 per year for low-income earners, provide higher superannuation contribution caps for those nearing retirement, and raise the superannuation guarantee age limit. These measures have been complemented by the increase in the superannuation guarantee to 12 per cent by 2019-20.

These reforms will increase private and national saving and help to ensure that the wealth from the community's resources is invested over a long period of time — rather than being consumed immediately — providing an enduring benefit from better charging for mineral resource access.

Improving skills and infrastructure

Flexible labour markets and investing in skills

With growth in labour demand likely to be much stronger in some industry sectors and regions than in others, a flexible labour market is critical to ensuring broad wages growth reflects productivity improvements, thereby containing inflationary pressures

during periods of high capacity utilisation. Current enterprise-focused wage setting arrangements limit the scope for higher wages in one sector to spill over into other sectors when not supported by labour market conditions.

Reducing impediments to labour mobility, such as inconsistent skills recognition arrangements, will also limit any geographically driven wage and inflationary pressures.

To ensure that the benefits of a flexible labour market are realised, it is also important that education, training and immigration systems can respond to relative wage signals and the needs of employers. Flexible and responsive education and training systems allow educational institutions to alter the quantity and mix of education and training services provided, as both individual preferences and the needs of the economy change.

Due to the lead times associated with education and training, temporary migration also provides a means of responding to short-term demands for skills in particular areas. In addition, to meet future skill needs as the economy strengthens the Government will recalibrate the general migration program by increasing skilled migration by an additional 5,750 program places in 2010-11, to a total of 113,850 program places, with an offsetting reduction in family migration. Increasing skilled migration will enhance productivity, by providing additional skilled workers to the labour force, and increase participation, since skilled migrants typically have positive employment outcomes.

Higher level qualifications

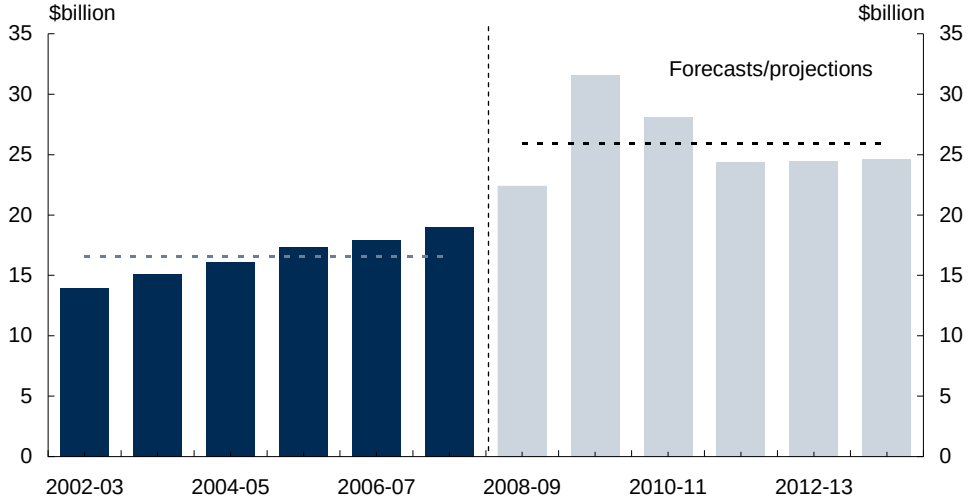
One of the keys to raising Australia's future growth rate is increasing the education and skill level of the workforce. A more highly educated workforce is likely to be more productive and better able to adapt to changing circumstances. This requires not only increasing the number of people with higher level qualifications, but also ensuring that all Australians have strong foundation skills.

Two key measures supporting these objectives in the 2009-10 Budget were the uncapping of the number of Commonwealth supported places and the increase to the Higher Education Indexation Factor.

These measures are complemented in the 2010-11 Budget through the $661.2 million *Skills for Sustainable Growth* strategy. The strategy aims to boost the skills base of Australia's workforce and ensure that Australia's education and training systems are responsive to the skills needs of the economy.

Spending on education, which includes early childhood education, schools, vocational education and training, and higher education, is projected to be higher over the forward estimates — averaging around $26 billion per year (Chart 16). This is a substantial increase when compared with the average level of spending during the period of strong growth in Australia's terms of trade between 2002-03 to 2007-08.

Chart 16: Commonwealth spending on education



Note: 2009-10 dollars. Education sub-function totals, excluding income support payments. 2002-03 to 2008-09 actuals, 2009-10 to 2011-12 forecasts and 2012-13 to 2013-14 projections.
Source: Final Budget Outcome (various years), Statement 6 and Treasury.

