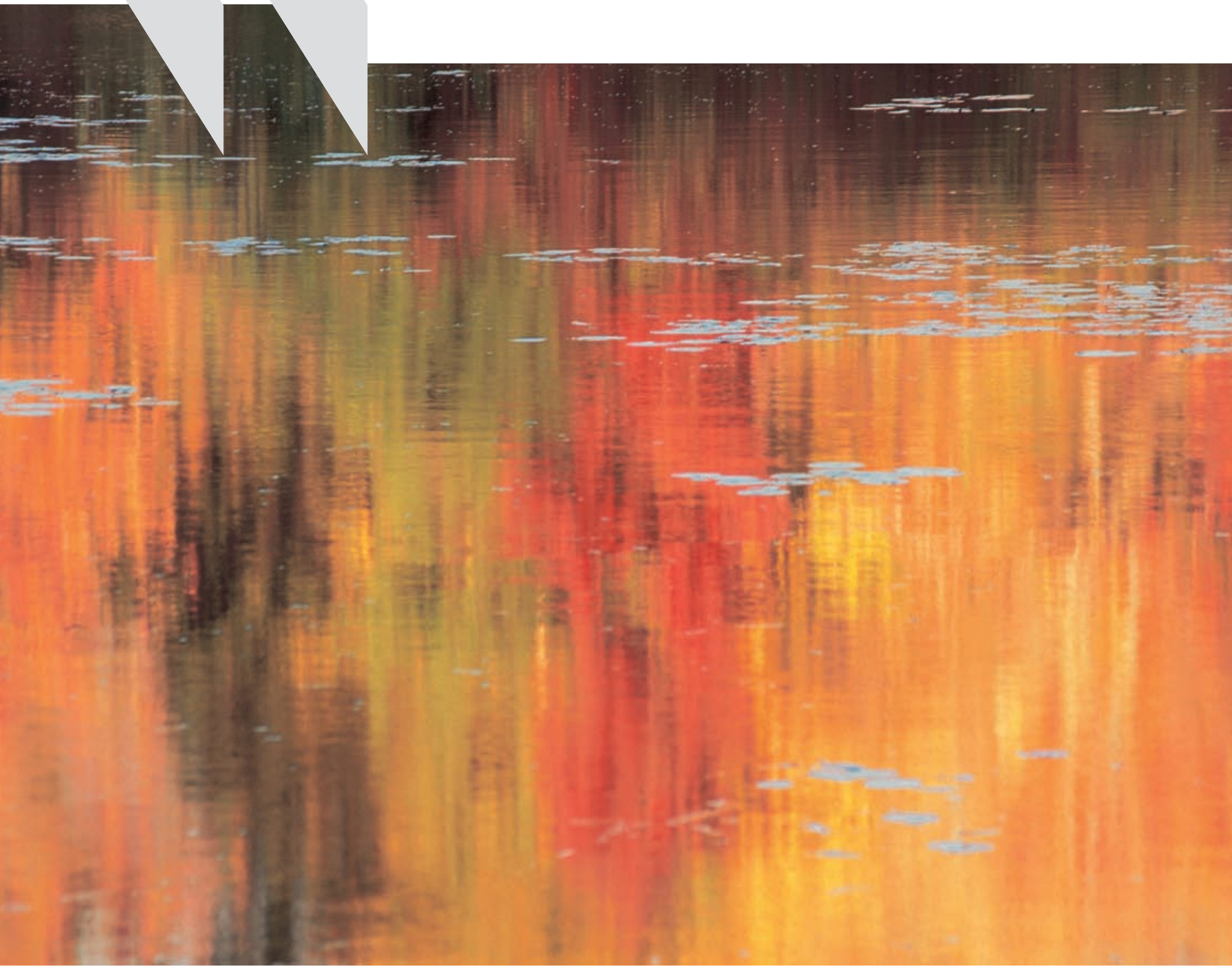
OECD Economic Surveys

AUSTRALIA



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This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of Australia were reviewed by the Committee on 11 October 2010. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 22 October 2010.

The Secretariat's draft report was prepared for the Committee by Claude Giorno and Vassiliki Koutsogeorgopoulou under the supervision of Piritta Sorsa. Research assistance was provided by Ane Kathrine Christensen and Josette Rabesona.

The previous Survey of Australia was issued in October 2008.

BASIC STATISTICS OF AUSTRALIA (2009)

THE LAND

Area (1 000 km²):	
Total	7 692
Agricultural (mid-2006)	4 349
Major cities (June, thousand inhabitants):	
Sydney	4 504
Melbourne	3 996
Brisbane	2 004
Perth	1 659
Adelaide	1 187

THE PEOPLE

In thousands (December):	
Population	22 166
Natural increase	157
Net migration	278
Number of inhabitants per km²	2.9
Total labour force (million)	11.12
Civilian employment (% of total, 2006):	
Agriculture, forestry and fishing	3.3
Industry and construction	21.0
Other activities	75.6

PRODUCTION

Gross domestic product (GDP):	
In billion AUD	1 137
Per head (USD)	45 251
Gross fixed capital investment:	
In % of GDP	28.4
Per head (USD)	12 820

GENERAL GOVERNMENT

In % of GDP:	
Current and capital expenditure	36.2
Current revenue	32.1
Public consumption (% of GDP)	17.8

GOVERNMENT COMPOSITION

House of Representatives (seats):	150
Australian Labour Party	72
Liberal Party (of Australia and Queensland)	65
The Nationals	7
The Greens	1
Independent	5

Next general elections for House of Representatives: August 2013-April 2014

Senate (seats) between 1 July 2008 to 30 June 2011:	76	76[1]
Liberal/National Party	37	34[1]
Australian Labour Party	32	31[1]
Australian Greens	5	9[1]
Other	2	2[1]

FOREIGN TRADE

Exports of goods and services (% of GDP)	19.9
Main merchandise exports (% of total):	
Raw materials	26.1
Fuels	29.4
Manufactured goods	9.6
Food, beverages and tobacco	12.3
Machinery and transport equipment	6.1
Imports of goods and services (% of GDP)	20.4
Main merchandise imports (% of total):	
Machinery and transport equipment	38.1
Other manufactured products	24.5
Fuels	12.7
Food, beverages and tobacco	5.2

THE CURRENCY

Monetary unit: Australian dollar (AUD)

Currency unit per USD, average of daily figures:	
Year 2009	1.282
September 2010	1.066

1. Senate as from 1st of July 2011.

Executive summary

The Australian economy has been one of the most resilient in the OECD during the global economic and financial crisis. *The impressive results, which are only partially due to links to fast-growing China and India, have shown that the economy was well-prepared to face major shocks. Years of sound policies left ample room for monetary and fiscal policy to act rapidly and forcefully when the crisis struck. A key to the good outcome was the interaction of appropriate macroeconomic policy with structural flexibility of markets, especially financial and labour markets. The strong policy response and encouraging outlook restored confidence rapidly, and exit from the stimulus is underway.*

Prospects are promising but not without important risks for balanced growth. *The rebound of activity, supported by the sustained vigour of Asian markets and higher terms-of-trade, seems sufficiently robust to stand up to the gradual monetary and fiscal consolidation underway. Medium-term prospects are also good, as potential growth will be boosted by strong investment in the mining sector and population increases underpinned by continued immigration. In this context, monetary policy needs to guard against the re-emergence of inflation pressures, as the economy enters the upswing with little spare capacity and inflation around the middle of the medium-term target. There are also possible downside risks from weaker growth in China and further financial turmoil. The risks from a widening current account needed to finance mining investments can be managed by continued careful hedging policies, sound use of capital inflows, promoting FDI, and boosting domestic saving. The resilience of the Australian economy in the crisis and its favourable prospects should not lead to complacency regarding structural policies. The flexibility of the economy needs to be maintained and policy should be directed towards medium-term issues, including those related to the mining boom, focusing on the following priorities:*

Prudent management of commodity price cycles and emerging supply bottlenecks. *To deal with the uncertainty of future commodity price developments and reduce risks of pro-cyclical fiscal policy, which had been a problem during the previous mining boom, spending decisions should be disconnected from resource tax revenues. One option would be to park resource revenues in a reserve fund, and adopt a structural spending rule. To alleviate supply bottlenecks, which will be amplified by the mining boom, reforms to boost housing supply are needed, the demand-driven immigration should be continued, and infrastructure capacities further expanded.*

Structural reforms to strengthen productivity. *Rising commodity revenues have hidden a decline in productivity growth in recent years. Productivity and efficiency of investment decisions would be enhanced by improved product market regulations, in particular in infrastructure. Rationalising public spending by removing production subsidies would speed up reallocation of resources to expanding sectors. Considerable room exists to reduce distortions and simplify the tax system, thereby stimulating growth.*

Fair distribution and use of the benefits of prosperity. *The reform of the resource tax to capture excessive mining-sector rents is welcome, but more could be done to enhance efficiency and equity. Increasing social inclusion and reducing the underutilization of labour that affects marginal groups could improve well-being and labour supply. Given the multiple and inter-related characteristics of social exclusion – homelessness, health/disability problems, insufficient education and training, poor social networks – a comprehensive approach to service delivery is needed. Improving the tax-transfer system and targeting education policy more towards disadvantaged groups would boost employment and social inclusion.*

Assessment and recommendations

Australia weathered the crisis well and its challenges relate to ensuring medium-term balanced expansion

The performance of the Australian economy has remained solid. It weathered the world financial and economic crisis better than most of the OECD and, indeed, avoided a recession. Unemployment has already fallen back to near its structural level, and the government balance sheet is healthy. Although these remarkable results were in part due to the dynamism of the Asian markets, they illustrate both the structural resilience of the economy, well-functioning financial and labour markets and the timely and strong policy response to the crisis. Managing the exit strategy is less problematic in Australia than in most OECD countries thanks to the sound fiscal position and favourable outlook, although policy vigilance is required as the new cycle starts with inflation around the middle of the medium-term target and little spare capacity.

Australia's key challenges are medium-term: ensuring a balanced expansion, especially in the context of the mining boom that has gathered pace. Strengthening supply especially in infrastructure, housing and labour markets is needed to ensure non-inflationary growth and smooth reallocation of resources. Continued structural reforms are also needed to reverse the weakening of productivity gains in recent years, partly hidden by income gains from rising commodity prices, to establish a solid basis for future growth.

Recovery from the crisis is well on its way and the outlook is good

After a mild downturn at the end of 2008, activity is picking up on the back of strong commodity exports and a rebound in domestic demand. The swift policy response, strong housing market and good outlook have maintained confidence. The rise in unemployment was relatively modest, partly because many firms reduced hours worked, rather than jobs, to forestall potential skill shortages, which had occurred in the past. Employment is already 3% above its pre-crisis level and the economy is approaching capacity constraints. Underlying (or core) inflation, having declined since late 2008, reached about 2½ per cent in the third quarter of 2010, around the middle of the inflation target band (2 to 3%). The new cycle begins with limited spare capacity and substantial price pressures in housing and utilities.

In contrast to most other OECD countries, the short term outlook is favourable. Rising private demand fuelled by business investment and restocking is expected to take over from public demand as the main driver of growth. Firms in the mining sector should benefit from the dynamism of Asian markets and the consequent more favourable terms of trade. Output is projected to grow at between 3½ and 4 per cent in the near term, above potential. Unemployment is likely to continue to decline, though only gradually because of the expected rise in working hours. Aided by the residual slack and wage pressures contained by immigration, inflation is set to remain within the target band. Risks to this outlook are balanced. Demand from Asia and the terms of trade could surprise in either direction, the rebound in domestic spending may be stronger than expected while the global recovery might prove weaker. In the medium term, prospects are good with potential growth among the strongest in the OECD sustained by population growth and mining investment. Supply bottlenecks, the rising current account, strong housing markets and uncertainties regarding world commodity prices are the main medium-term risks.

Strong supervision and prudent lending policies limited damage from the global financial turmoil

Australia's financial system has proved very resilient during the global crisis. This is partly due to solid domestic banking supervision, which was substantially reinforced after sizeable banking sector losses in the early 1990s, and low exposure to toxic assets. The initial drop in the stock market and the exchange rate and the increase in capital outflows were reversed in early 2009 as confidence rebounded. Although banks were exposed to rollover risks in foreign markets, they had focused on domestic lending, which held up relatively well, and had lower leverage than institutions in other OECD countries. Banks have remained profitable with stable capital ratios, and the largest Australian banks are now among the soundest in the world. No banks were bailed out, but the government did step in at the height of the crisis by issuing guarantees for bond issuance and deposits to boost confidence and ensure funding needs. Conditions have now returned to normal although credit growth remains sluggish.

Resilience was aided by a prompt monetary policy response, and a large, timely and targeted fiscal stimulus

The Reserve Bank of Australia responded to the crisis with a large, pre-emptive cut in policy rates, made possible by the high level of policy rates prevailing before the crisis. It did not wait for data on the weakening economy, which comes with lags, but instead reacted to the risks of a large recession in the context of global uncertainties. The Reserve Bank also eased monetary conditions by increasing regular market operations and extending eligible collateral. Despite the rise in risk premiums, the cuts in policy rates were translated into lower market rates, aided by the prevalence of variable interest rate mortgages. Policy effectiveness was ensured by the soundness of the financial sector, which kept credit channels open, again in contrast to many other OECD countries. Consistent with a recovery in activity, somewhat high inflation and rising house prices, the Reserve Bank started to hike rates earlier than elsewhere, starting in October 2009 and bringing monetary conditions close to neutral by mid-2010. In November 2010, the Reserve Bank raised again its policy rates by 25 basis points to 4.75%.

As Australia's automatic fiscal stabilisers are relatively modest compared with some other OECD economies, the response to the crisis called for significant discretionary measures.

One of the largest fiscal stimulus packages in the OECD was made possible by the sound state of Australian public finances – successive surpluses had left public debt low. The fiscal stimulus was implemented rapidly and targeted to credit constrained households and public investment. It proved highly effective, with a sizable impact on output and confidence, although the required speed of implementation meant that some spending could have been more cost effective.

Fiscal consolidation plans are welcome, while monetary and financial policy will have to guard against excesses

The stimulus was wisely accompanied by a well-designed fiscal exit strategy. The pre-announced multi-year plan restricts the real increase in public spending to below 2% per annum, but lets the automatic stabilizers work on the revenue side, until a 1% of GDP surplus is reached. This might occur by 2015/16. *This gradual retrenchment plan is appropriate and should be carried out.* The implementation of the spending limit will initially be eased by the waning stimulus measures, but may be harder to maintain as time passes. *The quality of public interventions should be assessed, as there is considerable scope to rationalise assistance, especially to the automotive sector and for drought assistance. Rationalising such programmes, which would be beneficial in itself, would make the spending limit easier to obtain.*

The current stance of monetary policy, with interest rates to borrowers slightly above their decade average, is appropriate in the current economic context. The monetary authorities need to ensure that inflation does not drift up, even as price and wage pressures may be increased by labour shortages and a gradually closing output gap. It is also important that people do not translate relative price changes stemming from supply shocks in specific sectors, notably housing and utilities, into higher wage demands. With this background, *the Reserve Bank should remain vigilant and ensure that these sectoral pressures do not feed into inflation expectations, which have picked up slightly. It should continue to monitor price developments and tighten policy if demand pressures on productive capacities intensify or expectations worsen. In this context, communicating well the sources of price pressures is important.*

Persistently rising house prices have until now been driven by fundamentals. Nevertheless, caution is advisable, given the experience of other countries. Looking forward, there remains a risk of speculative behaviour, which requires continued prudence in lending standards, given the relatively high level of household indebtedness, and adequate macro- and micro-prudential rules on housing finance. *Consideration should be given to developing prudential measures that could be implemented to dampen future exuberance in house prices and lending, such as countercyclical capital buffers, adjustments to risk-weightings and limits on loan-to-valuation ratios. The Reserve Bank should continue to stress that house prices cannot forever outpace incomes. Given the prominence of loans at variable rates, lenders should be advised to base their mortgage credit criteria on medium-term average conditions, rather than exceptionally benign ones at a point in time.*

The external vulnerabilities may arise from the expected widening in the current account deficit

The financing of rising mining sector investment is expected to widen the current account and, over time, increase foreign indebtedness, which may exacerbate current external vulnerabilities to sudden changes in market conditions. The risks associated with foreign indebtedness are currently well contained. Currency risks are negligible, as most of the country's foreign liabilities are either in Australian dollars or hedged. Moreover, the high degree of resilience of the Australian economy over many years despite several external shocks including the recent crisis, suggests that the vulnerabilities are at this point easily manageable. However, a considerable part of the high and rising share of liabilities is short-term debt, which might increase rollover risks. *External debt developments should thus continue to be closely monitored. External vulnerabilities could be contained by promoting domestic saving (see below), and ensuring that risks remain well hedged, that the funds are used for high-return projects, and that foreign direct investment (FDI) continues to be encouraged. The existing approval thresholds, for assessment of potential FDI, could be aligned to the more generous criteria applied for the United States.*

Reforms are needed to boost housing supply

Housing supply is failing to keep up with strong demand growth, driven largely by immigration. Price-to-income and price-to-rent ratios exceed levels in other countries and historical averages in Australia, but at this point seem to be broadly consistent with fundamentals. However, a rising share of the population is being priced out of the market. Measures should be adopted to stimulate supply and more efficient use of the existing housing stock, as recognised by the Council of Australian Governments. *More transparent, harmonized and less restrictive zoning and planning regulations across jurisdictions are needed. Rationalizing infrastructure charges with nationally consistent principles would encourage more efficient land use and reduce delays and cost of negotiation between developers and local governments. Lower conveyance duties would reduce transaction costs and improve the use of the existing housing stock. Subsidies to demand benefiting first-home buyers should be phased out, and redirected to raising supply. Rebalancing tax incentives in the rental sector between small and large-scale investors would help increase the currently low proportion of apartment buildings in Australian cities. The progressivity of land tax affecting large developers should, for instance, be removed. The revenue losses implied by these changes can be offset by broadening the land tax, notably by ending existing tax exemptions on owner-occupied housing.*

The continued mining boom will complicate fiscal policy making

A key fiscal issue raised by the higher commodity wealth is the sharing of the rents from non-renewable resources (mainly mineral, but also gas), while ensuring their efficient exploitation. The use of the tax revenues derived from these resources should also take into account the uncertainty and volatility of commodity price developments. On the spending side, public investment is required to enhance infrastructure capacity to meet the greater needs of the mining industry and the concomitant pick-up of population growth. Domestic saving could be promoted to finance the increasing investment needs in mining and infrastructure industries. For this latter purpose, the government has planned to boost retirement savings, by gradually increasing the compulsory pension contribution rate from 9% to 12% by 2019-20.

The proposed changes in resource taxation are welcome but should go further

Central to the government's mining-boom related fiscal strategy is to increase taxation of non-renewable resources and shift it from output-based royalties to rents. The proposed mineral resource rent tax (MRRT) on coal and iron ore operations, along with the extension of the petroleum resource rent tax, are justified on both equity and efficiency grounds. This resource rent tax is more efficient than the current royalties system as it raises taxation of finite and immobile resources. This will improve efficiency in the resource sector. The government has coupled the MRRT with a reduction in the corporate tax rate, which affects mobile capital. This switch will improve efficiency of the overall tax system and foster the development of the non-mining sector. However, the potential gains of the MRRT may be reduced by some of its characteristics. First, the proposed tax is set at a relatively low level and therefore the taxation of profits of mining companies is likely to remain much lower than before the mining boom. Second, the efficiency gains of the new tax will be mitigated by its coverage of only larger firms and certain sectors. As conceived, the MRRT is likely to distort investment incentives between mining projects of coal and iron ore and those on other resources that are not subject to the tax, regardless of their underlying merits. Moreover, mining ventures will remain subject to royalties, which carry particularly large disincentives for marginal projects. *Replacing the royalties by a well designed resource rent tax extended to all commodities and all companies irrespective of their size would be desirable. Royalties should also be eliminated, rather than credited to MRRT payers by the federal government,* to simplify the tax system and remove states' incentives to raise royalty rates further, with counterproductive effects.

Promoting retirement savings, investing in public infrastructure and cutting the corporate tax are welcome

The higher resource revenues from the MRRT are set to finance a number of welcome initiatives. The authorities plan to gradually increase the compulsory pension contribution rate and to improve the equity of the tax treatment of retirement savings for the currently disadvantaged low-income earners. Another set of measures aims at spurring investment through reduced company taxation, especially of SMEs. The cut of the statutory corporate tax rate from 30% to 29% by 2013 will bring it closer to the OECD average. Although modest, this efficiency-enhancing measure should be favourable to investments in the non-mining sector and help reduce the risk of a two-speed economy in the context of large terms of trade changes. Finally, the government plans to earmark some of the resources obtained from the MRRT for infrastructure financing, with the creation of the new Regional Infrastructure Fund, the assets of which are expected to reach AUD 6 billion in the coming decade.

More attention should be paid to shielding the budget from the volatility and uncertainty of commodity price movements

Australia is planning to spend all the expected resource revenues from the MRRT. These revenues are estimated assuming that resource prices gradually fall from their current high levels. However, should prices fall faster than expected, this policy could lead to a structural deterioration of the budget. Although changes in prices would trigger other adjustments to maintain the medium-term fiscal strategy of a balanced budget or a slight surplus over the cycle, these would have costs. Moreover, as the resource industry grows, it will become an increasingly important driver of the Australian business cycle, as is the case in countries like Norway and Chile. If resource revenues are spent as they come in, which occurred to some extent in the boom of the 2000s, fiscal policy risks being procyclical. *To avoid such risks, public spending decisions should be disconnected from the fluctuations in tax revenues caused by commodity price movements. While Australia's circumstances differ in important respects from other commodity producing countries, the authorities should nevertheless consider creating a reserve fund endowed with all resource tax revenues to assist in shielding the budget and the real economy from the effects of revenue volatility.* The creation of such a fund holds the promise of increasing transparency and strengthening fiscal management. The proposed fiscal council (Parliamentary Budget Office) should strengthen fiscal decision making, perhaps including with respect to the use of resource revenues. However, it must be carefully designed and its mandate must be clear.

Tax reform could spur growth

Considerable room remains for improving the quality and effectiveness of Australia's tax and transfer system, as noted in past OECD *Surveys*. Many weaknesses were addressed by the government-commissioned *Australia's Future Tax System* (AFTS), released in May 2010. It includes 138 recommendations, of which relatively few have been acted upon. As suggested by AFTS, *Australia's company tax should be reduced further*, higher labour participation promoted, the tax system simplified and its distortions reduced. These goals can be achieved by *broadening the base and raising the rate of the goods and services tax (GST), while lowering taxation on labour, notably the high effective marginal tax rates affecting low-income households. Going forward, the tax-free threshold on personal income tax could be increased to beyond the numerous allowances and pensions, in order to reduce the marginal effective tax rates arising from the complex interactions of the tax and transfer systems. The structure of transfers could also be streamlined (see below). Increasing the weight of the GST in total tax revenues, which in Australia is low by international comparison, would also help simplify and rationalise the states' taxation systems, which rely on many inefficient taxes, including on housing*. There are too many taxes (125), the bulk of which yield little revenue but cause large distortions, especially at the state level, and have high administrative costs. State royalties, payroll taxes, conveyance duties and insurance levies are highly inefficient, resulting in large marginal welfare losses. *They should be reduced, reformed or eliminated outright. Reform will need to be implemented over time, consistent with the fiscal strategy.*

Responding to infrastructure needs is important…

Australia faces a shortfall in infrastructure, which could worsen with the demand pressures exerted by the mining boom, population growth and environmental concerns. To respond to this demand and avoid bottlenecks, the authorities have put bolstering infrastructure at the top of their policy agenda. This entails greater public spending, but also structural reforms to optimise public and private investment choices and the use of existing facilities. Measures have thus been adopted to better co-ordinate the infrastructure development at the national level. A new body, Infrastructure Australia (IA), has carried out its first audit on the basis of project submissions, identified the needs and established a priority list of investment projects. This is welcome. *Future audits should, however, be less supply driven. Recent efforts of IA to assess the demand for (or target of) services in each main infrastructure area should continue.* Such an approach would lead to clearer objectives and a more transparent monitoring of progress with infrastructure policy. IA has also pledged to follow an investment selection process based on rigorous cost-benefit analyses (CBA). These are fundamental for assessing infrastructure projects, although the final decision will depend on broader social, economic and environmental considerations, which are ultimately decided by government. Transparency in this domain, however, needs to be further enhanced. *The results of all CBAs should be published, while audits and independent analysis of large projects should be more systematic.*

… and requires a better regulation to promote a more efficient use of equipment and well targeted investment decisions

Existing infrastructure could be used more efficiently and further regulatory reforms are required to promote more efficient infrastructure investment decisions in several sectors:

- Road congestion in large urban areas imposes rising costs to the community in terms both of well-being and productivity. *Introducing location-specific and time-varying congestion charges would help to achieve a more efficient use of road infrastructure in large cities. Public transport, which is less developed in Australia than in many other OECD countries, could also be expanded. In the road freight sector, the development of a pricing scheme for heavy vehicles, based on the mass transported, the distance travelled and the part of the network used, should be accelerated.* Institutional arrangements should better link revenue and spending for roads than is currently done in the budgetary process. *Road investment choices would likely be more efficient if road user charges were set in a more consistent and accountable way, and their spending managed by public firms run on commercial basis.*
- *Demand for electricity would be better managed if "smart meters" were installed more widely.* The current over-allocation of water resources leads to an effective undercharging for irrigation water, and hence to over-exploitation and poor investment decisions. *Water pricing in rural areas should ensure full cost recovery, including of environmental costs. Barriers to water trade between rural and urban areas should be lifted* to ensure more efficient use of water resources, widen supply options for urban water and reduce investment needs. *Putting an end to public monopolies of urban water management should also be considered, to attract private investors and promote innovation.*
- *Harmonisation of infrastructure regulations across states should continue, including in the energy sector.* However, the most important regulatory issues that need to be settled to ensure adequate development of infrastructure in the energy sector relate to the policy of reduction of greenhouse gas emission. In this domain, *uncertainties need to be lifted rapidly by the adoption of market mechanisms to set a price on carbon, thereby reducing emissions in an effective way.*
- In the telecommunication sector, the government's project of building a new fibre network, the National Broadband Network (NBN), holds the promise of delivering potentially large benefits. However, as the cost amounts to 3¼ per cent of GDP, it also entails substantial financial uncertainties. The authorities' strategy will improve

Internet services for the entire population and promote a fairer competition between private firms on retail services. Part of the plan is to shut down the existing copper network and the country's main cable network. While establishing a monopoly in this way would protect the viability of the government's investment project, it may not be optimal for cost efficiency and innovation. Empirical studies have stressed the value of competition between technological platforms for the dissemination of broadband services. *It would therefore be preferable to maintain competition between technologies in the broadband sector and, within each technology, between Internet service providers.*

- The existing regulation guaranteeing third party access to infrastructure, the National Access Regime (NAR) developed in the mid-90s, raises a number of issues concerning the appropriate balance between efficient use of existing networks and stimulating private investments. The implementation of the NAR implementation over the past 15 years seems to vary across industry. *A detailed assessment would help draw lessons from the experience to date and fine-tune regulatory provisions.*

Labour market flexibility is critical to sustained growth

The strong terms-of-trade rise is likely to require structural changes, in particular reallocation of workers across sectors. *The implementation of the new industrial relations system, which strengthens wage bargaining at the enterprise-level and enhances worker protection, should be monitored closely to ensure fairness while promoting flexibility. Maintaining an open, demand-driven immigration policy will allow immigration to continue to play a key role in meeting rising labour demand, and in alleviating skill shortages. A more effective system of assessment and recognition of foreign qualifications and experience would help to make better use of immigrants' human capital.*

Raising labour supply would ease bottlenecks and help to tackle social inclusion, an important aspect of well-being in Australia

Despite relatively high participation rates, underutilisation of labour remains important, especially among such groups as lone parents, people with mental and other disability and indigenous people. Their relatively tenuous labour-market status leaves them exposed to risks of social exclusion. Increasing labour force participation would reduce such risks, but the multiplicity, inter-relatedness and complexity of the issue call for a comprehensive strategy.

Reforms in tax-transfer, education policies and labour market institutions would boost both labour market participation and improve social inclusion, but should be subject to fiscal constraints

The transfer system could better tackle poverty, while strengthening incentives to work. Recent reforms towards more individualised employment services may help in this regard. *However, additional attention given to disadvantaged groups should not lead to worsening of services provided to less disadvantaged unemployed. Over time, the adequacy of Newstart*

Allowance should be examined, taking into account both fiscal constraints and community expectations. An option would be to increase the Newstart Allowance for the initial period of unemployment to provide a more adequate safety net, but job search requirements should be maintained and the impact on the incentive to work should be assessed. Streamlining of family benefits into a "single family payment" would increase incentives to work, especially for second earners, by reducing the impact of cumulative withdrawal rates arising from multiple and often overlapping transfers. The effects of such a reform on "low wage" traps, which are prevalent in Australia, would need to be closely monitored. The introduction of a paid parental leave by 2011 is welcome. *Child care benefits could be made more conditional on employment and job search of parents, except if children face multiple disadvantages.* More account should be taken of the higher cost of service provision for very young children. *This can be achieved by moving towards a simple and adequate structure of child care benefits, set as a percentage of out-of pocket expenses. More effective job capacity assessment for people on disability, subsidies in line with recent policy announcements, would also enhance participation.* The new Disability Employment Services System ensures access to services for all job seekers with disability, attempting to provide the right assistance as early as possible and focussing on outcomes. *Given the already relatively high minimum wage, future increases should be moderate and take account of productivity developments to avoid exclusion of vulnerable and low-skilled workers. A system of in-work benefits could also be explored as part of changes to existing income support and tax arrangements to reduce disincentives to work.*

Although Australia's education system fares well internationally in terms of student achievement and intergenerational social mobility, gaps related to disadvantaged groups remain. Children from disadvantaged groups generally participate less in the important early childhood programmes, or have lower scores in tests. The government's commitment to provide universal access to early education for all children in the year before formal schooling by 2013 is welcome. Reforms to lift the quality of early childhood services are also being phased in and have the prospect of delivering significant benefits. *In the longer term and as fiscal circumstances allow, consideration should be given to continuing to improve the quality of, and access to, early childhood education, to three-year olds, focusing initially on disadvantaged groups.* Improvements in quality and equity in schools are also commendable. *Linking school funding more closely to differences in students' socioeconomic backgrounds would counteract disadvantages.* At the tertiary level, initiatives underway to reform the income support system for higher education students will help increase participation among students from low socioeconomic backgrounds. Finally, the recently announced strategy concerning vocational education and training (VET), which aims to provide new training in resources and related sectors, support apprenticeships, and improve the quality of VET through the establishment of a national regulator, are welcome. *More flexible apprenticeships, focusing more on the development and recognition of competencies rather than requiring a standard fixed duration, and simpler and more frequently updated training packages should be promoted.*

Social inclusion calls for comprehensive service delivery

Improving the governance of policy actions aiming at combating social exclusion is key for enhancing outcomes, given the difficulties in providing effective service delivery for people with multiple disadvantages. *Closing data gaps and frequent reporting on social inclusion outcomes are essential for monitoring progress.* Comprehensive early intervention is important for reducing homelessness, which results from many and diverse interacting causes such as long-term unemployment, mental health problems, addiction and family violence. Housing affordability is also important for reducing social exclusion and homelessness. This aspect is currently being addressed through the provision of income and need-linked social housing at a low cost, or capped rent assistance subsidy for those on income support. However, social housing tends to be poorly targeted, raising equity concerns with regards to those renting privately, who receive less subsidy. In addition, the lack of portability of public housing entitlements can reduce mobility and incentives to work. *To promote equity, work incentives and efficient provision of social housing, consideration could be given to allowing public housing tenants to access rent assistance, while charging them rents that are close to, or even at, the market rent*. Care should be taken that the new system ensures equity in access to social housing while it attempts to address efficiency concerns. *The generosity of the rent assistance system could also be improved by moving toward an indexation system, based for instance* on *the rent component of the CPI, provided that upward pressures on rents are contained*. On the issue of people with disabilities, comprehensive support services are needed to deal with a combination of homelessness, poor health and lack of social networks. Recent efforts to enhance comprehensive service delivery are therefore welcome. The disability service system remains too fragmented, inflexible and under-resourced, leading to large unmet demand. *A swift move to a person-centred approach to service delivery, as agreed by the governments under the National Disability Agreement, would reinforce the effectiveness of recent initiatives on early intervention and prevention. Better co-ordination of mainstream and specialist disability services is a government objective and remains critical in this regard.*

Chapter 1

Recovering from the crisis and addressing medium-term challenges

Australia weathered the world recession well, and economic prospects are, overall, favourable both in the short and medium term. Managing the exit strategy from the global economic and financial crisis is less problematic than in most of the OECD thanks to the sound fiscal position and positive economic outlook, although the new upswing starts with inflation around the middle of the medium-term target and little spare capacity. Over the medium term Australia needs to ensure a balanced expansion in the face of a mining boom and potentially volatile terms of trade movements, and strengthen supply to ensure non-inflationary growth. This chapter assesses recent performance of the economy, the main sources of its resilience, the outlook, and monetary and fiscal policy stances. The chapter then highlights some key medium-term policy challenges: bolstering weakening productivity, boosting housing supply and further reducing risks associated with a likely widening of the current account to finance mining investments.

The economy responded well during the world economic crisis, aided by strong fundamentals, a swift and appropriate policy response and solid demand from Asia for its commodity exports. The country is in its 19th year of consecutive growth, and economic prospects are favourable both in the short and medium term. To ensure sustained recovery the authorities need to engineer a smooth transition that allows the private sector to take over from the public sector as the main driver of activity. The transition will be facilitated by the sustained dynamism of the major Asian economies. The fiscal position has remained sound in face of the crisis, leaving substantial room to manoeuvre in managing its exit strategy. The relatively high inflation at the beginning of this new cycle is a challenge for monetary policy. With policy rates already back up to neutral, vigilance will be needed in view of persistent uncertainties surrounding the global financial environment and a rapidly strengthening economy.

Australia's major economic challenges are medium-term. Rising commodity prices will initially spur demand and revenue more than production, tending to widen the current account deficit again and thereby increase external vulnerability. Demand pressures, which are already significant in some key sectors, notably housing, may become more widespread as the economy continues to expand. A key issue for policy is to strengthen productive capacity to achieve balanced, non-inflationary growth. The supply of housing, labour and infrastructure needs to meet the rising demand as incomes and population grow. Productivity gains, which have weakened over the past years, need to be raised to ensure a more solid basis for future growth.

This chapter discusses both the near term challenge of exiting from the financial crisis, and ensuring that the economy is sufficiently flexible to cope with the continued resource boom. The medium-term fiscal and infrastructure challenges are further elaborated in Chapters 2 and 3, while Chapter 4 discusses policy issues related to the dual objective of boosting labour utilisation and promoting social inclusion.

The Australian economy resisted well the global economic and financial crisis

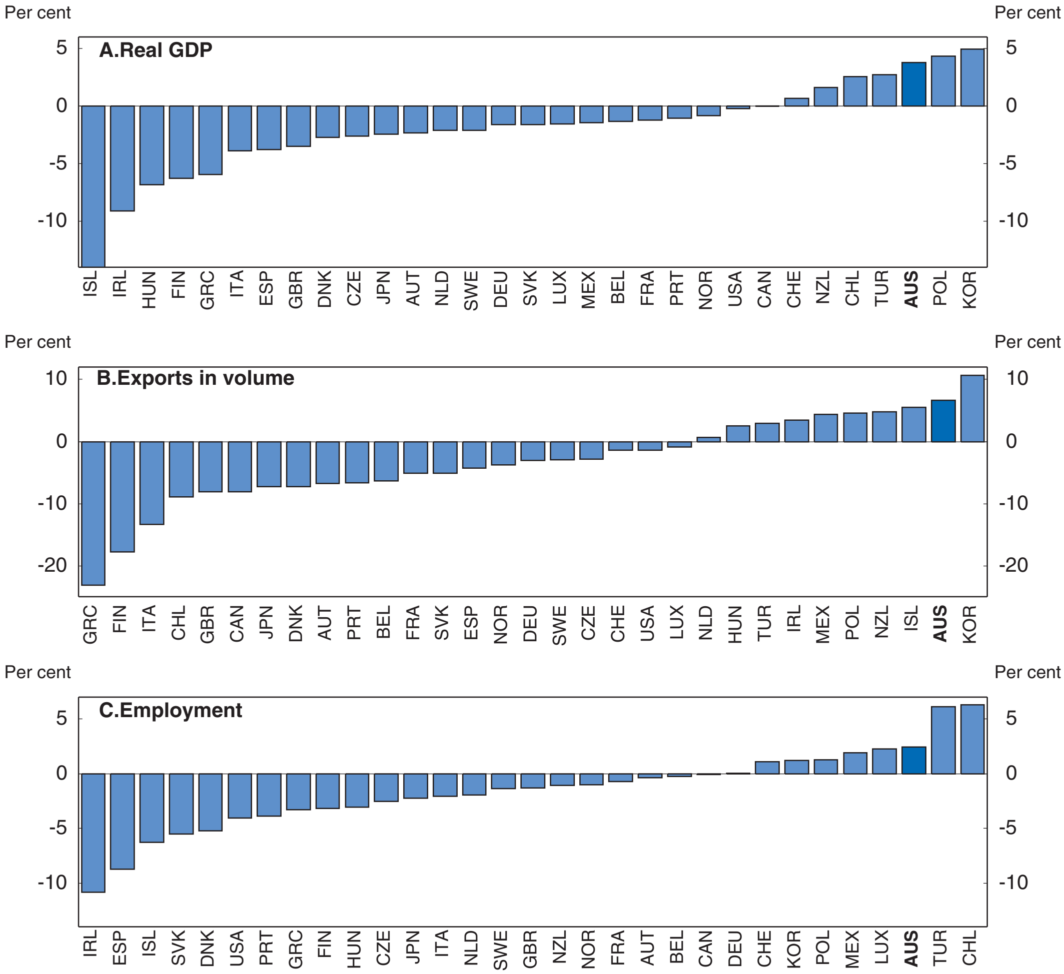
Australia was prepared to face shocks

Australia was one of only two OECD countries that escaped the recent world economic and financial crisis without a recession. In the second quarter of 2010, GDP was 3.8% higher than its pre-crisis level, the third best performance among OECD countries (Figure 1.1 and Table 1.1). In contrast to most OECD countries, domestic demand did not weaken sharply in 2009, and has picked up strongly since then. Exports, particularly to Asia, also contributed importantly to growth during the acute phase of the crisis. The resilience of the economy was also reflected in the labour market. In the third quarter of 2010, employment was around than 3½ per cent above its pre-crisis level and unemployment has fallen back to its natural rate of about 5%, after peaking at 5.7% in the third quarter of 2009.

A sound policy environment had prepared the country to face external shocks, and monetary and fiscal policies reacted swiftly and strongly to the crisis. Structural reform in competition, product and labour markets in the 1990s made the economy more resilient

Figure 1.1. **Output, exports and labour market development since the onset of the crisis**

Total growth Q3 2008-Q2 2010



Source: OECD, *National Accounts*. Missing data have been estimated using *OECD Economic Outlook*, No. 88 projections.

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(OECD, 2010a). The flexible exchange rate acted as a shock absorber, shielding the country from some of the swings in external prices and demand. More importantly, given the nature of this global turmoil, reforms to banking regulation in the 1990s and early 2000s, and memories of the 1990s banking difficulties had reinforced financial supervision and caution in bank lending. This reduced vulnerabilities in the banking sector, which kept functioning through the crisis, thereby allowing monetary policy to function.

Prior to the onset of the downturn the economy was benefiting from a commodity price boom (Figure 1.2). Signs of overheating appeared as activity was reaching capacity constraints and asset prices were rising. Monetary tightening before the onset of the crisis left significant room for loosening once the crisis hit. Consequently, Australia never hit the zero-bound rate, as a number of other advanced economies did. The fiscal position was also strong prior to the crisis. Surpluses were about 1% of GDP, on average, between 1998 and 2008 (Figure 1.3), and the general government held net assets equivalent to 7½ per cent of GDP at end-2008. This created ample space for stimulus to support activity. Moreover,

Table 1.1. **Economic developments and projections**

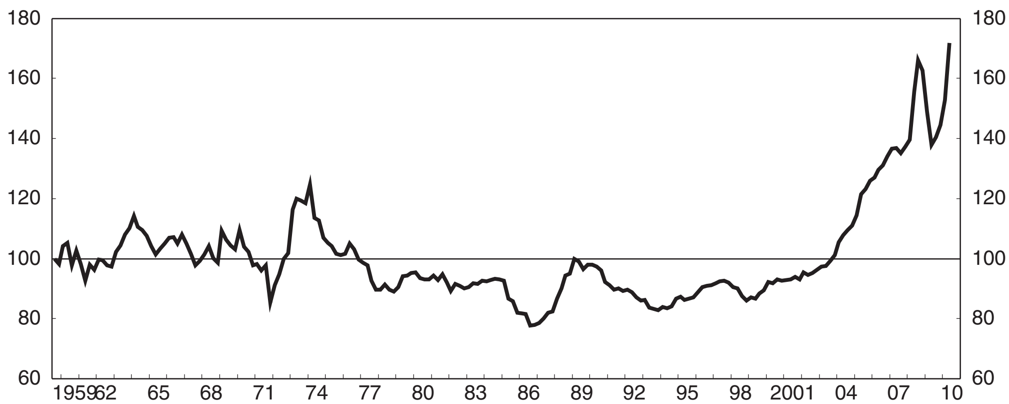
	2007	2008	2009	2010	2011	2012
	Current prices AUD billion	Percentage changes, volume (2007/08 prices)				
Private consumption	635.9	1.9	1.7	3.3	3.2	3.2
Government consumption	192.9	3.3	2.8	5.2	2.1	1.7
Gross fixed capital formation	323.5	9.0	–1.1	7.0	6.6	8.5
Final domestic demand	1 152.4	4.1	1.1	4.7	4.0	4.5
Stockbuilding[1]	6.5	–0.4	–0.5	0.4	0.0	0.0
Total domestic demand	1 158.9	3.7	0.5	5.1	4.0	4.5
Exports of goods and services	217.6	3.1	1.0	4.7	6.1	6.5
Imports of goods and services	239.0	11.1	–8.3	13.3	8.1	8.4
Net exports[1]	–21.4	–1.6	0.7	–1.9	–0.4	–0.5
GDP at market prices	**10 137.5**	**2.1**	**1.2**	**3.3**	**3.6**	**4.0**
GDP deflator	–	6.4	0.3	5.9	3.5	2.5
Memorandum items:						
Consumer price index	–	4.4	1.8	2.9	2.8	2.9
Private consumption deflator	–	3.7	3.1	2.6	2.7	2.9
Underlying inflation		4.1	2.6	3.0	2.9	2.9
Unemployment rate	–	4.2	5.6	5.2	4.9	4.7
Household saving ratio[2]	–	1.9	5.1	2.2	2.5	2.9
General government financial balance[3]	–	0.4	–4.0	–3.3	–1.7	–0.4
Current account balance[3]	–	–4.5	–4.4	–2.3	–1.9	–2.6
Net general government liabilities[3]		–7.6	–3.8	0.4	2.7	3.6

1. Contributions to changes in real GDP (percentage of real GDP in previous year), actual amount in the first column.
2. As a percentage of disposable income.
3. As a percentage of GDP.

Source: *OECD Analytical Database* for the historical period and *OECD Economic Outlook*, No. 88 for the projections.

Figure 1.2. **Terms of trade**

Index 1959 Q3 = 100



Source: ABS, Australian National Accounts: National Income, Expenditure and Product, cat. 5206.0.

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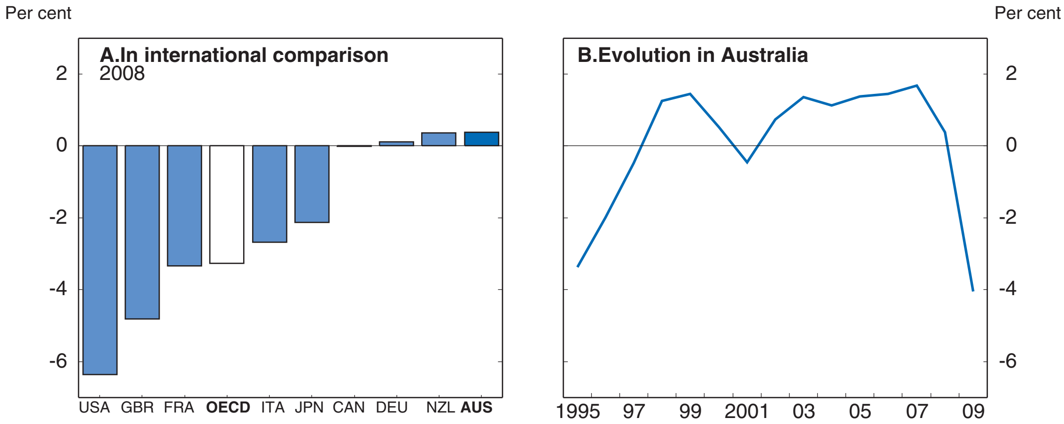
while Australia was initially negatively affected by the fall in the terms of trade induced by the global downturn, it has since benefited from the strong demand from Asia, and in particular China, which boosted exports of non-rural commodities that account for about 50% of total exports of goods and services.

Figure 1.3. **Fiscal balance**

General government net lending in per cent of GDP



Source: OECD, *National Accounts* and *OECD Economic Outlook*, No. 88.

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The crisis first hit the financial sector, which weathered it well

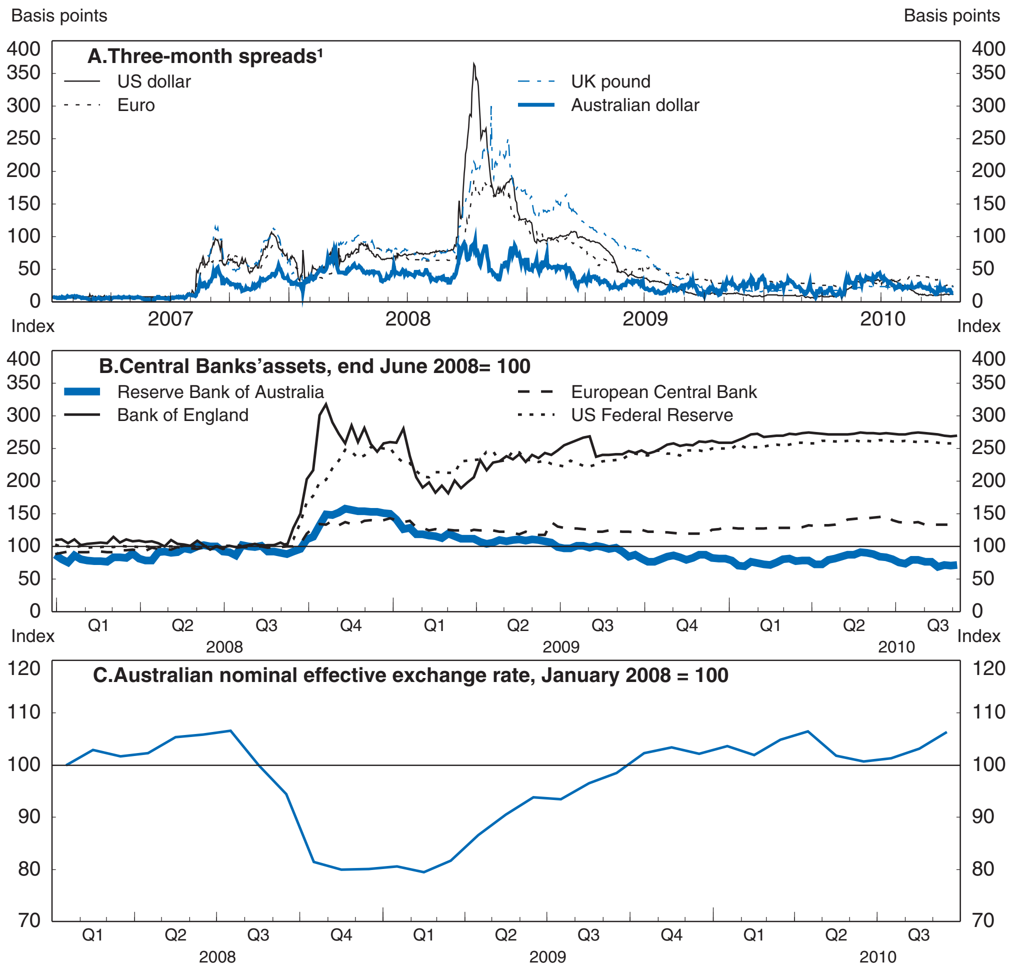
Despite the initial shock, the Australian financial sector was less affected by the turmoil in world financial markets than those in many other OECD countries. As in much of the OECD, stock markets tumbled towards end 2008, reflecting rising risk aversion, with the ASX200 dropping by around 40% between mid-2008 and early March 2009. The Australian dollar depreciated by about 30% as capital pulled out of the country. Money market spreads rose as liquidity dried up and counterparty risks increased, but by much less than in other industrial countries (Figure 1.4). Stock markets have since recovered and the exchange rate is now close to its pre-crisis levels, although volatility remains high.

Australian banks resisted the crisis well. Supervisory rules limited risk-taking in banks through conservative capital adequacy rules and reduced leverage (IMF, 2009b). They remained profitable (Table 1.2) and the government has not had to bail out any financial institutions. Banks had only small exposures to toxic assets, as their portfolios were focused on domestic, mainly low-risk household loans. The Australian banking sector was also less leveraged than international banks on average prior to the crisis (IMF, 2009a). The sector remains well capitalised with tier 1 capital to risk-weighted assets ratio at around 10%. Compared to many other OECD countries the rise in impaired assets has been small so far, peaking at 1.1% of total assets compared to more than 5% in the United States in 2009. Stringent stress tests conducted recently suggest that the banking sector would be able to cope relatively well with a major economic contraction occurring simultaneously with a severe downturn in the residential and commercial property sectors.[1]

Australia's regulatory and legal framework was an important factor in avoiding a crisis in the housing market. Securitisation has been part of the Australian lending environment for more than a decade; around 20% of housing loans were securitised prior to the crisis. Prudential regulation establishes strong incentives for banks using securitisation to base issuances on higher quality loans. The prudential regulator has also taken steps to reduce incentives to make high risk "sub prime" loans. However, there has not been the same disassociation between lenders and borrowers as in some other countries. According to the Australian Consumer Credit Code, the courts can set aside mortgage agreements where the lender could have reasonably known that the borrower would not be able to repay the loan

Figure 1.4. **Evolution of spreads, central bank balance sheets and effective exchange rates**

In main OECD countries during the crisis



1. Three-month spreads, last observation: 20 October 2010. Spread between three-month interbank rates (DEALER BILL in Australia, EURIBOR in the euro area, LIBOR in the United Kingdom and United States) and overnight swap rates.

Source: Datastream, Reserve Bank of Australia (RBA), Bank of England, European Central Bank (ECB), US Federal and OECD Secretariat.

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Table 1.2. **Selected financial soundness indicators**

(%) end 2009

	NPL[1]		ROA[2]	ROE[3]	Risk exposure capital/RWA[4]	Capital/assets	Provisions to NPL (% of NPLs)
	2007	2009					
Australia	**0.6**	**2.1**	**1.0**	**18.6**	**11.9**	**5.7**	**22.6**
United States	1.4	5.0	0.2	1.8	13.9	12.4	58
United Kingdom	0.9	3.3	–0.1	–2.0	13.3	4.8	30

1. Non performing loans/total loans.
2. Return on assets (after tax).
3. Return on equity (after tax).
4. Risk-weighted assets.

Source: IMF.

without causing substantial hardship. This places a strong obligation on lenders to make responsible lending decisions. In addition, all mortgages in Australia are "full recourse" and allow banks to pursue assets in addition to the house in the event of non-repayment (OECD, 2010a). Furthermore, compared with some other OECD countries, such as Ireland, Spain or especially the United States, Australian housing markets have been characterised by a shortage of supply relative to the underlying demand (see below). Without an overhang in housing supply, the market has not suffered from steep price declines.

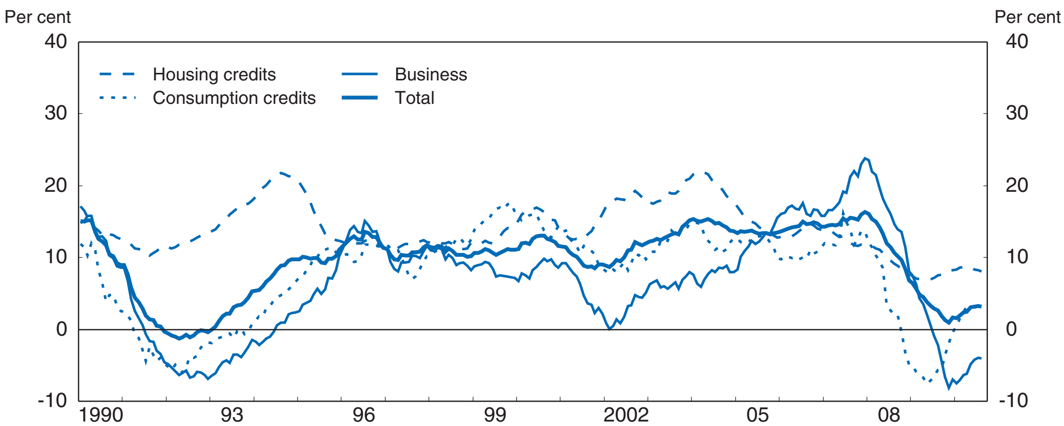
When the crisis was intensifying, however, the federal government intervened to respond to the increased nervousness of the financial market, as in other OECD countries. In October 2008, government guarantees of deposits and wholesale funding were announced (Australia had not had deposit guarantees). All deposits of AUD 1 million or less in eligible financial institutions were guaranteed for free (with the cap to be reviewed after three years), and a fee-based guarantee was put in place for large deposits and wholesale funding. These measures successfully lowered tensions in the market and limited the worsening of funding conditions. Banks were able to raise funds more cheaply and at longer maturities than otherwise, thereby helping to sustain credit to the economy. In April 2010, as risk aversion faded, spreads narrowed and banks started to get funding at similar cost without this guarantee, the government ended the guarantee for large deposits and wholesale funding scheme.

Notwithstanding the stable banking system, credit growth slowed substantially, especially to businesses, as credit conditions tightened reflecting in part tighter lending standards (RBA, 2010) and a pullback by foreign-owned banks (Figure 1.5). Credit is gradually picking up again. Financial market conditions more broadly are also improving, reflecting issuance of equity to rebuild balance sheets and recourse to debt instruments by enterprises.

The good performance of the financial sector has improved the ranking of Australian institutions by international standards. Reviews of Basel II implementation and stress tests give good marks to the solidity of the system (IMF, 2010; RBA, 2010). The main identified risk stems from the relatively high rollover of banks' large short term foreign exposures, which arose because Australian banks have funded much of their activity by borrowing overseas. Four of the world's nine most highly-rated banking groups are now Australian.

Figure 1.5. **Credit growth: Household and business sectors**

Percentage changes



Source: Reserve Bank of Australia (RBA).

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These good results are also confirmed in a recent ranking of world financial centres (Table 1.3). Australia improved its position substantially from 11th to 2nd place between 2008 and 2009 reflecting solid performance in both banking (5th) and non-banking (3rd) financial services.

Table 1.3. **Financial Development Index 2009 Rankings**

Country/economy	2009 rank	2008 rank	2009 score (17)	Change in score
United Kingdom	1	2	5.28	–0.55
Australia	**2**	**11**	**5.13**	**+0.15**
United States	3	1	5.12	–0.73
Singapore	4	10	5.03	–0.12
Hong Kong SAR	5	8	4.97	–0.26
Canada	6	5	4.96	–0.30
Switzerland	7	7	4.91	–0.32
Netherlands	8	9	4.85	–0.37
Japan	9	4	4.64	–0.64
Denmark	10	n.a.	4.64	n.a.

Source: World Economic forum the index measures financial development with an index that covers factors, policies, and institutions that lead to effective financial intermediation and markets, as well as deep and broad access to capital and financial services.

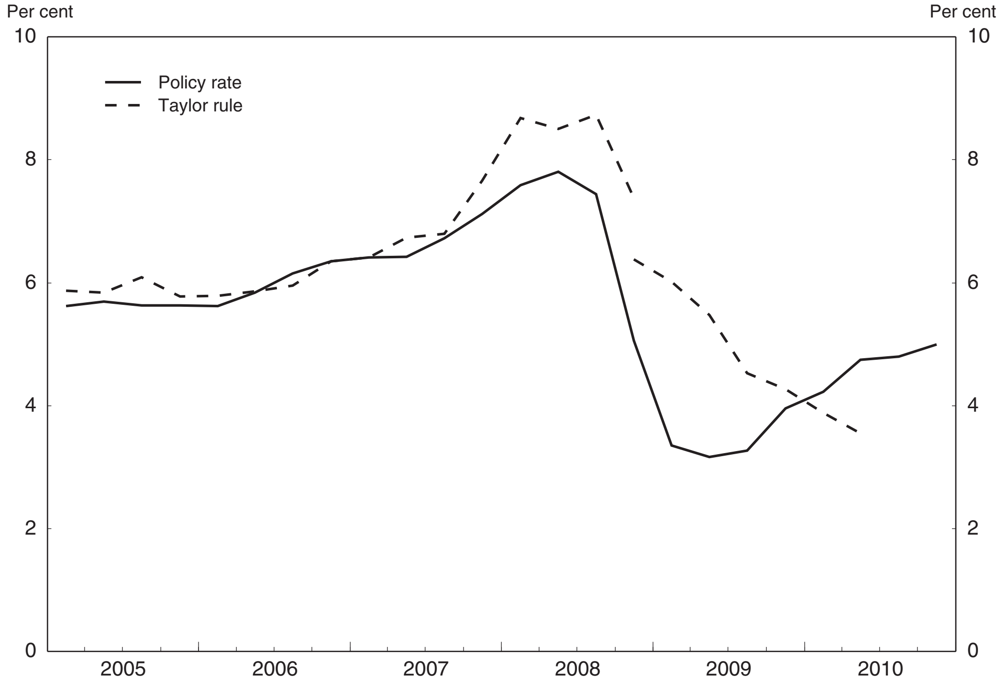
Appropriate policies and flexibility of the economy played a pivotal role in dealing with the crisis

The monetary policy response was rapid and appropriate

The monetary stance was rapidly eased at the onset of the global crisis. The RBA cut rates by 425 basis points between September 2008 and April 2009, well in excess of cuts suggested, for example, by a Taylor rule (Figure 1.6). The RBA did not wait for data on the weakening economy, which tends to come with a lag, but reacted to the risks of a major recession in a context of large uncertainties. Initially, monetary conditions were further loosened by the rapid depreciation of the exchange rate, as the terms-of-trade worsened and net portfolio inflows dropped. Despite the rise in risk premiums, the cuts in policy rates were translated into lower market rates. The relatively good health of the banking system facilitated policy effectiveness, as the credit channel continued to function. Additional liquidity was provided through an increase in regular market operations, including 6 month and 1 year term repos, a swap facility with the US Fed and an extension of eligible collateral. The last included all AAA paper and so-called self-securitised RMBS from the issuing institution. Financial institutions made extensive use of this extension, particularly as collateral for the longer-term repos: by the end of December 2008, the self-securitised RMBS were about half of total collateral, although their share has declined to under a quarter as markets recovered in early 2010. However, compared to other major central banks that engaged in quantitative easing or other liquidity operations, the RBA's balance sheet expanded only moderately and these operations have been largely unwound (Figure 1.4, Panel B).

Monetary easing helped sustain the incomes and confidence of households and enterprises. Household debt servicing, measured as a ratio to disposable income, fell by more than 5 percentage points in June 2009 compared with the peak in June 2008. By comparison, in the United Kingdom, household debt servicing fell by some 3 percentage points by June 2009 from the December 2007 peak, while in the United States the ratio fell by only 1 percentage point relative to its September 2007 peak (RBA, 2009a). This greater

Figure 1.6. **The Taylor rule**[1]



1. The standard specification, used here, is given by: $rT = p + r^* + a1(p - p^*) + a2.GAP$, where rT is the Taylor rule interest rate, p is the rate of inflation as measured by core CPI, p^* is the inflation target, r^* is the equilibrium real interest rate, GAP is the output gap, and $a1$ and $a2$ are the weights to inflation and output stabilisation, respectively. The weights are both assumed to equal 0.5. The equilibrium real interest rate is fixed at 3.0% until end of 2008 and hereafter at 2.0% (hence the break in the Taylor rule). The target inflation rate is 2.5% and the core CPI is the average of RBA Consumer Price Measures – Weighted Median and Trimmed Mean, Percentage Change from Corresponding Previous Year.

Source: RBA, *Price and Inflation* and OECD, *OECD Economic Outlook* No. 88.

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pass-through of policy rate changes to debt servicing and household income in Australia was due to the high share of variable rate loans and the fact that, reflecting their good conditions, financial institutions passed most of the decline in funding rates to lending rates on new and existing housing loans.

The RBA started to normalize monetary conditions earlier than other central banks as the crisis was milder than expected, inflation remained high and house prices were rebounding quickly. Between October 2009 and May 2010, the cash rate was raised from 3% to 4.5%, close to its estimated neutral level and more in line with a Taylor rule. The current neutral rate is about one percentage point below its pre-crisis level, because higher funding cost for banks have widened the normal spread between policy and market rates. Funding costs have been raised by higher risk premia, the push by the banks to increase the share of their funding that comes from deposits, rising costs of long-term debt[2] and changes in banks' funding mix towards these more expensive, but more stable, types of funding (Table 1.4). The RBA has kept its policy rates unchanged between May 2010 and October 2010, before raising them again by 25 basis points to 4.75% in November 2010. Although underlying inflation has returned to the target band, the housing market has shown signs of cooling and increased uncertainty in the world economy has continued to affect confidence, the economy is subject to a large expansionary shock from the high terms of trade and it has little spare capacity.

Table 1.4. **Change in cost of new funds relative to the cash rate**
Major banks, change between July 2007 and December 2009

	Basis points
Deposits	147
_transactions	250
_savings	36
_term	250
Short-term debt (including CDs)	13
Long-term debt	173
Total	**108**

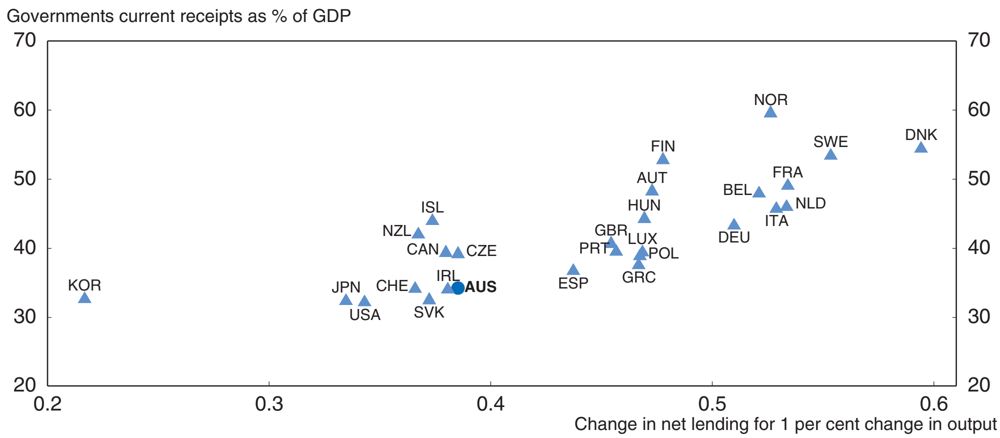
Source: Battellino, R. (2009a), "Some Comments on Bank Funding", remarks to 22nd Australasian Finance and Banking Conference, Sydney, December.

The timely, targeted and temporary fiscal stimulus helped sustain activity…

The government also rapidly implemented one of the largest fiscal stimulus packages in the OECD, which contained many timely, targeted and temporary measures to boost consumption and investment (Box 1.1). As Australia has relatively modest automatic stabilisers, because its government is relatively small (Figure 1.7), the response to the demand shock called for discretionary measures. The stimulus package was among the most effective in the OECD (OECD, 2009), and is estimated to have boosted growth by some two percentage points in 2009. The extra-aggregate demand helped to avoid a recession as usually defined by at least two consecutive quarters of negative output growth,[3] but the fiscal policy reaction also had a pivotal role in boosting overall confidence. Other factors affected demand as well. For example, disposable incomes were boosted by large declines in mortgage interest payments due to sharp drop in interest rates, and business confidence and activity were buoyed by continued growth in Asia.

The effectiveness of the fiscal stimulus was in part a function of its size. The total amount of stimulus measures legislated for the period running from end-2008 to mid-2012 exceeded 7% of GDP (Box 1.1). Adopting such a large stimulus plan was made

Figure 1.7. **Government size and automatic stabilisers**



Note: Governments current receipts and GDP are for year 2008 and the sensitivity of the cyclical component to changes in the output gab reports the coefficient of a bivariate regression.

Source: Girouard, N. and C. André (2005), "Measuring Cyclically-adjusted Budget Balances for OECD countries". *Economics Department Working Papers* No. 434, OECD.

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Box 1.1. **Main features of the Australian fiscal stimulus plan and its estimated impact**

Five recovery programmes were announced between October 2008 and May 2009, including as part of the 2009/10 budget.* The cumulative amount of measures adopted for the period running from end 2008 until the end of the 2011/12 fiscal year (in June 2012) came to more than 7% of GDP (around AUD 88 billion). The magnitude of these measures put Australia's fiscal stimulus effort in third place among OECD countries, after Korea and the United States (Figure 1.8, Panel A).

The stimulus was made up of a range of measures, the intensity of which peaked in the first half of 2009 (Figure 1.8, Panel B). To simplify, it can be divided into three phases:

- *The first phase* sought primarily to spur private consumption via cash transfers (2.3% of GDP), the majority of which were given to modest-income households at the end of 2008 and beginning of 2009. During this phase, aid measures were also increased for first-time home buyers.
- *The second phase* of the stimulus, running from the second half of 2009 until the beginning of 2011, focused on infrastructure investment that could be carried out rapidly (2.5% of GDP). This included: improvements to educational infrastructure (1.2% of GDP) and social housing; subsidies for household insulation and energy-saving improvements; and financial incentives for businesses to acquire capital goods.
- *The third phase* involved larger and longer-term infrastructure projects, including in road-building and railroads.

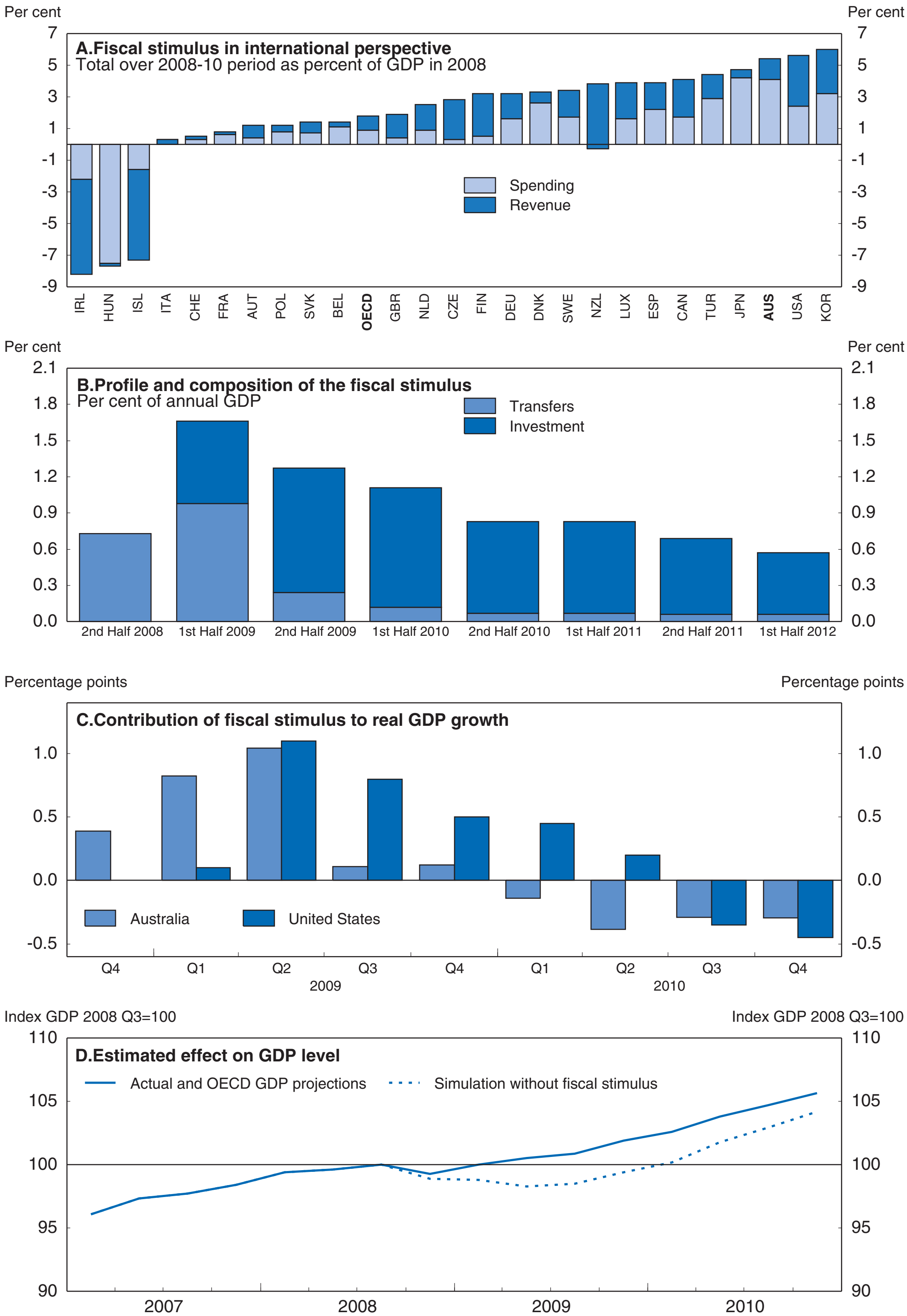
The positive growth impact of the measures was evaluated by the authorities at roughly one percentage point for the 2008/09 fiscal year and 1¼ percentage points for 2009/10. This assessment assumes multiplier effects of 0.6 for transfers to households and 0.85 for government capital spending. These multiplier estimates would appear relatively prudent, in particular as compared to assumptions made by the OECD and the IMF. The IMF (2009c) estimates, for example, that in the G20 countries multipliers would lie between 0.5 and 1.8 for infrastructure outlays and between 0.3 and 0.6 for cuts in household income tax. The OECD estimates Australian multipliers at between 0.9 and 1.3 for infrastructure and between 0.4 and 0.8 for transfers to households. Based on OECD estimates, the Australian stimulus package has the second-highest demand effect, after that of the United States (OECD, 2009).

Due to its rapid implementation, the Australian stimulus had a more rapid impact on the economy than the US recovery programme (Figure 1.8, Panel C). The impact of the stimulus on growth increased gradually from end 2008, peaking during the second quarter of 2009, quickly reversed thereafter due to the temporary nature of the measures taken, and turned slightly negative from the beginning of 2010.

* The authorities announced their first plan, the Economic Security Strategy, amounting to 0.9% of GDP in October 2008 and the Nation Building Package (0.4% of GDP) in December 2008, followed by the COAG funding package (0.9% of GDP). In February 2009, the Nation Building and Jobs Plan (3.5% of GDP) was introduced. Lastly, in May 2009, a package of recovery measures representing 1.7% of GDP was included in the 2009/10 budget.

easier by the healthy state of the public finances, which reflects in part the effectiveness of the fiscal strategy pursued since the mid-1990s, which aimed at maintaining a balanced budget or a small surplus on average over the cycle and at keeping the tax burden below its 2007/08 level (corresponding to the beginning of the previous legislature).

Figure 1.8. **Main features of the Australia fiscal stimulus**



Source: Australian Government; ABS, *Australian National Accounts: National Income*; and OECD (2010), *OECD Economic Outlook*, No. 88 online database.

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The effectiveness of the stimulus also stemmed from the speed with which it was introduced. This limited the weakening of demand in late 2008 and in 2009. Traditionally, the effectiveness of discretionary fiscal policies is hampered by the difficulties inherent in carrying them out, due to well-known lags. In this case, however, the authorities acted before the consequences of the crisis on activity were perceptible in the data. Rather, they responded to the warning signs that the economy could plunge sharply, as reflected, for example, in the steep downturn in economic forecasts in late 2008 and early 2009 (Gruen, 2009). The authorities learnt from the tardy fiscal response to the early 1990s recession that speed was of the essence. By October 2008, just one month after Lehman Brothers failed, the first phase of the recovery plan had been announced, and by the beginning of December 2008 around AUD 8½ billion (0.7% of GDP) had been distributed to households.

The targeting of the stimulus was consistent with the goal of lending the economy substantial and quick support. The initial transfers to households spurred private consumption. The targeting of these measures to people with modest incomes, pensioners and families would appear to have limited the potential private saving offset related to the additional public spending (Ricardian effects). According to Leigh (2009), roughly 40% of the transfers were spent during the quarter in which they were received. The preponderant share of capital investment in the recovery plan also reflected a concern for effectiveness, insofar as such outlays have a high multiplier, given that Ricardian effects have little impact (Röhn, 2010) and imports are only a minor component. In addition, the authorities mitigated the usual problems of slow implementation by putting school building, which can be planned and carried out quickly, at the heart of the capital spending plan: schools are often built from standardised blueprints, and there is no unnecessary wait for approval stemming for building permits (Kennedy, 2009).

Special arrangements were also made with the states to co-ordinate implementation of stimulus measures financed by the federal government. Under the Australian federal system, the central government wields only limited powers in the areas of public service, infrastructure, education and health care; these are administered essentially by the states (OECD, 2006). Implementing the stimulus, which was financed by the federal government, therefore entailed close co-operation among all levels of government, which was laid out in a National Partnership Agreement. This arrangement also guaranteed that the fiscal stimulus introduced at the federal level would not be offset by restrictive measures imposed sub-nationally.[4] A federal guarantee for borrowings by the states was also put in place, although it is to expire at end-2010.

Vigorous fiscal intervention was justified given the scope and exceptional nature of the recent crisis and the uncertainties over the magnitude of the disruptions to monetary policy transmission channels (OECD, 2009; IMF, 2009d). Furthermore, given the time lag for monetary policy measures to affect the real economy, there was a risk that a sharp downturn in activity might occur in the absence of active fiscal support. Macroeconomic models of the Australian economy indicate that the production effects of monetary actions are gradual, peaking only after some 18 to 24 months, even if their impact on consumption via lower mortgage interest payments can be rapid (Lawson and Rees, 2008; Jääskela and Nimark, 2007).

Although the stimulus was effective in the short term in spurring activity, the predominance of spending and the costly nature of certain programmes has been criticized by some observers in Australia (Ergas and Robson, 2009; Davidson and Silva, 2009).

The priority given to introducing the stimulus quickly reduced the quality of certain expenditures. For instance, the tax incentives for home insulation were subsequently halted because of faulty management that led to poor service provision.[5] Also, there were cost overruns for some school buildings.[6]

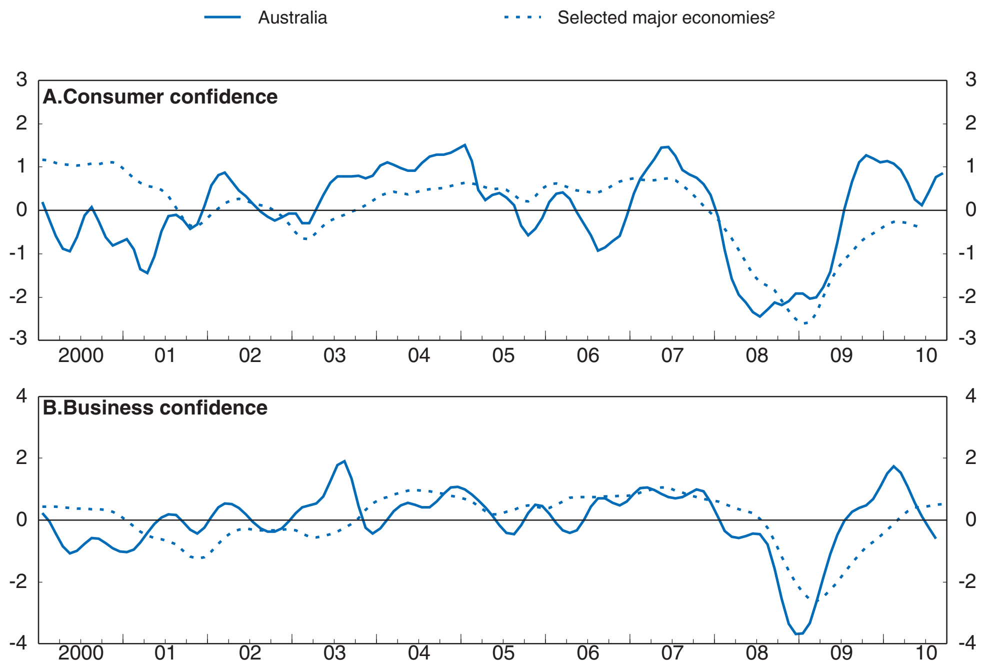
It would have been difficult, however, to reconcile swift and forceful short-term fiscal action with microeconomic efficiency. The choice of giving priority to speed of action and to measures having a high multiplier effect would seem to have been justified. According to most estimates, tax multipliers are much smaller than spending multipliers. By avoiding a sharp drop in activity and a long-lasting rise in unemployment, and especially long-term unemployment, the stimulus has had beneficial effects, some of which are long-term, by limiting the weakening of potential output caused by the crisis. The risks of distortions from the design of the Australian stimulus package should also not be overestimated. The spending increases are temporary, and the government has pledged to restrain spending growth to achieve fiscal consolidation once recovery is underway. This ought to avoid the costs of potentially excessive taxation *ex post*. From another standpoint, some stimulus measures, such as financial transfers to modest-income households, were in fact like temporary tax cuts. It would have been difficult to achieve the same effect via changes in taxation, which tend to be slower to implement and harder to target.

… the swift policy response together with the flexible labour markets helped cushion the impact of the crisis

The strong and rapid support of macroeconomic policies to activity convinced both consumers and businesses that the slowdown would be relatively mild. Moreover, the longer term outlook was positive with strong growth expected in key Chinese and Indian markets. In this context, business and consumer confidence rebounded in the early part of 2009 (Figure 1.9). This limited the impact of the downturn on employment. A significant part of the adjustment was achieved through a decline in the average hours worked, even though Australia did not subsidize shorter working hours. The reduction in hours has been equivalent to a hike in unemployment of about 2 percentage points (Figure 1.10). Taking advantage of the greater flexibility after several years of labour market reform, employers are likely to have concluded that the costs entailed in hoarding labour would be less than those associated with laying off staff and re-hiring others at some point in the future (Eslake, 2009). Firms had experienced widespread shortages of labour, particularly skilled worker, in the run up to the crisis (OECD, 2008).

In contrast to much of the OECD, the Australian economy is coming out of the global turmoil with little spare capacity and inflation around the middle of the medium term target. In the first half of 2010, GDP grew by almost 3% year-on-year, sustained by solid domestic demand driven by a rapid increase of public investment and consumption. Private demand was somewhat weaker because of the unwinding of fiscal incentives that had benefited households and private firms in the course of 2009, although household consumption has strengthened in the second quarter 2010. In early 2010, the output gap was quite small – around 2% according to OECD estimates – consistent with business surveys indicators of capacity utilisation. The slowdown in activity caused by the crisis nevertheless eliminated the inflation pressures that had been building up before the crisis. Real wage growth fell in 2009 and early 2010, reducing unit labour costs despite the labour hoarding, although it has edged up a little recently. Import prices were also lowered by the appreciation of the currency in 2009. As a result, core inflation fell from around 4¾ per cent

Figure 1.9. **Confidence indicators**[1]

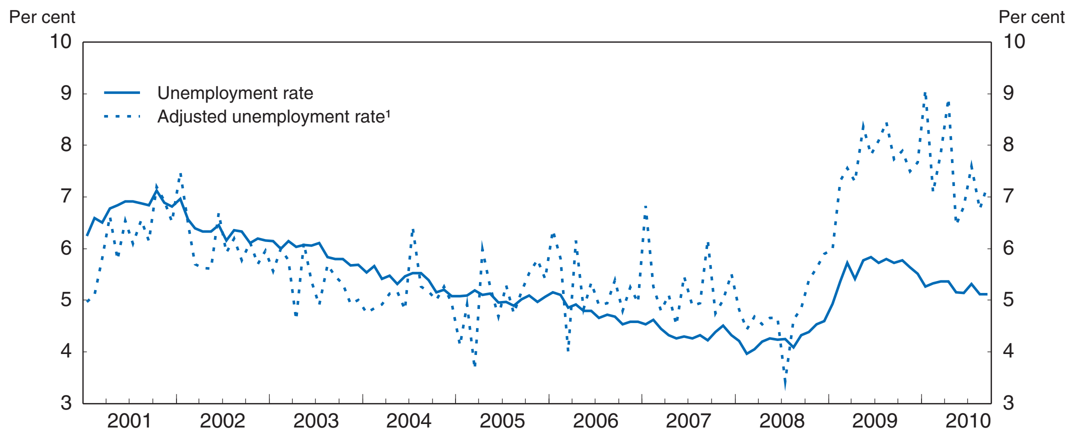


1. The series are normalised at the average for the period starting in 2000 and are presented in units of standard deviation.
2. Simple average of Japan, United Kingdom, United States and euro area.

Source: OECD, *Main Economic Indicators Database*.

StatLink http://dx.doi.org/10.1787/888932344121

Figure 1.10. **The slack in the labour market**



1. The adjusted unemployment rate adjusts for changes in the number of hours worked. It is computed assuming that the people in the labour force would be willing to work the same number hours as the average of hours worked between January 2001 and October 2008.

Source: ABS, Labour Force, cat. 6202.0.

StatLink http://dx.doi.org/10.1787/888932344140

in the September quarter of 2008 to around 2½ per cent in September 2010. Headline inflation reached 2.8% in September 2010, boosted by rising prices on utilities and tobacco. Such inflation rates are at or above the middle of the RBA inflation target.

Policies need to remain prudent as the economy is entering the upswing with little spare capacity

Fiscal policy exit has begun

As the external environment normalised, the exit from the crisis became a more immediate fiscal issue, even though the small rise in the already moderate public debt posed no threat to sustainability of public finances, and the deficit had peaked already at only 4% of GDP. The rebound in activity also seems well underway and sufficiently robust to absorb the fiscal consolidation planned for 2010 and 2011 as the temporary stimulus comes to an end and the government resumes its strategy to restore a balanced budget. This strategy, which was laid out in conjunction with the stimulus package, combines a rebound in tax revenues from automatic stabilisers as activity recovers with a lid on spending. The latter will be constrained to grow at below 2% per year in real terms as long as growth exceeds its underlying trend (around 3%), and until a surplus of 1% of GDP is reached.

The federal government deficit is to decline to 2¾ per cent of GDP in fiscal year 2010/11 and reach a small surplus (¼ per cent of GDP) by 2012/13. This is three years earlier than anticipated in the previous budget, owing to an upward revision of the macroeconomic assumptions (Table 1.5). To stick to the strategy, new spending initiatives in the 2010/11 budget for both the current and next fiscal years on health, training and renewable energies are to be offset by savings elsewhere and by the 25% increase in tobacco excises in April 2010. Once the surplus target is reached, additional spending is in the pipeline, including on the superannuation system and infrastructure; a cut in business profit taxation is also planned. These initiatives, which are to be financed by an increase in the taxation of the rent drawn from the exploitation of non renewable resources, are assessed in Chapter 2.

According to OECD estimates, fiscal policy will have a restrictive impact on activity of the order of ¾ per cent GDP in 2010 and 2011, which will cool off emerging demand pressures. The strategy will also contain the rise in public debt, with net general government debt set to peak at less than 4% of GDP in 2011/12 (Figure 1.11).

Table 1.5. **Changes in fiscal targets since the 2009/10 budget**

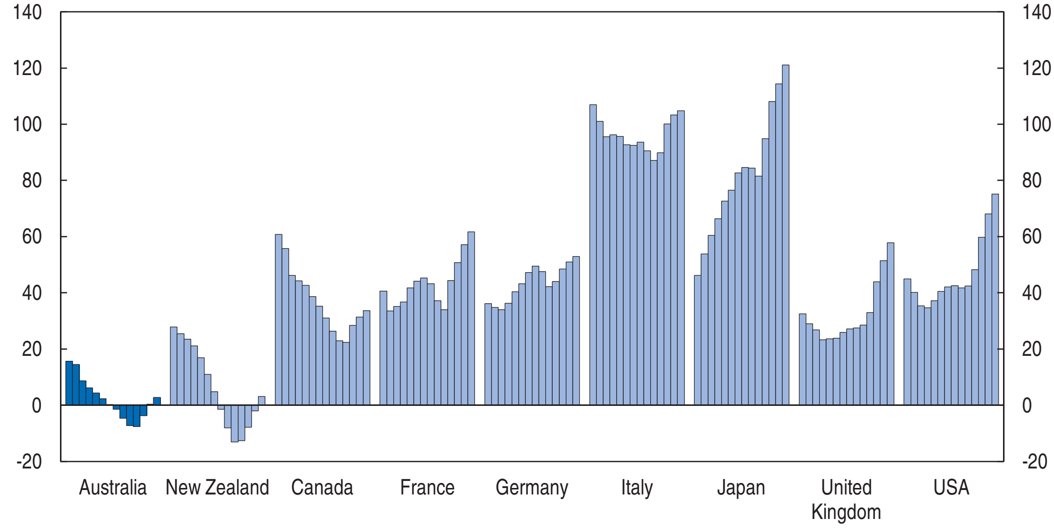
Per cent of GDP

	2009/10	2010/11	2011/12	2012/13
2009/10 budget target	–4.1	–4.0	–2.8	–1.9
2010/11 economic statement target	–4.2	–2.8	–0.6	0.3
Changes between 2009/10 budget and 2010/11 economic statement	–0.1	1.2	2.2	2.2
of which:				
Effect of policy decisions	–0.2	–0.1	–0.1	0.0
Effect of changes in economic conditions and other parameters	0.1	1.3	2.3	2.2
Underlying macroeconomic assumptions				
2009/10 budget				
GDP growth	–0.50	2.25	4.50	4.50
Unemployment rate[1]	8.25	8.50	7.50	6.50
2010/11 economic statement				
GDP growth	2.25	3.00	3.75	3.00
Unemployment rate[1]	5.25	5.00	4.75	5.00

1. Q2 level.

Source: Australian Government, 2009/10 and 2010/11 budgets and economic statement, *www.budget.gov.au* and OECD calculations (discrepancies with the figures published by the Australian Government are due to differences regarding the estimated level of GDP used for this calculation).

Figure 1.11. **Net government debt in international comparison**
General government net financial liabilities as per cent of GDP, 1998-2011



Source: OECD, *OECD Economic Outlook Database*.

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The rapid recovery and the resource boom complicate monetary policy making

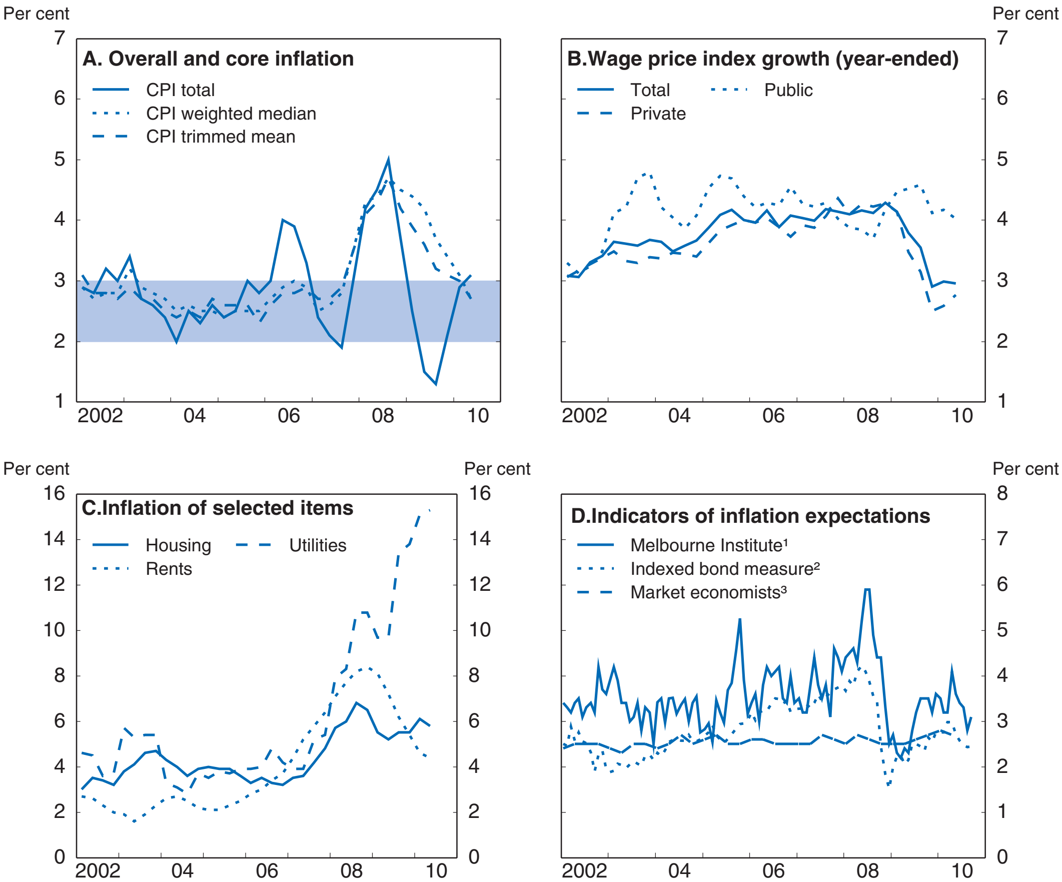
The RBA's challenge is to control inflation while sustaining solid growth. The dynamism of Asian markets and a terms of trade that is likely to remain high for some time are expected to support the economy. Underlying demand in the housing and infrastructure sectors is also likely to remain quite buoyant given the growing population and the resource boom. But there are also clearly downside economic risks, including global uncertainties with financial market developments. In this context, the current stance of monetary policy, which implies market interest rates slightly above their decade average, is appropriate.

Looking ahead, however, RBA's task is complicated by the concentration of price pressures in some specific sectors. Empirical work on inflation in Australia points to price changes being most sensitive to shocks in domestic supply and the exchange rate, while the impact of domestic monetary shocks has been small (Buncic and Melecky, 2007; Ericksson, 2009; Norman and Richards, 2010). Recent price pressures have been particularly strong in housing and utilities (Figure 1.12, Panel C), which have accounted for an increase in headline inflation of over 1 percentage point since the last quarter of 2008. In utilities, large price increases have been approved by regulators to meet investment needs to expand supply and accommodate higher input prices. The rapid increase in population and supply constraints in several areas in Australia have put pressure on house prices, which are feeding into price pressures through rents and building costs. To the extent that these adjustments are relative price changes, which are needed to enable a strengthening of supply in the housing and infrastructure sectors, rather than an inflation phenomenon, they should not be *a priori* of concern to monetary policy.

Monetary authorities need however to ensure that inflation expectations stay well anchored and there is a risk that the sectoral price pressures will feed into inflation expectations. The underlying inflation rate has been above the Bank's target band (2% to 3%) from December 2007 to December 2009, and it returned within the band only in June 2010 (Figure 1.12). Although they are difficult to measure, after declining during the downturn,

Figure 1.12. **Inflation developments**

Percentage change from corresponding quarter of previous year



1. Melbourne Institute median consumer inflation expectations.
2. End of month.
3. Market Economists Consumer inflation expectations for 2 to 2.5 years ahead.

Source: RBA, Prices and Inflation and ABS, Consumer price index, cat. 6401.

StatLink http://dx.doi.org/10.1787/888932344178

inflation expectations have picked up to around their average levels over the inflation targeting period, although wage pressures have been limited so far in the private sector. But the slack in the economy is rapidly disappearing as unemployment is nearing its natural rate and the output gap is closing. The rise in the terms of trade induced by the resource boom will also boost income and demand growth in the quarters ahead. With this background, the RBA should thus continue monitoring the inflation developments closely and tighten policy if demand pressures on productive capacities intensify or if there are signs that sectoral price increases are raising inflation expectations or being transmitted to economy-wide wages. In this context, communicating well the sources of the price pressures will be important.

House price developments also pose potential risks, which has given rise to debate about how monetary policy might respond (Box 1.2). Rising house prices, though now explicable by fundamentals, might induce speculative behaviour if, as expected, the strong growth of housing demand persists, and supply bottlenecks are not reduced. So far, credit growth, which often is associated with bubbles, has been relatively subdued and house prices have been broadly flat in recent months.