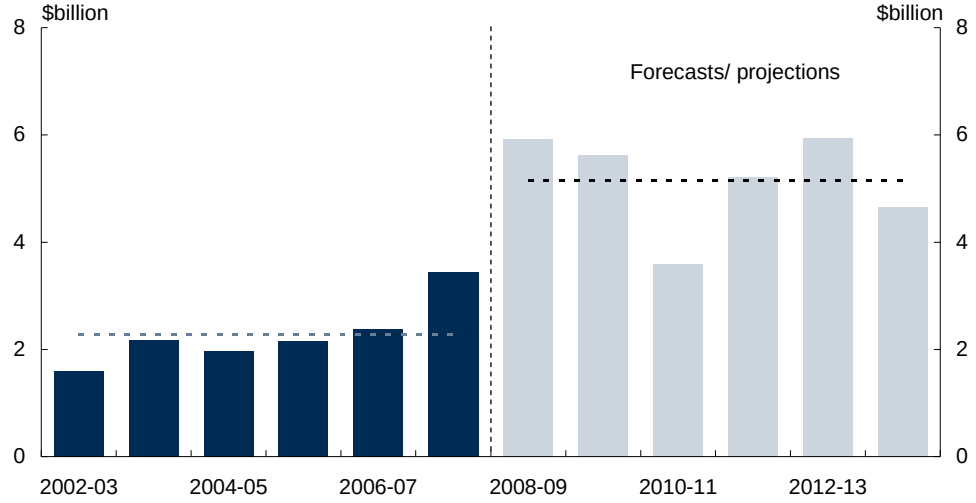
Investing in infrastructure — a national approach

Investment in well-planned infrastructure can provide for future generations. Investment in infrastructure projects and associated reforms in the operation of these capital assets are designed to enhance supply capacity — helping to manage medium-term pressures arising from the growing economy.

The Australian Government will direct some of the proceeds from the RSPT to investment in nation building infrastructure. The Government will establish an infrastructure fund that will start at $700 million in 2012-13 and grow to over $5.6 billion over the next decade. The 2010-11 Budget invests a further $1 billion in the nation's transport infrastructure, building on the significant investment that the Government has already committed to roads, rail and ports.

Commonwealth spending on transport infrastructure (road and rail) is projected to be substantially higher over the forward estimates (Chart 17), averaging around $5 billion per year. In real terms, this represents expenditure on major transport infrastructure in the six years to 2013-14, that is more than double the expenditure during the period of strong growth in Australia's terms of trade between 2002-03 to 2007-08.

Chart 17: Commonwealth spending on major transport infrastructure[(a)]



(a) Road and rail infrastructure.
Note: 2009-10 dollars. 2002-03 to 2008-09 actuals, 2009-10 to 2011-12 forecasts and 2012-13 to 2013-14 projections.
Source: Statement 6 and Treasury.

The Government has previously established Infrastructure Australia to provide advice to governments, investors and owners of infrastructure, and to assist their decision-making for Australia's current and future needs and priorities relating to nationally significant infrastructure. In doing so, the Government has sought to institute a national approach to assessing and meeting Australia's infrastructure needs and to ensure Australia gets the most out of its infrastructure.

This includes promoting the effective regulation and more efficient use of existing infrastructure, and more robust and transparent frameworks for new investment decisions. Infrastructure Australia has undertaken a national infrastructure audit, identified national infrastructure priorities and developed a priority list and pipeline of infrastructure projects.

Pursuing broader microeconomic reforms to improve productivity

History suggests that long-term prosperity is driven by improvements in the efficiency with which the inputs to production are used, which is in turn facilitated by the drive for competitiveness. An increase in the terms of trade through higher commodity prices will boost national income, but this alone cannot be relied on to sustain prosperity into the future.

Productivity growth depends in part on maintaining the momentum of reform (OECD 2009). It is noteworthy that Australia's productivity performance slowed in the 2000s, with annual labour productivity growth on average only 1.4 per cent compared with 2.1 per cent during the 1990s. There were also signs that the pace of reform in Australia had fallen behind that of other countries (Box 4: Lost impetus in product market regulation reform, highlights one example).

A challenge for Australia is to create and maintain momentum for reform that generates stronger productivity growth, benefiting both those employed and the broader community by allowing demographic and associated challenges to be addressed in a fiscally responsible way.

Tax reform is an important part of the microeconomic reform agenda. The introduction of the RSPT, the reduction in the company income tax rate, and associated reforms will improve productivity — leading to a projected increase in real GDP of 0.7 per cent and in real wages of 1.1 per cent in the long run.

Another way this challenge is being addressed is through the Seamless National Economy reform agenda being implemented by the Council of Australian Governments (COAG). The reforms are intended to reduce inconsistent and unnecessary regulation and restrictions on competition across Commonwealth, State and Territory governments.