Box 1.2. **Monetary policy and housing price inflation**

The rise in housing prices before and after the crisis has stimulated discussion in Australia about the need to consider asset prices in monetary policy decisions to prevent asset bubbles. Similar discussions are held in other OECD countries. Many observers have blamed asymmetric monetary policy, the "Greenspan put" (being passive about rising asset prices but lowering rates when bubbles burst), for the asset price bubbles in the US or the UK that partly contributed to the crisis. A pattern of not raising rates to contain credit growth in an upswing while lowering rates to deal with the aftershock of bubbles has led some observers to promote using policy interest rates more actively to prevent asset bubbles (White, 2009). The task is further complicated by a build-up of imbalances in a low inflation environment, which makes monetary tightening even harder to do when only asset prices rise (Borio and Shim, 2007).

The RBA has long taken into account asset price developments in the setting of monetary policy, particularly where this has been accompanied by rapid credit growth (Stevens, 2004). In particular, the RBA, together with other regulatory authorities in Australia, raised concerns about the risks associated with rapid growth of mortgage credit and housing prices, and a decline in lending standards, in the early 2000s (Bloxham, Kent and Robson, 2010). In addition to highlighting these risks publicly, interest rates were raised and a number of regulatory policies were tightened over this period. The result was a significant cooling in the housing boom that was occurring early in the decade, with a sharp slowing in the rate of house price growth, lower credit growth, increased household saving and an increase in housing equity injection.

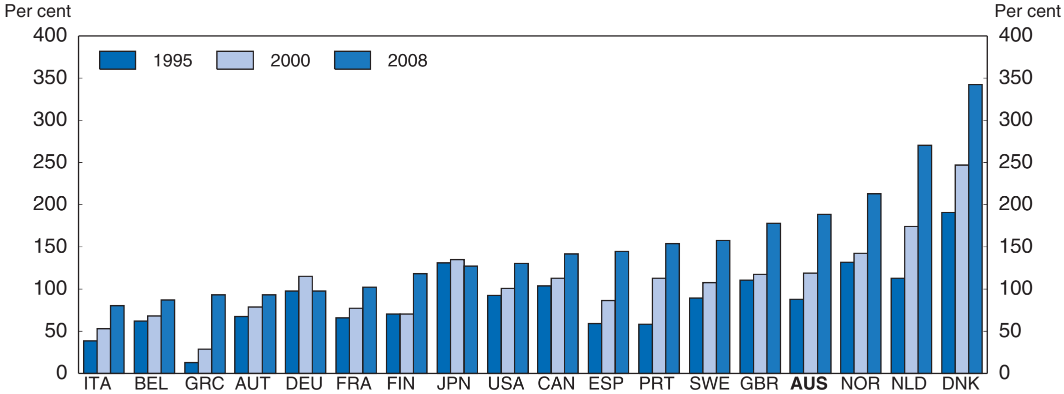
Looking ahead, enhanced macro-prudential policies could help to better address financial imbalances, although, this may be more difficult in open and sophisticated financial systems. With mobile capital and a large non-bank financial sector, there are many ways to avoid prudential rules set on banks by borrowing off-shore or lending through alternative vehicles (*i.e.* those outside the regulatory net).

The relatively high level of indebtedness of Australian households has raised concerns of vulnerability to shocks in the housing market, although vulnerabilities seem contained so far (IMF, 2009a) (Figure 1.13). A large proportion of recent house purchases is by first-home buyers with variable rate mortgages and high loan-to-value ratios (at around 90%), which makes them vulnerable to changes in interest rates (Battellino, 2010). However, these vulnerabilities are mitigated by the rise in household financial assets, which have reached 2.8 years of income, compared with 1.8 years in the early 1990s (Battellino, 2010). Additionally, housing debt is held disproportionately by households with the highest incomes, who are best able to support a possible fall in housing prices or a rise in interest rates. The rate of non-performing housing loans is less than 1%, which is very low by international comparison.

Housing market risks nevertheless call for continued prudence in lending standards. Australia has clear lines of responsibility for supervision and adequate prudential rules on housing finance. It might be advisable to enhance prudential policies regarding housing finance to prevent bubbles from developing, even though the effectiveness of these policies might be limited. For example, loan-to-value ratios should be strictly enforced, and consideration should be given to adjusting them in a counter-cyclical fashion, as seems to be envisaged in Sweden and Norway. Lenders should be urged to base their mortgage credit

Figure 1.13. **Household gross debt**

Per cent of disposable income



Note: It is important to note that in several OECD countries, the assets held by households are sizable and should be taken into account for assessing their vulnerability.

Source: OECD, *National Accounts*.

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criteria (*e.g.* debt service to income ratio) on medium-term average conditions, rather than on exceptionally benign (or severe) ones. More fundamentally, there is a need to pursue structural reforms to enhance the functioning of the housing market (see below).

Australia's major macroeconomic challenges are medium term

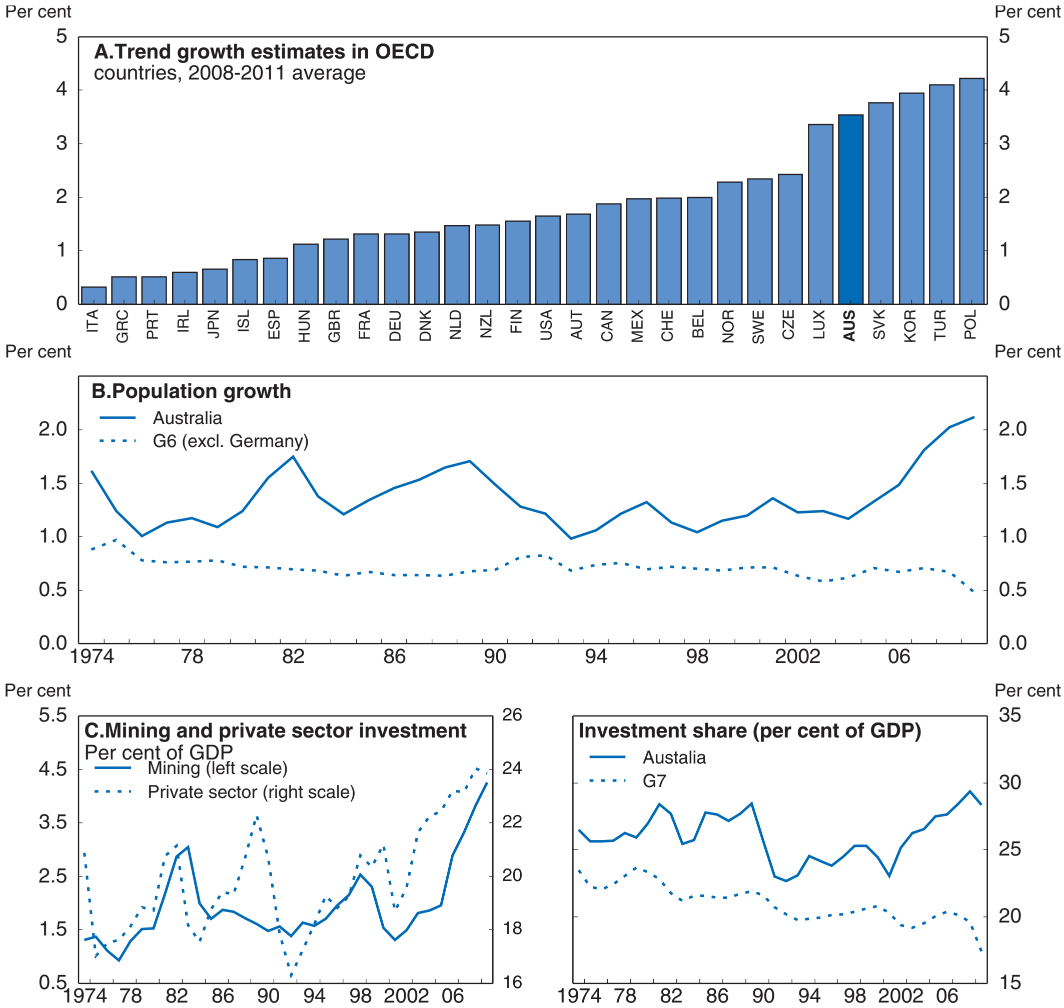
Short- and medium-term prospects are favourable

Overall, short-term prospects are favourable in Australia, particularly in view of the anticipated strong export demand from Asia. An already robust recovery is likely to gather speed going forward. Private demand boosted by investments and re-stocking will gradually take over from public demand as the driver of growth (Table 1.1).[7] Investment in industry and housing is expected to pick up to respond to strong demand, while private consumption will continue to grow on the back of declining unemployment and improving confidence. Projected above potential growth at 3-4% between 2010 and 2012 is among the strongest in the OECD. Rising investment and consumption will gradually stimulate job creation, but unemployment is set to decline only gradually as working hours are expected to rise again. The remaining slack and increase in the labour supply from immigration should help contain wage pressures in the near term. With an output gap expected to remain slightly negative, inflation is projected to level off at around 3% in 2011.

The risks seem broadly balanced. The dynamism of growth in Asia has been moderating since the middle of 2010 and the risks related to renewed financial turmoil and new shocks to growth in the OECD area might bear negatively on Australia. However, demand from Asia and the terms of trade could surprise in either direction. Moreover, the rebound in domestic spending may also be stronger than expected as confidence could strengthen further.

The medium term prospects are also good. Although trend productivity growth has weakened over the past years, the rise in labour and capital inputs should help maintain or even boost trend growth which, at around 3¼ per cent, is already estimated to be among the strongest in the OECD area. OECD estimates, while highly uncertain, suggest that the impact of the crisis on trend output has been less pronounced in Australia than in most other OECD countries. The estimate of over 4% decline in the level of potential output for the OECD area as a whole stems mainly from higher capital cost for corporations (on average 150 basis points) as interest rates adjust to greater risk (OECD, 2010b). Recessions also tend to have a permanent impact on labour participation or structural unemployment that may be reversed only slowly. However, unemployment in Australia rose only modestly, and the expected rapid recovery would contain any upward pressures on long-term structural unemployment or weaker trend growth. More importantly, despite possibly costlier capital, the investment rate, which is already high by historical and international standards, should continue to increase over the coming years with the renewed expansion of capital spending in the mining sector (Figure 1.14). A key driver of the expected surge in investment in the resource sector will come from the liquefied natural gas (LNG) industry, which could rise from around ½ per cent of GDP currently to 2½-3 per cent of GDP by 2013-14 (Commonwealth of Australia, 2010a; RBA, 2009a). Potential growth is also likely to be sustained by a relatively large increase in population.

Figure 1.14. **Potential growth development**



Source: ABS, *National Accounts*, cat. 5204.0; OECD, *National Accounts* and OECD (2010), *Economic Outlook* No. 88.

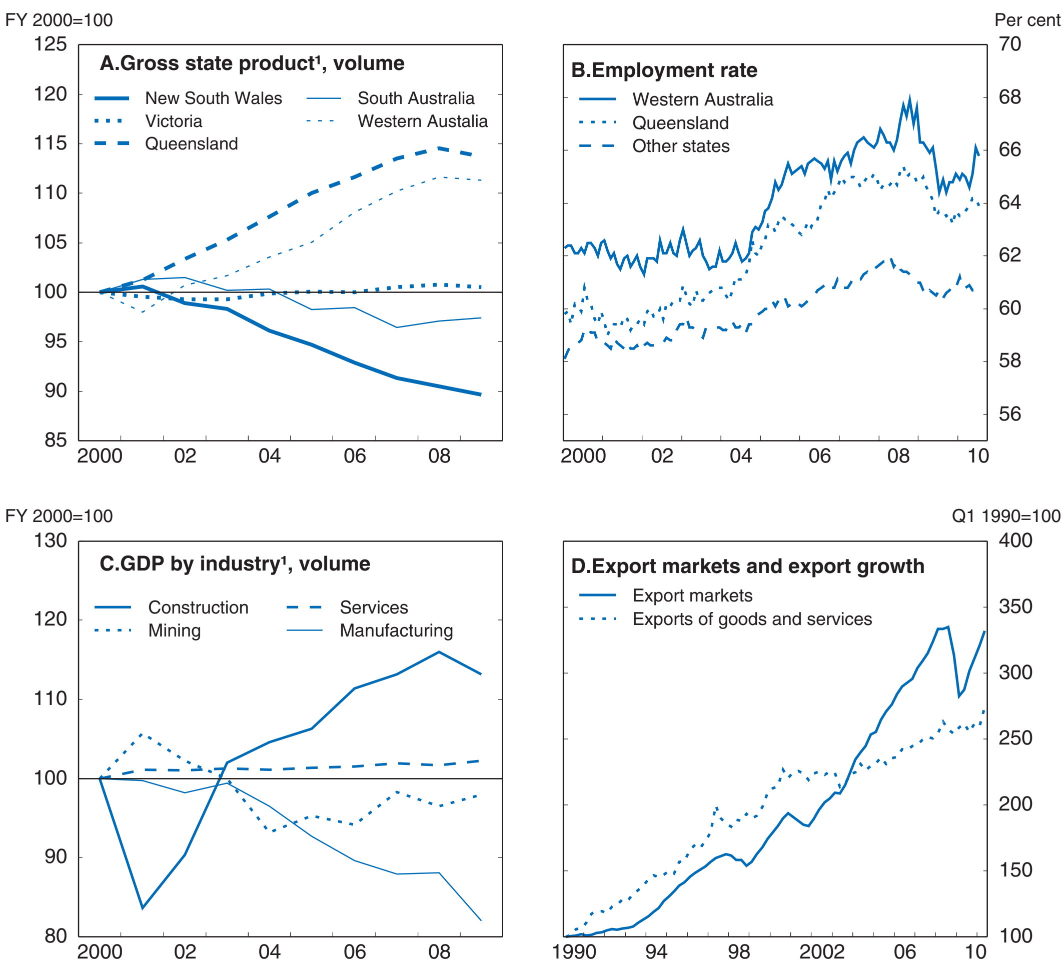
StatLink http://dx.doi.org/10.1787/888932344216

Australia's challenges are those of success. The main policy challenge is to ensure balanced and robust growth in the years ahead. The supply adjustments in Australia are complicated by the need to reallocate resources prompted by the rise in commodity prices and the associated natural resource boom, the rapidly expanding need for housing and other infrastructure (Chapter 3) and an ongoing concern that the fruits of strong growth are shared fairly (Chapter 4).

Flexible markets and macroeconomic policy are key for facing the challenges of the natural resource boom

The pre-crisis terms-of-trade boom has already started to reshape the regional balance of the economy. While the share of mining is a relatively small part of the total economy – 7% of GDP and 1.6% of employment – it is heavily concentrated in two states, Western Australia and Queensland. The impact of the boom has therefore been more pronounced in these states, where activity and demand for labour and capital has been much stronger than in the rest of the country (Figure 1.15, Panels A and B). In recent years,

Figure 1.15. **Output and employment: Sectoral and geographical indicators**



1. Indicators measured in relative terms compared with the trend recorded for the whole economy.

Source: ABS and OECD (2010), *OECD Economic Outlook*, No. 88 online database.

StatLink http://dx.doi.org/10.1787/888932344235

employment growth has been largely sourced from within the resource-rich states, which has resulted in unemployment rates well below the national average and record high participation rates. Some of the labour demand has nevertheless been met by interstate and overseas migration. Going forward, competition for existing labour supply could generate important wage pressures, as employment rates are already high. Immigration and population in both Western Australia and Queensland will probably need to continue to grow at a rapid pace to accommodate a sustained rise of resource output and exports (McKissack *et al.*, 2008). Adjustment would be facilitated by increasing labour utilisation and preserving the flexibility of the labour market to avoid wage pressures, as discussed in Chapter 4.

However, although mining investments have been strong, production growth in this sector has so far been modest (Figure 1.15, Panel C). Exports have also lost market share despite strong growth of booming Asian markets (Figure 1.15, Panel D). While this is partly due to long lead times for new mining projects, it also reflects bottlenecks in transport infrastructure in some regions and, to some extent, the effect of the appreciation of the exchange rate on manufacturing exports. Population growth has also intensified demand pressures on infrastructure.

A key to orderly adjustment and an appropriate supply response is preserving the flexibility of the economy. As discussed above, flexibility already enabled Australia to weather the global financial and economic crisis better than most other OECD countries. While the current strong exchange rate poses risks for some sectors of the economy, it is also a mechanism to transfer productive resources toward the resource and related sectors. Apart from labour and product markets, and the exchange rate, the need for flexibility also applies to macroeconomic policy in general, which should be ready and able to react rapidly to changes in the external environment (Lowe, 2010). For example, the volatility of commodity prices and the terms of trade should not be underestimated. Past trends and market behaviour point to the possibility of large future downward price adjustments in the metals market as supply adjusts (Box 1.3). While the path of future prices is impossible to predict, it may be prudent to assume some temporariness in the recent price hikes, perhaps more than is currently assumed by the government. For the public sector this means that a more cautious use of the incoming resource revenues may be warranted (Chapter 2). Further turmoil on international financial markets cannot be ruled out either. Australia's dependence on external funding will probably grow in the coming years, especially for mining-sector investment. Although Australia has managed external risks well so far, its relatively high net foreign liabilities (about 60% of GDP) raises concerns about greater vulnerability to external shocks (see below).

Although limited, the risks related to the rise in the current account deficit could be further reduced

A potential source of vulnerability often discussed in Australia is the expected increase in the current account deficit and net foreign liabilities in the years ahead. The investment ratio is projected to rise for an extended period as mining investment responds to high commodity prices. In addition, both housing and infrastructure investment are projected to expand with population growth, following a long period of underinvestment in infrastructure. Although domestic saving has increased slightly in recent years, it is unlikely to meet the rising investment needs (Figure 1.16). Foreign saving will thus be necessary to fill the gap, which potentially increases the country's vulnerability to external

Box 1.3. **Is the terms of trade rise permanent?**

Commodity prices tend to be volatile, non-stationary, and some prices are considered to be in a longer-term secular decline. Prices are influenced by long supply-lags, economic cycles, estimated reserves, etc. Recoverability in turn may depend on price, as the costs of reaching marginal deposits can be high. Australia exports a range of commodities, mostly metals or minerals, and their estimated lives are relatively long (Table 1.6). While a number of factors tend to favour a sustained increase in Australia's key export commodity prices coal, copper and bauxite many risks for large price adjustments over time remain, raising some questions:

- *Will the current market imbalances persist?* Strong demand from Asia for metals and minerals over this decade has led to supply shortages and higher prices, as supply tends to react to higher prices with long lags. For example, world iron production has doubled in recent years but that of its key inputs coal, and bauxite has only risen by about 40% suggesting some room for new supply. Investments are already under way to increase supply of many metals and minerals in Africa, Latin America and Australia, which are likely to put downward pressure on prices. Demand may also be affected by substitution by cheaper materials as technologies evolve, or by improvements in productivity. The risks of large price adjustment over the medium-term are thus important.
- *History points to secular decline in prices?* Over long periods of time non-fuel commodity prices have tended to decline (IMF, 2006) as their demand/income elasticities are low. Although, there have also been long periods when strong demand has raised prices, overall metals prices have declined by 1.6% per year on average since the 1950s. Although resource depletion or rising marginal costs of extraction can increase prices over time, reserves for many metals seem unlimited and collusive price behaviour seems much rarer than in, notably, the oil market. These factors suggest the price boom will be temporary.

Table 1.6. **Mineral resource exports, indicative resource life and ranking**

Mineral resources	Exports 2008-09 ($m)	Export shares (%)	Indicative life years at 2008[1]	World ranking at 2008[2]
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	[3]
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**		

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.

1. 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.
2. The world ranking is based on the EDR in Australia compared to that in other countries.
3. The ranking is not available. Australia's reserves for crude oil and condensate accounted for 0.6% of the world total in 2008.

Source: ABARE, Geoscience Australia and Treasury.

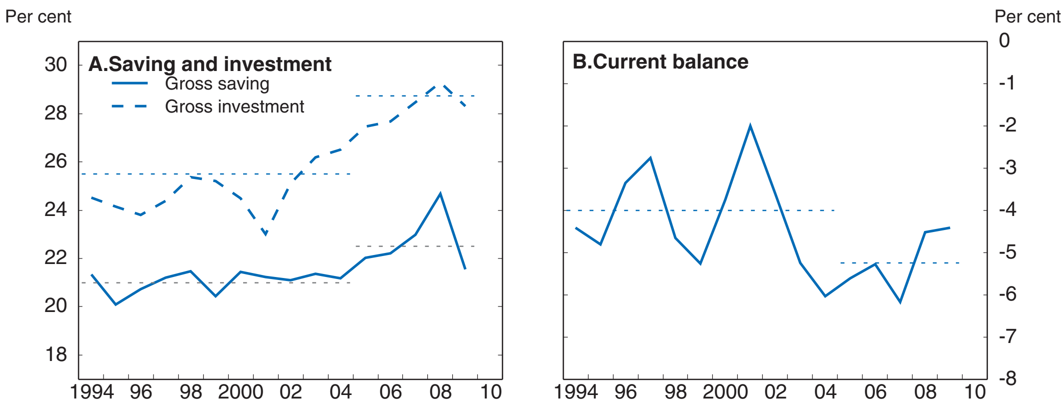
Box 1.3. **Is the terms of trade rise permanent?** *(cont.)*

- *Is this time different?* Some market participants argue that the strong growth and demand for commodities in Asia is likely to continue for some time, raising prices to a permanently higher level (Commonwealth of Australia, 2010b). Demand for metals and minerals tends to be strong as countries industrialise and until they reach per capita incomes of about AUD 15-20 000 (IMF, 2006). As China and India are currently at AUD 8 000 and AUD 3 000 per capita respectively, this would mean strong growth for some years to come. However, the share of industry in India is quite small and demand may be affected by a shift in Chinese growth patterns from exports to domestic consumption and services adding some uncertainty to demand forecasts. More crucially, even a long period of strong demand is consistent with flat or even falling prices if the eventual supply response is large enough.

It is clear that there is much uncertainty concerning future price developments. Based on continued, strong demand, the Australian government assumes that prices will remain substantially higher than in recent decades, although not as high as recently recorded. The revised budget projections assume that the terms of trade will increase by 17% in 2010/11 before declining by 4.5% in 2011/2.

Figure 1.16. **Gross national saving, investment and current account balance**[1]

As a per cent of GDP



1. Calendar year.

Source: OECD, *National Accounts* and *OECD Economic Outlook* No. 88.

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shocks. Net foreign liabilities are already about 60% of GDP, which is relatively high in the OECD context, and gross foreign liabilities, which are mostly private, reached 150% of GDP in 2009 (Table 1.7).

The risks associated with foreign indebtedness are currently well contained. Currency risk is negligible as the country's foreign liabilities are virtually all either in Australian dollars or hedged back to Australian dollars. As foreign investors seem happy to hold assets denominated in Australian dollars, domestic borrowers are protected against exchange rate risk (Battellino, 2010). During the crisis, this helped shield the country against the increased volatility of the exchange rate. Potential risks associated with a widening external deficit are also reduced by the good outlook for the Australian economy and the fact that the foreign liabilities are expected to be used for investment, rather than consumption. Thus, the past resilience of the Australian economy has shown, the flexible exchange rate, modest public debt, a track record of sound fiscal management and flexible product and labour markets all facilitate adjustment to external shocks. Adjustment would

Table 1.7. **Foreign liabilities and assets**

Per cent of GDP

	1990 Q1	2000 Q1	2010 Q1
Total foreign liabilities	**70.6**	**112.1**	**149.1**
Debt	47.2	62.8	94.8
of which: Private debt	42.3	59.0	87.3
Equity	23.5	49.3	54.3
of which: Foreign direct investments	17.8	25.4	25.9
Total foreign assets	**29.3**	**64.3**	**90.9**
Debt	15.4	23.8	44.5
Equity	13.9	40.5	46.4
of which: Foreign direct investments	10.2	25.4	25.5
Net foreign liabilities	**41.4**	**47.7**	**58.2**
Debt	31.8	39.0	50.3
Equity	9.6	8.8	7.9
of which: Foreign direct investments	7.6	0.1	0.4

Source: Reserve Bank of Australia.

be further facilitated by pursuing structural reforms, and continuing the application of robust credit standards by the banking sector to ensure that foreign funds are used for efficient and profitable projects.

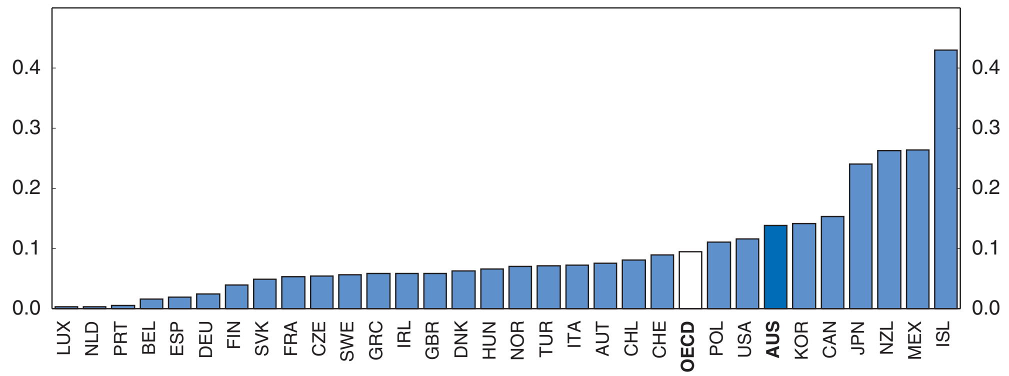
National saving should grow in the years ahead. The government's financing needs will decline in the coming years with a return to surpluses expected as from 2012. The gradual increase of compulsory pension savings announced by the government, with the rise of the contribution rate to superannuation funds from 9 to 12% between 2013 and 2020, would boost national savings by 0.4% of GDP by 2035, according to official estimates (Commonwealth of Australia, 2010b).

Nevertheless, a high and rising share of debt in gross foreign liabilities might make Australia more vulnerable to changes in world financial market sentiment and rising cost of credit, by raising rollover risk (IMF, 2009a). A considerable part of foreign liabilities are short-term loans and bonds intermediated by the banking sector. Debt represented more than 85% of total net liabilities at the beginning of 2010, compared with less than three-quarters at the end of the 1990s, and about 40% of debt liabilities have short maturities, even though, recently, banks have started to increase the maturity of their foreign liabilities. A large share of future investment in mining is expected to be financed outside the domestic banking system, either from retained earnings, issuance of equity or directly from international capital markets. However, net equity liabilities, including both FDI and portfolio investments represented only around 8% of GDP at the beginning of 2010, and FDI inflows have been broadly offset by FDI outflows since the beginning of 2000s (Table 1.7).

The authorities could consider relaxing further their FDI regulations to promote a rebalancing of the structure of foreign liabilities and would improve the structure of longer term financing of the economy. Australia ranks relatively high in the OECD FDI restrictiveness index (Figure 1.17), although regulation has been eased since 2006 (Kalinova, Palerm and Thomsen, 2010).[8] However, the index looks only at statutory restrictions and does not assess the manner in which they are implemented. Restrictions apply to investment in certain sectors (international aviation, including airports, domestic shipping, telecommunications, media and real estate) and investments above a certain size are subject to screening, increasing the regulatory costs for investors. The criteria for approvals, especially with respect

Figure 1.17. **Foreign ownership barriers: Indicators of barriers to FDI**[1]

2010



1. Index scale of 0-1 from least to most restrictive.

Source: Kalinova, B., A. Palerm and S. Thomsen (2010), *OECD's FDI Restrictiveness Index: 2010 Update*, *OECD Working Papers on International Investment*, No. 2010/3.

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to the national interest, are not always clear, although the government released national interest principles in 2008 with further clarity provided in June 2010. Investment from the United States is subject to more generous criteria, introducing an element of discrimination (ITS Global 2008).[9] The impact of these restrictions on actual FDI inflows is subject to diverging views. Some argue that the fact that only about 1% of investment applications have been rejected in recent years shows that the restrictions are not onerous (FIRB Reviews). At the same time, the existence of the barriers, the uncertainty and the costs of the approval process may have discouraged potential investors from applying at all, or led some to withdraw the application during the process (ITS Global, 2008). The OECD has estimated that FDI in Australia could increase noticeably over time if the restrictions were removed (Nicoletti *et al.*, 2003). The discrimination between countries in investment approval thresholds should be removed. Furthermore, transparency and accountability would be enhanced by more information on the criteria for approvals and by providing for the formal involvement of specialist agencies (*e.g.* national security) in the review process. This would improve the predictability of the Australian screening regime of FDI.

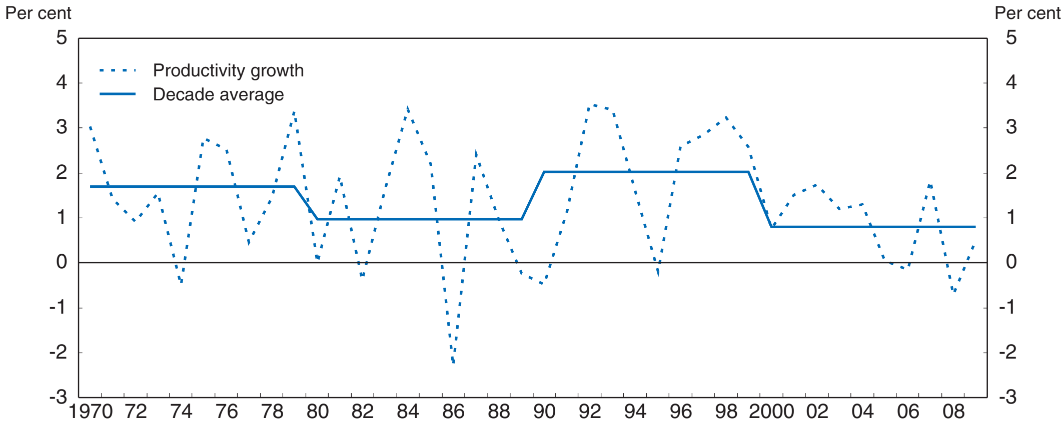
Productivity growth has fallen

Although apparent labour productivity growth in Australia has not been much lower than in major OECD countries over the last decade, it has fallen below its long-term trend of about 1½ per cent, after booming in the 1990s following deep regulatory reforms (Figure 1.18). The causes of this evolution are somewhat unclear. Part of the slowdown seems to be due to temporary factors such as drought or large investments in a construction phase in mining and infrastructure sectors (Dolman, 2009). At the same time, the decline has been widespread, which may point to more systemic problems, possibly due to the exhaustion of the impact of the structural reforms of the 1980s and 1990s.

Slowing productivity may also be the consequence of success in increasing labour force participation and thereby absorbing relatively low productivity workers into employment. Some evidence for this hypothesis is provided by an international comparison of the evolution of the ratio of output to the working age population, which takes into account not only productivity developments but also the gains generated by bringing unemployed or non-active people to work, *i.e.* by moving their productivity from zero to positive (Table 1.8).

Figure 1.18. **Productivity growth**

Real GDP divided by total employment, per cent



Source: ABS, Australian National Accounts: National Income, Expenditure and Product, cat. 5206.0 and OECD (2010), *Economic Outlook* No. 88.

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The growth rate of this ratio has not fallen as much in Australia as in the major OECD countries and it is rising more rapidly than in these countries. The weakening of Australian actual productivity growth thus seems at least partially due to the strong resilience of the economy to the business cycle, which boosted potential employment (*i.e.* increased trend labour force participation rates, and/or reduced structural unemployment) and allowed actual employment to grow in line with potential employment.

Slower productivity growth over the past decade has rightly raised concerns and lifting productivity performance is an important priority of the authorities. There are certainly margins for improvement, as the difference of GDP per capita with the United States mostly reflects a productivity gap (Figure 1.19). Some industries such as retail and wholesale, and infrastructure appear to be far from the technological frontier, as suggested by their significantly weaker productivity performance than in the United States, though such differences may in part reflect Australia's remoteness from large markets and its pattern of settlement (Dolman *et al.*, 2007). Raising efficiency would boost future living standards, which will otherwise weaken as population ages. If productivity growth were to return to its 30-year historical average, real GDP per capita might grow by 1.5% on average per year over the next 40 years compared with 1.9% over the previous 40 years (Commonwealth of Australia, 2010c). To support productivity growth, the government has taken a number of welcome initiatives, which include an improvement of infrastructure, policies to support skills and education, reforms to reduce business costs arising from regulation, and tax reforms. These measures are analysed in the following chapters of this *Survey*.

Reforms are needed to address the imbalances between the supply and demand for housing

The rapid rise in housing prices in recent years has increased fears of a housing bubble in Australia

Housing prices, which are between 4 and 4½ times average household incomes, are quite high compared to levels in other countries or to their historical average of [2½ to 3] times household income). Following a rapid increase in real house price, the rise in the ratio has also been among the fastest within the OECD since 1990, although it has broadly

Table 1.8. **Decomposition of productivity developments**

Annual growth rate

	1970s	1980s	1990s	2000s
Australia				
Productivity	1.6	0.9	2.0	1.0
Output/working age population ratio	0.9	1.5	2.0	1.5
Working age population/potential employment ratio[1]	0.3	–0.2	–0.4	–0.5
Potential employment/actual employment ratio[1]	0.4	–0.3	0.3	0.0
United States				
Productivity	1.0	1.2	1.5	1.8
Output/working age population ratio	1.5	1.8	2.1	0.6
Working age population/potential employment ratio[1]	–0.3	–0.6	–0.5	0.5
Potential employment/actual employment ratio[1]	–0.1	0.1	0.0	0.7
Japan				
Productivity	3.8	3.2	0.9	1.0
Output/working age population ratio	3.6	3.4	1.3	1.4
Working age population/potential employment ratio[1]	0.0	–0.2	–0.4	–0.3
Potential employment/actual employment ratio[1]	0.1	0.0	0.0	0.0
France				
Productivity	3.2	2.1	1.4	0.7
Output/working age population ratio	3.0	1.4	1.6	0.8
Working age population/potential employment ratio[1]	0.2	0.6	0.0	–0.2
Potential employment/actual employment ratio[1]	0.0	0.1	–0.1	0.1
United Kingdom				
Productivity	2.1	1.8	2.1	1.1
Output/working age population ratio	2.2	2.0	2.0	1.0
Working age population/potential employment ratio[1]	0.2	0.0	–0.2	–0.2
Potential employment/actual employment ratio[1]	–0.3	–0.2	0.3	0.2
Italy				
Productivity	3.0	2.0	1.3	–0.5
Output/working age population ratio	3.0	1.8	1.3	0.4
Working age population/potential employment ratio[1]	–0.1	0.1	–0.2	–0.7
Potential employment/actual employment ratio[1]	0.1	0.1	0.2	–0.1
Canada				
Productivity	0.9	1.0	1.4	0.5
Output/working age population ratio	1.8	1.8	1.3	0.9
Working age population/potential employment ratio[1]	–0.8	–0.6	–0.2	–0.5
Potential employment/actual employment ratio[1]	–0.1	–0.2	0.3	0.1
Weighted average of the above countries				
Productivity	1.9	1.7	1.4	1.3
Output/working age population ratio	2.2	2.1	1.8	0.8
Working age population/potential employment ratio[1]	–0.2	–0.4	–0.4	0.1
Potential employment/actual employment ratio[1]	–0.1	0.0	0.0	0.4

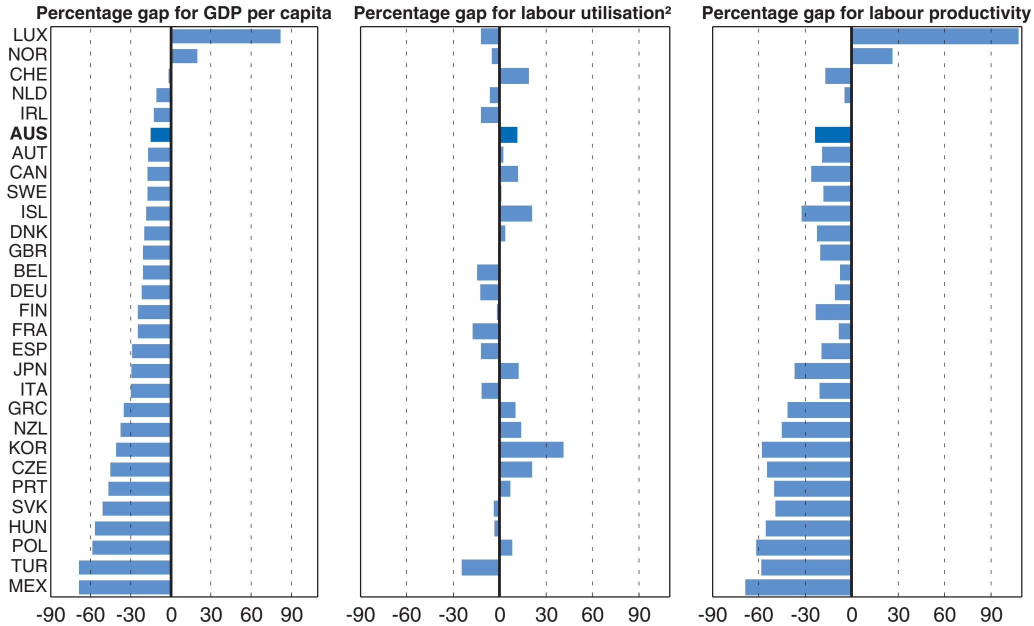
1. Potential employment is an employment indicator based on demographic developments, trend labour participation rate and estimate of structural unemployment rate. This indicator is used in OECD production function to calculate the output gap.

Source: *OECD Economic Outlook Database* and calculations.

stabilised over the last seven years (Figure 1.20, Panels A and C). Residential rents are quite high and have also increased relative to incomes, though less steeply than house prices (OECD, 2010c). As a result, the price-rent ratio rose by 60% between the mid-1990s and 2005, which again is sharper than in most other OECD countries (Figure 1.20, Panels B and D).

Figure 1.19. **Per capita GDP decomposition**

Percentage gap with USA, 2009[1]



1. Relative to the United States in terms of GDP per capita, based on 2009 PPP.
2. Labour resource utilisation is measured as average number of hours worked per employed.

Source: OECD, *National Accounts*; OECD (2010), *OECD Economic Outlook*, No. 88; and OECD (2009), *OECD Employment Outlook*.

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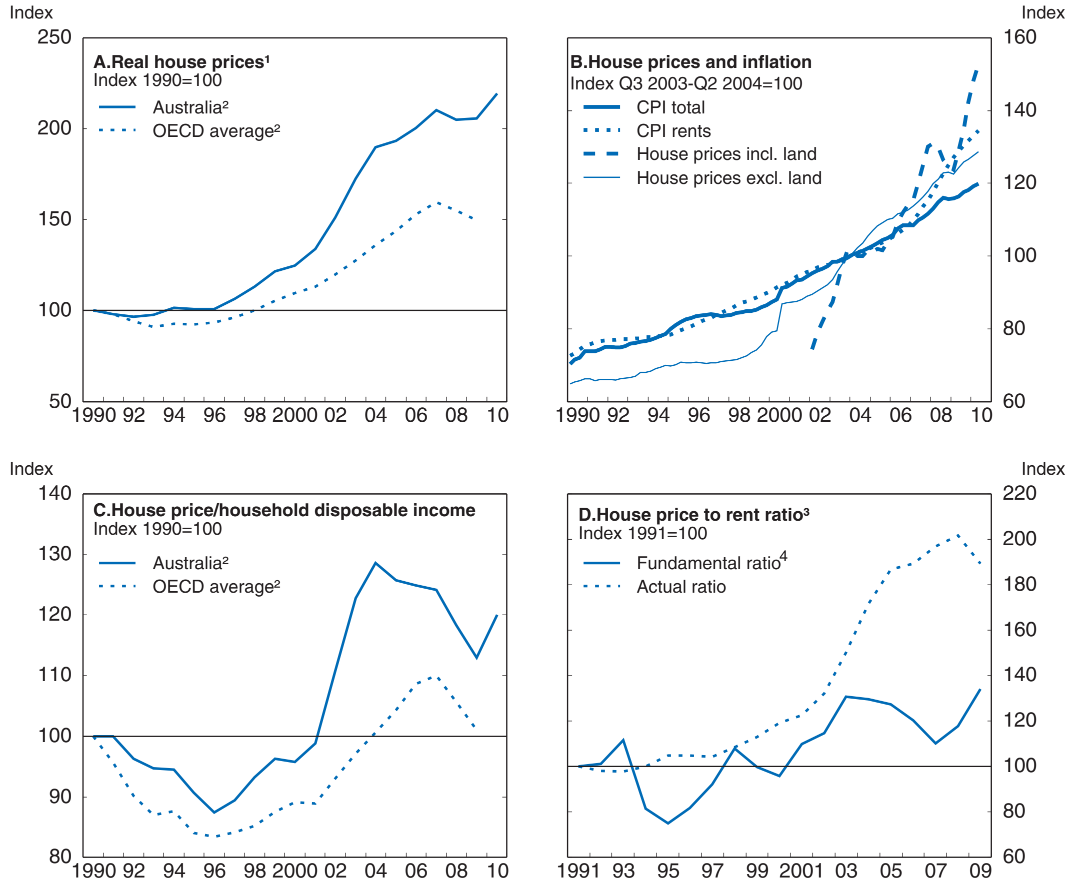
These developments have raised claims of the existence of a bubble, which are to some extent supported by a number of studies (IMF, 2009b; OECD, 2010c) and by the calculations of the fundamentals-based equilibrium price-rent ratio, which points to overvaluation of house prices even by 2000 (Girouard *et al.*, 2006).[10] However, there are good reasons to think that the current house price level and its trend largely reflect fundamentals rather than a bubble, which is the broad consensus in Australia. Changes in structural factors and supply-side constraints to the expansion of the housing stock have generated increases in the equilibrium price (RBA 2010, Robertson 2010). This explains why in most of the "overvalued" countries prices have adjusted substantially since the global crisis, but not in Australia.

Structural changes in fundamentals and demographics have increased housing demand…

Several demand-side changes in fundamentals are likely to have underpinned much of the rise in house prices over the past decades. As in many other OECD countries, nominal mortgage interest rates in recent years are well below their level in the 1980s and 1990s. This has raised the maximum debt that could be serviced with the same monthly repayments (Ellis 2006). Access to mortgages and their cost have also been eased by financial liberalization enabling the entry into the housing market of "mortgage managers" that compete with banks. For example, they introduced "low-documentation" loans for the self-employed and other individuals with variable incomes (BIS, 2006; Ellis, 2006).

The house price level in Australia is also influenced by demographic and socio-economic factors. The share of home-ownership at 70% is among the highest in the OECD which, apart from preferences, has been influenced by ageing, as older generations are

Figure 1.20. **House prices**



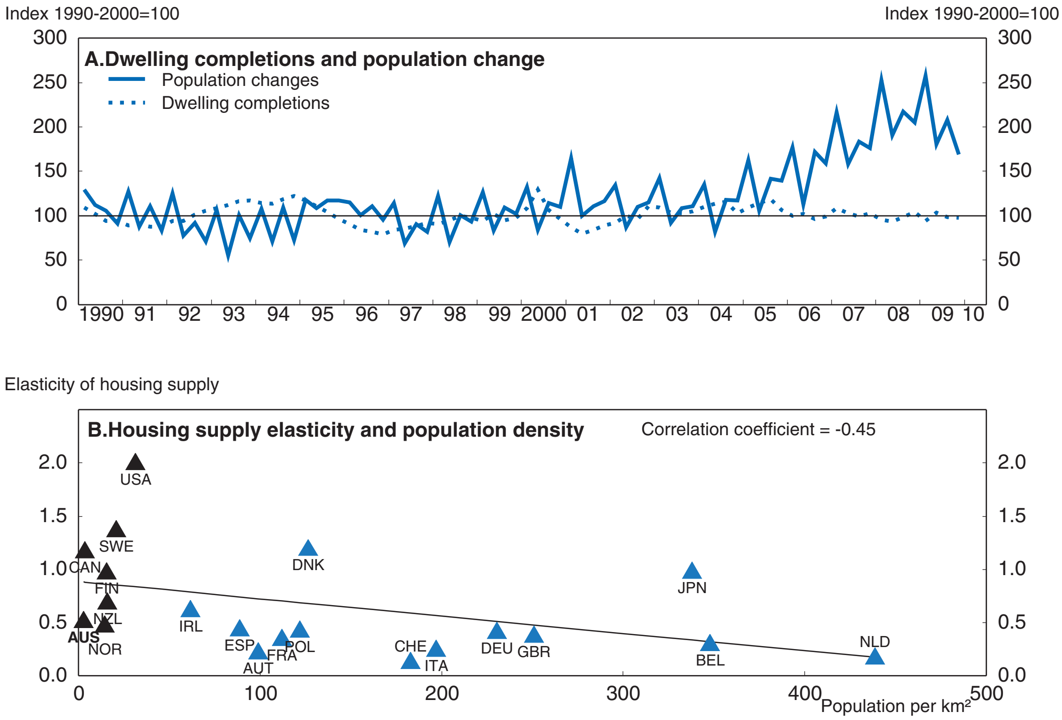
1. Nominal price deflated by the private consumption expenditure.
2. Simple average. For 2010, Australian house prices are estimated assuming that the annual price level is equal to its level reached in the first semester.
3. Latest data available: 2009 Q3.
4. Fundamental ratio is calculated assuming that in equilibrium, households should be indifferent as between renting and purchasing property after adjusting for after-tax mortgage rates, property taxes, maintenance costs, risk and expected capital gains (Girouard *et al.*, 2006).

Source: ABS; APM, REIA; OECD, National Accounts and Girouard N., *et al.* (2006), "Recent House Price Developments: The role of fundamentals", *OECD Economics Department Working Papers No. 475*.

StatLink http://dx.doi.org/10.1787/888932344330

more likely to own their house (OECD, 2010c). The reduction in the average household size from 2.75 persons in the mid-1990s to 2.68 persons currently has also increased demand for dwellings, although there has been some reversal of this trend recently (Richards, 2009). In addition, Australians have large dwellings by international standards, which raises the average house price, and demand is concentrated in large coastal cities, which is putting pressure on housing in certain areas despite generally low population densities (Ellis and Andrews, 2001).[11] Since the mid-2000s, the demand for housing has been stimulated by strong population growth, currently 2% annually, which is unusual among OECD countries. Immigration is about 250 000-275 000 persons per year lately, and total population is rising by around 400 000 persons per year. Meanwhile, the annual number of housing units constructed in the country has remained broadly stable at around 150 000 (Figure 1.21, Panel A).

Figure 1.21. **Housing supply and demand**



Source: ABS and OECD calculations.

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... and supply has been slow to adjust

The price elasticity of supply at 0.5 is about average for the OECD, but it is low compared to countries with a similar population density such as the United States, Canada, Sweden or Finland (Figure 1.21, Panel B) (OECD, 2010c). It is also remarkable that the strong forces underpinning demand for housing has not resulted in an upsurge in dwelling investment. Residential investment has oscillated around 5½ per cent of GDP for the past 15 years despite rising prices, and has even fallen recently (Lowe, 2010). Apart from supply rigidities, this evolution may also have been influenced recently by higher returns and competition for resources in other parts of the economy, notably mining and related activities.

The slow adjustment of supply has created tensions, which are unlikely to be temporary. Even if population growth falls back to its historical rate, there will still be a shortfall between the number of persons seeking accommodation owned or rented and the available supply. The most recent estimate puts the shortage at around 180 000 dwellings in June 2009, equivalent to about 2% of the total stock, or just over the typical annual construction rate; it is a sharp increase from the shortage of 80 000 dwellings estimated only one year before (National Housing Supply Council, 2010). Based on current estimates of population growth and "business as usual" construction activity, the gap will continue to increase for some years, until household formation rates stabilise.

The supply constraints need to be lifted by streamlining the planning and zoning regulations

Supply rigidities are influenced by the legally complex and time-consuming nature of developing land for residential use. The process of obtaining planning permission (which might entail rezoning land) and actual construction (including infrastructure) can take several years. There is evidently no physical shortage of land for building in Australia, and while it is true that most of the population live in coastal cities, there is an essentially unlimited amount of sparsely-inhabited hinterland. Land zoned for residential construction may jump in price ten-fold compared with rural values, which provides evidence that supply is heavily restricted by existing regulations. Regulations impose maximum housing densities and controls on types of permitted dwellings. As in other countries, such regulations are locally enacted and imposed, and thus differ across jurisdictions. The states are responsible for city development, as these entail large-scale infrastructure often cutting across several local jurisdictions. Local stakeholders may oppose proposals to modify zoning regulations in "their" areas in ways that could reduce the value of existing properties. This is a difficult political problem as states and local governments have limited incentives to confront local stakeholders.

Zoning regulations could be simplified by better co-operation among levels of government or setting uniform standards for developments. In its April 2010 communiqué, COAG addressed the co-ordination issue calling for a report on potential reforms to speed up the zoning and planning processes, consistent principles across States and Territories for development infrastructure charges, examination of underutilised land, and other supply-oriented measures. Agreeing on more transparent, harmonised and less restrictive regulations across jurisdictions would be welcome. If an agreement cannot be reached, the authorities might consider adopting special rules to fast-track land-release mechanisms and development assessments in local housing markets with excessive pressures. Such an approach, which was recently used to speed up implementation of some of fiscal stimulus measures, has been adopted in New South Wales.

Tax reforms would also help boost housing supply

The Australian government has traditionally favoured home ownership relative to other forms of saving, while acknowledging that owner-occupation is not the optimal solution for all households. Home ownership is favoured in part because it confers greater financial security on retirement. The usual arguments levelled against high rates of owner-occupation that they reduce labour-market mobility and/or divert savings from more productive uses seem less relevant in the case of Australia. Mobility of owner-occupiers is high (OECD, 2010c), and although residential construction is somewhat above the OECD average, total investment as a share of GDP is also well above the OECD average.

Political support for home ownership has not translated into overly generous fiscal support and, as there has been little change in these policies in recent years, they are unlikely to be contributing to the recent rise in the demand and price of housing. Grants (up to AUD 7 000 from the Commonwealth Government and additional State-specific assistance) are available for first-home buyers satisfying eligibility criteria,[12] but otherwise, the fiscal treatment of home ownership does not seem to be more favourable than in most other OECD countries. Imputed rents are not taxed, but mortgage interest payments are not deductible from income, and value-added taxes are levied on building materials and services. Home owner-occupiers are, however, exempted from land taxes levied by the states, and there is no capital gains tax on primary residences.

Nevertheless, existing measures to sustain demand, such as the subsidies benefiting first-home buyers should probably be redirected to raising supply. These fiscal concessions, which are not restricted to the acquisition of new dwelling, are unlikely to be effective in boosting supply or improving affordability, as they tend to be capitalised into higher house prices. *De facto*, these subsidies have not prevented a noticeable trend decline in ownership between 1988 and 2008 in the typical first-home owner-cohort, those under 35 years (Battelino, 2009). Moreover, the boost to housing accessibility from increased grants during the crisis has increased housing prices in the less expensive suburbs (RBA, 2009b). There are also doubts concerning the effectiveness of some existing tax incentives, such as the favourable fiscal treatment to individual investment in the rental sector. The deductibility of mortgage interest payments against income, including against income not derived from the rental of the property (so called "negative gearing"),[13] is widely used by household and costly for the public finances. Almost one in seven tax payers had invested in rental properties in fiscal year 2007-08 and 70% of them claimed a net rental loss, the total of which amounted to AUD 8.6 billion for the whole economy. The cost effectiveness of this incentive may need to be reviewed as the tax subsidy benefits to all individual investment in the rental sector, including purchases of established dwellings, and may thus have a limited impact on new constructions.

Infrastructure charges should be rationalised. Appropriately set infrastructure charges can encourage more efficient land use and development in areas where less new infrastructure is needed (Kennedy, 2010). States or local governments levy infrastructure charges on developers, which are sometimes used more to raise government revenues than as efficient user charges. A case in point is "betterment taxes". The main function of these taxes is to extract some of the economic rent from land rezoning, rather than to finance infrastructure as such. Since there is no straightforward way of calculating by how much rezoning increases the value of land if only because discussions about re-zoning might have started several years previously betterment taxes can be subject to an opaque negotiation process (AFTS, 2010). Developers should be charged only for the costs of networks and other facilities used by them. Charging developers for other types of infrastructure that would in any case have to be supplied because of population growth is not justified, nor can the different levels of development charges levied by different jurisdictions for the supply of similar infrastructure. Adopting nationally consistent principles for setting infrastructure charges would improve transparency. Betterment taxes, which are likely to increase uncertainty associated with land development and discourage it, should be replaced by a more transparent tax on the economic rent from land rezoning. This could probably be achieved by levying land taxes on all land owners, including land occupied by owner-occupier households. Rebalancing the taxation on housing through a broadening of the land tax would also be justified by efficiency reasons. This tax, which affects immobile capital (land), is one of the less distortive of the tax system (Chapter 2).

Reducing transaction costs, which are high by international comparison (OECD, 2010c), could enhance available supply. As households incomes, places of work, and family circumstances change, so does the optimal size, quality and location of their accommodation. Barriers to transactions reduce the value of the flow of housing services provided by the existing housing stock. Stamp duties are justified by the need to recover the actual cost of registering dwellings. But stamp duties exist essentially as a convenient revenue-raising device and they are highly distortive (Chapter 2). Reducing stamp duties would help to optimize the use of the existing housing stock and raise the effective supply of accommodation. However, the taxes collected on transfers of land and buildings of about 1¼ per cent of GDP in 2007-08 are an important source of revenue for the states, and any reform would have to take this into account (Chapter 2).

The flow of new dwellings should be increased by overhauling of the land tax and the treatment of rental income for investors. A particularity of the rental sector in Australia is its dominance by a large number of small investors, often owning only one property other than their own dwelling. This may help explain why such a high proportion of Australian city dwellings are detached houses rather than multi-storey apartment buildings, and why residential land prices have risen so quickly. Land taxes, which are paid by investors, are based on the totality of land holdings, with a progressive rate, which increases costs for large-scale developers. The authorities should envisage removing the progressivity of land tax, which disadvantage large developers. These developers are more likely to build higher density housing, as they can enjoy economies of scale in the maintenance of multiple-occupied buildings. They can also take a longer view than small-scale investors, preferring long leases to short ones, thus making renting a more attractive proposition for households unable to afford house purchase (or not interested in doing so).

Box 1.4. **Recommendations for preparing the economy for medium-term macroeconomic challenges**

Maintain a prudent macroeconomic policy management

- Proceed with the planned fiscal strategy of progressive withdrawal of the stimulus based on tighter spending discipline in the medium term. Exerting more prudence in spending commodity-related revenues than currently planned would be welcome.
- Give priority to the use of monetary policy over fiscal policy for navigating through cyclical fluctuations because of its greater flexibility. The monetary authorities should continue to monitor carefully price development and tighten monetary policy if demand pressures on productive capacities intensify or inflation expectations worsen. Remain vigilant to ensure that heightened pressures on resources and the associated changes in relative prices do not feed into inflation expectations.
- Tighten prudential measures for housing loans if speculation appears. Strictly enforce loan-to-value ratios and consider adjusting them counter-cyclically. Monetary authorities should repeat warnings to lenders and borrowers that house prices cannot for ever outpace incomes. Lenders should be urged to base their mortgage credit criteria (*e.g.* debt service to income ratio) on medium-term average conditions, rather than on exceptionally benign (or severe) ones, given the prominence of loans at variable rates.

Continue monitoring closely external financial risks

- Promote domestic saving by maintaining a sound fiscal management. Continue monitoring external debt development and ensure that currency risks remain well hedged.
- Consider relaxing FDI regulations to promote a rebalancing of the structure of foreign liabilities towards longer term financing. Remove the existing discrimination between countries in investment approval thresholds. Further enhance transparency of FDI regulations by clarifying the criteria for investment approvals and by providing the formal involvement of specialist agencies (*e.g.* national security) in the review process.

Box 1.4. **Recommendations for preparing the economy for medium-term macroeconomic challenges** *(cont.)*

Reforms would boost housing supply

- Adopt more transparent, harmonized and less restrictive zoning and planning regulations across jurisdictions. Consider adopting special rules to fast-track land-release mechanisms and development assessments in local housing markets with excessive pressures.
- Rationalise infrastructure charges with nationally consistent principles to improve their transparency. Developers should be charged the actual costs of the infrastructure needed to support their projects. Existing "betterment" taxes should be eliminated.
- Lower conveyance duties to a level that covers registration costs to reduce transaction costs and improve the use of the existing housing stock.
- Phase out subsidies to housing demand benefiting first-home buyers.
- Review the cost effectiveness of the favourable tax treatment of individual investment in the rental sector, in particular the deductibility of mortgage interest payments against income ("negative gearing"), for stimulating rental supply and new constructions.
- Rebalance tax incentives in the rental sector between small and large-scale investors. Remove the progressivity of land tax, which penalises large developers.
- Broaden the land tax by ending existing exemptions on owner-occupied housing to offset state revenue losses implied by the other proposed tax changes.

Notes

1. The parameters used as the basis of the stress-rest were: *i)* a 3% contraction of GDP in the first year followed by a V-shaped recovery; *ii)* a rise in the unemployment rate to 11 %; *iii)* a peak-to-trough fall in housing prices of 25%; and *iv)* a peak-to-trough fall in commercial property prices of 45%. The main results of the stress test performed for the 20 authorised deposit-taking institutions (ADIs) as a group indicates that none of the ADIs would have failed under the downturn macroeconomic scenario; none of the ADIs would have breached the 4% minimum Tiers 1 capital requirement of the Basel II framework; and the weighted average 3.1 percentage points reduction in Tiers 1 capital ratios between the beginning and the end of the three-year stress period is at the higher end of the range of macroeconomic stress-test results in other countries (Laker, 2010).
2. Primary market spreads on banks' bond have risen as greater risk accession has seen investors demand larger risk premia. The cost of hedging foreign currency debt back into Australian dollars has also been high and voilatile. More recently, the improvement in capital market conditions has seen the cost of issuing new debt decrease (Brown *et al.*, 2010).
3. There are other definitions of recessions than the standard one which refers to two consecutive quarters of growth. Some economists prefer a definition of a 1½ percentage point rise in unemployment rate within 12 months. Between March 2008 and March 2009, the unemployment rate increased by 1.7 percentage points. On this basis, Australia has experienced a recession, even if a very mild one by international comparisons.
4. A team reporting to the Prime Minister's staff and working in partnership with co-ordinators in each state was asked to monitor compliance with the timetable for implementing the AUD 42 billion Nation Building and Jobs Plan. This team, which briefs the authorities on any problems and risks that could affect implementation of the Plan, has published two reports indicating that the programme is on the whole being carried out on schedule. After ensuring that numerous programme projects have been set up and carried out, the team is to prepare a subsequent evaluation of how the stimulus package was implemented.
5. The stimulus package included a AUD 2.5 billion (0.2% of GDP) plan to encourage households to improve the insulation of their homes. The programme's poor management was reflected in the insufficient quality of services proposed to households. The programme was halted in February 2010 after AUD 1.5 billion had been spent.

6. Furthermore, the costs of taxation are not observable directly and are often disregarded in economic policy debates, despite their acknowledged importance economically. Robson (2007) estimates that on average for the United States, the average cost of deadweight losses is between 18 and 24 cents per dollar of tax revenue. Creedy *et al.* (2008), who use a microsimulation model to assess variations in well-being associated with changes of income taxation in Australia, show that the marginal costs of well-being vary according to individual circumstances. While these costs seem, on average, of roughly the same magnitude as those found by Robson (2007), they may be much higher for certain groups. These costs are estimated to be lower in the event of a rise in indirect taxation (Creedy, 2009).
7. These projections are consistent with those that will be published in November 2010 in the *OECD Economic Outlook*, No. 88.
8. Another factor that can potentially influence the composition of debt or equity financing of enterprises is the tax treatment of equity *versus* debt funding. There is little evidence that this is an issue in Australia.
9. In 2010, the government raised to AUD 231 millions the threshold above which FDI needs to be screened before implementation. US investors benefit however from a higher threshold (AUD 1004 millions, except in strategic sectors).
10. Since the speculative element in house purchases is related to investment in home ownership, rather than the purchase of a flow of housing services, the ratio of house prices to residential rents is likely to be a better indicator of speculative activity. In equilibrium, and with no speculative element, new entrants would be indifferent as between renting and purchasing property, after adjusting for the higher costs of maintaining owner-occupied dwellings. Widening supply shortages are undoubtedly contributing to the rise in house prices, but they should not affect the price-rent ratio, absent speculative buying. Taking into consideration the various factors that affect the ratio, importantly after-tax mortgage rates, property taxes, maintenance and risk, and expected capital gains, it is possible to calculate what the price-rent ratio "should" be (see [OECD, 2006] for details). In equilibrium, and with no speculative element, new entrants would be indifferent as between renting and purchasing property, after adjusting for the higher costs of maintaining owner-occupied dwellings.
11. About 80% of the population lives in towns or cities, a figure similar to that in other OECD countries, but the Australian population is highly concentrated: over 60% of the population lives in only 40% of all regions, compared with an OECD average of 60%. Some 40% live in the two largest cities, compared with 27% in the case of Canada, a country with a similar overall population density. A high proportion of the population live in detached dwellings, and the average floor area of new houses is close to 250 square metres. The average size of new apartments is around 140 square metres (Kennedy, 2010).
12. The system of grants for first-home buyers was introduced after goods and service taxes (value-added taxes) started to be levied on construction materials in 2000. The eligibility criteria include a maximum housing price but no income or assets test. The maximum size of the grant was doubled during the global crisis and triple to AUD 21 000 for the acquisition of new dwelling, but has since reverted to AUD 7 000.
13. "Negative gearing" involves borrowing to finance the purchase of an asset, the return on which does not cover the payment of interest on the borrowed funds. In a few countries where negative gearing is legal for property assets (Australia is one, Canada and New Zealand are others), the investor can offset ongoing losses against taxable income. Assuming that property prices rise over time, and that capital gains are taxed less heavily than income, the owner can eventually realise a profit, despite making losses in the meantime.

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ANNEX 1.A1

Progress in structural reform

This annex reviews action taken on recommendations from previous *Surveys*. Recommendations that are new in this *Survey* are listed in the relevant chapter.

Recommendations	Action taken since the previous *Survey* (October 2008)
Product market competition	
Improve competition and regulation of the product markets: ● Address the unfinished business of the National Competition Policy agenda as planned in the National Reform Agenda and extend competition and efficiency enhancing reforms to new areas. ● Reform consumer protection legislation to establish a single generic law and a single regulator in this area. ● Expand recourse options for consumers. Expand the powers of the ACCC so that it can verify and impose sanctions for deceptive advertising. Institute a uniform system of product labelling that discloses unit prices. ● Speed up the harmonisation of regulations between the states and strengthen mechanisms for mutual recognition of regulatory standards. ● Explore ways of ensuring cost-effective and timely investment decisions in regulated network sectors that operate across several jurisdictions. Evaluate infrastructure projects on the basis of rigorous cost-benefit analyses (CBAs).	According to the COAG Reform Council, the plan to harmonise regulations between jurisdictions, which has been expanded from 10 to 27 hot spots, had made good or generally satisfactory progress in 18 areas as at 30 September 2009. The Government has since indicated that over one-third of the reforms have now been achieved, with the remainder either fully on track, or in a small number of cases, a few months behind schedule. An updated progress report by the COAG Reform Council is due in February 2011. In March 2010, and June the Australian Parliament passed legislation to implement the Australian Consumer Law (ACL), which is a single law replacing 17 Commonwealth, State and Territory acts,.. The ACL will commence on 1 January 2011 and covers general standards of business conduct, prohibits harmful business practices, regulates specific forms of business-to-consumer interactions, provides basic consumer rights for goods and services and regulates the safety of consumer products and product-related services. National principles for public/private partnerships (PPPs) were established at the end of 2008. Mutual recognition of state and territory prequalification status and national harmonisation of prequalification regimes in the construction industry is planned for 1 January 2011. Infrastructure Australia (IA) has conducted an audit and set a list of priority infrastructure projects, some of which were financed by the 2009/10 budget. IA released an updated list of priority projects in June 2010 and will update the list by 30 June every year.IA has pledged to follow and objective and stringent investment selection process base on CBAs. Some results of these CBA were released in its recent reports.
● Remedy shortcomings of the recent reforms regarding predatory pricing practices. Revised legislation should provide for subsequent evaluation of its application. ● Introduce criminal sanctions against hard-core price-fixing cartels, while preserving the effectiveness of the leniency programme.	In June 2009 a legislation that criminalises serious cartel conduct was enacted.

Recommendations	Action taken since the previous *Survey* (October 2008)
Expand the supply of freight services and improve the co-ordination thereof:	
● Further simplify and harmonise the regulation of nationally significant freight infrastructure. Implement uniform state standards for heavy goods vehicles and regimes for access to railway infrastructure. ● Implement a road freight pricing scheme that takes into account the intensity of network use (mass transported and distances travelled) and place of use. ● Extend AusLink Nation Building Program to the port sector. Give more financial responsibility and adequate resources to the local jurisdictions to cover the operating costs and investment needs of their road networks. ● Review application of the verticalseparation principle and the national access regime on portions of the railway network where competition from road or maritime transport would preclude monopoly rents.	Single national regulators will be operational for rail safety and investigation, maritime safety and the heavy vehicles by 2013. A feasibility study for introducing a new road freight pricing system taking into account the mass transported distance travelled and location, is planned for end-2011. Federal 2009/10 budget included investments in ports. A national ports strategy is being devised by IA to eliminate obstacles to their development. This strategy will be part of a broader national freight strategy that IA is going to propose to COAG at end-2010 to improve co-ordination of investment choices between the various modes of transport
Promote competition in postal services.	
Develop a nationwide energy market responsive to environmental objectives:	
● Pursue reforms that encourage the emergence of a nationwide competitive market. Pursue the privatisation of companies still under government control. Impose limitations on crossshareholdings between firms managing infrastructure and those operating in competitive segments of the market. ● Remove the ceilings on retail electricity prices rapidly.	Privatisations in the energy sector are planned in New South Wales.
● Clarify the measures to reduce greenhouse gas emissions quickly.	A national renewable energy target (RET) has been approved to ensure that 20% of the electricity supply comes from renewable sources by 2020. This RET has led to the introduction of a number of initiatives supporting the use, investments and research in low-emission technologies.
Expand and improve the supply of broadband Internet access:	
● Consider a functional separation between the management of broadband access infrastructure and marketing activities, in order to encourage construction of a fibre optic network without impairing competition. ● Promote a local, rather than nationwide, approach to raising broadband supply to achieve better adjustment to market conditions and to intensify competition between different types of infrastructure.	The government has prompted Telstra to accept a financial agreement involving structural separation between the management of its copper network and its other commercial activities. The proposed reform seeks to allow a superfast national broadband network (NBN), managed by a public company, NBN Co, to be deployed with a bold programme of public investment totalling AUD 43 billion (3¼ per cent of GDP) over eight years.
Improve water management:	
● Set up a better-harmonised information system, as is required by the plan Water for the Future. Continue work aimed at defining homogenously the concept of sustainable exploitation across states by improving understanding of the links between environmental conditions and water availability. ● Strengthen co-ordination between jurisdictions with respect to catchment areas shared between several states, as provided for in the Water for the Future plan. Accelerate the implementation of this plan. ● To correct over-allocation of water entitlements, opt for buy-backs of these rights rather than infrastructure-modernising investment. ● Lift the quantitative restrictions on trades in permanent water rights. Improve market transparency through the publication of transaction prices. Abolish the exit fees limiting trading between districts. Lift barriers to trade between rural and urban areas. Further progress on unbundling of water from land. Removal of barriers to trade in water helf by bulk water suppliers. ● Consider putting an end to the public monopolies of urban water management. Authorise thirdparty, including private, access to water and drainage infrastructure. ● Continue the reforms of water charging, especially in agriculture, to ensure full cost recovery. Incorporate management and planning costs more systematically in water pricing. Avoid providing subsidies to infrastructure projects. Encourage the use of market mechanisms to internalise pollution and salinity costs. ● Link urban water pricing to demand pressures, while keeping prices low for a minimum allowance of water corresponding to essential needs.	With an AUD 12.6 billion budget to run for ten years, the Water for the Future plan aims to establish the foundations for sustainable water use in the farm sector. It focuses on the management of the Murray-Darling Basin (MDB), where water use for agriculture is the most intensive, but also includes urban water management and supply. In early 2011, the new Murray Darling Basin Authority will release a draft Basin plan providing limits on water use for the entire MDB. Some 900 billion litres of water entitlements have been purchased. The government has committed about AUD 5 billion in funding specific water infrastructure and efficiency projects under the AUD 5.8 billion Sustainable Rural Water Use and Infrastructure programme of the Water for the Future Plan. The *Water Amendment Regulations 2010* have been approved. It seeks to provide water users and water market participants with better information about water planning and water management activities being undertaken, the costs incurred, and the extent of cost recovery through charges. This information will facilitate comparisons of activities, costs and charges across jurisdictions where it is appropriate; and it will help identify whether further policy and/or regulatory measures are required.

Recommendations	Action taken since the previous *Survey* (October 2008)
Labour markets	
Raise the participation of second earners, older workers, the disabled and lone parents:	
● Reduce further high effective marginal tax rates for low income families, with a particular focus on addressing "low wage traps". Monitor closely the enforcement of the eligibility and participation requirements.	The 2010 budget delivered further personal income tax cuts. A wideranging review of taxation has been concluded (see below) examining, among others, how to improve the interaction of the tax and transfer systems.
● Introduce tighter eligibility criteria for existing recipients of Disability Support Pension and Parenting Payments, in line with those introduced for new applicants in July 2006.	No action taken.
● Maintain efforts to provide employment services to people on welfare benefits to help them find a job. Proceed with plans to reform the employment services.	A new, employment service system was introduced in 2009 (Job Service Australia) with emphasis on disadvantaged workers. Moreover, in March 2010, a new Disability Employment Services system commenced with two distinct programmes for job seekers with disability, injury, or ill health and those with permanent disability.
● Continue efforts to facilitate access to affordable child-care facilities. Change the structure of Child Care Benefit (CCB) to reflect the agerelated cost profile of child-care provision. Make CCB more conditional on employment. Proceed with the planned introduction of a paid parental scheme.	A national parental leave scheme is to be introduced in January 2011 for parents meeting work tests and the primary carer has an adjusted taxable income of AUD 150 000 a year or less.
● Encourage older workers to continue working after retirement age. Reduce incentives to retire early under the Superannuation Guarantee scheme by aligning the eligibility age with the Age Pension.	Recent reforms increased the generosity of the pensions. As part of the reforms, the minimum age of eligibility for the Age Pension is set to gradually increase from 65 to 67 years by 2017. The preservation age for accessing superannuation benefits is legislated to increase from 55 to 60 years.
Maintain labour market flexibility:	
● Ensure that labour market reforms preserve collective bargaining at the firm level. ● Modernise awards and harmonise the system of industrial relations.	A new system of industrial relations was introduced in July 2009 under the *Fair Work Act*. The main features of the system include: ● Strengthening collective bargaining and no longer entering into Australian workplace agreements (AWAs). ● Enlarging the safety net laying down minimum terms of employment and wages. ● Implementing a uniform nationwide system of industrial relations in the private sector, reducing the number of awards and creating a single regulator, Fair Work Australia.
● Consider introducing a system of employment-related benefits in parallel with more moderate minimum wage increases.	No action taken.
Address supply constraints through migration:	
● Implement swiftly the announced reforms for the temporary business (subclass 457) arrangement.	Recent reforms to the subclass 457 visa increased the protection of temporary workers through the introduction of market-based minimum salary rates for its holders.
● Ensure adequate use of immigrants' human capital. Reduce the complexity of the current assessment and recognition of overseas qualifications.	The marked shift towards demand-driven migration since 2009 will facilitate full time employment in highly skilled jobs. Immigrants with experience in shortage occupations on a Critical Skills List now get priority. A national licensing regime was agreed by COAG in 2009 opting to introduce a benchmark for offshore assessment arrangements for skilled workers.
Education and training	
Early Childhood Education and Care (ECEC):	
● Move towards a more integrated ECEC system. Reform the current the current staffing regime, bridging the split for pre-school teachers and staff for child care. ● Proceed swiftly with the development of a more streamlined accreditation system.	Ongoing reforms aim at reducing fragmentation and complexity in ECEC sector through replacing current licensing and assurance processes by a unified national system, and providing a single set national quality standards. The Australian government has made a commitment to provide access to a quality early childhood education programme delivered by a university trained early childhood teacher for all children by 2013. This education will be delivered for 15 hours a week, 40 weeks a year in the year before formal schooling. The Council of Australian Governments endorsed the National Early Childhood Development Strategy in July 2009. This strategy aims to improve outcomes for all children by building a better early childhood development system which responds to the needs of young children, in particular vulnerable children and their families.
● Proceed with the provision of the universal access to early education for all children in the year before formal schooling. Consider extending universal access to three year-olds, focusing initially on disadvantaged groups, and increasing the duration of services beyond 15 hours per week.	

Recommendations	Action taken since the previous *Survey* (October 2008)
School education:	
● Broaden the secondary school curriculum to reduce the risk of early school leaving and integrate the vocational education and training sector better. Proceed with the implementation of the Trade in Schools programmes.	The Trade Training Centres in Schools programmes, improving access and relevance of trade training in schools, is being implemented.
● Develop and implement a national curriculum. Adopt a common final certificate and eliminate differences in the basic structure of schools.	The development of the Australian Curriculum for Kindergarten to Year 10 and for the senior secondary years is progressing. The Australian government has announced that a new national senior secondary qualification for high achieving students, the Australian Baccalaureate, will be developed following the implementation of the senior secondary Australian Curriculum.
● Continue strategies to counteract disadvantage. Reform the school funding mechanisms to better take into account the impact of students' socioeconomic background.	The Smarter Schools National Partnerships target additional resources to the most disadvantage schools. Delivering on a 2007 election commitment, the government has commissioned a comprehensive review into the funding arrangements for schools to report by end-2011. The review will provide recommendations for a funding system which is transparent, fair, financially sustainable and effective in promoting educational outcomes for all students.
● Move towards a less centralised management and governance structure and strict entry and exit regulations for schools.	No action taken.
● Change the system of teacher career progression to help keep the best teachers. Ensure that teacher remuneration systems create appropriate incentives to re-allocate high quality teachers where they are needed most.	The Smarter Schools National Partnerships help to ensure that highly performed teachers are recognised and rewarded in schools in low socioeconomic areas. The government committed to introduce a range of school reform initiatives including reward payments for teachers, rewards for school improvement and enhancements to principal autonomy.
Vocational Education and Training (VET):	
● Ensure that the VET system is broadly based, also delivering generic skills. Update training packages regularly to meet changing skill needs.	Inclusion of employability skills (*e.g.* communication and planning) in Training Packages.
● Lift the completion rates of VET. Train and upskill persons already in work, particularly older workers.	The Productivity Places programme supports new training places over the period 2008-12. This was topped in the wake of the global crisis with compacts with retrenched workers and young people, and initiatives to boost apprenticeships (*e.g.* Kickstart). The 2010 budget took further action to provide training and improve its quality.
● Move towards a more commercial governance model for the institutes of Technical and Further Education (TAFE), by allowing for example, course fees to reflect at least partly the cost of services. Reform the funding mechanism of VET to foster competition among providers.	No action taken.
Higher education:	
● Remove barriers to higher education for students from disadvantaged socioeconomic backgrounds. ● Make the higher education system more demand oriented, with financing following students. ● Improve quality of teaching and learning. ● Increase the responsiveness of the sector to labour market needs.	Since the finalisation of the Bradley review of Australian higher education in December 2008, a comprehensive reform process has been underway. Major reforms being implemented by the government include: ● reform of the income support system to reduce financial barriers for disadvantaged students; ● improved market responsiveness through uncapped university places; and ● a more robust quality assurance process through a new independent national quality and regulatory agency and performance funding, including for teaching quality and completion rates. Reform is ongoing. Reviews of the university cluster funding arrangements and student income support system are due to be delivered before 1 July 2012.
● Reduce the complexity in regulation arising from share responsibilities for the sector of Commonwealth and state governments.	No action taken.
Taxation	
Tax reform should aim at: ● Lowering high marginal tax rates and raising the threshold at which the maximum marginal income tax rate cuts in. ● Abolishing distortionary state taxes and reforming the payroll tax. ● Reducing the complexity of the tax law. ● Raising the Goods and Services Tax take. ● Raising the taxation on natural resources while adopting a balanced regime that attracts investors and provides a fair sharing of economic rents.	A government-commissioned report, the Australia's Future Tax System Review, was released in May 2010. Following this comprehensive review, reforms concentrated initially in three main areas – taxation of non-renewable natural resources, company taxation and the tax treatment of superannuation – have been proposed.

Chapter 2

Enhancing the effectiveness of fiscal policy

Although the budgetary outlook remains strong, Australia's fiscal policy will be challenged by a number of efficiency issues and the expected rise in volatile mining revenues. In contrast to many OECD countries, low public debt and good growth prospects leave ample fiscal space to respond to future shocks. However, there is scope to improve efficiency of public interventions as the authorities have started implementing their fiscal exit strategy. The new mining boom is an opportunity for the Australian society, but it raises questions on sharing the rents from increased mineral wealth; on how to use the expected higher tax revenues from the exploitation of non-renewable resources; and on how to deal with uncertainty generated by commodity price movements. Volatility can lead to biases in fiscal policy; this was the case during the mini-boom of 2000s. The second part of this chapter assesses the fiscal measures adopted and planned so far to deal with this challenge. Furthermore, although Australia has one of the lowest tax burdens in the OECD, the system includes numerous taxes with low yields and high administrative costs. Some taxes and the complex transfer system can also blunt incentives to work and thereby weaken growth. The detailed review of the system released in 2010 identified many of these problems. However, most of its recommendations are not in the pipeline for implementation. Tax reform is analysed in the last part of this chapter.

Promoting the effectiveness of the fiscal exit strategy

The stimulus has been accompanied by a well designed fiscal exit strategy

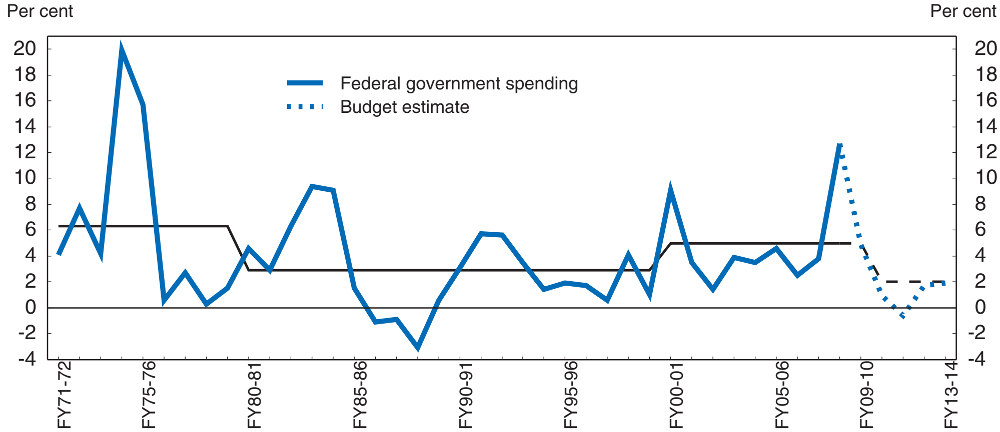
Owing to commendable management of its public finance and the shallowness of it slowdown, Australia's exit strategy will be less problematic than in much of OECD. In 2009, the general government still held a small positive asset position (4% of GDP) and recorded a relatively moderate deficit of 4% of GDP. In addition, a well-designed fiscal strategy was wisely conceived when the stimulus package was adopted in response to the crisis (Chapter 1). The exit strategy is based on the upswing in tax revenues induced by the effects of automatic stabilisers accompanying the recovery, as well as a ceiling placed on government spending growth. The authorities are committed to limit the real growth of expenditure to less than 2% per year on average as long as growth exceeds its underlying trend (around 3%), until public accounts return to a surplus of 1% of GDP. The prudent fiscal consolidation strategy reinforces Australia's commitment to sound public finances, the maintenance of which is one of the major lessons from the international economic crisis. This restores the fiscal leeway that was tapped during the crisis. It will also prevent the current account deficit from being compounded by a budget deficit, and it will improve long-term public finance perspectives, which will be affected by population ageing. This strategy ought to prove effective: an expenditure rule appears empirically the best suited to ensure fiscal consolidation (Guichard *et al.*, 2007).

Enhancing the quality of public intervention would facilitate the implementation of the exit strategy

While the lid on spending is welcome, it is quite restrictive compared to the past or in the light of future investment needs. The authorities envisage that the spending lid will become effective in fiscal 2010/11 (due to the halt in temporary stimulus measures) and remain in place until 2015/16. The continued robust growth driven by demand from the Asian economies and brisk population growth mean that policies should be more geared towards boosting supply rather than demand. Therefore, it is important to keep the cap on government spending growth from thwarting infrastructure that should move ahead to prepare for the coming expansion. Indeed, there is already an infrastructure deficit from the past from continuous underinvestment in this area and, during the previous expansionary phase, the export sector was affected heavily by the bottlenecks resulting from inadequate transport infrastructure (OECD, 2008). In this context, limiting government spending rises to 2% per annum over an extended period is a relatively bold objective, especially as spending has grown on average by over 4% per annum since the early 1970s (Figure 2.1). With a growing population, this rule implies zero real per capita government expenditure.

Improving the quality of public expenditure would make the spending limit easier to respect over time. The experience of waste associated with the fiscal response to the crisis has led to some corrective actions. However, further efforts would be desirable to enhance the quality of spending. Efficiency gains could be achieved by reviewing some public

Figure 2.1. **Real growth of federal government spending**[1]



1. Data are referring to the fiscal year, *i.e.* 1st of July to 30th of June.

Source: Australian Government, *Mid-Year Economic and Fiscal Outlook 2009-2010*.

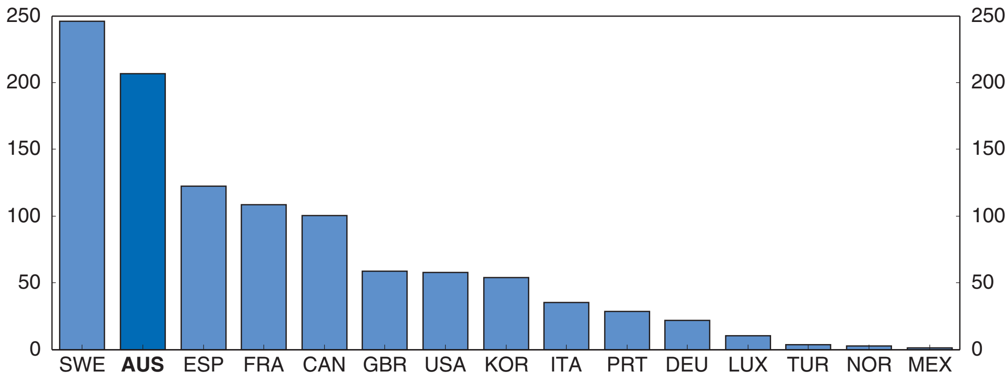
StatLink http://dx.doi.org/10.1787/888932344368

interventions in the housing sector. In particular the effectiveness of subsidies to first-home buyers and the fiscal treatment favourable to individual investment in the rental sector (so called "negative gearing") should be examined (Chapter 1).

Further rationalisation of industry subsidies would also seem desirable. Total gross assistance to industry reached AUD 17.2 billion (1½ per cent of GDP) in 2008/09, including some AUD 7.7 billion in the form of fiscal expenditures (PC, 2010). As rightly stressed by the Productivity Commission over the last years, a large share of these subsidies could be eliminated with beneficial effects for the budget and the economy alike, thanks to reduction of the resultant distortions in resource allocation. This applies, for example, to aid extended to the farm sector during droughts and also aid to the automotive industry (PC, 2009). Further assistance to the industry was provided in November 2008, making the total level of subsidies to the Australian automotive industry the second highest in the OECD on a per capita basis (Figure 2.2). This package for the automotive industry was

Figure 2.2. **International assistance to the automobile sector**

US dollars per capita PPP, 2007



Source: OECD, *Policy Responses to the Economic Crisis: Investing in Innovation for Long-Term Growth*, June 2009; Grattan Institute Analysis.

StatLink http://dx.doi.org/10.1787/888932344387

released following a continuous period of transitional assistance, which was designed in the mid-1980s, to help the industry adjust to higher competition following the reduction in tariff levels. The transitional assistance did not prevent Mitsubishi in South Australia from leaving the Australian market in 2008. Justification for subsidies to distressed industries, like the need to offset the appreciation of the Australian dollar or to preserve the technological spillover benefits for other industries, has no solid empirical evidence. In contrast, such subsidies hinder structural adjustment and the re-allocation of resources in the economy made necessary by the changes in relative prices (PC, 2008). These adverse effects could worsen over time as a result of the need for structural change due to the emerging mining boom.

The emergence of a new mining boom is creating fiscal policy challenges

In the coming years, the increased value of the nation's mining and energy wealth will create rents that will have a beneficial impact on income and activity. But this change raises issues from a fiscal standpoint. The first involves sharing of the rent derived from private exploitation of non-renewable natural resources, which belong collectively to all Australians. Here, the main challenge is to strike a balance that ensures appropriate distribution of this income and efficient exploitation of natural resources. A second issue concerns insulating the budget from transitory surges (or collapses) in revenues, especially if they are coupled to the business cycle. Third, productive capacities, especially in infrastructure, need to be bolstered to meet the expanding requirements of the mining industry and the concomitant population growth. Fourth, the probable widening of the foreign deficit stemming from growth in mining and infrastructure investment is a potential source of vulnerability, as discussed in Chapter 1. Lastly, in the longer term, there is a danger of a two-speed economy resulting from a lengthy but temporary rise in commodity prices, with undesirable effects from the standpoint of economic diversification.

Factoring these difficulties into the management of public finances is complicated by the uncertainty of commodity price movements (see Box 1.1 in Chapter 1). The appropriate fiscal response to an increase in the terms of trade should theoretically take account of its amplitude and duration. The growth prospects for major Asian economies make it probable that demand for raw materials will continue to be strong and sustainable for some time to come. Nevertheless, this demand can be expected to fluctuate and to generate price changes that would be hard to anticipate. Moreover, the supply of mining products will react, reducing prices and rents received by Australian producers. For example, a scenario of a hike and relapse in prices is not unlikely in the case of iron ore, which is not a rare resource, even if it is difficult to assess when this might take place. The rise of environmental concerns, even in emerging countries such as China, could also eventually reduce the consumption of coal, another important source of export revenue for Australia. The effect of such factors on the terms of trade could be offset, however, by higher prices and greater demand for natural gas, the production of which is set to rise in Australia in the years ahead.

The government has adopted an important tax reform to respond to these challenges

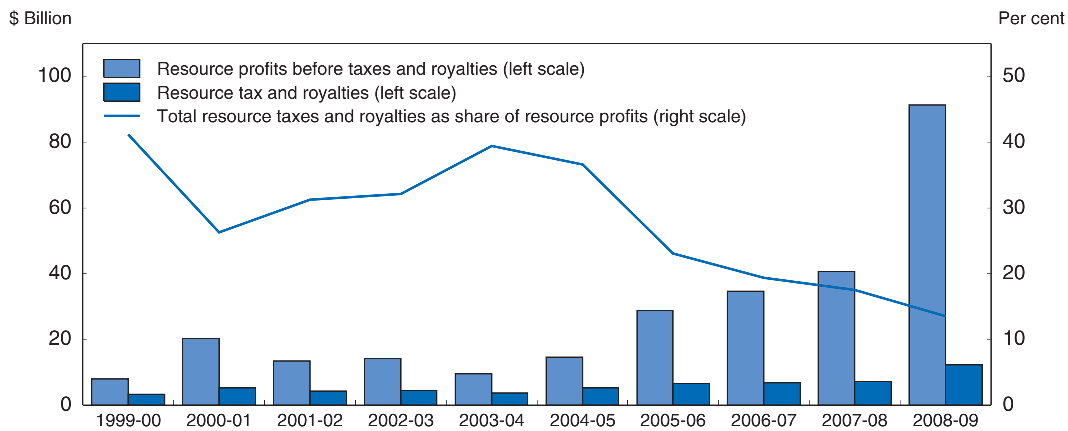
Tax reform is a critical pillar of the government's strategy for securing balanced and sustainable growth in response to the mining boom.[1] Following a comprehensive review, reforms are concentrated initially in three main areas: *i)* taxation of non-renewable natural resources; *ii)* company taxation; and *iii)* the tax treatment of superannuation. The proposals are coherent with the government's overall post-crisis fiscal and macroeconomic strategy of rebalancing growth, ensuring broad-based benefits from the country's terms-of-trade gains and strengthening retirement saving.

Improving and increasing natural resource taxation

Central to the government's strategy is a shift in the system of taxation of non-renewable natural resources from royalties to rents. The reform was motivated by the fact that general government receipts from non-renewable natural resources have not kept pace with the substantial price-induced increases in mining company profits during most of the past decade (Figure 2.3).[2] This is due in large part to the prevalence of output-based royalties set by the states. While historically royalties are the most widely used and administratively easiest tax to collect, they are widely recognized to be inefficient taxes, generating large welfare losses (Figure 2.4). Royalties distort investment and production decisions since they tax production independently of profitability (AFTS, 2010; Baunsgaard, 2001). By contrast, and as proposed by the government, a tax on resource rents is in principle highly efficient since it has no impact on investment and production decisions if properly designed and administered. A shift from a royalty scheme to a resource rent tax thus promises improved efficiency within the minerals extraction sector and, to the extent that this shift can generate higher revenues, rates on other tax bases can be reduced (Box 2.1).

The design of a resource rent tax for the minerals sector has been challenging due to the complications involved (Daniel *et. al*, 2009). The government's initial proposal to introduce a 40% Resource Super Profits Tax (RSPT) on all mining projects encountered immediate and strong opposition from the mining sector, accompanied by threats of project cancellation by several large operators. Faced with apparently insufficient political support, the government announced a revised proposal in early July 2010 that met with the mining sector's cautious acceptance in principle.[3] The government opted for a differentiated system of resource taxation. First, for coal and iron ore operations above a threshold level of profits, companies would be subject to a new Minerals Resources Rent Tax (MRRT), modelled on the Petroleum Resource Rent Tax (PRRT) adopted in the 1980s. Companies with annual resource-related profits below AUD 50 million would have no MRRT liability. State royalties would be credited

Figure 2.3. **Taxes and gross receipts: Resource extraction sectors**[1]



1. Resource profits before taxes and royalties are measured using income less an allowance for corporate capital.

Source: Australian Government (2 May 2010), *The Resource Super Profits Tax: A Fair Return to the Nation.*

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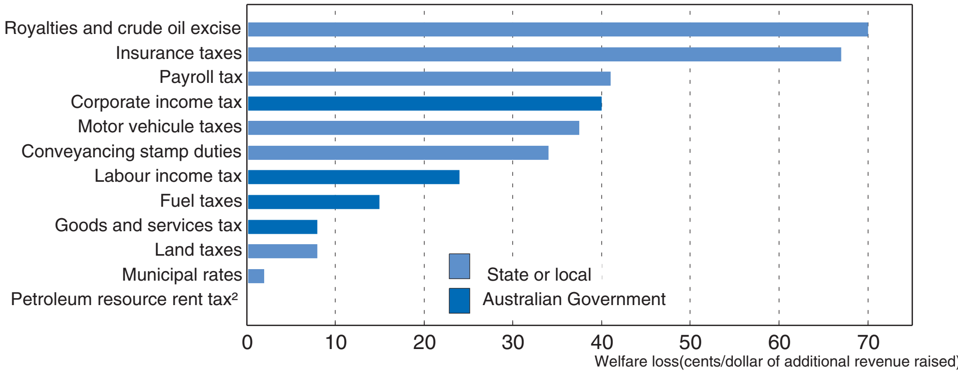
Figure 2.4. **Marginal welfare loss from a 5% increase in selected taxes**[1]



1. 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 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 of the economy.
2. 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, 2009.

StatLink http://dx.doi.org/10.1787/888932344425

against MRRT liabilities rather than refunded as was proposed under the RSPT. Second, the PRRT would be extended to all petroleum activities both on and offshore. Commodities other than iron ore, coal, oil and gas will not be affected by the reform.

Notwithstanding the compromises needed to secure the core of resource taxation reform, these changes should on balance have favourable economic effects, in particular in conjunction with the other components of the government's strategy. This resource rent tax is more efficient than the current royalties system as it raises taxation of finite and immobile resources. The tax arrangement focuses on the biggest and most profitable commodities, which represent three-quarter of the value resource operating surplus. It is designed in similar way as the existing Petroleum Rent Tax, which has been in place since 1987 and has been providing a stable and effective taxation regime for offshore oil and gas projects.