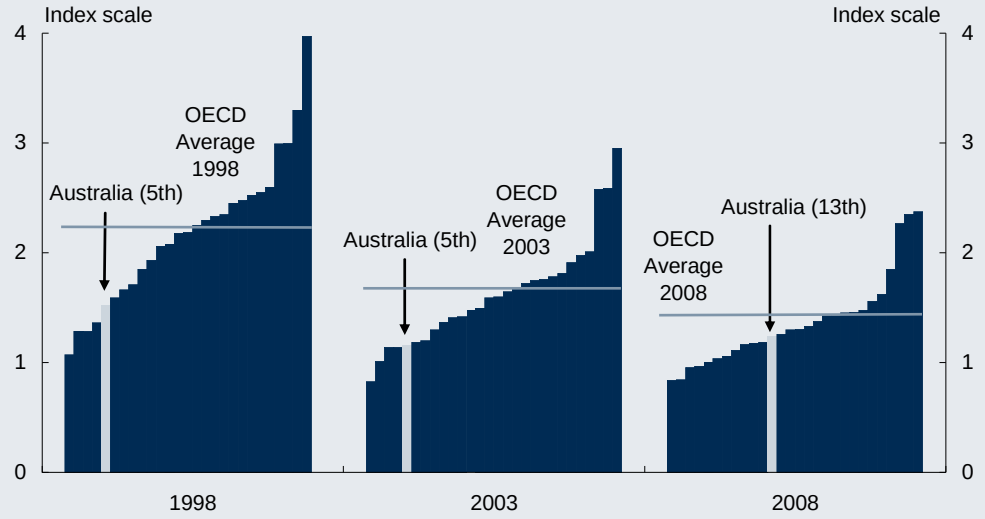
The Productivity Commission (2008) estimates that consumer policy reforms alone, could result in a net gain to the Australian community of between $1.5 billion and $4.5 billion a year. The reforms will also ensure that new regulations minimise compliance costs to business, which ultimately improves productivity and Australia's international competitiveness.

Box 4: Lost impetus in product market regulation reform

As a result of earlier reforms, by the end of the 1990s and into the early 2000s OECD indicators of product market regulation ranked Australia amongst the most open in the OECD. The OECD has found that opening Australia's product markets to increased international competition helped to drive productivity improvements that enabled Australia's living standards to catch up to the wealthiest OECD countries, with GDP per capita rising from 16th place in 1992 to 8th place in 2007 (OECD 2010b).

However, in the most recent OECD review, the Australian regulatory environment was found to have become less conducive to competition between 2003 and 2008, resulting in Australia moving from being ranked as a 'front runner' in the OECD to close to average in the latest rankings (Chart 18).

Chart 18: OECD integrated product market regulation indicator ranking



Note: indicator uses an index scale 0-6 from least to most restrictive.
Source: OECD regulation database and Treasury.

According to the OECD, Australia has fallen back in the rankings due to the rate of reform, relative to comparator countries, having slowed in recent years. For Australia to return to higher productivity growth, the OECD (2010b) recommended that efforts be refocused on longstanding commitments to reform challenging aspects of the transport, energy, water and infrastructure sectors. Work for the OECD also suggests that countries such as Australia that have undertaken major reforms are increasingly left with areas of regulation that could be politically difficult to reform (Wolfl et al. 2009). The OECD (2010b) has acknowledged the actions the Australian Government is taking in response to the past rate of decline in the reform process, by commending the Government's commitment to a new reform agenda focused on productivity and regulatory reform. Much of this agenda is to be carried out within the context of COAG.

CONCLUSION

Australia has come through the global financial crisis in a strong position, with economic policy again facing the pre-crisis challenges of managing an economy returning to normal levels of capacity utilisation capacity and an elevated and rising terms of trade.

Reaping the national income benefits in this environment requires the flexible and efficient allocation of labour and capital. With the increased prices received for Australia's mineral resources likely to be sustained for some time, this will entail a higher proportion of workers and investment moving to the mining sector and related parts of the economy. This may see different industries and regions grow at different speeds.

Fiscal policy is also critical, with the need to increase productive capacity, including through encouraging business investment, but without adding further to inflationary pressures in the economy. More responsive and better planned skills training and infrastructure will make the enhanced investment in these areas more effective in expanding capacity, while the reduction in the company income tax rate will help all sectors of the economy to grow. Together with the achievement of the medium-term fiscal strategy, this will provide a sound foundation for sustainable growth and the enhancement of the wellbeing of all Australians over the long term.

In this way, it is possible to avoid the 'resource curse', where the benefits of resource wealth are lost due to poor policy and institutional frameworks. Tax reform that better charges for the use of Australia's mineral resources will increase national income, and allow a better distribution of the benefits of resource wealth across the community.

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