However, the proposed changes in resource taxation could go further. Although the compromise scheme addresses the government's goal of boosting natural resource revenues, the MRRT will yield less revenue than the initially proposed RSPT would have. Over the first two years of its existence, the MRRT is expected to raise receipts of AUD 10.5 billion, instead of AUD 12 billion for the RSPT. However, this projected tax revenue is based on a higher profile for resource prices and terms of trade than previously envisaged for the RSPT (although resource prices are assumed to gradually fall from their current high levels). If terms of trade had been kept unchanged, estimated MRRT proceeds would have reached only AUD 4.5 billion.[4] Second, unlike the RSPT, the MRRT is likely to distort investment incentives between mining projects of coal and iron ore and those on other resources that will not be subject to this tax. Third, contrary to the initially proposed reform, royalty arrangements will remain in place for operators pending discussion between the federal government and the states, which will reduce the efficiency gains. Indeed, some mining ventures are likely to continue to be deterred by royalty payments whose disincentives are particularly powerful in the case of marginal projects, and these disincentive effects could in fact rise. Moreover,

Box 2.1. **The taxation of resource rents**

From an efficiency perspective, the pure "rent" of a non-renewable natural resource is an ideal tax base. By definition, natural resource rents are returns from resource exploitation in excess of the opportunity cost (including a risk-adjusted rate of return on capital) of exploration and extraction. In turn, their taxation does not in theory alter investment or production incentives. Although the theoretical superiority of a resource rent tax (RRT) over alternatives is widely recognized, implementation of a RRT poses practical challenges (Daniel *et al.*, 2009).

In designing a practical RRT, the government has sought to approximate a so-called "Brown tax" (Brown, 1948). Under a Brown tax, also known as an R-based cash flow tax (Meade, 1978), a tax is levied on all real transactions on a cash flow basis. All investment expenditure is immediately expensed, and, therefore, no allowance is made for financing costs. When cash flows are negative, as in the early years of a project, the government reimburses contemporaneously its private-sector partner for its share. Symmetrically, when cash flows become positive, the government retains its share of total revenue at the tax rate. One way of characterising the Brown tax is that the government is taking ownership stakes, equal to the tax rate, in the company for the purpose of profit sharing (though not for purposes of corporate control). An obvious drawback to a pure Brown tax is the need for the government to disburse its share of costs upfront while realising revenues only in the future.

An option available to the government was the existing Petroleum Resources Rent Tax (PRRT) introduced in the 1980s to replace inefficient state royalties. The PRRT is modelled on the resource rent tax proposed by Garnaut and Clunies Ross (1975), consisting of a cash flow tax levied at a constant rate of 40% on annual positive cash flows. Unlike the Brown Tax, however, negative cash flows are not compensated immediately, but are carried forward with interest. In practice, there are 8 different interest rates used for carrying forward (or "uplifting") negative cash flows. The uplift rate comprises the government's long-term bond rate plus a premium, the combined rates ranging between 11 and 20% depending on whether the costs are related to exploration or development.

Concerned about possible compliance difficulties associated with the multiple uplift rates of the PRRT, the government initially proposed a so-called Resource Super Profit Tax (RSPT) based on proposals made by the Australia's Future Tax System (AFTS) review. The RSPT would tax estimated resource rents at a 40% rate on all existing and future minerals projects, beginning in July 2012. The RSPT would differ from a pure Brown tax in two ways. First, rather than receiving ongoing cash payments for the government's share of costs when cash flows were negative, the private operator would depreciate capital assets over time, as under the corporate income tax. Second, payment of the government's share would be delayed; the private operator would carry forward a claim on the government until cash flows were positive, which could be used to offset income. To compensate the private operator for the delay, reimbursable costs would be carried forward with interest at the government's long-term bond rate (the "uplift rate"), avoiding the need for the government to provide cash outlays during the negative cash flow phase of a project. The government justified use of its long-term bond rate on the grounds that, in view of its promise to pay in the future, there was no risk attached to the delay. With the 40% tax on rents deductible against corporate income tax, and the latter expected to be cut to 28% by 2013-14, the combined tax rate would have reached a maximum of 57% though the average tax rate over mining projects' lives would be substantially lower.

Faced with mounting opposition, and increasing indications that risk would likely be attached to the government's proposed delayed reimbursement, the government proposed a number of modifications to the RSPT. Its new scheme, the Minerals Resources Rent Tax (MRRT), is modelled quite closely on the PRRT. Key differences from the RSPT include: *i)* a tax rate of 30%; *ii)* the "uplift rate" is set equal to the government's long-term bond rate plus 7%, and will apply to broadly similar spending categories as under the PRRT; *iii)* firms may choose to value existing investment at market value (but without uplifted carry-forward) or book value; *iv)* no refunds for tax losses are provided; *v)* an extraction allowance of 25% is allowed to avoid taxation of value-added from extraction, rather than just the value of the resource, effectively reducing the tax rate to 22.5%; and *vi)* state royalties are creditable against MRRT rather than reimbursed.

since royalty payments are not eliminated but are instead credited against MRRT liabilities by the federal government, some states may see an incentive to raise royalty rates further, with correspondingly counterproductive effects. It is therefore of some urgency for states and the federal government to take advantage of opportunities for supplanting a range of highly inefficient taxes and levies prevalent among states – including royalties – with less distortionary sources of revenue (see below).

Complementary policies-proposals to use the extra revenues are good on their own merits

The broader strategy of rebalancing the economy in the face of higher resource rents entails important complementary policies. These include boosting national saving through increases in retirement saving, spurring investment through reduced company taxation, especially of small and medium enterprises, and boosting infrastructure spending. The specific measures (Box 2.2), to be financed entirely from the proceeds of the reformed resource tax, are largely justified on efficiency and equity grounds.

Measures proposed by the government should have a positive impact on national saving. First, the proposed tax discount on interest earnings increases the rate of return to saving and reduces the dispersion in tax treatment across savings vehicles. Second, the planned increase in the superannuation contribution rate from 9 to 12% will add directly to household retirement saving. While some reduction in voluntary saving will accompany increased mandatory saving, empirical evidence suggests that the offset might be relatively small. Indeed, recent research finds that each additional dollar of superannuation saving adds between 70 and 90 cents to household wealth (Connolly, 2007). Greater lifetime accumulation will in turn hold the promise of higher future pension replacement rates, which are relatively low by international comparison (Figure 2.5). The government's proposed co-contribution of AUD 500 per low-income earner also compensates partly for the more favourable tax treatment of superannuation accorded to high-income earners. Finally, the phasing in of the increase over several years provides ample time for the increase to be smoothly incorporated into wage contracts.

The planned cut in the statutory corporate tax rate is an initial step toward bringing Australia's company tax more in line with levels elsewhere (Figure 2.6). At 30%, the corporate tax rate is well above the average of small and medium-sized OECD countries. Evidence suggests that corporate taxation is among the most distortive taxes, reflecting in large measure the high degree international of mobility of capital (OECD, 2009b). Marginal welfare costs of the corporate tax in Australia are indeed estimated to be relatively high (Figure 2.4). The shift in taxation from company taxation to resource rents holds promise of enhancing the investment environment and helping to avoid a two-speed economy in the context of the large terms of trade changes underway.

The government's room for manoeuvre to reduce the company tax rate narrowed, however, following the compromise on the resource rent tax. While the AFTS recommended that Australia's corporate rate be cut to 25%, the government initially proposed a two-step reduction to 28% beginning in 2012-13 for small and medium enterprises, and a year later for others. However, against a backdrop of a lower revenue yield from the MRRT, the government chose to limit the reduction in the company tax rate to 29 per cent beginning in 2013-14 (and one year earlier for smaller companies). The effective tax rate will be lower for smaller companies, however, given the favourable expensing provisions accompanying the rate cut (Box 2.2).

Box 2.2. **Strategic use of mineral wealth**

The MRRT is projected to yield AUD 10.5 billion (¾ per cent of GDP) of additional revenue during the first two years following its introduction. The government has chosen to use these proceeds to further three key priorities of its overall macroeconomic strategy of achieving more balanced growth: reduce the corporate tax rate, provide co-financing for increased superannuation saving by low-income taxpayers, and fund infrastructure.

A cut in the corporate tax rate

Leaving further cuts conditional on future fiscal performance, the government proposes to reduce the company tax rate, accompanied by other measures for small and medium enterprises. Specifically, the government has proposed to reduce the corporate tax rate for larger businesses from 30 to 29% in 2013-14. Small and medium enterprises (SME), would see their rate drop one year sooner, and would benefit from favourable write-off provisions; SMEs will be able to immediately expense assets costing less than AUD 5 000 and to depreciate other assets (except structures) at a rate of 30%.

Boosting retirement saving

The government proposed several measures to boost overall retirement saving. The contribution rate on wages to a superannuation fund will rise between 2013 and 2020 from 9% to 12% in 0.25 percentage point increments on 1 July 2013 and a year later, followed by 0.5 percentage point increments annually thereafter. At the same time, to increase the eventual accumulated stock of retirement savings of low-income workers who are unable to benefit from favourable tax treatment accorded to higher income workers, the government proposed to provide a co-contribution for low-income taxpayers up to AUD 500. Finally, individuals over age 50 with superannuation balances below AUD 500 000 would be able to make annual tax-preferred contributions up to AUD 50 000.

A second set of proposals is aimed at savings more generally. To equalize in part the treatment of interest earnings (outside of superannuation) and long-term capital gains (which receive a 50% tax discount), from 1 July 2012, individuals will be entitled to a 50% tax discount on up to AUD 500 of interest income received, including interest earned on deposits held in banks, building societies and credit unions, and on bonds, debentures and annuity products. As from 1 July 2013, this tax discount will apply on up to AUD 1 000 of interest income received.

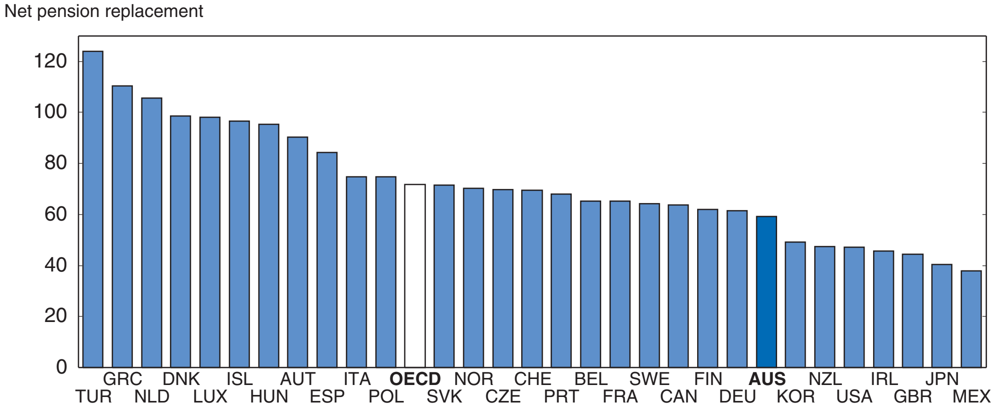
Funding infrastructure investment

The government has created a new AUD 6 billion Regional Infrastructure Fund, partly funded by proceeds from the MRRT, to invest in roads, ports and other infrastructure in mining-intensive states and communities, to support the mining sector.

In addition to fiscal measures, the government plans to earmark some of the resources obtained from the new mineral rent tax for infrastructure financing with the creation of the new Regional Infrastructure Fund. Two-thirds of the assets of this fund, which are expected to reach AUD 6 billion in the coming decade, is to go to the two main mining states, Western Australia and Queensland. The expected expansion of both these states, in terms of activity and population, will require faster and more substantial infrastructure development than in the rest of the country. This increase in public investment prolongs the capital spending under the stimulus plan, and reflects the federal government's determination to play a larger role in enhancing the consistency and co-ordination of

Figure 2.5. **Net pension replacement rates**[1]

Per cent of pre-retirement earnings

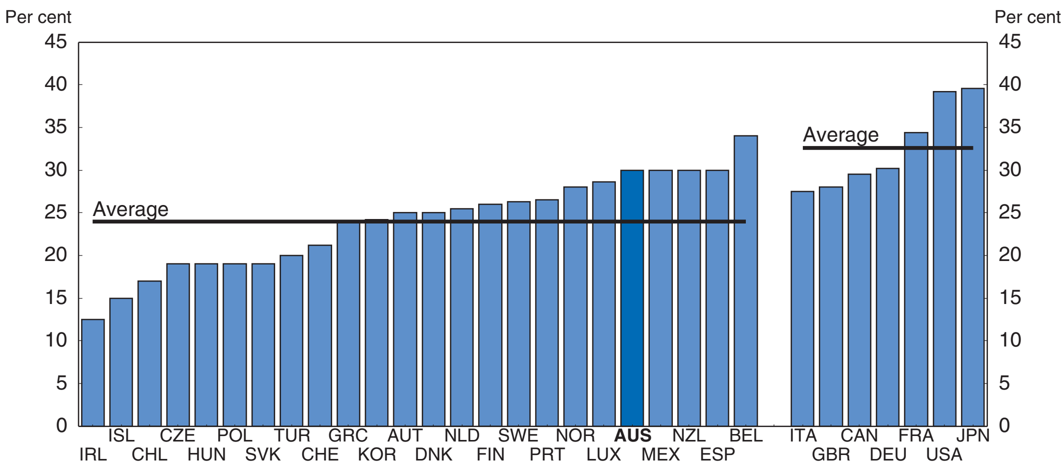


1. Data refer to year 2006. Pension entitlements calculated using the OECD pension model, based on national parameters and rules in 2006.

Source: OECD (2009), Pensions at a Glance 2009: Retirement-Income Systems in OECD Countries.

StatLink http://dx.doi.org/10.1787/888932344444

Figure 2.6. **Statutory corporate tax rates, OECD countries 2010**



Source: OECD Tax Database.

StatLink http://dx.doi.org/10.1787/888932344463

infrastructure spending at the national level. This action is welcome insofar as it is being carried out within a strict framework that guarantees efficient distribution of these expenditures (Chapter 3).

The management of revenues from the non-renewable resources could be improved

Australia is planning to spend all the expected higher budget revenues from resource taxation. This essentially implies that the price increases are assumed to be permanent, and to that extent risks a costly reversal of some spending should prices fall again. This differs from the approach favoured by, for example, Norway and Chile with broadly similar circumstances, which have established sovereign funds financed by revenue from the taxation of non-renewable resources. The motivation behind these reserve funds is not identical in Norway and in Chile, as can be seen from the way they work (Box 2.3). They do, however, perform some of the same functions, such as shielding fiscal policy from

Box 2.3. **The role and operation of reserve funds in Norway and Chile**

The mining and energy sectors, which account for 22% and 7% of GDP respectively in Norway and Chile, play an important role in both economies. From a budgetary standpoint, public revenue from oil and mineral exploitation accounted for 13% of GDP in Norway and 3% of GDP in Chile in 2009, larger than in Australia (less than 2% of GDP).

To protect its economy from fluctuations in the prices of raw materials, Norway has created a sovereign fund (the Government Pension Fund) to accumulate revenues from its oil and gas resources. The funds are invested in foreign assets. This policy of sterilisation seeks to protect the budget from oil price fluctuations, to ensure future pension payments, and to save for future generations. Part of the fund's resources (4% of its average value, corresponding to the notional real return on the assets) are spent each year. Permanent accumulation of financial reserves in foreign currencies also seeks to limit the risks of loss of competitiveness in the manufacturing sector and of disindustrialisation (Dutch disease) by reducing exchange rate appreciation.

In contrast, the reserve fund created in Chile is not meant to accumulate financial assets but to smooth their use. Chile needs to make substantial investments in education and infrastructure to promote a rise in living standards. In addition, the country's copper reserves are not expected to be depleted quickly. Accordingly, the principle of the Chilean reserve fund is to avoid the risks of overheating the economy that might be triggered by pro-cyclical fiscal policy during mining booms. Chile has therefore adopted a budgetary rule targeting the structural equilibrium of its public accounts, corrected for cyclical variations and fluctuations in copper prices. To this end, the authorities distinguish between permanent and temporary mining-related tax revenues based on independent estimate of long-term equilibrium raw materials prices (OECD, 2010).

commodity price fluctuations and limiting the risks that policy will be pro-cyclical. This raises a question whether it would be appropriate for Australia to create such a fund. Indeed, the idea has been raised for some years in discussions of fiscal policy in Australia (Henry, 2010).

Permanent accumulation of assets in a reserve fund is hard to justify in Australia

There are several justifications for the Australian government's scant interest in permanently accumulating reserves earmarked for revenue from the exploitation of mineral and energy resources. On a practical level, revenue collected from natural resource exploitation is poorly identified in the public accounts. At the federal level, until now most of this income has been commingled with the proceeds of the company tax, and only royalties collected by the states can be identified. Resource revenue is relatively modest, estimated at just under 2% of GDP in 2008/09, roughly one-third of which consists of royalties. The economic absorption of such amounts therefore does not present the same difficulties as in Norway or, to a lesser extent, Chile. Moreover, given the large size of the country's mineral reserves, the prospect of depletion is more remote than in Norway. This eases the generational equity problem. Above all, the country must fulfil the immediate needs to invest in infrastructure and education generated by sharp population growth, whereas the long-term funding requirements of public finances are relatively moderate. The main source of budgetary pressures in the decades ahead will come not from pensions but from the rise in health care costs, which can be dealt with by implementing reforms in this particular area, rather than having the outlays pre-financed by the current generation

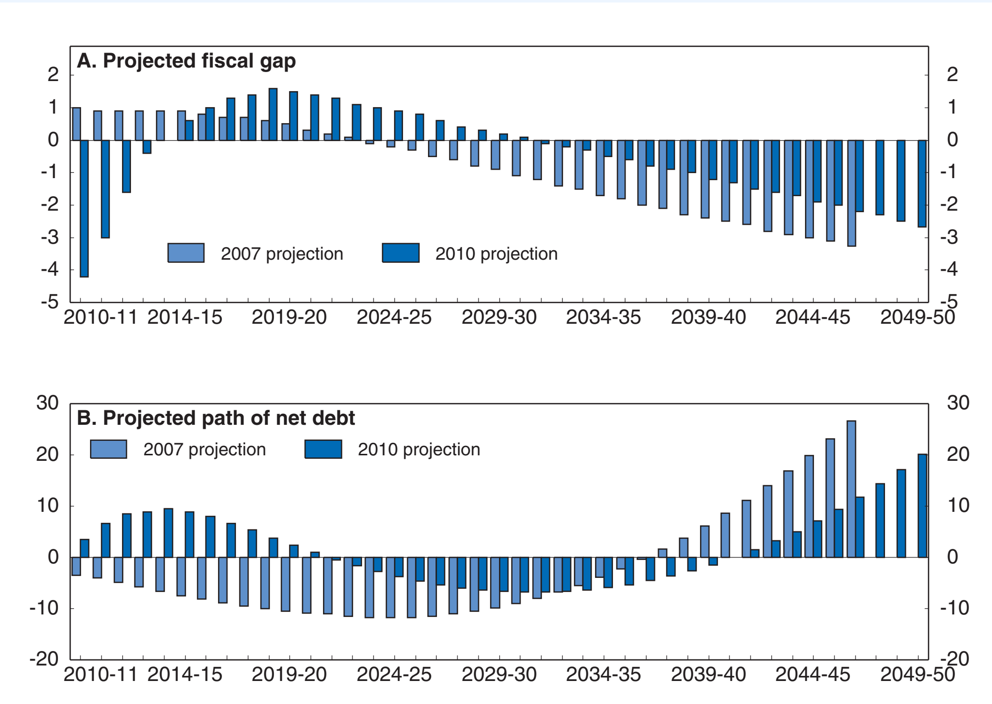
(Box 2.4).[5] Moreover, the Australian authorities consider that a low tax burden, an effective educational system and efficient infrastructure with good labour market incentives and adequate regulation of product markets are more important to responding to outside shocks and to helping future generations, than accumulation of wealth by the public sector (Commonwealth of Australia, 2010a).

Box 2.4. **Long-term budget projections underline the importance of reforms to the health care system**

In January 2010 the authorities published their third *Intergenerational Report* (IGR2010) with an assessment of long-term budgetary pressures at the federal level (Commonwealth of Australia, 2010b). If policy remains unchanged, a primary budget deficit of 2¾ per cent of GDP is projected for 2050, which would increase net public debt to roughly 20% of GDP (Figure 2.7), which would not be excessive by international standards. In addition, it does not factor in the improved short-term fiscal outlook in the 2010/11 budget, published in May 2010. The debt would, however, continue to grow after that period under this scenario. A further risk is also that these budget projections cover only federal accounts thereby underestimating the pressures that will come to bear on general government.

Figure 2.7. **Fiscal and debt projections**

Per cent of GDP



Source: Intergenerational Report 2010, "Australia to 2050: Future Challenges", January 2010, Australian Treasury projections.

StatLink http://dx.doi.org/10.1787/888932344482

The deficit forecast for 2050 is lower than the 3¼ per cent of GDP projected by the previous report, despite the adverse effect of the crisis on public accounts. This slight improvement results in part from the adoption of a strategy to restrict spending until budget surplus returns, which should improve the fiscal balance by one percentage point of GDP as from the middle of this decade. This lesser budget pressure also stems from the revision of demographic forecasts, which includes assumptions of higher women's fertility and immigration rates and therefore a slightly more gradual ageing effect than had been previously estimated.

Box 2.4. **Long-term budget projections underline the importance of reforms to the health care system** *(cont.)*

The IGR2010 projects that government outlays for old age pensions will rise modestly from 2.7% to 3.9% of GDP by 2050 in contrast to the sharp rises expected in many OECD countries. This reflects the workings of the Australian retirement system. Since 1992, that system has been based on a mandatory occupational pension scheme with defined contributions and capitalisation the Superannuation Guarantee. Moreover, the payment of civil service pensions, which do not entail defined contributions, is guaranteed by the assets of a Future Fund, which was created in 2006 and amounted to AUD 67.4 billion (5% of GDP) in June 2010. Only old-age pensions, which seek to protect the elderly from poverty, are funded by the federal budget. The amount of these standard and means-tested pensions was increased significantly in the 2009/10 budget. Nevertheless, the long-term cost of that increase was neutralised by offsetting measures, including the gradual increase, from 65 to 67, in the minimum age of eligibility for the pension. The proportion of people eligible should also decline in the future as the Superannuation system comes to maturity.

It is in health care that upward pressures on federal spending are greatest. Over two-thirds of the projected rise in aggregate federal expenditure, of 4¾ percentage points of GDP by 2049-50 from the projected low point in 2015-16, will come from this sector. This increase in spending does not constitute an intergenerational transfer because future generations will benefit. It does, however, justify the efforts undertaken by the government to enhance the efficiency of the health care system. Indeed, it is important to avoid a situation in which the foreseeable budget constraints in the years ahead lead to a deterioration in the quality of services offered, or to an excessive tax increase.

Despite its past successes and relative efficiency by international standards (Joumard *et al.*, 2008), the health care system faces substantial challenges ahead: *i)* the population is ageing and requires better cover for care to the elderly and persons suffering from chronic illnesses; *ii)* the cost of treatments is rising along with technological progress; and *iii)* rising living standards have triggered growth in the demand for medical services. Moreover, the management of this system is still too focused on inputs and is thwarted by financial power-sharing problems between the states, which administer hospitals, and the federal government, which bears most responsibility for primary care and for the elderly. This has given rise to cost-shifting problems between the levels of government and to a lack of co-ordination between the different types of care. Too many persons, for example, are transferred needlessly to hospitals. Moreover, there are problems with long waiting lists for elective surgery, which differ from one region to the next.

Further to an agreement concluded with the states within the framework of COAG in April 2010, the government has undertaken an ambitious reform of the hospital and health care system under the 2010/11 budget to remedy these shortcomings:

- The Federal government will expand its role in the operation of the health care system to reduce administrative fragmentation and regional disparities in the supply of medical services. To this end, the seven of the eight hospital systems controlled by the states (Western Australia did not sign the agreement) are to be replaced by the National Health and Hospitals Network. The proportion of hospital care expenses paid by the federal government will go from 40% to 60%. The federal government will also take full funding and policy responsibility for all primary health care, whether delivered in or outside of hospitals, as well as care for the elderly.
- Hospital administration will remain local, but it will be subject to national rules and to greater transparency requirements in terms of performance and the quality of care offered. Funding for local hospital networks will depend on procedure-specific (pathology-specific) costs, to be set by an independent body. A large amount of funding will also be provided for other forms of recurrent expenditure, including research and training, as well as capital infrastructure. For the majority of establishments, this will replace the comprehensive hospital transfers paid by the federal government to the states, which manage their use independently.

Box 2.4. **Long-term budget projections underline the importance of reforms to the health care system** *(cont.)*

- The reform also calls for an increase in capital investment and a number of measures to improve medical services. These measures, representing an expenditure of AUD 7.3 billion (0.5% of GDP) cumulatively over five years, include: improved treatment capacity for hospital emergency units; an increase in the number of hospital beds and capacities for elective surgery; an increase in the number of trained nurses and doctors; introduction of individual electronic health care records; and improved access to primary care services, especially for persons suffering from chronic illnesses, which operate outside normal office hours as well.
- To finance this reform and these additional expenditures, the federal authorities will use approximately one third of the GST revenue currently paid to participating states, as well as their own resources. A 25% increase in tobacco taxes was also adopted. The federal government is also in the process of introducing further reforms to the Pharmaceutical Benefits Scheme which build on the earlier 2007 reforms which aim to achieve better value from medicines subject to competition in the market place. Since trend growth in health care expenditures exceeds that of indirect taxes, this change in the financing system can be expected to ease the pressure on state budgets by more than AUD 15 billion (1% of GDP) by 2019/20, according to official estimates, by transferring most of the burden to the federal accounts (Commonwealth of Australia, 2010c).

The measures adopted ought to bring rapid improvement to the operation of medical services in important sectors like emergency hospital care and elective surgery. The extension to local hospital networks of the system of financing by procedure-specific (pathology-specific) costs should increase efficiency in the supply of hospital services. The introduction of individual health care records could also limit needless duplication of medical acts and ensure that patients are monitored better. Lastly, the greater proportion of health care financing covered by the federal government should reduce incentives for cost-shifting between levels of government.

Despite these advances, additional reforms will probably be necessary in the future to enhance efficiency. Too few resources, for example, are earmarked for preventive medicine. Care for mental illnesses by primary healthcare networks also appears limited, and increases hospital costs (Chapter 4), although there has been significant increase in primary health care spending in this domain since 2006, and the federal government is taking full funding and primary responsibility for common disorders. The measures adopted to improve health care for the elderly would also seem inadequate in relation to needs, and unmet needs in this area may well continue to weigh upon hospital costs in the future. The authorities have asked the Productivity Commission to explore the options for improving operations in this area. Lastly, greater efficiency gains could probably be obtained in the hospital sector by bolstering the federal government's monopsony power over hospitals in large metropolitan areas, where competition can come into play between the multiple existing health care providers.

A reserve fund would improve fiscal governance

The economic policy strategy underlying the government's choice to redistribute the revenue from mineral rents should factor in the uncertainty over commodity price movements. The financing of permanent expenditure or tax cut initiatives by a revenue increase that could subsequently prove only temporary risks a structural deterioration of the fiscal position. The upward revision of the terms-of-trade-gain assumptions in July 2010, when the design of the MRRT was finalised, compared with those included two months earlier in the 2010/11 budget, illustrates this risk. However, these risks are mitigated by the medium-term fiscal strategy and the good track record of Australia with public finances. The enactment of this strategy of maintaining a balanced budget or a slight surplus, on average over time, would necessarily trigger an adjustment of public accounts in the event of deterioration caused by an unexpected decline in the terms of trade (Box 2.5). Such a reaction would ensure the preservation of sound public finances, albeit at the expense of greater volatility and potentially pro-cyclical fiscal management.

Box 2.5. **Key elements of Australian medium-term fiscal strategy**

As mentioned in Chapter 1, since the mid-1990s the Australian authorities have followed a medium-term fiscal strategy designed to ensure fiscal sustainability. This strategy, in its current form, is based on the following key elements (Commonwealth of Australia, 2010d):

- Achieve budget surpluses, on average, over the medium-term.
- Keep taxation as a share of GDP below the level for 2007-08, on average.
- Improve the government's net financial worth over the medium term.

This strategy aims also to provide the necessary flexibility for the budget to vary in line with economic conditions and to react to unexpected economic shocks, as shown by the fiscal response to the global financial and economic crisis.

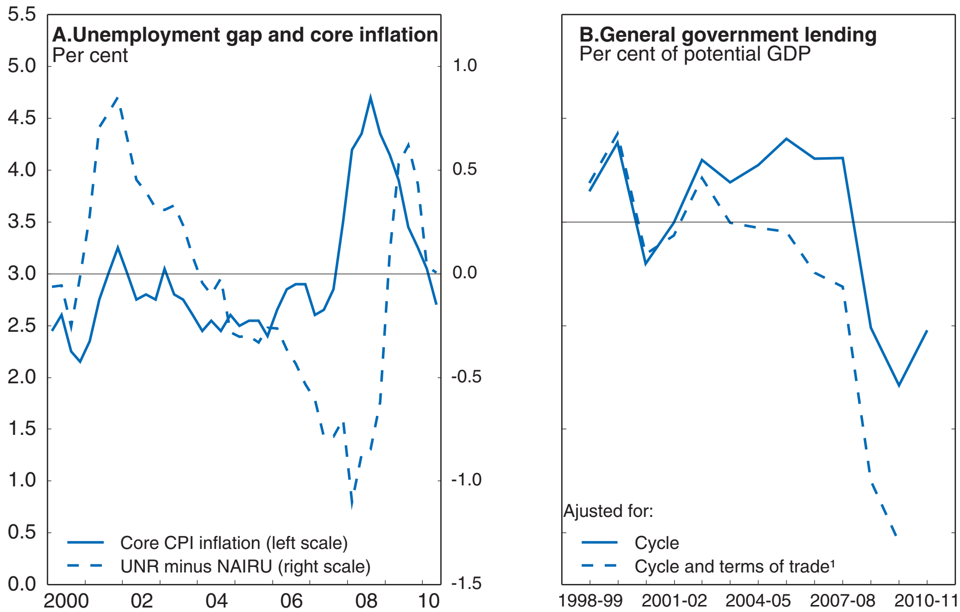
Following the adoption of a large fiscal stimulus in response to the crisis (Chapter 1) and consistently with its medium-term strategy, the government has also taken specific action to return to budget surpluses. This includes:

- Allowing the level of tax receipts to recover naturally as the economy improves, while maintaining the commitment to keep taxation as a share of GDP below the 2007-08 level on average.
- Holding real growth in spending to 2% a year, while the economy is growing at or above trend, until the budget returns to a surplus of 1% of GDP.

In the longer term, the Australian medium-term fiscal strategy of accumulation of surpluses, would, if all used to repay debt, have implications for the government bond market. However, in its 2010-11 budget, the Australian government outlined its commitment to ensuring the effective operation of Australia's financial markets. The Government noted that the existence of an active and efficient bond market alongside the banking system strengthens the robustness of Australia's financial system and reduces its vulnerability to adverse shocks. The volume and maturity structure of bond issuance will continue to be set to meet the Government's financing task and portfolio management needs. In the longer term, the Government will aim to maintain a liquid Commonwealth Government Security (CGS) market to provide a sound foundation for Australia's financial system. This includes supporting the three-year and ten-year Treasury Bond futures markets.

More vigilance is needed *vis-à-vis* the risk of fiscal policy pro-cyclicality as occurred during the mining boom in the 2000s. During that period, the rise in raw materials prices and the terms of trade spurred revenue more than production. This coincided with an upturn of the business cycle, but tax revenue increased by more than would be characteristic of a normal economic cycle. This revenue was in part recycled into the economy, via tax cuts and spending increases which accentuated demand pressures, even as strains on production capacities and inflationary pressures were obvious (OECD, 2008). Thus, between 2002/03 and 2007/08, the expansionary thrust of fiscal policy on activity in response to the mining boom represented some 2% of GDP according to the OECD, or an average of 0.4% per year over the five fiscal years (Figure 2.8).[6] The risks of pro-cyclicality

Figure 2.8. **Unemployment gap, inflation development and fiscal policy impulse**



1. This indicator takes into account the cyclical fluctuations of the budget on the basis of the gap in real income rather than the gap in real output by including the impact of the increase in the terms of trade relative to their long-term level (see Turner, 2006).

Source: Source : ABS (2010), *Australian National Accounts, National Income, Expenditure and Product* (cat. No. 5206.0); RBA (2010), *Measure of consumer price inflation*; OECD (2010), *OECD Economic Outlook*, No. 88 and Turner, D. (2006), Should Measures of Fiscal Stance be Adjusted for Terms of Trade Effects, *OECD Economics Department Working Papers*, No. 519.

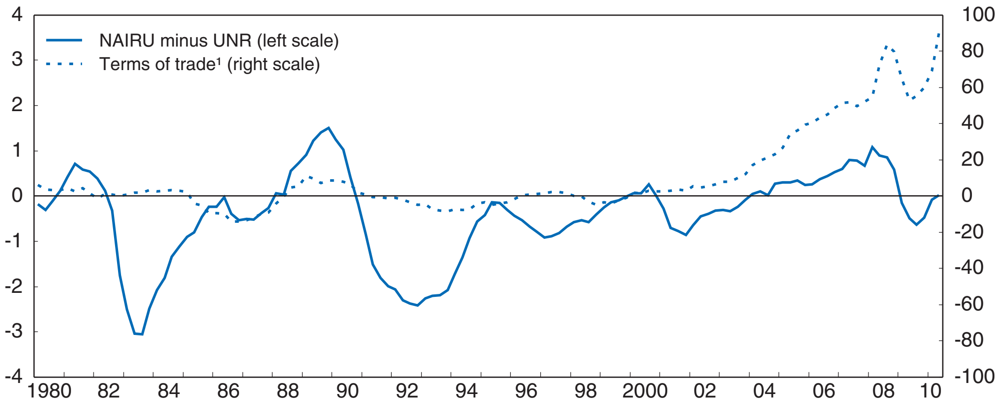
StatLink http://dx.doi.org/10.1787/888932344501

will increase once the consolidation strategy has returned the budget to a surplus of about 1% of GDP, probably around 2015/16. The amount of this additional revenue, which is likely to be spent in full, could reach 0.5% of GDP per year.

Australian economy and public finances may be increasingly subject to commodity price cycles and the terms-of-trade fluctuations. This type of cycle, linked to international market trends in raw materials, has an impact on business cycles,[7] but it did not necessarily coincide with them in the past (Figure 2.9). Between the early 80s and the beginning of the 2000s, for example, movements in the terms of trade had only a marginal effect on business cycles. Since the beginning of 2000s however, the rise in the terms of trade fed through to the appearance of significant pressures on production capacities until the outbreak of the crisis. As the resource industry grows, it is likely that commodity price movement become an increasingly important driver of the Australian business cycle, as in countries like Norway and Chile. The effects of both of these cycles, business and price will thus tend to be superimposed on public finances through their differentiated impact on production and income, as shown by the experience of the mining boom that preceded the crisis.

Creating a reserve fund and having the use of its assets reflect the economic situation would improve fiscal governance. Instituting a fund, endowed with tax revenue from the exploitation of non-renewable resources, would increase the transparency of fiscal management, and better allow the volatility of these revenues to be taken into account. This approach would be similar to the arrangements in place in Chile insofar as the fund's assets would not accumulate a large amount of assets. This would require a better identification of the effects on public revenue of variations in the terms of trade (business

Figure 2.9. **Terms of trade and cyclical developments**



1. Terms of trade deviation relative to 1980-2003 average.

Source: OECD, *OECD Economic Outlook*, No. 88 online database.

StatLink http://dx.doi.org/10.1787/888932344520

taxes, royalties, etc.). From this standpoint, the new mining tax will make this task easier. In contrast to the Chilean management system, the authorities ought to consider endowing the fund with all tax revenue stemming from the exploitation of raw materials, whether that revenue is permanent or temporary and whether it derives from normal taxation of businesses or from special taxes imposed on mineral and oil rents. An assessment of whether the tax revenue stemming from commodity price movements is permanent or temporary, although highly uncertain, would theoretically make it possible to ensure that public spending decisions trigger no structural deterioration of the public accounts. In practice however, making such a distinction has proved to be difficult, as shown by the Chilean experience (OECD, 2010). Moreover, insofar as the impact of business cycles and price cycles tend to superimpose their effects on public finances, the use of this tax revenue, whatever its source, could in fact have a pro-cyclical impact during cyclical upswing, even if growth in this revenue reflects a permanent increase in the terms of trade.

To keep the risk of structural fiscal deterioration and procyclical budgetary management under control, expenditure decisions should be disconnected from the fluctuations in government revenue caused by commodity price movements. To that end, the authorities might consider introducing a rule concerning the management of the reserve fund's resources, imposing for instance that the use of the assets of this fund, in real terms, does not increase more rapidly than the estimated trend growth of the economy. Deviation from this rule would be possible and, at time even desirable, but would need to be justified. In practice, this could be achieved by following a similar approach as the one that had been used to manage the various funds created prior to the crisis to collect the budget surpluses that were being generated at that time (Commonwealth of Australia, 2008).[8] Use of the fund's resources would thus be made contingent on an opinion provided by a specific body that would assess the economic impact of using those resources, given the economic situation, the financial position of the reserve fund and the fiscal outlook for all levels of government.

The proposal to create a Parliamentary Budget Office (PBO) is a welcome initiative

Another possible way to improve fiscal performance and effectiveness, which is attracting growing interest among OECD countries, including in Australia, consists in creating an independent fiscal institution. Following the recent federal election, the government has indeed agreed to establish a Parliamentary Budget Office. The details concerning the structure, resources and functioning of the future PBO are, however, still to be defined, and will be the subject of decision by a special committee of the Parliament. The PBO has the potential to improve transparency and thus enhance the quality of the democratic debate. Other countries, such as the Netherlands, have for instance found useful to give their independent fiscal institution (the Central Planning Bureau in the Dutch case) the task to cost the election programmes of political parties (Hagemann, 2010). The PBO should also help to strengthen an already well functioning set of fiscal institutions, which will be particularly important in the light of the mining boom. Efficient and prudent management of resource-related budget revenues and avoidance of fiscal swings associated with fluctuations in mineral tax receipts will be a challenge in the years ahead. If a resource fund is created, the PBO could play a useful role.

As shown by Australia and other OECD country experiences, to be effective a PBO needs political support, financial independence and access to information and expertise in the bureaucracy. Accountability is also critical: it is important to guarantee the transparency of its analyses by releasing them to the public. Australia has a long tradition of relying on technical experts for independent advice on reform projects, the Productivity Commission being an outstanding example of an effective independent agency that is well integrated to the reform process.

Priorities for further medium-term tax reform

The tax and transfer system is inefficient and complex

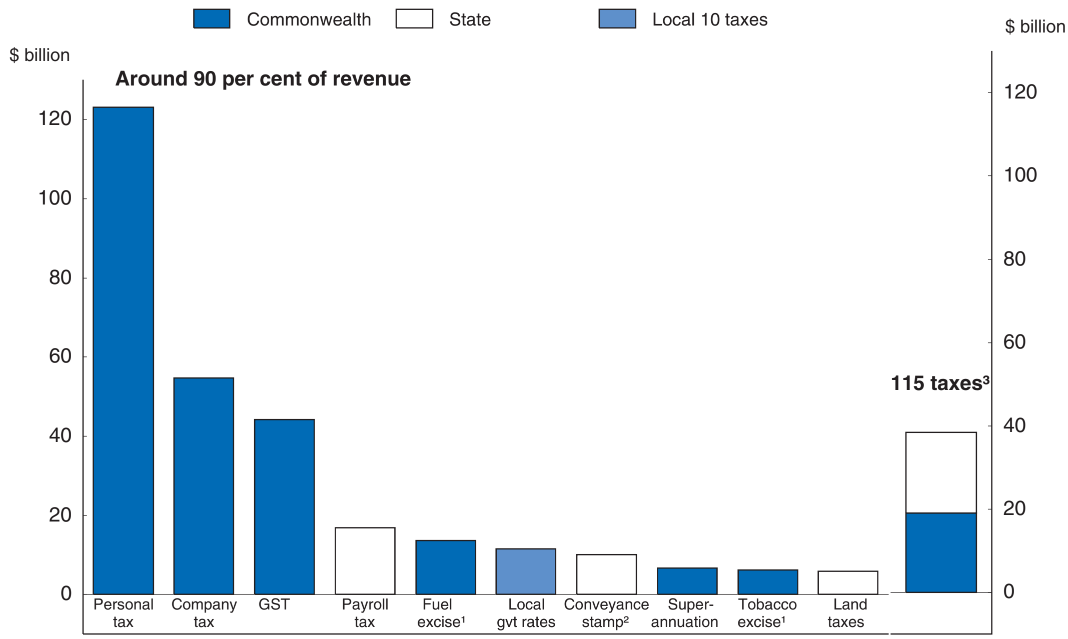
Notwithstanding the significant initiatives proposed by the government, there remains considerable room for improving the quality and effectiveness of Australia's tax and transfer systems. Past OECD *Surveys* have highlighted a number of weaknesses of the tax system that are harmful to the performance of the economy. Many of these are directly addressed by the AFTS but await government action – of its 138 recommendations relatively few have so far been acted on. However, following the recent federal election the government committed to hold a "tax summit" to discuss the other proposed measures of the AFTS. Two key aspects of Australia's overall system of taxes and transfers warrant substantial and far-reaching reform.

First, many taxes, especially at the state level, yield little revenue but cause large distortions. Of the 125 taxes and charges, about 115 yield only 10% of total revenue (Figure 2.10). Several taxes, including mining royalties and payroll taxes, are highly inefficient, resulting in very large marginal welfare losses (Figure 2.4). The tax system is also more complicated than necessary – about 75% of taxpayers use a tax agent to complete their returns, second only to Italy in the OECD (AFTS, 2010).

Second, the transfer system is a source of inefficiency and distortion, notably in its interactions with personal income taxation. The multiple and often overlapping benefits, each with its own thresholds, caps, and withdrawal rates, can result in high effective marginal tax rates for low income households and for persons whose labour market participation is most

Figure 2.10. **Ranking of Australian taxes by revenue**

2009-10



1. Fuel excise and tobacco excise include equivalent customs duties.
2. Stamp duty.
3. Around 10% of revenue. 115 other taxes include fringe benefits tax, gambling taxes, insurance taxes, beer and spirits excise, customs duties, motor vehicle taxes, crude oil excise and agriculture levies.

Source: Australia's future tax system. Reporter to the Treasurer, December 2009.

StatLink http://dx.doi.org/10.1787/888932344539

sensitive to changes in take home pay, such as single parents and second earners (OECD, 2008). The AFTS proposed ways to rationalise and simplify benefits, which could improve incentives for labour force participation, without adverse redistributive effects.

The possibility of tax reforms in these two domains is discussed below. However, other aspects of the tax system also warrant attention, including the housing sector and the issue of road congestion in large agglomerations, which are examined in Chapters 1 and 3.

Reducing marginal tax rates and simplifying compliance

Personal income taxation and its myriad family tax benefits and the system of multiple, targeted and means-tested benefits combine to complicate the tax-transfer system. Australia has a very targeted system of redistribution; the share of transfers paid to the richest half of the population is the lowest in the OECD. While this ranking reflects to some extent the absence of social insurance in Australia (Whiteford, 2009), it also results from widespread means testing. At the same time, the system is complex and is less than fully transparent to most people. There are multiple and overlapping transfers, including the Family Tax Benefit Parts A and B, the Baby Bonus, the Parenting Payment, the Newstart Allowance, and the Pharmaceutical Allowance. Each of these has its own thresholds and payment and withdrawal rates that are difficult for individuals to fully understand. Rapid benefit withdrawal (in some instances compounded by withdrawal of multiple benefits) raises effective tax rates on wage income. The personal income tax system is also complicated by some 40 tax offsets (both refundable and non-refundable), each with its own design. For example, deductions for work-related expenses of employees are allowed, subject to detailed record keeping. Opportunities to simplify both the transfer and personal income tax are thus present.

Although an estimated 90% of working age Australians face effective marginal tax rates (EMTRs) below 40% (Harding *et al.*, 2006; Kalb, 2007), the percentage facing an EMTR over 50% increased by half during the decade ending in 2006-07, to 7% . High rates are particularly problematic for some individuals with higher than average labour supply responsiveness. As noted in Chapter 4, second earners are particularly affected. Single parents and one-earner couples with children also face high EMTRs by international standards when moving from part-time to full-time work, but face low EMRTs moving from no work to part-time work (Figure 2.11). Australia's policy settings seek to encourage part-time work and there is evidence that shows that part-time employment for lone parents increases the likelihood of them taking up full-time employment in the following year (Foc *et al.*, 2009).

Proposals to simplify the personal income tax should be pursued and further measures considered

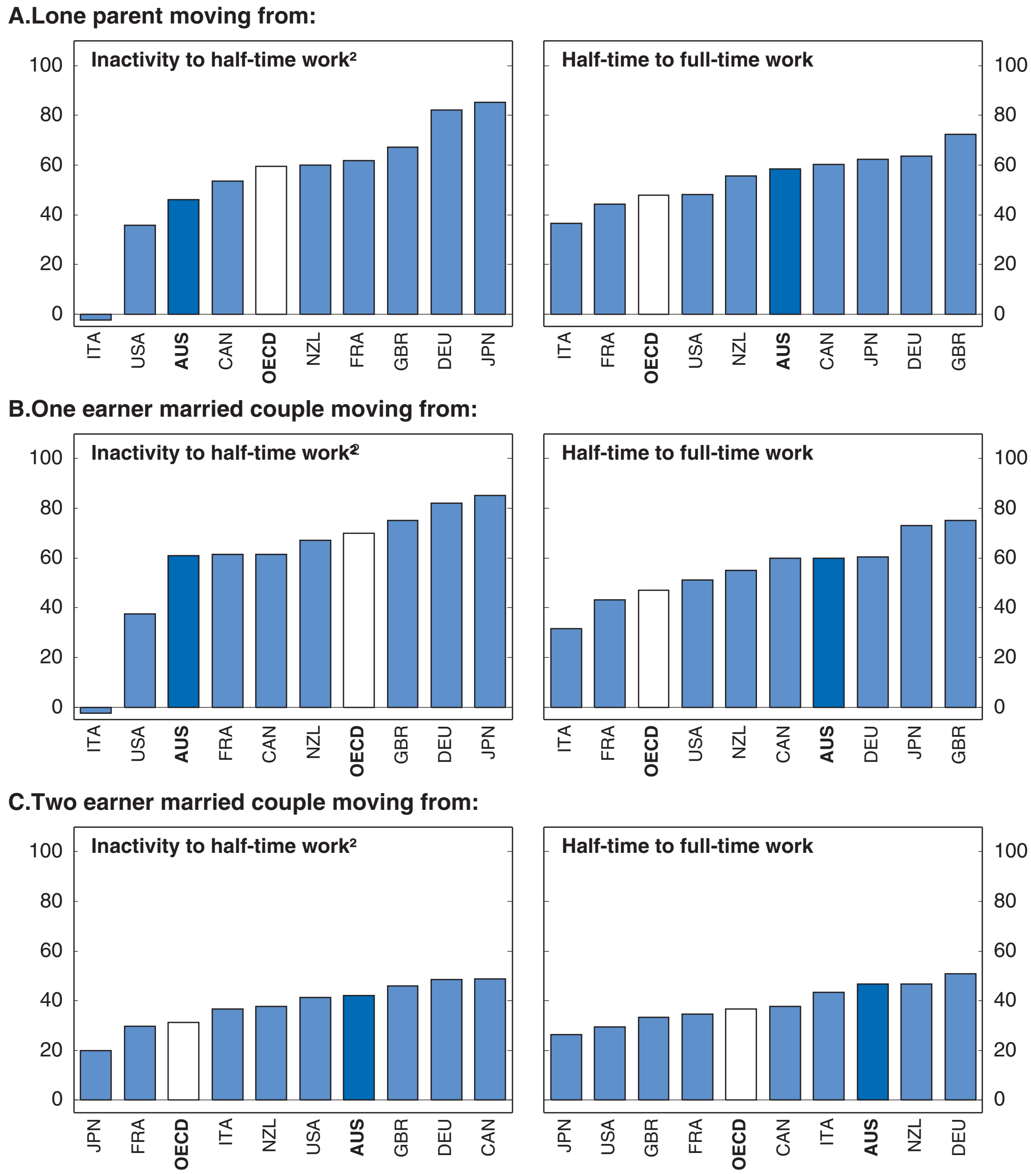
The AFTS proposes changes to transfers and to personal income taxes that would make the system more simple and transparent and, potentially, raise incentives to work, while preserving the desired degree of redistribution. The budget 2010/11 proposal to introduce, in 2011-12, an optional standard deduction in lieu of itemized deductions for work-related expenditure is therefore a welcome simplification. Bolder reforms to personal income taxation would offer much greater efficiency gains, however. The AFTS suggested a new rate structure that would preserve progressivity of the personal income tax through a high tax-free threshold. The first rate above that threshold would apply to all but a small number of very high-income taxpayers. This schedule, comprising a zero-rate threshold of AUD 25 000, followed by a wide 35% bracket up to AUD 180 000, above which the rate would be 45%, would likely lower the marginal (and average) tax rates for most earners below the average production worker wage. An especially desirable feature of the proposed rate schedule is that, with the threshold for the zero-rate bracket set sufficiently above the numerous means-tested allowances and benefits, pensions and unemployment compensation, the complexities arising from the interactions of the tax and transfer systems could be reduced.

Substantial additional efficiency gains would be achieved by rationalizing the income support system. One possibility would be to consolidate the numerous income support payments. The AFTS suggests three categories: a pension for those unable to work due to age or disability, a participatory payment for working age persons able to at some point undertake employed work, and a student assistance payment for those engaged in full-time study.

Twin rationalizations of the personal income tax and transfer system would introduce much more transparency and greater simplicity. In the absence of details on, at a minimum, the threshold values and withdrawal rates for the proposed "consolidated" allowances and benefits, it is not possible to gauge the extent to which twin reforms of the personal income tax and the transfer system might improve incentives to enter the workforce. High priority, therefore, should be given to simulating possible combinations of tax schedules and rationalized transfers to identify options that both preserve progressivity and reduce key marginal effective tax rates.

Figure 2.11. **Inactivity and low wage traps: An international comparison**[1]

Marginal effective rates for families following a change in work status, per cent, 2008



1. This figure shows how much of the wage earned (or wage rise) following a change in work status is taken away in the form of higher taxes and lower welfare benefits. The results shown cover families with two children aged four and six. Hourly earnings correspond to the average wage level so a half-time employee would have earnings equal to 50% of an average wage. For married couples the percentage of average wage relates to one spouse only; the second spouse is assumed to be "inactive" with no earnings in a one-earner couple and to have full-time earnings equal to 67% of the average wage in a two-earner couple. Social assistance and any other means-tested benefits are assumed to be available subject to the relevant income conditions. No child-care benefits nor costs are considered. The OECD aggregate is an unweighted average.
2. Results relate to the situation of a person who is inactive and receives no unemployment benefits. In-work benefits that depend on a transition from unemployment into work are available.

Source: OECD (2008), *Benefits and Wages* and OECD *Tax-Benefit Models*.

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Streamlining and reforming state-federal taxation

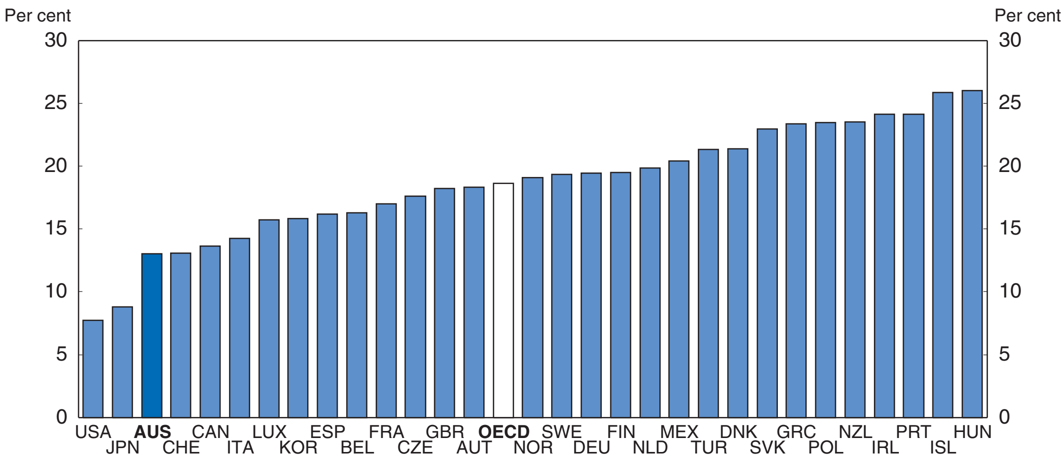
Given the prevalence of a number of highly inefficient taxes on which states rely, achieving a broad-based reform will require a concerted effort of the states, in close co-ordination with the federal government. Some of the taxes on which states depend the most, notably the payroll tax, conveyance duties, royalties, and insurance levies, are among the most distortionary (Figure 2.4), justifying either substantially reducing their yield or eliminating them outright. With projections pointing to rising expenditure pressures in the coming decades, states' access to alternative and sustainable sources of revenue will require new fiscal federal arrangements.

One reform option deserving serious consideration is the replacement of a number of inefficient taxes with revenue from a single and more efficient source. For instance, the payroll tax, levied at variable rates and on different bases across states, leads to a misallocation of labour resources and, potentially, to lower wages throughout Australia. The tax on insurance policies raises the cost of protection against risk, and likely causes low-income households to under-insure. The duty on conveyances of real property substantially increases the transactions costs of property sales, discouraging mobility and the reallocation of property to its highest valued use. Another clear motivation for rationalising state revenue schemes is the need to address a weakness of the new resource rent tax. As noted, the continued presence of royalties undermines the efficiency gains of this measure.

Alternatively, consideration could be given to raising the revenue yield from the Goods and Services Tax (GST). This could provide a ready offset for lost revenue from the elimination of less efficient state taxes and, possibly, lower personal income tax if its tax-free threshold is raised.[9] Although the GST, as an indirect invoice-credit tax, poses greater compliance complexity than would a cash-flow tax, it has the merit of already existing and being broadly understood. At present, the 10 per cent GST rate is low by international comparison and it is applied to a relatively narrow base, such that, as a share of total revenue, indirect taxes on consumption are comparatively low in Australia (Figure 2.12).

Figure 2.12. **Taxes on general consumption as a percentage of total tax revenue**

2007



Source: OECD (2009), *Revenue Statistics 1965-2008.*

StatLink http://dx.doi.org/10.1787/888932344577

Specifically exclusions from the base include health and medical care services and supplies, educational supplies and childcare services, and fresh food and beverages. Yet, it is widely recognized that a broad-based tax on consumption at a single rate is highly efficient and sustainable. Revenue gains could be achieved by broadening the base and, if necessary, increasing its rate. Any distributional concerns from increasing the burden on low-income households could be addressed by appropriate upward adjustments to means-tested income support payments.

Box 2.6. **Recommendations for enhancing the effectiveness of fiscal policy**

Pursue efforts to improve the quality of public interventions

- Further rationalise industry subsidies. In particular phase out or reduce subsidies to the automotive industry and to the farm sector which are ineffective and encourage poor management practices and keep resources in potentially uncompetitive sectors. Review the effectiveness of subsidies to the housing market, in particular the fiscal treatment favourable to individual investment in the rental sector ("negative gearing").
- To enhance efficiency in health care, increase resources for preventive medicine. Improve the supply structure for elderly care and care for mental illness to reinforce efficiency, and reduce hospital costs by promoting primary care interventions. Consider bolstering the federal government's monopsony power over hospitals in large agglomerations where competition is possible between multiple health care providers.

Improve fiscal governance and lessen the risk of pro-cyclicality caused by resource price changes

- Disconnect public spending decisions from fluctuations in tax revenues caused by commodity price movements. Consider creating a reserve fund endowed with all resource tax revenues, which would be used on a sustainable basis.
- Use the fund's resources in line with economic developments. For instance, impose a rule to ensure that the use of the assets of this fund, in real terms, does not increase more rapidly than the estimated trend growth rate of the economy. Deviation from this rule would need to be justified on the basis of an assessment of the cyclical situation, the financial position of the reserve fund and the fiscal outlook.
- Proceed with the creation of a Parliamentary Budget Office to further strengthen fiscal decision making, perhaps including with respect to the use of resource revenues. Carefully design this new institution by assigning it a clear mandate and guaranteeing its independence, access to information and accountability.

Proceed with tax reform in the medium term to promote labour market participation, simplify the tax system and reduce distortions

- Streamline and reform state-federal taxation. Consider either reducing substantially or removing payroll taxes, conveyance duties, insurance levies and royalties. Royalty payments should be eliminated rather than reimbursed to Mineral Resource Rent Tax payers by the federal government. Apply a well-designed resource rent tax to all commodities and all companies, irrespective of their size.
- Further reduce the corporate tax rate.
- Further lower the high effective marginal tax rate on low-income households by increasing the tax-free threshold on personal income tax above point at which the numerous allowances and pensions cease to be payable.
- Proceed with the rationalization and simplification of the income support system to avoid cascading and cumulating multiple withdrawal rates. Identify possible combinations of tax schedules and transfers that both preserve progressivity and reduce key marginal effective tax rates.
- Consider replacing inefficient state taxes and offsetting the lower corporate and personal income tax by raising the yield for the Goods and Service Tax (GST). Increase the rate of the GST and broaden its base to include health and medical services and supplies, educational supplies, childcare services, fresh food and beverages. If necessary, compensate for the potentially adverse distributional effects of such a reform by appropriate adjustments to means-tested income support payments.

Notes

1. The government's reform initiatives are based on the analysis contained in *Australia's Future Tax System* (hereafter, the AFTS), commissioned in May 2008 and released in May 2010 following a half-year of reflection since its completion. The AFTS is the most comprehensive and forward-looking review of Australia's tax and transfer system in decades. The review panel's principal mandate was to "… position Australia to deal with its social, economic and environmental challenges and enhance economic, social and environmental well-being" (AFTS, 2010).
2. While the vast majority of royalty payments accrue to state governments, mining companies' profit tax payments benefit the commonwealth Treasury.
3. Indeed, the political turmoil spawned by the government's initial proposal led eventually to the resignation of Prime Minister Rudd and his succession by the Deputy Prime Minister in late June.
4. If the expected additional tax revenues raised by this tax in 2013-14 had been collected during the fiscal year 2008-09, the tax rate associated with these specific levies on mining companies would have increased from 14% to less than 21%. This would remain low by historical standards (Figure 2.3). The impact of this tax change on the overall tax burden of the mining companies will also be partly offset by the projected fall in the corporate tax rate.
5. The most active generation today is already affected by negative transfers since it is the first one to pay for its own retirement, whereas it must also finance that of the previous generation via taxes. It has also pre-financed future public-sector pensions through the creation of the Future Fund, and it is helping to pre-finance the development of infrastructure that coming generations will enjoy.
6. The estimated expansionary thrust of fiscal policy during the last mining boom can be measured by an indicator of the general government balance which corrects both the effect of cyclical variations and those stemming from the terms of trade (Turner, 2006). The decrease in this balance, which incorporates the impact of the rise in terms of trade over their long-term average, indicates a drop of 2% of GDP more than if gains in the terms of trade are not factored in or are not spread through the rest of the economy. This estimation is independent of the reference period used for the long-term value of the terms of trade (OECD, 2008).
7. In Australia, business cycles seem to be empirically better measured by the unemployment gap than the output gap (Norman and Richards, 2010).
8. The 2008/09 budget provided the creation of three funds to invest in infrastructures (*Building Australia Fund, BAF*), education (*Education Investment Fund, EIF*) and health (*Health and Hospital Fund, HHF*). A large share of these funds (almost a total of AUD 17 billion) have been used for the stimulus At 31 March 2010, the estimated uncommitted balance of funds was AUD 0.7 billion for the BAF, AUD 2.7 billion for the EIF et AUD 2.9 billion for the HHF.
9. The introduction of the GST in 2000 led to the removal of some small state taxed, though not as many as hoped.

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Chapter 3

Meeting infrastructure needs

Adequate and well-functioning infrastructure is a key ingredient to growth and well-being. The benefits to activity of efficient spending in energy, water, transport and communication sectors go well beyond their contribution to capital accumulation. Good infrastructure facilitates trade, bolsters market integration and competition, fosters the dissemination of ideas and innovations and enhances access to resources and public services. These benefits are particularly important for Australia because of its size, the geographical dispersion of its population and production centres, and its remoteness from other markets. Nevertheless, Australia has an important infrastructure deficit. This is in part due to underinvestment in the 1980s and 1990s, while the rebound in capital spending at the beginning of the 2000s has been insufficient to deal with capacity shortages exacerbated by the strong demand generated by the mining boom, expected population growth, technological progress and environmental concerns. To ease these shortages, the authorities have put bolstering infrastructure to the top of their economic policy agenda. This entails greater government expenditure in this area, but also structural reforms to optimise public and private investment choices and the use of existing facilities with better regulation. This chapter reviews the state of Australia's infrastructure and the government's action programme.

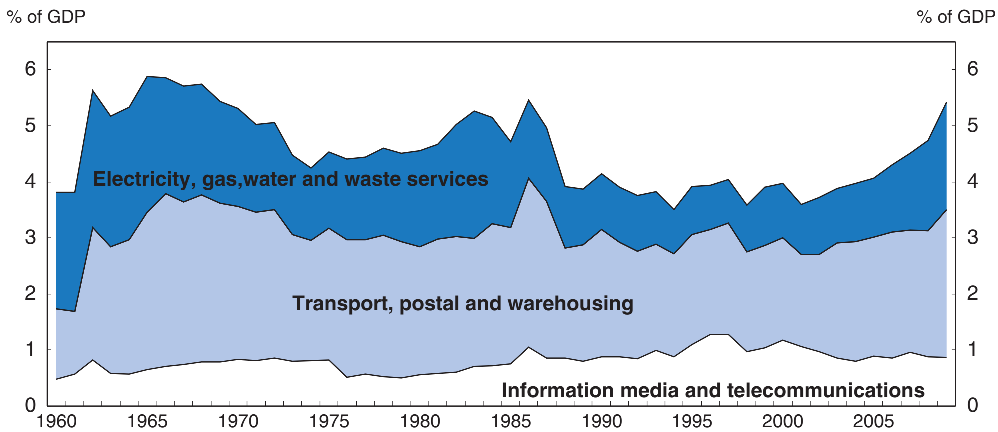
Increasing infrastructure capacities has become a national priority

The goals of infrastructure policy have shifted in recent years to capacity-building from an earlier focus on management efficiency. Expanding capital investment and improving use of the current stock of infrastructure are national priorities (Rudd, 2010). There are substantial needs in many areas:

- Growth in mineral exports predominantly to China has put substantial strain on key port infrastructure and exposed gaps in rail infrastructure. The demand for freight is expected to double between 2000 and 2020 and needs to be addressed (BTRE, 2006).
- Rapid growth and population ageing over the coming decades call for a reappraisal of urban infrastructure requirements. In 2006, over three-quarters of the population was living in cities of over 100 000 people, which produced roughly 80% of GDP (IA, 2010a). While this concentration is a source of scale economies, it also gives rise to problems of congestion. In the large metropolitan areas, congestion costs estimated at some AUD 13 billion (1½ per cent of GDP) for 2010 could exceed AUD 20 billion in constant price by 2020 with unchanged policies (BTRE, 2007).
- Water supplies to large cities are insufficient given the prices currently charged, leading to chronic restrictions. These difficulties are only partially attributable to climate change (OECD, 2008). A high proportion of the electricity infrastructure was installed in the 1960s and now needs replacement. There is also a substantial population and industry shift towards regions where mining industry is expanding and new infrastructure is required. Capital investment in water, energy and transport industries, which was low in the 1980s and 1990s, has nonetheless increased since 2000 (Figure 3.1).

Figure 3.1. **Infrastructure investment development**

Per cent of GDP



Source: Australian Bureau of Statistics, *Australian National Accounts: Gross Fixed Capital Formation by Industry and by Sector* (Cat. No. 5204.0), Tables 52, 53 and 54.

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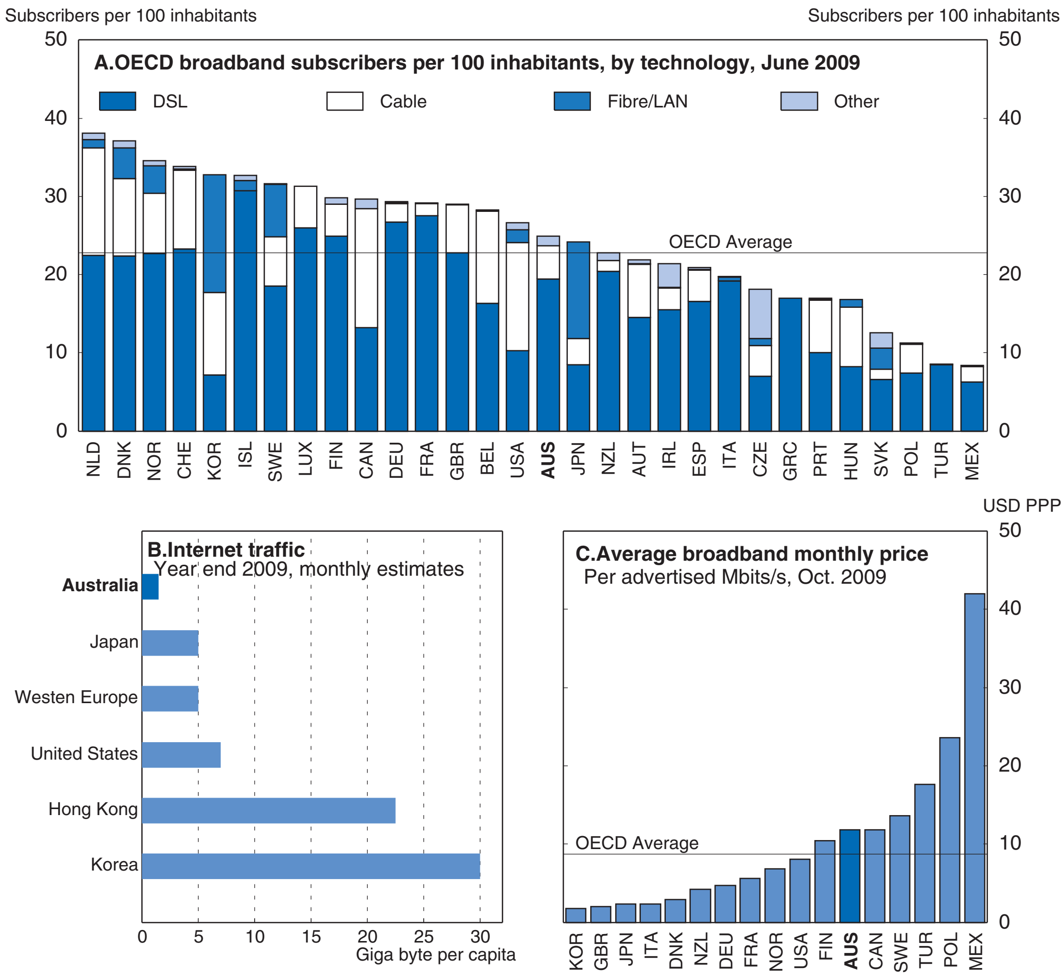
- Environmental concerns about scaling back greenhouse emissions demand substantial capital investment in energy and rural water management (OECD, 2008).
- Broadband Internet services have limited distribution, high prices and slow connection speeds in relation to the best-performing OECD countries (Figure 3.2).

Figure 3.2. **Broadband access and uses**

Internet



Source: OECD Broadband Portal and Minnesota Internet Traffic Studies, University of Minnesota, *www.dtc.umn.edu/mints/home.php*.

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As in many other OECD countries, capacity problems reflect management difficulties in the infrastructure sector in dealing with market failures. The delivery of these services depends on natural monopolies, entails substantial, mostly irreversible capital investment, and involves a high level of risk-taking. Moreover, the development of infrastructure networks is often associated with positive or negative externalities that can lead to socially non-optimal levels of capital investment. Public policy in Australia to deal with these issues has taken a variety of forms over time and across sectors (Box 3.1). However, the capacity problems encountered in recent years reflect persistent gaps in policies. The authorities have started to fill these gaps with increased capital spending and new reforms in two main areas:

Box 3.1. **Policies in the infrastructure sector have taken various forms over time and across industries**

Until the mid-1980s, the bulk of infrastructure investment was made by the public sector, mostly by monopolies controlled by the states or the federal government (Figure 3.3, upper left and right). For example, between 1981 and 1990, the share of private investment reached only 20%. Poor management of these monopolies led to reforms in the mid-80s culminating in the adoption of the National Competition Policy in 1995 to enhance efficiency. Vertically integrated, publicly controlled sectors such as telecommunications, rail transport and energy were restructured and/or opened up to competition. Privatisation of some entities brought gains in efficiency and quality of services. This policy continued until recently, enabling Australia to adopt regulatory measures that on average are less restrictive than those of the other OECD countries, although there are disparities between industries* (Figure 3.3, lower left). These reforms resulted in efforts to optimise capital investment outlays, which had probably been excessive in previous decades, and led to a drop in investment in the 1980s and early 90s, especially within the public sector (PC, 2009a).

These transformations changed the structure of infrastructure markets. Since the early 2000s, half of the sector's capital investment has been undertaken by private companies. The private share is lower, however, in the energy and water sectors (35%) and in transport (45%). In telecommunications all capital investment has become private following the total privatisation of the historical operator, Telstra, in 2006 (Figure 3.3, lower right). The states are the main public-sector players with spending on infrastructure acting primarily through public enterprises under their control, but also directly via budget expenditures, as in the transport sector. The federal government has an important role in regulation, and in fostering and co-ordinating capital investment in all these areas. The influence and the form of these public interventions vary from one industry to another.

In telecommunications, the government has mainly a regulatory role. Mobile telephony is subject to relatively few restrictions, while fixed-line services and especially the broadband Internet sector are subject to tighter regulatory control. The supply is dominated by DSL technology, which uses the copper telecommunication local access network owned by Telstra after its privatisation. Telstra's competitors have access rights to the network which are guaranteed by an independent regulator. Even so, there are recurrent conflicts between the firms operating in this market, in which competition has not worked satisfactorily for the delivery of broadband services. The federal authorities have embarked on reforms in this area.

In the case of energy (electricity and gas), a structural separation was introduced between network activities involving a natural monopoly (transmission and distribution) and those open to competition (gas production, electricity generation and energy marketing). This gave rise to the creation of companies controlled by the states which play a large role. In Victoria and South Australia the industries have, however, virtually been wholly privatised and substantial privatisations of particular assets have occurred in most other states. Even where governments retain ownership of energy assets, the assets are held and managed as commercial enterprises and new private sector energy infrastructure has been built. All Companies operating in the sector have regulated non-discriminatory network access. A national wholesale electricity market the National Electricity Market was created in 1998 to cover all but Western Australia and the Northern Territory, which are too remote. Nevertheless, within the National Electricity Market the transmission distances are such that the investments in interconnection infrastructure have not been sufficient to remove all capacity constraints and, the trade within the market is frequently segmented into regions. Transmission network capacity limitations are also an obstacle to the development of renewable energy production. The picture is also similar in the wholesale electricity market established in Western Australia and in wholesale gas markets that exist in several regions.

The urban water management chain from storage to distribution and sewage disposal is operated by public monopolies controlled by the states. The states are also heavily involved in rural water management. This sector is marked by overexploitation of water resources, which poses environmental problems, especially in the Murray-Darling Basin. Australia is one of the very few OECD countries that have developed markets in this industry, although they are compartmentalised. The lack of co-ordination of state actions in the industry has prompted the federal government to intervene more directly since 2007 to lay the foundations for a more efficient and sustainable use of water.

Box 3.1. **Policies in the infrastructure sector have taken various forms over time and across industries** *(cont.)*

Management of transport networks involves a multiplicity of government responsibilities, shared between the federal government (for roads and interstate railways), the states (for roads, intrastate railways and most ports) and local governments (for roads). Regulatory measures for road, rail and maritime transport differ from state to state. The multiplicity of parties involved complicates co-ordination between the modes of transport and affects the efficiency of the freight system. Access to rail transport and port infrastructure is non-discriminatory. The private sector manages some ports and toll roads directly, and certain mining companies have developed their own rail networks.

* In 2008, regulatory provisions imposed comparatively few restrictions in land transport, gas and, to a lesser extent, electricity. Restrictiveness was above the OECD average in respect of telecommunications and postal services.

i) improving co-ordination and planning of infrastructure projects at the national level with better information about the supply and demand for services; and *ii)* regulatory reform to optimise the use of existing infrastructure and investment decisions.

Despite progress, the management of public infrastructure provision needs more attention

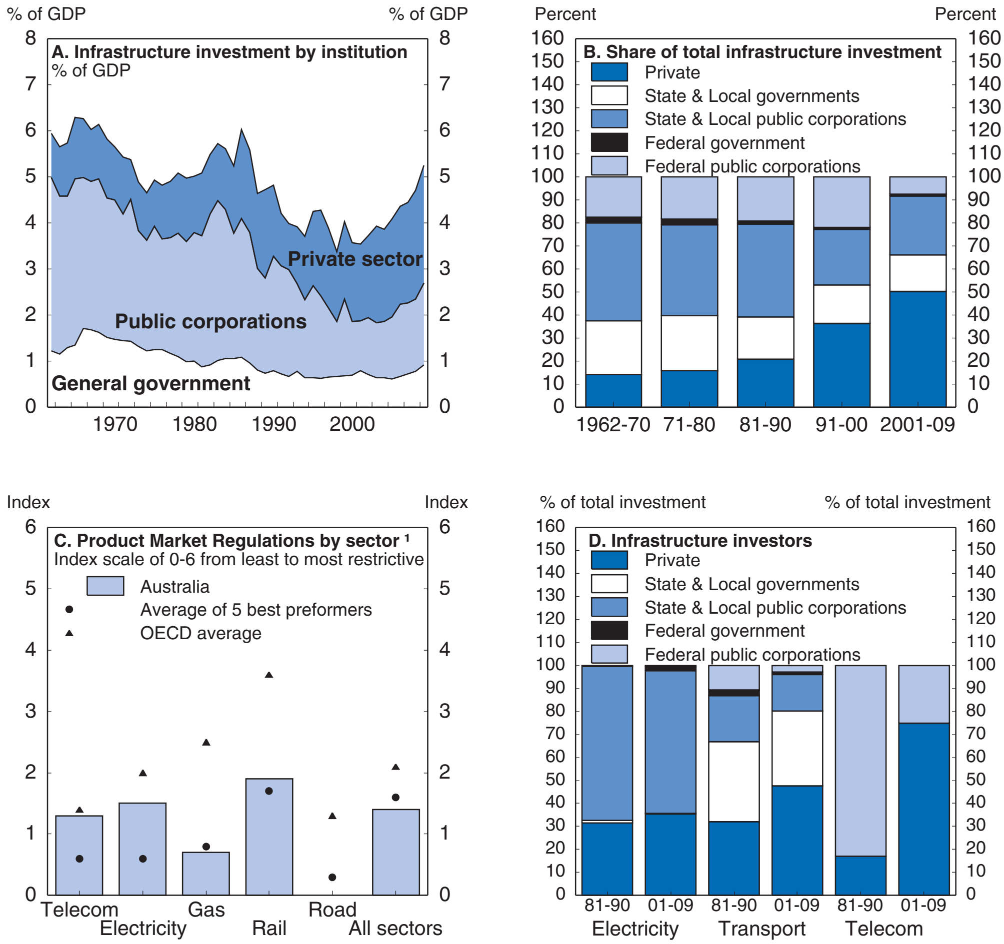
Information gaps and weak co-ordination within government have contributed to the deficits

Current estimates of unmet infrastructure needs vary and tend to be unreliable, as they are based on cumulative costs of multiple capital investment projects proposed in each sector, instead of detailed needs assessments, and do not consider making better use of the existing stock of equipment.[1] It is also difficult to assess how the significant increase in public and private investment in infrastructure in recent years meets current and foreseeable needs (Figure 3.3). The infrastructure deficit stems in part from the inevitable time lag for investment between the increased demand triggered by the take-off of Asian economies and the rise of environmental concerns. More specific information is needed to assess the precise needs of various infrastructure services and to identify potential obstacles to a greater supply.

Weak co-ordination between public infrastructure development and fiscal management has contributed to capacity problems. Before the crisis, the cyclical situation of the economy did not justify spurring already strong demand through increased public spending to eliminate bottlenecks in the freight sector, for example, even though the fiscal situation was comfortable. From one standpoint, then, the crisis provided an opportunity to increase these outlays. Nevertheless, the resources allocated to this in the 2009/10 budget were limited because of the lack of capital investment projects that were ready to be undertaken quickly (Henry, 2010). Moreover, it is likely that in the coming years the need for fiscal consolidation will constrain the growth of public infrastructure investment.

The lack of co-ordination between the various levels of government, and between jurisdictions at the same level, has been another source of inefficiency. Infrastructure spending decisions are frequently taken with no regard for national priorities. This is the case, for example, with freight, where the transport chain is governed by multiple authorities (Box 3.1). Efforts have been made in the past to co-ordinate road and rail investment thanks to federal government involvement. But the plan in question Auslink (renamed the Nation Building Program following a change of government in 2007), did not include port infrastructure, whose lack of connections to the land transport chain reduced

Figure 3.3. **Infrastructure investments by sector**



1. 2007.

Source: Australian Bureau of Statistics, *Australian National Accounts: Gross Fixed Capital Formation by industry and by sector* (cat. No. 5204.0), Table No. 52, 53 and 54 and OECD, Indicators of Product Market Regulation.

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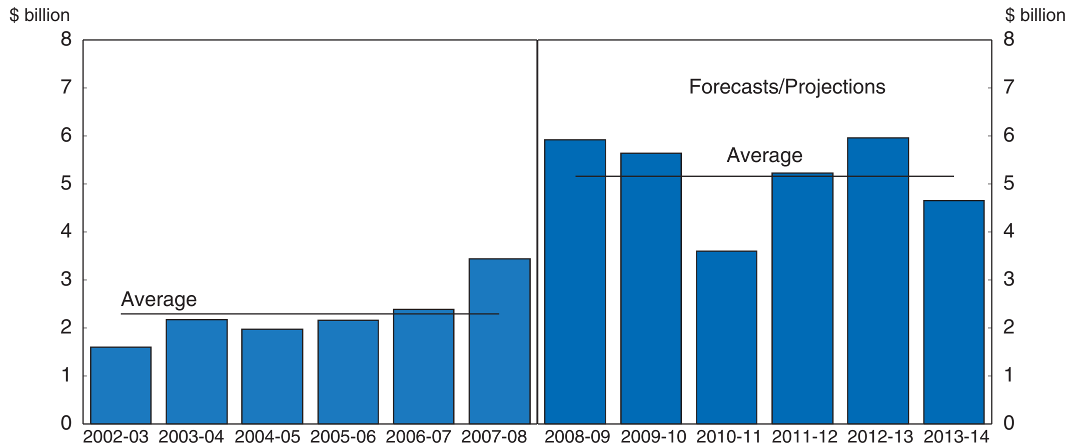
its benefits. The problem of inter-governmental co-ordination also takes the form of cost transfers: for example, the application of the Auslink Program for roads between 2005 and 2009 prompted the local authorities to use federal subsidies to scale back their own capital investment (ANAO, 2010).

The federal authorities have taken steps to bolster their intervention in the infrastructure sector

To tackle these difficulties, the federal government has recently taken a more active role in infrastructure development. A federal ministry was established to handle the issues involved. The Building Australia Fund was set up to finance infrastructure projects, endowed with a portion of the pre-crisis budget surpluses. These financing arrangements are to be replaced as from 2012/13 by a new permanent arrangement the Regional Infrastructure Fund funded by the new federal tax on mining industry profits (Chapter 2). In addition, the newly established Infrastructure Australia (IA) was asked to advise the government on infrastructure policy.

One of IA's first tasks was to conduct an audit and compile a list of priority needs to steer public and private investment. The audit spotlighted requirements in seven sectors: broadband Internet, ports, the rail freight network, urban transport, the energy market, water supply and infrastructure for Indigenous communities (IA, 2008). In these sectors, nine priority projects and an additional list of 28 other projects, accounting for aggregate investment in excess of AUD 60 billion, were identified (IA, 2009). In the short term, this planning effort led to the funding of seven of the nine priority projects selected as part of the 2009/10 budget thanks to the resources of the Building Australia Fund. The 2010/11 budget has also increased railway investment, so that federal transport expenditures, either actual or projected, which amount to 0.3-0.4% of GDP a year between 2008/09 and 2013/14 represent, in real terms, more than twice those of the six previous years (Figure 3.4) In the longer term, it should be useful for the formulation of future fiscal stabilisation policies to maintain a list of projects that have been scrupulously evaluated and could be launched rapidly (Henry, 2010). Moreover, in June 2010 Infrastructure Australia updated the list of projects likely to meet the country's most pressing needs (IA, 2010b).

Figure 3.4. **Commonwealth spending on road and rail infrastructure**



Source: Treasury.

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The role of the federal government in the sector has been expanded. This has led to investments in ports and urban transport, which had previously been reserved exclusively for the states. Infrastructure Australia has also recommended a closer integration of ports into the freight transport chain for expanding the country's export capacities. The pivotal role of cities in the workings of the economy also legitimises federal intervention to guarantee the efficiency of infrastructure in major city centres, especially given the sharp population growth.

Co-ordination between the various levels of government and long-term planning efforts have been strengthened in the ports and urban transport sectors. Implementation of these long-term strategies is essential in view of the long lead time for capital investment projects in transport. This is also important to clarify the outlook for the supply of freight services and facilitate the planning of private-sector investment, especially in the mining industry. A national ports strategy is thus being devised by the Council of Australian Governments (COAG) to eliminate obstacles to development. This was facilitated by improved management of the land surrounding the port areas near large cities. More broadly, the strategy should be incorporated into a national freight strategy that Infrastructure Australia is going to propose to COAG at end-2010 to improve co-ordination of investment choices between the various modes of transport (IA, 2010b). In addition, an agreement was reached within COAG at the end of 2009 to tie federal funding of urban infrastructure to better town planning for state capitals. In Australia, the infrastructure of large cities is not co-ordinated by a special authority as in many other big cities in the world (Henry, 2010). Under the signed agreement, the states will have to formulate town planning schemes for their capitals by January 2012 on the basis of common criteria for better identifying and tackling the challenges and infrastructure needs made necessary by population and economic growth.

The new federal policies are welcome, but there is room for further reforms

Future audits to assess the country's requirements should be fine-tuned. By relying primarily on submissions of investment projects by the states or the private sector, the first audit by IA was unable to analysing demand and evaluating imbalances in the various markets. Recently however, IA seems to have geared its work more towards assessing demand, as in the areas of ports and water (IA, 2010c). It would seem useful to get a clearer picture of the current level of the supply of infrastructure services in relation to needs, using indicators that are updated regularly (BCA, 2009). Such indicators could show, for instance, how freight handling capacity for ports and land transport compare with desirable levels; they could also gauge the extent and frequency of city water restrictions and the degree of congestion of urban road transport in relation to acceptable maximum thresholds. This results-oriented approach, which would entail the creation of a customised database, would supplement *ad hoc* evaluations of various infrastructure projects. It would provide systematic information on supply and demand imbalances and assess the underlying trends. This would clarify the policy makers' strategy, and provide a better accounting of the progress made.

It would also be advisable to upgrade the mechanisms for selecting public infrastructure projects. Greater federal government involvement in this sector, alongside the states, is beneficial from a co-ordination standpoint, but needs to be well managed to avoid diluting responsibilities and affect the quality of expenditures (Ergas and Robson, 2009). Prior earmarking of public resources for infrastructure financing is superficially attractive for sustaining infrastructure growth, but it is unadvisable because it will hinder incentives for strict project selection.

Infrastructure Australia has pledged to follow an objective and stringent investment selection process. It is based on a published methodology using cost/benefit analyses. Recently, some results of project cost/benefit analyses carried out by IA have been released, although not all have been disclosed (IA, 2010b). A cost-benefit analysis was not undertaken before the government announced the National Broadband Network policy. However an implementation study was conducted after the announcement of the policy which undertook detailed financial analysis, including revenue and cost modelling. This study estimated the cost of the NBN at a maximum of AUD 43 billion of which taxpayers are expected to contribute approximately AUD 26 billion. Additional efforts for rigour and transparency would, however, be welcome. Such efforts could be geared towards three objectives:

i) *Enhancing transparency.* Systematic publication of cost/benefit analyses for the projects evaluated would be useful. The technical quality of these evaluations should be verifiable, and the assumptions underlying investment choices should be clearly identifiable. From this standpoint, the recent transparency efforts made by IA go in the right direction, but they should be pursued and stepped up, because the information disseminated to date has been too limited.

ii) *Making more frequent use of audits*. Independent evaluations could be made mandatory for capital investment projects exceeding a certain amount. Regular audits after the fact would also provide useful lessons.

iii) *Bolstering the technical quality of cost/benefit analyses*. Such analyses make use of complex techniques which are important to fine-tune and disseminate more widely. In this area, for example, the Productivity Commission could play a useful role as a reference centre to help agencies involved in the analyses to shore up their work.

Regulatory incentives for investment, capacity utilisation and competition should be reviewed

Continued regulatory reform in the infrastructure sector is also needed. Increases in public investment should not serve as a substitute for such reforms. The options for government funding are in any event limited, and the private sector should become more and more decisive in the supply of services. On the other hand, investment flows are relatively modest in relation to stocks of existing infrastructure, the usage of which could be improved. Against this backdrop, there should be no underestimation of the role of regulation, and especially of efficient pricing systems, in improving infrastructure services. Adequate signals enable a better fit between demand and available capacities and let investors identify the economy's real needs, thus fostering efficient resource allocation. The regulatory reforms of the 1990s to expand the influence of markets in the infrastructure sector have generated gains estimated at 2½ per cent of GDP, and a continuation of these reforms should secure substantial added benefits, which might amount to as much as 2% of GDP (Productivity Commission, 2005; BCA, 2007; Productivity Commission, 2008).

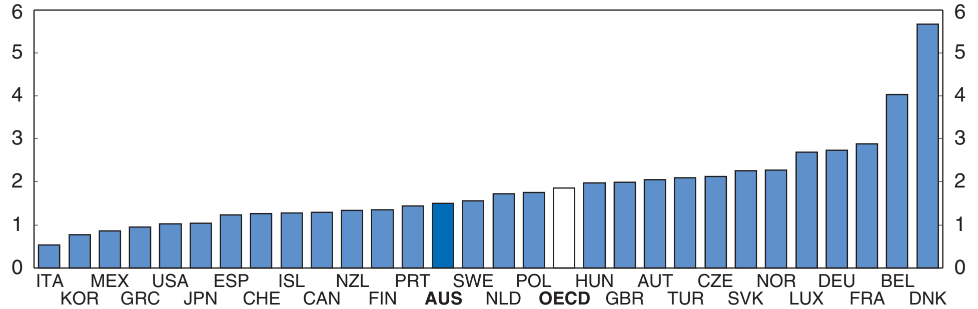
Many distortions affecting the pricing of public infrastructure could be eliminated or improved

The authorities should pursue reforms of public infrastructure usage pricing to ensure that long-term costs are recovered in full. This applies in particular to water pricing, in rural and urban areas. The over-allocation of water resources in some areas of Australia has led to an effective under-pricing of water and a deterioration of the environment. These demand-stimulating price distortions have also induced pressures to renovate unviable infrastructure (PC, 2008a). Efforts have been made in recent years to rectify this under-pricing, *inter alia* by improving how water-rights markets work in rural areas. However, the segmentation of those markets that is caused by the existence of natural barriers is exacerbated by state regulations that, among other things, limit trade in water between urban and rural areas. The subsidies that states grant regularly to water companies also show that pricing adjustments are needed. A better job must also be done to factor in environmental costs (OECD, 2008).

Water pricing also poses difficulties in urban areas. Prices in this sector are low by international standards (Figure 3.5) and are affected by distortions. The states intervene frequently in the financing of infrastructure (IA, 2008; Marsden Jacob, 2006). Recently, most large cities have increased their investment to put an end to the quantitative restrictions that had been put in place in response to excess demand. Nevertheless, as a rule these investment decisions have shown little transparency. The construction of numerous

Figure 3.5. **Cost of water for urban consumers**

US dollars per cubic metre, June 2009[1, 2]



1. User cost (based on 2009 purchasing power parities) assuming consumption of 15 cubic metres per month per user; including value added tax but *excluding wastewater treatment*. Unweighted average of the city data available for each country. The OECD aggregate is an unweighted average excluding Ireland.
2. For Belgium, Denmark, France and Sweden include wastewater treatment cost (*i.e.* combined billing).

Source: Preliminary estimates from Global Water Intelligence.

StatLink http://dx.doi.org/10.1787/888932344672

desalination plants responded to a need to diversify supply and thus avoid the consequences of droughts. However, options that were attractive from a cost standpoint, such as those involving trade between rural and urban areas, could not be taken up. Regulatory barriers also limit increased use of water recycling. Dismantling these barriers, as well as reforming the current arrangements for management by public monopolies, ought to be considered. This sector bears many similarities to the electricity and telecommunications industries, which are also dependent on natural transmission monopolies. Introducing competition to industry segments upstream and downstream from the transmission chain (bulk water supply, marketing services and sewage treatment) could have beneficial effects that would attract private capital and spur innovation. Analyses in this area would be desirable (IA, 2010c; BCA, 2009; PC, 2008a). The Productivity Commission is currently examining opportunities for efficiency gains in the structural, institutional and regulatory arrangements relating to the urban water sector.

The pricing of road infrastructure also suffers distortions which are reflected in capital investment decisions. Road use charges in Australia involve fixed registration fees and an excise tax on fuel. Such payments are independent of the type of vehicle and the road infrastructure used. As a result, there are cross-subsidies between the different types of vehicles and the various infrastructures. Between 32% and 100% of road maintenance costs are attributable to heavy vehicles, whereas the wear and tear caused by passenger cars is negligible (PC, 2006a). This situation may in turn imply an inefficient allocation of capital investment in the freight sector between rail and road, when both modes of transport are in competition, if it results in a cost advantage for heavy goods vehicles over long distances (Sims, 2010). Neither, for that matter, is there any linkage between road fee revenues and the expenditures of the agencies in charge of managing this infrastructure. Spending decisions are taken by the states and local governments as part of their annual budget processes. Funding is provided via general transfers that the agencies get as a result of equalisation mechanisms and resources specifically allocated by the federal government (AFTS, 2010). The incentives for efficient choices in road infrastructure are thus reduced. Local governments are sometimes also prompted to protect the value of their assets by restricting access to roads. But the resultant reduction in management fees may be more than offset by the higher costs of freight companies, which may be compelled, for example, to adopt longer itineraries.

COAG is looking into the introduction of a new road freight pricing system to address these issues. It would harness new technologies to factor in the location and intensity of network utilisation (amount transported and distance travelled). The feasibility study for the system planned for end-2011 should be brought forward to accelerate the reform. In parallel, thought should be given to overhauling the framework for managing and financing road infrastructure. In line with the approach used for other services, such as electricity and water, the authorities could transfer the management of road transport to public enterprises (Sims, 2010; AFTS, 2010). This would make the supply of these services more market-driven than under the current budget-management approach. It would also enhance the consistency of decision-making with regard to expenditure and revenue, and spur more efficient use of infrastructure. To maximise the benefits of such an approach, efforts should continue to give public enterprises clear objectives, make them responsible for their results and ensure that they have sufficient managerial independence from the government, in respect of capital spending. This would require better identification and greater transparency of public funding of the services, and avoiding pricing distortions that impair investment choices (PC, 2008a and b).

Better demand management can reduce congestion

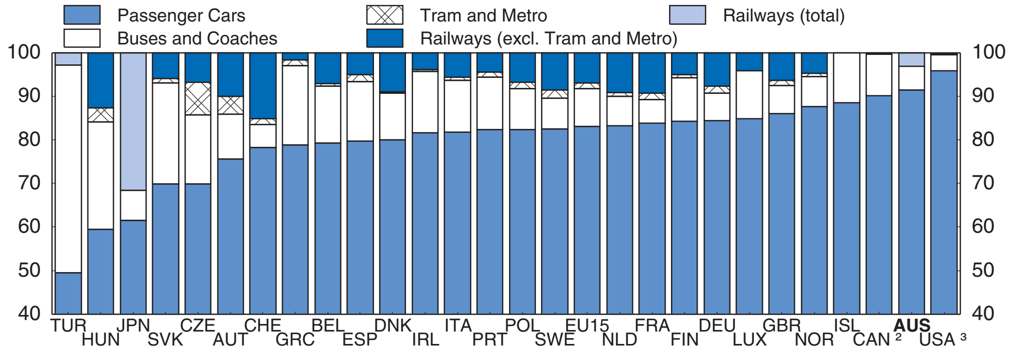
Regulatory reforms should be complemented by better management of transport demand to ease congestion problems in the large metropolitan areas. As mentioned earlier, these problems impose a growing cost on society, in terms of well-being and productivity alike. Congestion problems generate delays and uncertainty over transport times for individuals and businesses, additional costs for the fleet of automobiles and the environments. At present, users have no incentive to consider the costs of using urban networks at peak times.

Congestion charges would facilitate a better use of road infrastructure. They should vary according to time of day or location. This approach has been used successfully for access to downtown London, Oslo and Stockholm. More boldly, the Netherlands has been considering a generalised system of per-kilometre tolls on its road network, using GPS technology and charging additional fees for using congested areas and during peak times (OECD, 2010a). The introduction, at the beginning of 2009, of one-way tolls in the Sydney Harbour Bridge and Tunnel that vary by time of day seems to have increased off-peak traffic and reduced rush-hour traffic. The purpose of charging such variable fees is not to increase tax revenue but to correct market failures and ensure that users consider congestion costs when making decisions. The resources collected may, however, be a useful source of revenue for developing public transport that provides alternative travel options. Public transport would appear to play a more limited role in Australia than in the other OECD countries (Figure 3.6). Moreover, the growing use of public transport in urban areas is posing saturation problems justifying additional capacity (BCA, 2009; IA, 2009 and 2010b).

Efforts should also be pursued in the electricity and water sectors to make better use of available facilities. Greater responsiveness of consumption of these infrastructure services to pricing would avoid construction of costly production capacities to meet peak demand. In these areas, technology can provide invaluable assistance. In the case of electricity, the use of smart meters would allow users to better adapt consumption to rate

Figure 3.6. **Modal split of passenger transport on land**

In 2005[1] (passenger-km)



1. Or latest year available.
2. Intercity passenger services only for rail and includes light trucks in cars.
3. Private cars include vans and recreational vehicles.

Source: DG Transport and Environment, OECD Environmental Data Compendium, 2006/07.

StatLink http://dx.doi.org/10.1787/888932344691

differences during the day, which would help stabilise wholesale electricity prices (AEMO, 2010). The authorities should continue to promote the installation of such meters wherever they would be economically worthwhile. This should be accompanied by the elimination of the electricity rate caps in effect in most states for households and SMEs. Likewise, there should be greater recourse to pricing mechanisms to manage the pressures of demand for water in urban areas (ABARE, 2008). Here too, the use of smart meters may play a useful role. In addition, consumers exempt from these pricing signals, such as renters (whose water bills are generally paid by their landlords) and pensioners (who are granted special deductions on their water and electricity bills) should be included. It is important to avoid having social objectives, which some of these measures address but which are better pursued through the tax-transfer system, interfere with the workings of the markets.

The regulatory framework for private investment is another thorny area for reform

Some have suggested that regulations in Australia have focused more on enhancing the efficiency of the use of existing facilities rather than on spurring private investment in the industry (Emerson, 2009). Since the mid-1990s, Australia has adopted bold regulations to facilitate third-party access to infrastructure, which cannot be duplicated in an economically profitable manner (Box 3.2). They provide for arbitration by the regulatory authority, and set the terms and pricing for the access. As they were devised at a time when most infrastructure was managed by public enterprises, they do not always strike a suitable balance between incentives to investment by the private firms dominating these markets, and the need to avoid barriers to competition stemming from the existence of natural monopolies.

The effectiveness of this regulation raises questions inherent in the complexity of the problem. One function of the National Access Regime (NAR) is to avoid having monopolistic control over infrastructure services thwart competition in markets reliant on those services. However, this obligation entails a non-voluntary transaction, in which the cost to the supplier may exceed the gain to the applicant. A vertically integrated firm's refusal to grant access may in fact be justified on efficiency grounds rather than a desire to protect a rent or exclude a competitor (Ergas, 2009). The practical difficulties of implementing an

Box 3.2. **Australian regulations on third-party access to infrastructure services**

In Australia regulation provides for third-party access to infrastructure under certain conditions. The National Access Regime (NAR), Part IIIA of the Trade Practices Act, provides four broad avenues for access:

- Voluntary offers of access from infrastructure owners on terms that must be validated by the Australian Consumer and Competition Commission (ACCC).
- A state government (alone or with other governments) can implement a mandatory access regime for an industry or asset and seek certification from the Commonwealth Minister that the access regime is effective.
- For the new government owned infrastructure, the terms and conditions for access can be determined pursuant to an ACCC approved, competitive tender processes for the construction and operation of the facility.
- If none of the above three avenues have been taken, access-seekers have legal recourse to compel infrastructure owners to negotiate conditions and prices for using their facilities. They may apply for a recommendation of the National Competition Council (NCC) and, ultimately a decision by a responsible Minister, that the services provided by particular infrastructure should be "declared". This decision is based on several criteria including that:
  - The requested access to infrastructure would have to strengthen competition in at least one market other than that of the infrastructure services in question.
  - It would not be economically feasible to duplicate this infrastructure, which must also be substantial on a national level.
  - The right of access should not be detrimental to the public interest, and there must be no exemption in the legislation with regard to the services in question.

Once a service is declared, the infrastructure owner must negotiate with access seekers the terms and conditions for access to the service. If no agreement can be reached, the parties can refer the matter to the ACCC for arbitration.

Special national regimes exist for telecommunications and banking payment systems which replicate the main provisions of negotiation/arbitrage of the general access model described above. These industries stand apart from other infrastructure sectors because of the extent of the powers invested in the regulators, the ACCC and the Payment Systems Board: the regulators themselves determine which services to regulate on the basis of the "long term interests of end users" (telecommunications) and efficiency, competitiveness and the risk to the financial system (payments systems) and, once services are declared or designated, their powers extend well beyond the arbitration of disputes.

obligation to grant third-party access to an infrastructure network should not be underestimated. It is difficult for regulators to set adequate conditions and access prices in relation to costs, especially in respect of sectors undergoing rapid and complex technological change, such as telecommunications. Third-party access to an infrastructure network of a vertically integrated company also entails the institution of controls previously managed in-house to check the quality of network use. This raises transaction costs and impairs efficiency when conflicts arise, as happens frequently because of the divergent interests of the parties. Often, the owner of the infrastructure also adopts a discriminatory attitude *vis-à-vis* its competitors. This non-co-operative dynamic tends to increase regulatory intervention, which is a source of additional cost. In all, regulatory failure cannot be ruled out, and this can be costlier than the market failings that need correcting. In particular, such regulation can thwart capital investment if private businesses deem that the risk of having to share their new infrastructure with competitors at a price set by the regulatory authority is excessive.

The slowness of NAR implementation procedures is a source of uncertainty and costs for the parties involved. In part this reflects the complexity of the issues raised by this regulation. For example, applications for access to certain rail freight segments owned by big private mining companies in the Pilbara region of Western Australia were submitted between 2004 and 2007 and have yet to be resolved. In each case, the initial decisions triggered appeals, leading to comprehensive re-examinations of the arguments of the parties involved by the Australian Competition Tribunal. Application of the NAR constitutes an intrusion into ownership rights that demands extreme prudence and minute review by multiple independent bodies. However, the length of these procedures stems also from needless duplication of assessments and the legal options seized upon by companies prepared to expend the necessary resources to delay the application of these decisions (NCC, 2009).

The few empirical evaluations available suggest that the NAR's impact on infrastructure operation and development varies by industry, and even by particular circumstances within a given industry. Some arguments favour limited regulatory influence on investment delays. Since 1995, only 7 facilities have been declared under the NAR (some of these decisions are currently subject to appeal) and only two of those instances have led to arbitration by the ACCC to set access conditions and prices (NCC, 2009). Regulatory intervention has been more frequent in telecommunications, however, and a consensus exists to acknowledge the regulatory and organisational deficiencies of the broadband Internet sector (Ergas, 2008; Conroy, 2009a; ACCC, 2009). The NAR seems to have had beneficial effects in energy, although the workings of that particular market could be improved further (IA, 2008; Henry, 2010). Fagan (2007) reaches a mixed assessment of the regulatory impact on rail freight transport: a comparison with the situation in the United States shows that the gains obtained from additional competition would be more than offset by the costs of regulatory co-ordination. Rules for third-party access to various segments of the railway network do not sufficiently factor in specific circumstances, and the competition from other modes of transport (PC, 2006a). According to NCC (2008), co-ordination costs for some parts of the network (such as coal freight along the country's east coast) are not related to the NAR, but to the piecemeal organisation of the industry, which is regulated by the states and consists of a great many individual firms.

Measures to rationalise the NAR have been passed by the Australian Parliament. They aim at reducing the amount of time needed to implement the NAR by imposing deadlines for decision-making and by setting limits on the content of merit reviews conducted by competition courts to avoid duplication. These provisions also allow for minimum 20-year exemptions from NAR application with new infrastructure (Bowen, 2009). These amendments are expected to reduce some of the uncertainty that discourages private investment. However, the 20-year exemption period seems arbitrary. It should probably vary from one industry to another, if not from project to project. But it may be too long, by passing the entire life cycle of a technology in a fast-moving sector, or yielding excessive monopoly rents or unduly restricting access.

Application of the NAR combined with sufficiently high access prices to encourage new capital investment might be another option to consider (PC, 2008b). Economic regulation of natural monopoly infrastructure seeks to replicate the outcome of a competitive market. In doing so, it seeks to balance the need to efficiently attract investment funds to network businesses by providing a fair market return with preventing monopolies from charging inflated prices to the detriment of business and end consumers. A key component of the permitted rate of return for equity is an assessment of the nature and extent of the risk of such businesses. Until recently, these industries have been generally been regarded as mature industries with low investment risks and, consequently, the permitted returns for existing and incremental capital investments have been relatively conservative. However, Australia is now confronting the need for large investment by businesses that are structurally separate from the businesses that determine the pattern and extent of the use of the new infrastructure, which makes it difficult to quantify and control some types of risk. For regulators, this raises several related questions concerning whether some forms of co-ordination between the separate businesses can be improved, whether higher returns are required to encourage new investments and, if so, how much higher (Helm, 2010).[2] To the extent that improved co-ordination cannot eliminate the additional risks of new investments in structurally separated industries when compared with mature industries, the cost of capital might need to be higher.

The issues of co-ordination and identifying a fair rate of return for new investments in structurally separated regulated industries are exacerbated by the recent global financial and economic crisis. As in many other OECD countries, Australian regulatory system uses publicly quoted financial market data to calculate the fair return benchmarks for regulated businesses. Even if Australia financial sector has weathered this crisis well, these financial turbulences caused thinner trading on local equity and debt markets that are small by comparison with European, North American and Japanese equity and debt markets. This made the regulator's task of finding a fair rate more challenging. Counterproductive court and tribunal disputes have indeed significantly increased in number and value between infrastructure investors, consumer representatives and regulators on these issues.[3]

The search for improvements in how to apply the current methodology for establishing a fair rate of return and the consideration of alternative methods for identifying such a rate appear to be an important issue that regulators in Australia have already started considering. This question, together with those raised by the past implementation of the NAR in the various industries, should be given priority to address potentially damaging uncertainty and impediment to new investments. A detailed assessment of NAR new challenges and past implementation, to draw conclusions from the experience to date, would thus be useful to fine-tune regulatory provisions and help incorporate the specifics of each industry. This would facilitate the review of the regulatory framework scheduled for 2012.

Restructuring of the telecommunications sector should maintain competition between technologies

A far-reaching reform project has been undertaken to fill the gaps in the broadband Internet sector. Regulatory support for investment and innovation in this area is vital to respond to rapidly shifting technology and demand. Internet services that are faster and more widespread, using fixed and wireless technologies, could yield substantial benefits, especially in terms of productivity, as was the case with the dissemination of ICTs in the 1990s (OECD, 2010b).

The organisation of the telecommunications sector with a strong hold by the historical operator does not promote competition or the development of broadband networks. Telstra, which was privatised gradually between 1997 and 2006, is highly vertically integrated. It owns and controls access to the copper telecommunications network, and is active in the competitive retail services. There were 157 disputes between 1997 and mid-2009 on conditions for access to the telecommunications network, virtually all of which involved Telstra, compared to three conflicts in other infrastructure sectors under the NAR (Conroy, 2009b). This strategy of the historical operator is impeding its rivals' ability to build a customer base in the DSL Internet services niche which occupies a dominant share of the market in Australia. Telstra also owns the country's largest cable and mobile networks. Its strong presence in all service platforms therefore limits competition using different technologies: the company's incentive to develop new services is diminished by the potential loss of value of its assets and its income from existing networks. For example, Telstra did not respond favourably to the government's 2007 invitation to build a fibre optic network on the basis of a private/public partnership (OECD, 2008). Moreover, the other private operators do not have a large enough customer base to make wide-scale capital investment in such infrastructure economically feasible.

There are two main components to the authorities' plan to remedy these difficulties (Box 3.3):

- Revise the framework for competition in telecommunications, and especially the infrastructure access regime.
- Overhaul the market structure to ensure the development of a National Broadband Network (NBN) to replace the copper telecommunications network.

The first component of this major reform can be expected to improve competition in the telecommunications market during the transitional period prior to the launch of the NBN. In particular, simplifying the access regime ought to reduce possibilities for discrimination between private telecommunications operators. It would be prudent, however, to maintain the possibility of a number of independent bodies conducting a scrupulous review of the access pricing and conditions set by the ACCC. This would be compatible with faster application of the regulations, if these parameters are set in advance. Calling the dominant operator's vertical integration into question is also welcome, as it will stimulate competition in the DSL Internet sector, and it can be expected to yield substantial benefits, as shown by British Telecom's functional-separation experience (Ofcom, 2009; ERG, 2007; OECD, 2009a) (Figure 3.7).

The NBN development project has sparked intense debate on the need for government intervention. It has the potential to significantly improve Internet services within a relatively short time frame. Management of the new network by a public enterprise not involved in commercial activities ensures that private operators accessing the NBN will each get fair treatment on the basis of uniform nationwide pricing. Lastly, the government's programme will avoid the risk of a geographic digital divide insofar as it will cover the entire population. Public involvement could be important where private firms are

Box 3.3. **Proposals to reform telecommunications and improve the supply of Internet services**

The biggest regulatory change of the reform project is to replace the current infrastructure access regime, based on a negotiation/arbitrage model, with a system that sets in advance the conditions and price of access, as in European countries. Uniform conditions would be set for all applicants for three-to-five years. The current regime is heavy to administer and easy to manipulate, as regulatory decisions are required for each individual request for access. This has triggered many disputes. The dominant operator uses these legal procedures, along with the options that infrastructure owners can exercise to make voluntary offers of access, as stalling tactics to limit competition. As a result, the proposed reform would eliminate possibilities for voluntary access offers. It also seeks to do away with examinations of the merits of conditions for access, bolsters the ACCC's powers to prevent anticompetitive conduct and encourages faster intervention (Conroy, 2009b).

More fundamentally, the proposed reform seeks to change the structure of the market to deploy a national broadband network. The authorities have planned to construct a fibre optic network, the National Broadband Network (NBN), managed by a public company, NBN Co., to raise the quality of Internet services and connection speeds (up to 1000 Mb per second) for most of the population. The total cost of this projects is expected to reach AUD 43 billion, with public investment expected to total AUD 26 billion over eight years, and the balance funded by private debt raised by NBN Co. NBN Co. will be exclusively a wholesale broadband access service provider and will not take part in the marketing of consumer Internet services, which will be carried out by private firms.

To enable the development of this network, the government prompted Telstra to accept a financial agreement involving structural separation between the management of its copper network and its other commercial activities.* A financial heads of agreement in the amount of AUD 11 billion (0.8% of GDP) was signed in June 2010, allowing NBN Co. to access the conduits and ducts of Telstra's historical network, and to avoid unnecessary duplication of infrastructure to install its equipment. The agreement also provides for the gradual transfer to NBN of users of Telstra's copper and cable networks, which will then be decommissioned. Lastly, a public company, USO Co., is going to be created to finance certain universal service obligations and the costs of redeploying Telstra staff induced by these changes. To be applicable, the final agreement, which is being negotiated, must also be approved by Telstra shareholders and the government, probably during the first half of 2011. The ACCC will also review competition aspects of the agreement.

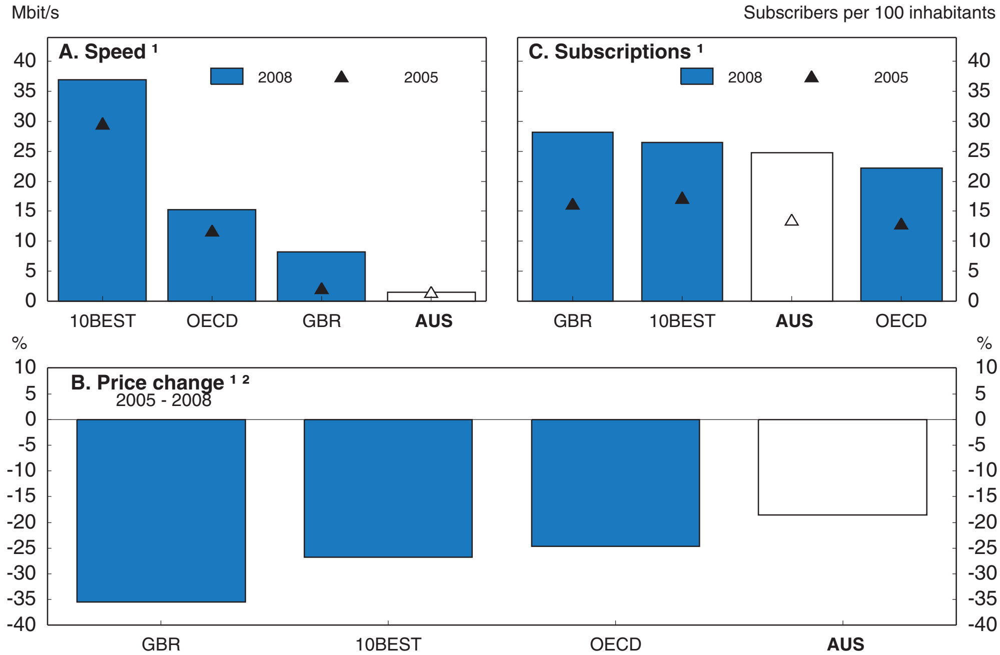
* Had this voluntary structural separation been refused, the draft legislation would have forced a functional separation on Telstra, similar to the one imposed in the United Kingdom. The company would then have had to divest its holdings in Foxtel, the main supplier of pay TV. Moreover, its outlook for supplying mobile Internet services would have been limited by a ban on acquiring spectrum band usage rights, which are necessary for the future development of this technology.

not prepared to invest if they were compelled to make the networks available to their competitors. What is more, if private capital were deployed, it would probably be done gradually and limited, at least at first, to the most densely populated areas.

Concerns have however been raised about potential limits to "local access" competition from building the NBN and its adverse impact on the effectiveness of the broadband sector. The heads of agreement signed with Telstra eliminate competition between the new fibre optic network and the existing technological platforms, the copper network and the country's main cable network. This implies a *de facto* restoration of a public monopoly over

Figure 3.7. **Evolution of broadband subscription**

Representative DSL broadband subscription over time, 2005-08



1. The ten best countries are the countries offering highest speed for a representative broadband subscription in 2008. They are: Japan, Korea, Finland, New Zealand, Sweden, Italy, Netherlands, France, Portugal and Luxembourg.
2. The price change between 2005 Q4 and 2008 Q4 of the price per kbit/s of the representative DSL broadband subscription.

Source: OECD, *OECD Broadband Statistics*, STI.

StatLink http://dx.doi.org/10.1787/888932344710

the supply of access to wholesale Internet services. Multiple empirical studies have stressed the value of competition between technological platforms for the dissemination of broadband services (Cava-Ferreruela and Alabau-Muños, 2006; Picot and Wernick, 2007; Lee and Lee, 2010). Moreover, such a monopolistic incumbent could forestall the development of, as yet unknown, superior technological alternatives.

The government decision to limit competition for NBN has been justified by the size of the country and its relatively low population density. This makes it difficult for more than one competing fixed telecommunications network to exist. Even in the country's most densely populated and wealthiest urban areas, demand is probably too low to ensure the economic viability of the three networks currently operating: those of Telstra (copper and cable) and the cable network of Optus Australia's second largest telecommunications operator.[4] Should the protocol agreement with Telstra not be implemented, an intensification of competition between fixed network platforms would probably limit the NBN take-up rate, while growing demand for mobile Internet services could also exert heightened competition. Nevertheless, these arguments seem contradicted by the conclusions of the NBN implementation report of May 2010, which confirm the choice of technology, the estimated cost of building the NBN and the programme's financial viability, even without an agreement with Telstra (McKinsey and KPMG, 2010). This study notes that the need to keep access prices low compared to those of the copper network would limit profit margins to between 4 and 7%. However, the authorities point out that this new infrastructure could also result in substantial spillover benefits not quantified by the study (Conroy, 2009c). Recent research suggests that the use of the new network can bring large savings (0.5% and 1.5% of GDP) to the cost of public services over a 10-year period in four areas (health care, education, transport and electricity), which on its own would warrant the construction (OECD, 2009b).

In sum, while the financial return from the NBN project remains uncertain, there are potentially large benefits from development of the new network. Given this uncertainty, government intervention, which would seem necessary for developing this infrastructure, ought to take a prudent approach. At the same time, it should not trigger a weakening of competition in wholesale broadband services to protect the viability of the government project. An alternative to this picking-the-winner strategy would be to let the market guide choices between the various Internet service options on the basis of prices that reflect costs, factoring in externalities that ought first to be evaluated. To that end, it would be desirable to maintain competition between technologies and, within each technology, between Internet service providers. This would be consistent with the planned vertical separation of Telstra and with other aspects of the reform that seek to promote competition. To develop fibre optic networks more gradually than under the government programme would also allow a better assessment of the new network's costs and potential benefits and the potential positive externalities. From this standpoint, development of an NBN pilot project in Tasmania is a welcome initiative which may provide useful lessons.

Continued regulatory harmonisation between the states can bring large benefits

The overall pro-competitive functioning of the policy framework for infrastructure is hampered by state to state differences in regulation. Implementation of a simpler and more consistent regulatory approach at the national level is one of the priorities of the COAG reform. An acceleration of reforms in this area is desirable, as noted by Infrastructure Australia, which advocates the principle "One economy, one set of rules" (IA, 2008). Application of this principle led to the establishment of nationwide rules for public/private partnerships (PPPs) at the end of 2008. PPPs, which are often predicated on complex contracts, may yield substantial benefits if designed thoughtfully and transparently (OECD, 2009c). They promote better risk management and bolster synergy between the construction, operation and maintenance of infrastructure, and enhance incentives for efficiency over a project's entire lifetime (Chan *et al.*, 2009). Standardisation of rules for PPP also helps disseminate expertise gained in this area by certain states, such as Victoria. In addition, these changes are bringing greater coherency and transparency between the PPP models used in the country, which helps lower transaction costs for potential participants and is conducive to competition.

Similarly, substantial gains may be derived by standardising transport policies. Regulation in this industry, which has historically been under the control of the states, has evolved in a piecemeal fashion that has been costly for business. Rationalisation in this area would yield substantial gains, which have been estimated at AUD 2.4 billion (0.2% of GDP) per year (Murphy, 2010). Reforms have moved forward in recent years. Single national regulators will be established for rail safety and investigation, maritime freight and the heavy goods vehicle sector. The states have agreed on the geographic location of the new regulators, and the new legislation must be endorsed by National Partnership Agreements, which are to be submitted to COAG for its opinion between late-2010 and mid-2011. This should allow these three national regulators to be operational in 2013.

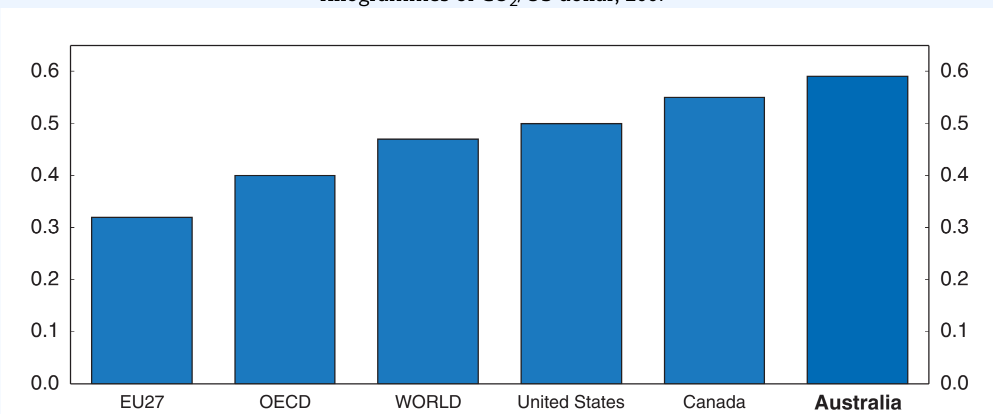
Greater regulatory harmonisation is needed in the energy sector, despite the progress already made to integrate energy markets as some jurisdictions have held on to exemptions from national electricity regulations. Harmonisation of safety regulations and elimination of legal obstacles to the exploration and development of gas deposits ought to be considered as well (Infrastructure Australia, 2008). In the energy sector, however, the most important regulatory issues that still need to be settled to ensure adequate development of infrastructure relate to reducing greenhouse gas emissions (Box 3.4).

Box 3.4. **Setting a carbon price sooner rather than later is the best option for cutting CO_2 emissions**

Australia, which is one of the hottest and driest continents on earth, is more exposed to the consequences of climate change than many other OECD countries (Commonwealth of Australia, 2010). Over the last decade, the average level of temperatures was the highest in recorded history and the country has faced severe droughts. The excessive increase in temperatures is threatening the Great Barrier Reef and irrigated agriculture in the Murray-Darling Basin, which accounts for one third of the country's food production. Although Australia emits only a small share of worldwide greenhouse gases (1½ per cent), its emission intensity measured either by per unit of GDP or per capita is high by international comparison (Figure 3.8). This is due to a dependence of the electricity sector on emission-intensive coal-fired power generation, which accounts for almost 80% of electricity production and a third of country's emissions.

Figure 3.8. **Carbon dioxide emissions from fuel consumption**

Kilogrammes of CO_2/US dollar, 2007[1]



1. Using 2000 prices and PPP.

Source: Source: IEA (2009), CO_2 *Emissions from Fuel Combustion*, International Energy Agency, OECD Publishing/IEA.

StatLink http://dx.doi.org/10.1787/888932344729

The government is committed to effective global and national solutions to climate change. It ratified the Kyoto Protocol in 2007 and the country is on track to meet its objectives. The authorities are also committed to reducing national emissions to 60% below 2000 Levels by 2050. An intermediate target, agreed by all political parties, is a unilateral cut of emissions to 5% below 2000 evels by 2020. This would be raised to 15-25% by 2020 if a global agreement involving both developed and developing countries are signed.

Box 3.4. **Setting a carbon price sooner rather than later is the best option for cutting CO_2 emissions** *(cont.)*

To meet these targets, the government proposed market-based mechanism to cut emissions. However, the proposed emission and trading system (the Carbon Pollution Reduction Scheme, CPRS) did not get sufficient parliamentary support. A national renewable energy target (RET) has nevertheless been approved to ensure that 20% of the electricity supply comes from renewable sources by 2020. This RET, which has led to the introduction of a number of initiatives supporting the use, investment and research in low-emission technologies, was part of a scheme to assist the transition of the energy sector to the introduction of the CPRS. Another attempt at approving a market-based mechanism to cut emissions has now been postponed to at least the end of 2012. In the meantime, the authorities will try to build a consensus on this issue, and have announced a set of transitory measures to promote a low pollution economy, including strict emission standards for new coal-fired power stations, an enhanced energy efficiency programme and fiscal incentives for companies to reduce their pollution. To increase certainty of future investments and ensure that firms taking early action on climate change will not be disadvantaged, assistance to trade-exposed industries under the future carbon policy would be assessed on the basis of 2007 emissions.

The postponement of the adoption of an emission and trading system (ETS) has increased uncertainty of investments in the energy sector and abatement cost over the longer term. In July 2010, a survey by the Energy Supply Association found that the planned capital expenditure in power generation over the next five years only reached AUD 8 billion, down from AUD 18 billion projected a year before (ESAA, 2010). Potential builders of energy-efficient low-carbon emission gas power plants are reluctant to invest because they are not competitive today and there is no guarantee that an ETS or carbon tax will put them on competitive terms with coal in the next few years (Daley and Edis, 2010). Building a new low-emission, high-efficiency gas power plant takes five to six years. Delaying mitigation action increases climate change risks and prevents low emission technology being developed which raises the cost of achieving any given environmental goal.

Attempting to reduce emissions through regulatory and subsidy arrangements would also be costly for the economy. Current emissions are already 6% above 2000 levels and they will rise to more than 20% above that mark by 2020 according to recent "business-as-usual" projections (Wong, 2010). Achieving the 5% cut of emissions below 2000 level by 2020 would be equivalent to removing emissions associated with all cars on the road and almost half of Australia's electricity generation (Commonwealth of Australia, 2010). As recognized by the government, the costs of regulatory approaches to reduce emissions can be more than twice as high as the costs of market-based approaches (Tietenberg, 1990). Past experience has also shown that using subsidies to reduce emissions would involve large and ongoing fiscal costs with substantial administrative and compliance costs to promote new genuine emission reduction activities which would rely on estimates of hypothetical business-as-usual scenario (Wong, 2010; Commonwealth of Australia, 2010). Since the authorities have retained their commitment to carbon reduction targets, setting a carbon price sooner rather than later is thus the best option to put Australia on a more sustainable low-pollution growth path.

Box 3.5. **Recommendations for promoting adequate and well-functioning infrastructure**

Improve the co-ordination and planning of public infrastructure to meet the country's needs

- Future audits assessing infrastructure needs should pay more attention to estimating demand for (or target of) services requested in the various infrastructure areas, and to evaluating imbalances in relation to supply on the basis of regularly updated indicators.
- Further improve infrastructure selection process:
  - Systematically publish the cost/benefit analyses with sufficient details for the projects evaluated.
  - Independent evaluation should be made mandatory for investment projects exceeding a certain amount.
  - Bolster the technical quality of CBAs with the creation of a reference centre able to help agencies involved in the analyses to shore up their works.

Enhance incentives for capital investment and capacity utilisation

- Remove state subsidies to water companies, which prevent the pricing of public infrastructure to ensure full cost recovery. Lift regulatory obstacles to water trade between rural and urban areas. Consider putting an end to public monopolies of urban water management.
- In the road freight sector, implement swiftly a pricing scheme that takes into account the intensity of network use (mass transported and distances travelled) and place of use.
- Consider reforming arrangements for managing and funding road infrastructure to enhance consistency of decision-making with regard to expenditure and revenue: investment choices would be more efficient if a consistent and accountable setting and spending of road user charges was managed by public firms on a commercial basis.
- In general, pursue efforts to give public enterprises clear objectives, make them responsible for their results and provide them sufficient managerial independence from the government, in respect of capital spending.
- Introduce location-specific and time-varying congestion charges in large cities to use more efficiently existing road infrastructure. Use the resources collected to improve public transports.
- Install "smart meters" for electricity more widely to improve demand management. Remove provisions limiting the impact of price signals on demand for services: tenants should pay their water bills directly; rebates on electricity and water bills for certain socioeconomic groups, such as pensioners, should be replaced by targeted transfers.
- Improve the regulatory framework for private investment. Conduct a detailed assessment of the national access regime implementation over the past years to draw lessons from the experience to date. Consider fine tuning regulatory provisions to better take into account the specifics of each industry.
- In the telecommunication sector, maintain competition between technologies in the broadband sector, and within each technology, between Internet service providers.
- Continue regulatory harmonisation between the states. In particular, harmonise safety regulations and eliminate legal obstacles to exploration and development of gas deposits.
- Lift swiftly uncertainties affecting investment decisions in the energy sector by clarifying climate change policy with the adoption of market mechanisms setting a price on carbon emissions.

Notes

1. According to some estimates, infrastructure requirements range between AUD 445 billion and AUD 770 billion (Henry, 2010).
2. As note by Helm (2010), the co-ordination problem is considerable: the development of new infrastructure assets needs to be co-ordinated with the building of new transmission and distribution networks, and these in turn need to be co-ordinated with expansions of the customer

bases. If each stage is conducted through separate and independent companies, then there will be a sequence of transaction costs. Hold up becomes a serious problem: not only in terms of extra costs but also in incentives.

3. A substantial divide about whether Australian infrastructure regulatory model delivers adequate returns to justify new investment has opened up between, on the one hand, virtually the whole of the infrastructure investment sector both publicly and privately owned and, on the other hand, regulators. Almost every major economic regulatory decision in recent times has been challenged in Courts and Tribunals on this basis. Examples of concluded dispute decision in the Australian competition tribunal involving 5 electricity companies can be found at: *www.austlii.edu.au/au/cases/cth/ACompT/2009/8.html*; similar decisions have involved Telstra and further disputes have recently commenced for a gas network.
4. According to Optus, Telstra and Optus were compelled to reduce the value of their cable investments by AUD 2.4 billion. Telstra's cable network covers 2.5 million homes and the Optus network 1.4 million. It should be noted, however, that competitive pressures bore down on these two competing operators in the same technology.

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Chapter 4

Enhancing labour utilisation in a socially inclusive society

Australia faces the mutually reinforced challenges of boosting labour supply and promoting social inclusion. Labour underutilisation is especially prevalent among groups such as lone parents, people with disability, and Indigenous Australians. These are also groups at greatest risk of social exclusion. Thus better integration of these groups into the labour market would enhance inclusion. In general, labour utilisation can be increased by training, improving the functioning of labour market institutions, reforming the tax and transfer system, and maintaining labour market flexibility. Beyond labour market policies, the multiplicity, inter-relatedness and complexity of social inclusion problems call for a comprehensive and integrated approach focusing on individual needs. The elements of the strategy include an education system that better promotes equity and integrated service approaches to help people with disabilities and the homeless. Recent efforts in all these areas by the government are welcome.

Boosting labour supply and maintaining flexible labour markets are among the key economic challenges in dealing with structural changes. Skill and labour shortages were already emerging prior to the global financial crisis, and are likely to intensify going forward given the subsequent resilience of the labour market and expected rise in labour demand over time. Raising labour supply would also help in tackling social exclusion, which is an important aspect of well-being in Australia (Box 4.1). A more inclusive society

Box 4.1. **Well-being in Australia**

GDP as a measure of well-being has well known drawbacks, most recently highlighted by Stiglitz *et al.* (2009). GDP reflects annual market production in a country, while many monetary and non-monetary factors (wealth, own production or leisure, health, environment, social inclusion) also affect well-being, and some production (household services or the decline in natural resources, for example) is not captured by market transactions. In recent years, a large body of theoretical and empirical research has examined the inherently complex conceptual and measurement problems related to a broader concept of well-being. Research has been facilitated by international efforts to develop comparable well-being indicators (World Value Survey, Gallup World Poll).[1] Stiglitz *et al.* (2009) emphasise that well-being is a multi-dimensional concept, and identify, in addition to material living standards, health, education, personal activities, political voice and governance, social connections and relationships, environment and economic and physical insecurity as important determinants of well-being. Other studies show that well-being is not just a function of income at a point in time, but adapts to changes in income over time. If GDP growth slows when living standards are high, life satisfaction can decrease (Di Tella *et al.*, 2003).

Policy makers are increasingly interested in these additional indicators and their determinants as complements to GDP; for example an index of well-being has been developed in Canada. Efforts to improve the measurement of well-being are being co-ordinated in an ongoing OECD project on "Measuring Progress in Societies". In this context the Australian government has articulated the goal of improving the well-being of current and future generations, and recognizes that well-being is a multi-dimensional concept that goes beyond GDP per capita and economic performance, and that policies should take into account the stock of environmental, human and social resources (Australian Government, 2010b). The Australian Bureau of Statistics has published a dashboard of well-being indicators since 2002, in line with Stiglitz *et al.* (2009).

Comparing well-being across countries and over time remains a challenge and there are many ways to measure it. The types of measures include expanded GDP, weighted averages of life satisfaction indexes, and self-reported subjective assessments of well-being based on survey data (Boarini *et al.*, 2006). Self-reported subjective well-being can be further divided into life satisfaction surveys (ranks of 0 to 10 of a person's satisfaction with life) and emotional well-being indicators (a person's emotional feelings about life today) (Kahneman and Deaton, 2010). Index-based measures face problems with subjective weights, while expanded GDP excludes potentially important factors of well-being. Studies

Box 4.1. **Well-being in Australia** *(cont.)*

based on self-reported life satisfaction avoid these problems, but are subject to challenging data interpretation issues. These studies, which are getting increasing attention in the literature (Helliwell *et al.*, 2009 and 2010), tend to show that self-reported subjective well-being has a strong correlation with income, but also that other factors, such as social context based on opportunities and capabilities, play an important role.

For Australia, which is characterized by high incomes and strong GDP growth over the past decade, self-reported life satisfaction is above the OECD average with Australia ranked eleventh within the OECD in 2008, below many Nordic countries and some other Anglo-Saxon economies (Gallup World Poll). Moreover, life satisfaction seems to have slightly declined in the past years, whereas it remained broadly stable on average in the OECD.[2]

To better understand self-reported well-being relationships in Australia in comparison with other OECD countries,[3] some tentative and exploratory analysis was done (Fleche and Sorsa, 2010). Ordered probit and weighted-least-squares regressions of well-being (life satisfaction), were estimated for various explanatory variables, using data from the World Values Survey (1981-2007) (see Annex 4.A1). The explanatory power of each covariate/determinant of life satisfaction can be compared with (the log of) income, to shed some light on the relative importance of various well-being dimensions to life satisfaction. However, this method cannot explain well-being developments over time nor demonstrate causality.

According to this analysis, in Australia the most important factors for self-reported subjective well-being, apart from income, are (self-evaluated) health, social cohesion, personal activities and unemployment (Table 4.A1.1). As in other OECD countries, the importance of health seems high relative to other well-being determinants. Being unemployed strongly decreases life satisfaction, which is in line with similar studies in other countries (Winkelmann and Winkelmann, 1998). Subjective measures of social trust, freedom of choice and control of personal activities also have statistically significant links with the self reported well-being of Australians.

Among other factors, having a higher educational level does not have a major direct impact on life satisfaction, but would have indirect benefits by improving access to employment, contributing to higher productivity, and enhancing the opportunity to participate in economic and social activities. Perceived income inequality decreases life satisfaction. Concern about the state of the current and future environment (for example, as proxied by CO_2 emissions from fuel combustion) has a higher coefficient in Australia than in the average of OECD countries, although it is low in Australia compared to other determinants of well-being. Finally, reported interest in politics increases life satisfaction in Australia, while indicators of perceived political corruption, as well as divorce, decrease life satisfaction. These empirical exploratory results confirm the multidimensional nature of well-being in Australia.

1. The Gallup World Poll and the World Values Survey provide measures like "life satisfaction". Life satisfaction is defined from the following question "all things considered, how satisfied are you with life as whole these days?" the answer is on 0 to 10 numerical scale. The top of the ladder (10) represents the best possible life and the bottom of the ladder (0) represents the worst possible. However, these surveys are not official statistical sources and provide relatively small samples. (1660 observations for Australia, 14 410 for the OECD).
2. For Australia, there are only data for 1981, 1995, 2005 and 2008. According to Gallup World Poll, self-reported life satisfaction slightly declined in Australia between 2005 and 2008. The World Value Survey also points to some weakening in well-being between 1981 and 2005.
3. To compare the results for Australia to those of the OECD on average, a statistical test was run to determine the significance of the difference between the coefficients. While this is not significantly different from zero at 5% level of significance, it, however, suggests that the size of the determinants of well-being estimated in the regressions is meaningfully similar on the average in the other OECD countries.

would enable a broader sharing of the benefits of economic prosperity, and contribute to it. While Australia fares well in cross-country comparisons of many indicators related to social inclusion, there is scope for better outcomes for some groups, such as lone parents, people with disability and Indigenous populations. Future policy improvements in this area will also need to ensure the long-term sustainability of the government's finances.

A lack of access to the job market is an important, but not the only, driver of social exclusion. Other dimensions include poverty, low educational qualifications, poor health, homelessness and weak participation in society. The government has sought to increase social inclusion through a systematic and integrated approach (Australian Government 2010a). Being socially included is defined as having the *resources* (skills and assets), *opportunities* and *capabilities* necessary to learn, work (paid or unpaid), engage in society and have a voice.

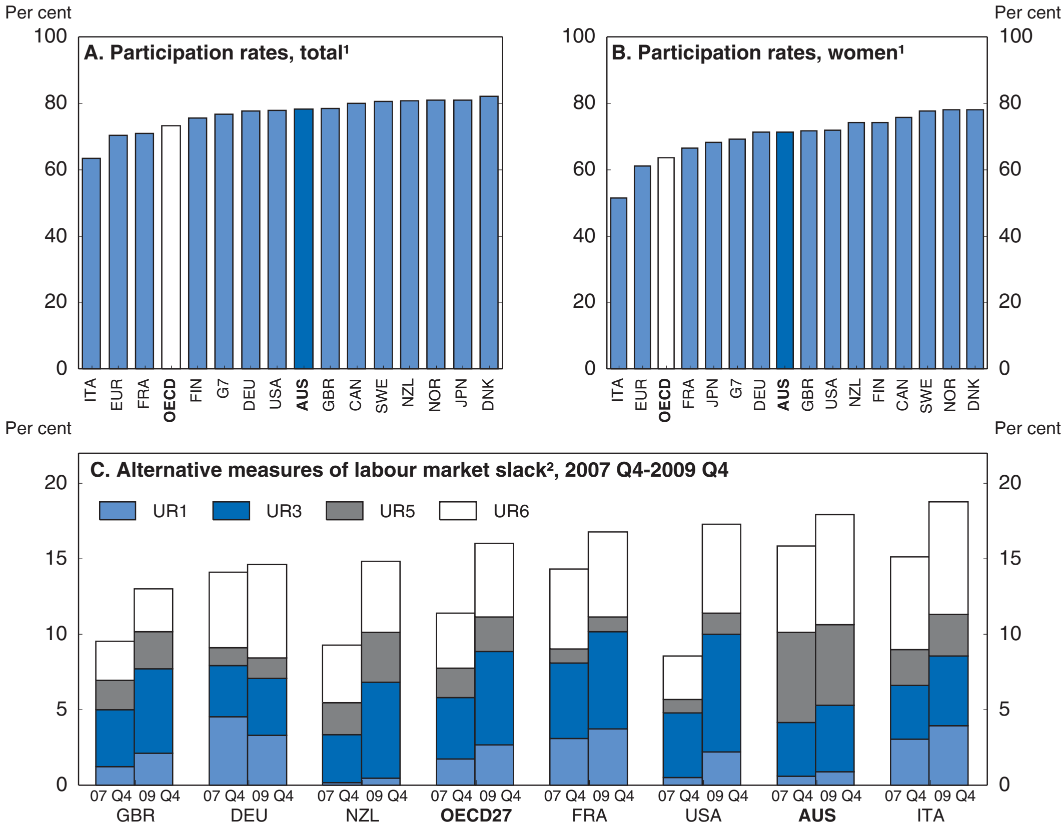
Underutilisation of labour and social exclusion are closely linked in Australia

There is a large pool of underutilised workers

Despite high overall labour force participation rates (Figure 4.1, Panel A), labour in Australia is underutilised more than average in the OECD (Figure 4.1, Panel C). Underutilisation includes the unemployed, the underemployed (workers who would like to work more hours) and workers who are marginally attached to the labour force. Part of the underemployment is cyclical, as adjustment during the recent downturn involved a reduction in working hours, but it was already high before the slowdown. Some of the groups involved people with disabilities, lone parents and Indigenous Australians face particularly weak labour market engagement, which raises the risk of social exclusion. The most important underutilised groups are:

- *Women, especially those with families.* Although female participation rates have increased markedly over the past decades, they lag behind male rates and the OECD best performers (Figure 4.1, Panel B). Women with dependent children, especially very young ones, have particularly low employment rates (Figure 4.2, Panel A). The effective labour supply of all female workers is even lower due to extensive part-time work (Figure 4.2, Panel B). Around a quarter of part-timers in September 2009 wanted to work extra hours, although only about half of these part-timers wanting more hours were actively seeking more hours (ABS, 2010a).
- *Lone parents.* About a fifth of families with children are headed by lone parents, and Australia has one of the lowest employment rates for single parents in the OECD (Figure 4.2, Panel C). While employment rates have increased over time, a sizeable gap remains compared to two parent families, especially for those with young children (Figure 4.2, Panel D). Indeed, approximately 60% of jobless families are headed by lone parents (Vinson, 2009).
- *People with disabilities.* The employment outcomes of people with disability are poor, even by international comparisons (Figure 4.2, Panel E), and those with mental illness fare worse than the physically disabled (Australian Government 2010a). Labour market integration of all those people with disability wishing to work could boost labour supply by as much as 5 percentage points by 2050, according to OECD estimates, depending on the degree of activation of this group (OECD, 2007a).
- *Older workers, especially those with disabilities.* The participation rate of older (55 to 64 years of age) workers ranks above OECD average, but falls below best performing countries. Exit from the labour force is particularly marked among those at 55, which can reflect

Figure 4.1. **Overall labour utilisation**



Note: UR1: Long-term unemployed (one year or more) as a percentage of the labour force. UR3: Unemployment rate (ILO definition). UR5: Unemployed plus persons marginally attached to the labour force, as a percentage of the labour force plus persons marginally attached to the labour force. UR6: Unemployed plus persons marginally attached to the labour force plus underemployed workers, as a percentage of the labour force plus persons marginally attached to the labour force. For more details, see OECD (2010), *Employment Outlook*.

1. Refers to population aged 15 to 64.
2. Countries shown in ascending order of UR6 in 2009 Q4. Seasonally unadjusted data, except for the United States. OECD27 and G7 are weighted averages. The OECD area excludes the following countries: Korea, Mexico and Switzerland.

Source: OECD (2010), *OECD Employment Outlook* and OECD, *Labour Force Statistics Database*.

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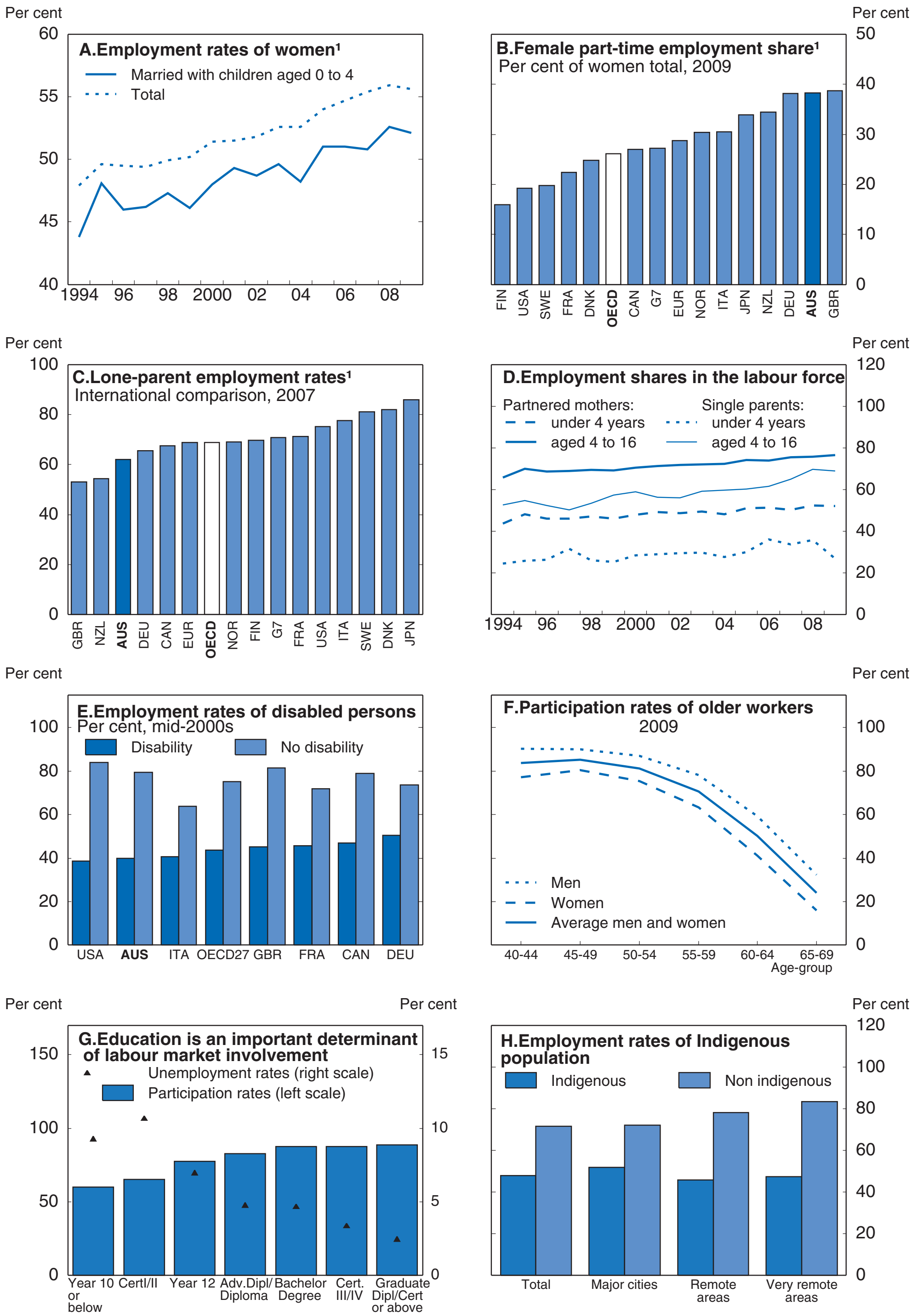
incentives in the tax-transfer system to apply for Disability Support Pensions (DSP), retirement arrangements,[1] lack of suitable jobs, and limited retraining opportunities (Figure 4.2, Panel F). Disability pension rates are highest among older workers (over 55), as in other OECD countries (OECD, 2009a).

- *Low educational attainment.* Participation rises markedly with the level of education (Figure 4.2, Panel G), and low educational attainment is also associated with higher unemployment and underemployment. More than 60% of involuntary part-time workers have no post-secondary school qualifications (OECD, 2010a), and a large number of inactive young people are not in education or training (Nelms and Tsingas, 2010).
- *Indigenous population.* The employment rates of Indigenous people (2.5% of the population) are low compared to non-Indigenous ones, especially in very remote areas (Figure 4.2, Panel H). This difference persists along gender and age lines. Indigenous Australians are also more likely to be employed on a part-time basis and in low skilled

Figure 4.2. **Labour market outcomes for specific groups**



1. For panel A, data refer to population aged 15 and more; for panel B, data refer to population aged 15 to 64; for panel C, data refer to population aged 15 to 64 and the latest available data are: 2005 for Canada and 2006 for Australia and New Zealand.

Source: ABS, *Labour Force Australia: Labour Force Status and Other Characteristics of Families*, June 2010; OECD, *Labour Force Statistics Database*; OECD *Family Database*; Centrelink/ABS *Labour Force Survey: Annual Family Data*, June 1994 to June 2004; OECD (2009), *Sickness, Disability and Work, Keeping on Track in the Economic Downturn*, Background paper, High-Level Forum, Stockholm; ABS, *Education and Training Experience, 2009* and SCRGSP (2009), *Overcoming Indigenous Disadvantage, Key Indicators*.

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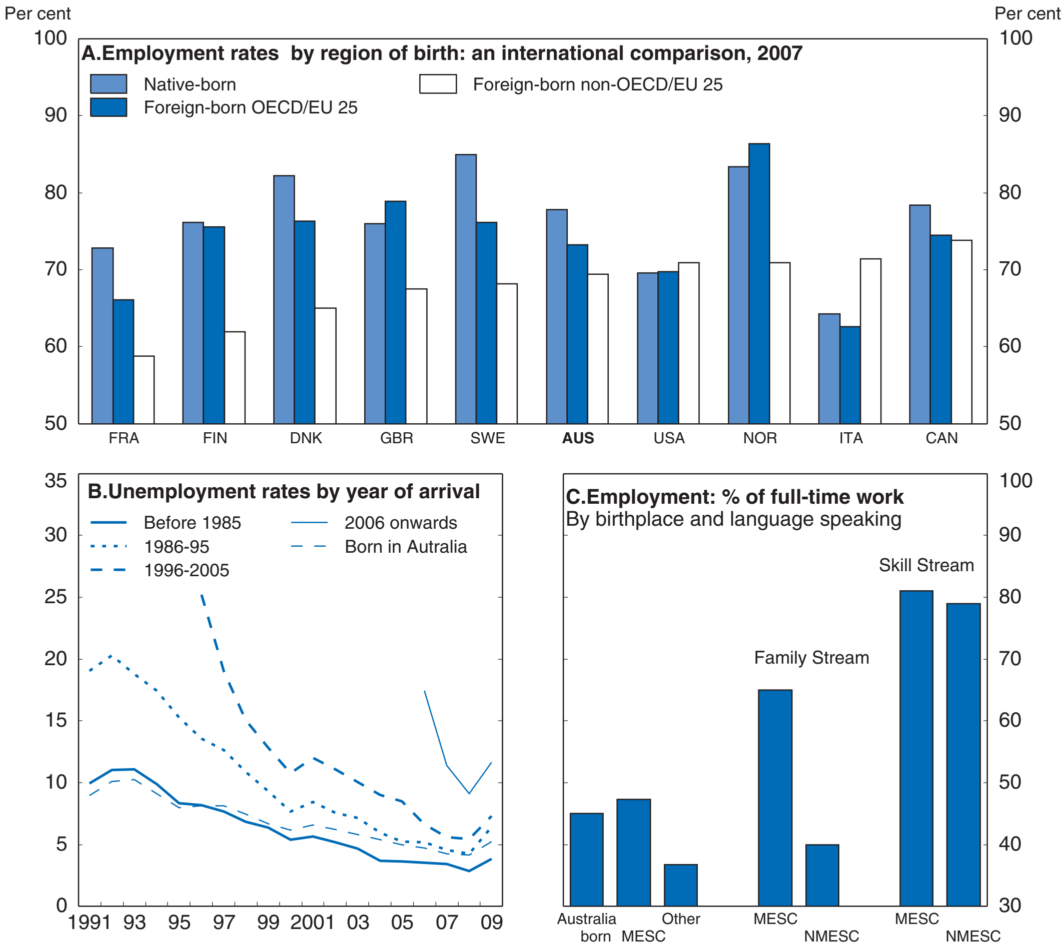
jobs (SCRGSP, 2009). The Council of Australian Government (COAG) agreed to the objective of halving the employment gap between Indigenous and non-Indigenous Australians within a decade, which would require a 63% rise in the number of Indigenous people employed at mid-2006.

- *Recent immigrants*. Australia does well in employing immigrants (Figure 4.3, Panel A), although it takes some years before their unemployment rates reach those of the Australian born (Figure 4.3, Panel B). Recent immigrants also tend to be vulnerable to cyclical conditions, but those speaking English do better. This partly reflects the less effective transfer of human capital for immigrants from Non-English speaking countries (Australian Government, 2010c). Recent reforms towards a more demand-driven migration policy can have a positive impact on employment outcomes as those in the skilled visa stream have a similar likelihood for full time employment, independent of the country of origin (Figure 4.3, Panel C).

Figure 4.3. **Migration indicators**



Note: MESC: Main English-speaking countries; NMESC: Non-English-speaking countries.

Source: OECD (2009), *OECD International Migration Outlook* and Australian Government (2010), *Population Flows: Immigration Aspects, 2008-2009 Edition*, Department of Immigration and Citizenship.

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Multiple disadvantages lead to social exclusion and weaker labour market outcomes

Social exclusion is a complex and multi-faceted problem, difficult to measure and address. Apart from lack of access to the labour market, it is influenced by poverty and income inequality, poor educational outcomes, health problems, and social disadvantages such as exclusion from services and lack of social network (Australian Goverment, 2010a). These disadvantages impact on the ability to work, learn and engage in the community (ASIB, 2009). About 5% of the working age population has multiple disadvantages.[2] The groups particularly at risk of social exclusion are largely the same as those where labour underutilisation is marked: lone parents, jobless families, Indigenous Australians, people with disabilities, those on low incomes, and new immigrants.

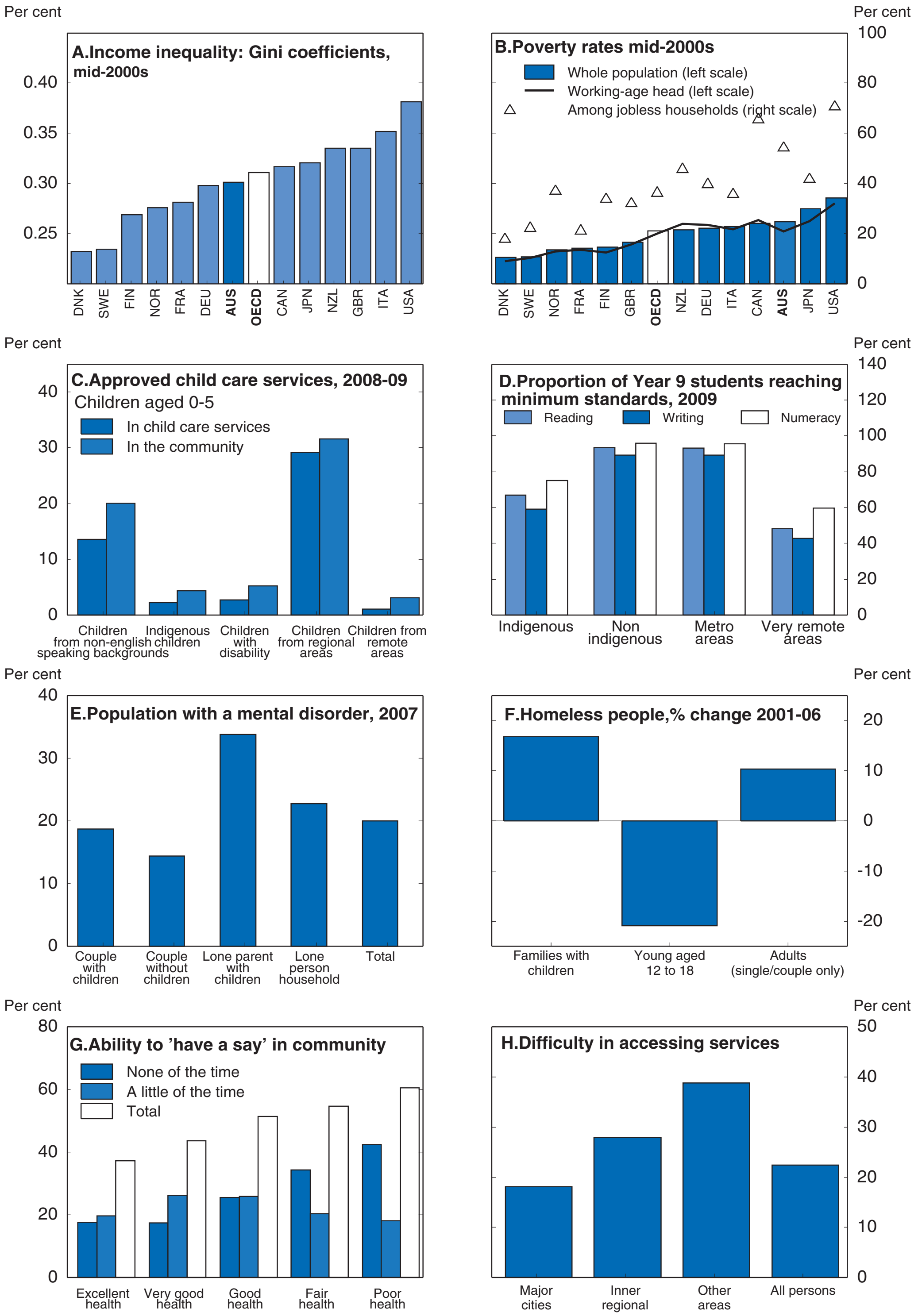
Social exclusion is influenced by income disparities. Income inequality was close to the OECD average in the mid-2000s[3] (Figure 4.4, Panel A). However, the gap between the poorest and richest households has widened in recent years.[4] Australia's poverty rate – measured as households with disposable income below half of the median income – is somewhat above the OECD average (Figure 4.4, Panel B). Jobless families are overrepresented among poor households. Indigenous Australians, public renters, social security recipients and lone parents are also among the poorest, followed by people with disability (Saunders and Naidoo, 2009). Most of these groups (lone parents, public renters and Indigenous people) are even more disadvantaged when poverty is measured by the "consistent poverty" approach, which covers low income and deprivation.[5] Indicators of housing stress (discussed below), provide further insights into the risks of poverty.

Poor education outcomes increase exclusion risks. For example, children with a disability, a non-English speaking background, living in remote areas, and from Indigenous groups[6] are under-represented (compared to the proportion of the relative group in the community) in child care services supported by the government (SCRGSP, 2010) (Figure 4.4, Panel C). Such care tends to improve overall educational outcomes later in life (Heckman and Masterov, 2007). Students from low socio-economic backgrounds are also around three times less likely than those from high socio-economic backgrounds to go to university (Universities Australia, 2008). Educational achievement varies across social groups. Literacy and numeracy performance is lower for Indigenous students (Figure 4.4, Panel D). High school completion is much lower among 20-24 year olds living in areas of lower socio-economic status than those from the least disadvantaged areas (ASIB, 2010). People with disabilities and mental health problems may find it difficult to access appropriate education for their learning needs. Only about a third of the working age population with a reported disability had completed upper secondary school in 2003, compared with around 50% of those without disability (Australian Government, 2010a).

Health outcomes remain unequal among vulnerable population groups, although Australia compares favourably with other OECD countries in overall health indicators (OECD, 2009b, Figure 1.1). The gap in life expectancy at birth between Indigenous and non-Indigenous population is around 11.5 years. Disabilities are also more prevalent among the Indigenous population at all ages (Australian Government, 2008). Mental illness is also higher among groups likely to face multiple disadvantages, in particular, lone parents (Figure 4.4, Panel E).

Homelessness is an important aspect of social exclusion and is comparatively high in Australia,[7] at about 0.5% of population since the beginning of the decade.[8] It is more prevalent in inner-city areas where facilities for the homeless are easier to access, but is not simply a metropolitan problem (Chamberlain and Mackenzie, 2008). The share of homeless

Figure 4.4. **Indicators of social exclusion**



Source: OECD (2008), *Growing Unequal? Income Distribution and Poverty in OECD countries*; OECD (2009), *OECD Employment Outlook*; SCRGSP (2010), *Report on Government Services*; MCEETYA (2009), *National Assessment Program, Literacy and Numeracy – Achievement in Reading, Writing, Language Conventions and Numeracy*; Chamberlain, C. and D. MacKenzie (2008), *Australian Census Analytic Program: Counting the Homeless, 2006*, ABS; ASIB (2010) *Social Inclusion in Australia: How Australia is Faring?* and ABS, *General Social Survey*.

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families with children increased between 2001 and 2006 (Figure 4.4, Panel F), and children under 12 now comprise 12% of the homeless population. This is of particular concern as homeless children are more likely to become homeless when they grow up. Other important homeless groups are older Australians,[9] people with disability and mental health and Indigenous Australians (9%).

"Network poverty" is part of social exclusion people need to have someone to turn to at a "time of crisis". This is lacking for several groups those with low incomes, the unemployed, those with poor health, people not proficient in English, and people in jobless homes (ASIB, 2010). Most of these groups also have particular difficulty in "having a say" in their community issues or in influencing decision makers. Finding it difficult to have a say increases as people's self-assessed health deteriorates (Figure 4.4, Panel G).

Some groups also face difficulties in accessing services, such as banks, health and employment services. This reflects mainly a lack of services in the areas of residence, difficulty with transport, or distance to, and the cost of services (ABS, 2007). People with low incomes, in one-parent families, with disability or poor health, living in remote areas (Figure 4.4, Panel H), public housing renters, the unemployed and jobless families are more likely to face poor access to services than the general population. The gap between Indigenous and non-Indigenous Australians in accessing Internet at home was over 20 percentage points in mid-2000s (ASIB, 2010). The youngest, oldest, Indigenous Australians and people with low levels of education were less likely to seek legal assistance (Coumarelos *et al.*, 2006).

Social exclusion in Australia is being tackled at all levels of government and is focused on six most vulnerable priority groups. These are: improving the life chances of children at greatest risk of long-term disadvantage; targeting jobless families with children; reducing the incidence of homelessness; enhancing outcomes for people with disability or mental illness and their carers; closing the gap for Indigenous Australians; and addressing locations of concentrated disadvantage (Australian Government, 2010a). The policies are based on the recognition that simply increasing government expenditure does not necessarily improve social inclusion. Mainstream services also need to be accessible to those who need them most, and initiatives to tackle deficits in areas such as education, health and housing, can be effective in reducing persistent disadvantages. Given the close links between labour market outcomes and social inclusion, the solutions need to cover policies related to the tax-transfer system, labour market, education and training, health care and social housing.

Addressing Australia's future employment needs and social challenges

The tax-transfer systems need to strike a balance between poverty and incentives to work for disadvantaged groups

The current tax-transfer system can discourage work incentives of some groups. The flat-rate and means-tested nature of Australia's social security benefits is less costly, more targeted, and more re-distributive than in most OECD countries (Whiteford, 2009a). However, the system raises issues of benefit adequacy, horizontal equity and incentives to work (Australian Government 2010d). At the same time, multiple and often overlapping transfers and cumulative withdrawal rates can result in relatively high effective marginal tax rates (EMTRs), especially for second earners (Chapter 2).

Income support benefits are paid at two main rates.[10] The higher pensions have traditionally been paid to people who were not expected to work (the aged, those with significant disability and their carers and single parents whose youngest child is below 8), and involve more generous participation tests and withdrawal rates. The lower allowances are granted to those having the capacity to work (usually the unemployed and students). The gap between the two is considerable: in 2010 the allowance for a single, unemployed person was 68% of a pension. Longer term projections show that the allowance would fall to 46% of the pension by 2040 under unchanged indexation arrangements (Australian Government 2010d).[11]

The low level of the unemployment allowance (Newstart Allowance) has raised concerns about its adequacy. Unlike most OECD countries, Australia provides a flat (non-earnings related) means-tested allowance to meet social risks such as unemployment, which may be paid for an unlimited period. In terms of other countries' programmes, this can be thought of as combining social assistance and unemployment benefits. The allowance for a single person for the full-year in 2007-08 amounted to 31% of net median income, which is below the poverty threshold of 50% of median income (Australian Government 2010d). The resulting net replacement rate is below the OECD average for the initial stage of unemployment. However, it gradually rises above the average, because of its flat and unlimited nature compared to declining and time-limited benefits in many other countries (Table 4.1).

The relatively low net replacement rate in the first year of the unemployment spell raises issues about its effectiveness in providing sufficient support for those experiencing a

Table 4.1. **Generosity of unemployment benefits**

Net replacement rates at different points during an unemployment spell, 2007,[1] in percentage

	Year 1	Year 2	Year 3	Year 4	Year 5	Five-year average
Norway	72	72	72	72	72	72
Belgium	65	63	63	63	63	63
Denmark	68	68	68	68	9	56
Ireland	50	50	50	50	50	50
Germany	64	48	42	36	36	45
France	67	64	31	31	31	45
Finland	60	58	33	33	33	43
Australia	**42**	**42**	**42**	**42**	**42**	**42**
New Zealand	38	38	38	38	38	38
Sweden	66	63	41	8	8	37
United Kingdom	28	28	28	28	28	28
Canada	52	14	14	14	14	22
Japan	45	3	3	3	3	11
Italy	37	0	0	0	0	7
United States	28	0	0	0	0	6
Median	***52***	***40***	***25***	***13***	***9***	***28***

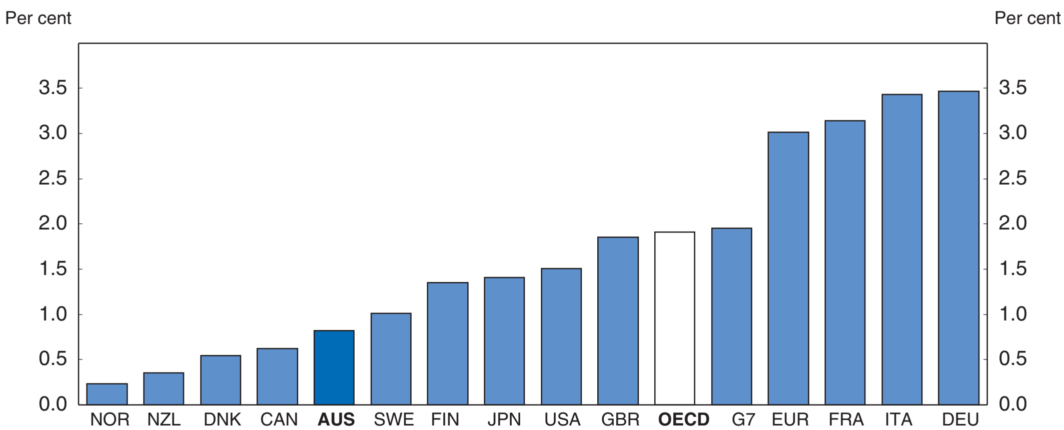
1. Countries are shown in descending order of the overall generosity measure (the five-year average). Calculations consider cash incomes (excluding, for instance, employer contributions to health or pension insurance for workers and in-kind transfers for the unemployed) as well as income taxes and mandatory social security contributions paid by employees. To focus on the role of unemployment benefits, they assume that no social assistance or housing-related benefits are available as income top-ups for low-income families. Any entitlements to severance payments are also not accounted for.

Source: OECD (2009), *OECD Economic Outlook*.

job loss, or enabling someone to look for a suitable job. There is empirical evidence on skill mismatches in Australia, although it is difficult to single out the impact of the unemployment benefit scheme. Skill mismatches appear to be a problem for a number of groups, including newly arrived immigrants who do not have initially access to social security, immigrants from non-English speaking countries (see below) and graduates from vocational education and training, especially in the case of tradepersons (Karmel, 2007). Mavromaras *et al.* (2007) conclude that overskilling is persistent in the labour market, with a wide variation in its incidence and wage consequences. The ratio of job vacancies to unemployment has increased between the end-1990s and later in the following decade, but this most likely reflects the strong growth of the economy (OECD, 2008a). However, long-term unemployment in Australia is well below the OECD average (Figure 4.5). This reflects the close linking of unemployment allowances to active labour market policies, and a well functioning compliance and sanctions regime.[12] Net impact analyses over the past 15 years, which are a measure of programme effectiveness, have shown that Australia's active labour market programmes are very effective in assisting job seekers into employment.

Figure 4.5. **Long term unemployment rate**[1]

2009



1. One year and over.

Source: OECD, *Labour Force Statistics Database.*

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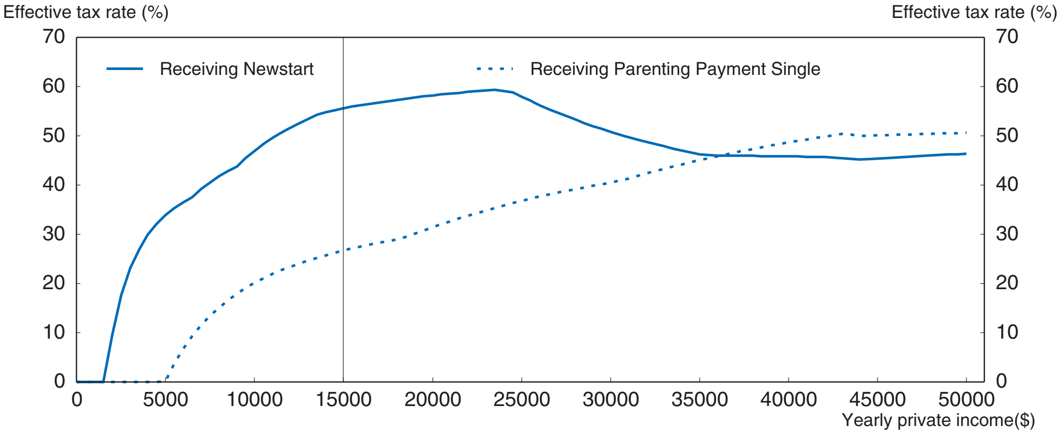
The large gap between the benefits in the current system can reduce incentives to work. The unemployed may have an incentive to apply for the Disability Support Pension (DSP), which has a higher risk of long-term welfare dependency, although the eligibility for the benefit is determined by a comprehensive, independent assessment of the individual's capacity to work (see below). For example, in September 2009, the net income of a person receiving the Newstart Allowance and working 15 hours at the minimum wage was only about 3 dollars more than the maximum disability pension. Those eligible for pension payments thus have a strong disincentive to work (Australian Government, 2010d). Outflow rates from DSP were approximately three quarters of inflows in 2008, but the majority of those leaving DSP does so either because they took up Age Pension or died. At the same time, more than a third of those entering DSP in 2008 had previously had Newstart Allowances.

Financial incentives to work are also weak for single parents at low incomes who are transferred from the parenting payment pension to the Newstart Allowance when their youngest child turns eight. For example, the average effective tax rate for a single parent with a parenting pension working 20 hours per week at the minimum wage (AUD 15 000) would increase from below 30% to above 50% when the child turns 8 years (Figure 4.6). The

Figure 4.6. **Participation tax rates:[1] Single parent, 2009**



1. The participation tax rate is the average effective tax rate from no work to the level of yearly private income.

Source: Australian Government, The Treasury.

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significant change in the average effective tax rate reduces the attractiveness of low paid work to single parents, impacting on part time work, in particular (Whiteford, 2009b). On the other hand, the drop in benefit rate facing single parents when their youngest child turns eight may provide a strong income effect to seek work. Parents receiving lower subsidies may also have stronger incentives to apply for a more generous benefit: the second largest group (12%) that has entered the disability payment system from another income support scheme in 2008 was former recipients of parenting payments. However, for higher earnings (above AUD 15 000) the average effective tax rate under Newstart declines relative to the average rate under parenting pension. Thus, the financial incentive to take a full-time job, even below average earnings, is higher under Newstart Allowances (especially, taking into account the income effect component of the incentive). Moreover, Newstart is subject to activity requirements and a legal obligation to accept suitable work, and the employment service providers generate job offers, which should also have a positive impact on work incentives for single parents. The official evaluation of the 2006 welfare reforms (see below), tightening the eligibility for single parenting payments, provide evidence in this regard (as evidenced by higher exit rates from payments).

Large differences in the benefit rates also raise concerns about horizontal equity. The present payment structure leads to very different outcomes for people with similar work capacity, because benefit conditions can change markedly for marginal changes in personal or family circumstances. This is for example the case of single parents when their youngest child reaches eight, discussed above.

Work incentives can be reduced by the rise in effective marginal tax rates (EMTRs) as benefits are withdrawn. Many of the tax and transfer policy changes implemented over the past decade were designed to reduce EMTRs and boost work incentives. Despite the reforms, EMTRs can still be high for families with children due to overlapping withdrawal rates of multiple family benefits (Australian Government 2010d). Empirical evidence suggests that a fifth of lone parents and around 14% of couples with children face EMTRs above 50%. This compares to 3.1% of couples without children and 2.4% of single people (Harding *et al.*, 2009). Second earners are particularly affected. This group is taxed more heavily in Australia than in other OECD counties, despite separate personal income taxation for spouses, because means-testing is less common in other countries and the relative generosity of family benefits in the first place. High EMRTs also hit single parents and one-earner couples with children in their transition from part- to full-time work (see Figure 2.11), reinforcing concerns about "low-wage traps" highlighted in previous *Surveys*. On the other hand, Australia does not stand out in international comparisons with regards to the EMTRs faced by these groups when they move from inactivity to part-time work. However, the large share of jobless households with children the fifth highest in OECD (Whiteford, 2009b) indicates that there is scope for further reducing "inactivity traps". Measures beyond welfare policy would also be important in this regard given the multifaceted disadvantages experienced by such households.

Changes in taxation[13] introduced since 2008 are expected to have a positive impact on labour supply. Official estimates suggest that around 85 000 individuals would be encouraged to enter the labour force as a result of changes in income tax rates and low-income tax offsets. Including additional hours for existing workers, this could imply around 3 million additional hours of work per week.

Employment is affected by access to affordable high quality child care services

The cost of child care to be borne by parents can reduce the financial benefits from returning to work. Recent research highlights the importance of child care prices on labour supply of mothers (Gong *et al.*, 2010). Non-price factors, such as availability and quality of services, also affect labour supply decisions of married women with young children (Breuing and Gong, 2010). The Australian Government provides a subsidy to both working and non-working parents through the Child Care Benefit (CCB) (a means-tested per hour assistance) and a complementary Child Care Rebate (CCR) available to working parents, which cover 50% of "out-of-pocket" expenses for approved child care, up to a cap.[14] The CCB rate varies depending on family income, the number of children in care and the type of the care used. The formula for calculating the CCB, and its interaction with the CCR scheme are complex. Although the maximum rates of CCB are indexed to inflation (CPI), this assistance has not kept pace with increases in child care prices in recent years (Australian Government 2010d).

Beyond government funding, supply constraints could also affect affordability of care. As discussed in the previous *Survey*, there is no clear evidence of a shortage of child-care places, but at the local level anecdotal evidence suggests that parents can experience difficulties in finding care for very young children (0-2 years), or at specific times of the week that match their working hours. Whereas these may reflect complex parental preferences rather than an under-supply of child cares places, the structure of Child Care Benefit (CCB) should take into account the fact that the provision of services for very young children is more expensive.

Reforms in the transfer system and childcare services should boost labour force participation

Increasing allowances while keeping incentives to work

Measures of relative poverty (described above) indicate that the Newstart Allowance should be raised (subject to fiscal constraints and in line with community expectations that payments are affordable, sustainable and fair) to provide a more adequate level of income support. To reduce the risk for long-term unemployment, however, job-search requirements for benefit eligibility, active labour market policies and a credible compliance and sanctions regime should be maintained. It is important, in this context, to ensure that the new employment services system, with greater emphasis on more disadvantaged, provides adequate incentives for service providers to place job seekers with low barriers to employment (Box 4.2). In addition, the higher Newstart Allowance could be of a limited

Box 4.2. **The new employment services system**

The new employment services system, Job Services Australia (JSA), in effect since July 2009, has a number of commendable features. It empowers providers to be more responsive to job seekers and puts greater emphasis on more disadvantaged job seekers through better levels of service. The system is also simpler and more integrated than previous schemes, including only one employment services contract which integrates a range of services previously provided under separate arrangements. The new system entails payments for employment and education outcomes. Higher levels of employment and social inclusion are closely linked to education, as discussed above. In particular, a bonus is to be paid to providers when the job seeker has achieved a successful transition to work and has completed an accredited course in a skill shortage area.

The new system assesses a job seeker for eligibility of services and income support with Centrelink, which is the primary gateway to JSA (private providers and community organisations contracted by the government). The services are demand driven. Every job seeker is linked to a provider of their choice who will have the flexibility to develop individually tailored assistance proportional to the disadvantage of the job seekers. JSA offers four employment assistance streams (Stream Services) adapted to job seekers, depending on the job seekers assessed difficulty of finding employment. This replaces the previous time-based employment services. Job seekers who have completed approximately a year of Stream Services, commence in the work experience phase of their stream or, if they are assessed as requiring a higher level of service, move to a higher stream for another 12 months of assistance; the most disadvantaged job seekers (Stream 4), either move into work experience or receive further assistance in their stream for another 6 months after which they automatically move to work experience.

Care should be taken, however, that the new system minimises risks for "cherry picking" behaviour by getting right the incentives to service providers. There is a widespread view among providers, according to ACOSS (2010), that the JSA funding model offers "scant" resources to assist Stream 1 job seekers, who form half of new job seekers. The structure of payments to providers and the rating system under JSA increases greatly the weight on outcomes achieved for individuals with significant barriers to employment. In particular, in Stream 1, there is a payment to provider for placements but not for "outcomes" (*i.e.* the placement to jobs that last at least 3 months)[1] (DEEWR, 2008). Moreover, in terms of the contribution of each stream to overall performance rating, Stream 1 is attached a weight of only 10% compared to 40% for Stream 4, reducing the incentives of providers to place

Box 4.2. **The new employment services system** *(cont.)*

the least disadvantaged job seekers during the first year of unemployment.[2] Preliminary evidence suggests poor scores for over half of all providers with a Stream 1 rating (DEEWR, 2010). While it is still early to assess the performance of the JSA system, this issue may have to be revisited in light of experience. Consideration could be given to increase the currently low weight within the performance management system, on achieving employment outcomes for less disadvantaged workers. At the same time it needs to make sure that the new system leads to performance increases for job seekers facing the greatest barriers to work. A frequent monitoring and assessment of the training programmes which are available to job seekers is essential.

1. Outcome Payments are not paid for Stream 1 job seekers before they commence in the Work Experience Phase.
2. Ratings for each stream measure providers' performance against efficiency and effectiveness that is, the average time required, compared to other providers, to place relevant participants and the proportion for whom placements and outcomes were achieved. They then are averaged, with progressive weights, to calculate the overall rating.

duration, with the benefits being gradually phased out over time to their current flat rate. This would not solve problems of adequacy for those remaining on Newstart for a longer period, but it would improve the effectiveness of Newstart as "the first line of defense" for those losing their job, while maintaining incentives to find a job over time. A potential cost of this change, however, is reduced employment incentives, especially for those at low incomes, during the period of the higher time-limited unemployment supplement, an issue that should be carefully studied. Beyond addressing adequacy issues, such a scheme could also improve matching by enabling the unemployed to look for a suitable job. Increasing Newstart for a limited duration at the initial stages of the unemployment spell could also reduce incentives to apply for more generous social security payments, such as DSP, although only on a temporary basis. As noted earlier, more than a third of those entering DSP in 2008 had previously had Newstart Allowances, even though the large majority of exits from unemployment are still towards employment.

Participation of families with children can be boosted through better work incentives and income support

A key challenge is to increase incentives to work for sole parents, which is a large socially excluded group. The "welfare to work" reforms, introduced in 2006, shortened the duration of eligibility for Parenting Payment Single pension, with single parents whose youngest child turns 8 moving from parenting payments to unemployment benefits, and introduced part-time participation requirements for parents (both partnered and single) with school-age children. More recently, part-time activity requirements have been refined to include more flexible combinations of job search, work, study or volunteer work. The reforms seem to have improved work incentives, as more single parents with a school age child have left income support. There has also been a small decline in the number of single parents with pre-school age children on benefits (Australian Government, 2010d). Further measures are needed however to improve the work incentives for this group. One option is to tighten participation requirements for the parents with pensions coupled with improvements in early childhood education and care services (Whiteford, 2009b). The age of the child at which parents on income support are required to look for part-time work could be reduced gradually from 6 to

4 years, as recommended in the recent tax review (*Australia's Future Tax System*, AFTS), with a simultaneous increase in child services (Australian Government, 2010d).

The incentives to take up low paid work for single parents not eligible for parenting payment (that is, youngest child reached 8 years) could be improved by reducing, finances permitting, the withdrawal rates for Newstart Allowance for low level earnings. This, of course, involves trade-offs in terms of complexity of the benefit system. Care should be taken to strike the right balance between more generous benefits and incentives to work, and sustainability of fiscal policy.

Work incentives for second earners could be improved through a better interaction of the tax and benefit systems. Combining family benefits into a "single family payment", with one withdrawal rate, in line with the AFTS review recommendations, could help to reduce high EMTRs for low-income families arising from cumulative withdrawal rates. Implementation is not easy as there are distributional issues to be considered and complex trade-offs. For example, if the benefit withdraws quickly upon working, there is a risk of an "inactivity trap", where employment, especially, part-time, does not "pay". If the benefit is withdrawn slowly, there is a risk of a "low wage trap". Previous *Surveys* emphasised the need to reduce low-wage traps, which in Australia are more prevalent than inactivity traps. Suggested measures include, for example, reducing the lowest income tax rate or, increasing the threshold at which income tax is first paid, which Buddelmeyer *et al.* (2006) judge to have the largest impact on the aggregate labour supply in terms of additional hours of work among alternative options.

Better access to quality child care and family friendly policies would boost employment

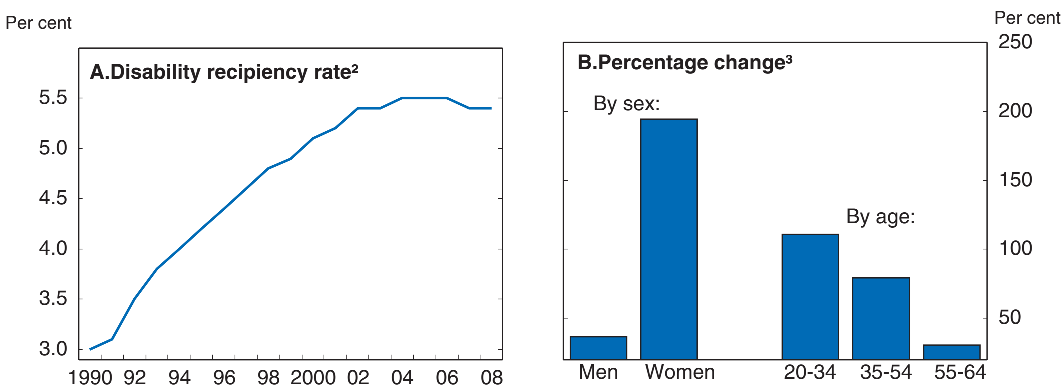
Progress in recent years towards reducing the cost (through increases in the Child Care benefit and Child Care Rebate rates) and increasing the number of child care places is welcome. Going forward, it is essential to ensure the sustainability of the generosity of the Child Care Benefit (CCB), as continuation of recent trends would imply a decline over time in the share of child care costs covered by CCB. In addition, reforms are needed to ensure that CCB is more responsive to differences in child care costs across services and locations to facilitate access by low paid families (Australian Government, 2010d). Combining CCB and CCR into a single (means-tested) payment, set as a percentage of out-of-pocket expenses, would simplify the benefit and address the above concerns. Such a scheme would also take better into account the age-related cost profile of child care provision. To contain pressures on government expenditure and child care fees, in view of the higher responsiveness of an out-of-pocket assistance payment to child care prices, a cap on assistance would be necessary. The child care benefit (currently available to all eligible parents for up to 24 hours per week for each child, without participation requirements) could be made more conditional on employment and job search of parents, except if children face multiple disadvantages.

The planned introduction of a paid parental leave (PPL) scheme in January 2011, in line with international practice, is welcome. Combined with other leave arrangements, the PPL scheme will enable most parents to stay with their infants for at least 6 months. Eligibility is subject to primary carer residency and income criteria and having worked continuously for 10 of the 13 months before the expected birth. PPL will be granted to eligible parents for a continuous period of 18 weeks at the minimum wage rate. The PPL scheme is estimated by the Productivity Commission to increase the average Australian women's lifetime employment by 2 to 6 months. The right granted to parents of a child below school age under the new industrial relations system (see below) to request flexible working arrangements, including changes to hours, patterns (job-sharing) or location, go in the right direction towards improving the family-work balance.

Activating workers with disability who have the capacity to work

Inflows to disability benefits could be reduced. Recipients of disability benefits nearly doubled as share of working age population over the past two decades, although the trend has stabilised in more recent years (Figure 4.7, Panel A). The highest rise was among women and young people (Figure 4.7, Panel B). Longitudinal data indicate that Australians tend to leave employment more easily than in other OECD countries after the onset of a health problem, with a comparatively high transition rate from employment into disability (OECD, 2009a) and, as discussed above, frequent transitions from unemployment into Disability Support Pension (DSP). These findings suggest that more attention should be paid to monitoring of the sickness absence process of workers, to ensure that as many of those on sick-leave return to employment as possible, if able to (OECD, 2007a).

Figure 4.7. **Disability indicators**[1]



1. Current and suspended customers in June of each year.
2. Number of disability benefit recipients divided by population. Data refer to persons aged 20-64.
3. 1990-2008.

Source: OECD, Directorate for Employment, Labour and Social Affairs.

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The effectiveness of the work capacity test for access to DSP could also be tightened. For example, the assessment of capacity to work for less than 15 hours per week, which is required for eligibility, is currently made before most claimants have had any retraining or rehabilitation (Australia Government, 2010d). This means that such an assessment is based on a prediction about a person's future capacity to work, with little information about the likely benefits of rehabilitation. This constrains the effectiveness of any potential change in the eligibility requirements of DSP.

Measures in the May 2010 budget to reform the process of job capacity assessments go in the right direction, though could be applied to all DSP recipients, including those who were granted DSP eligibility before 2006. The reforms aim at refining the assessment process to place a greater focus on a person's future potential to work, with appropriate capacity building and rehabilitation. From 2012, job capacity assessments will also be based on revised impairment tables, which are being updated to make them consistent with contemporary medical and rehabilitation practice. Most applicants will have to provide evidence that they would be unable to obtain employment, even with appropriate assistance, such as employment service or vocational rehabilitation. Should they not qualify for DSP, they will be referred to an alternative income support payment (such as Newstart Allowance) and offered employment assistance through Job Services Australia (Box 4.2) or the new Disability Employment Services (DES) system that started in March 2010. The DES programme ensures access to services for all job seekers with disability, attempts to provide the right assistance as early as possible, involves less complex assessments and referral processes, and has a strong focus on outcomes with the greatest rewards when providers find job seekers sustainable jobs. Emphasis is placed on skills acquisitions, especially in areas of skill shortages.

Recent policy changes have also aimed at removing disincentives for DSP recipients to use employment services to find work. Disability pensioners can currently seek employment assistance without fear of losing their pension through an automatic review of eligibility. This reform, introduced in 2008, appears to have positive results (Australia Government, 2010a). To further improve incentives to work of people with disability able to do so, the generosity of DSP could be reduced although the Australian government has advised in its response to the AFTS review that it would preserve the current income support rates set by the recent Pension Review in line with the community standards.

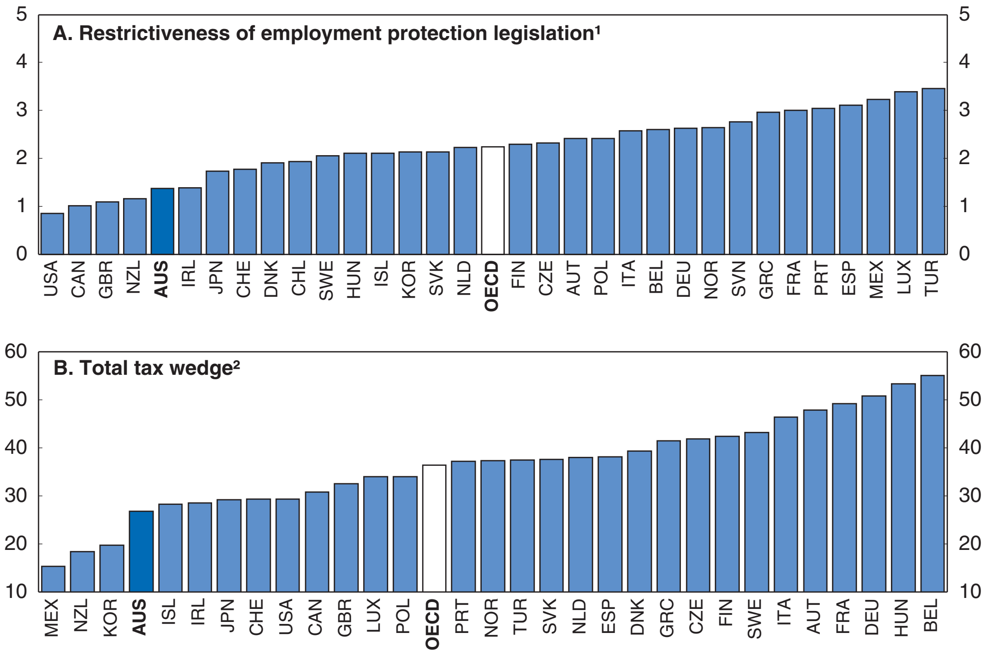
Labour market institutions should remain flexible

The flexibility of the labour market should be preserved under the new system of industrial relations

Australia's labour market institutions work well overall. The tax wedge is low and employment protection legislation is not very restrictive compared to other OECD members (Figure 4.8). Labour markets also performed well during the global economic crisis. A new system of industrial relations was introduced in July 2009 to strengthen bargaining at enterprise level, widen the minimum employment conditions safety net (*i.e.* minimum terms of employment and wages) and establishing a right of appeal against unfair dismissal of employees of small and medium-sized firms (OECD, 2008a). The challenge for its implementation is to balance flexibility and legitimate fairness concerns. Flexibility is particularly important in view of the expected structural change from the mining boom and reallocation of workers across sectors (Chapter 1). Ensuring adequate wage differentiation to limit the larger wage increases in the booming sectors and regions from spilling over to the rest of the economy is critical. The enterprise-level bargaining under the new system can reduce this risk by linking wages to productivity gains. It is important that arrangements do not extend beyond the company level, apart from the exceptions already envisaged by the legislation.[15]

Care needs to be taken that the restoration of unfair dismissal protection at small and medium-size enterprises does not impair labour market flexibility. Empirical studies for OECD countries do not appear to establish a clear link between stricter EPL and employment (OECD, 2007b), nor is there evidence of any link with hiring, firing or working hours of the exemption given to small firms from unfair dismissal under the Work Choices in 2006 (Venn, 2010). The new system of dealing with unfair dismissal claims should, however, be closely monitored to make sure that the administrative costs faced by the firms, especially smaller ones, are not so high as to jeopardize productivity growth and redeployment of labour[16] (OECD, 2008a). Moreover, the recent government decision requiring companies wishing to qualify for federal government contracts to accept stricter

Figure 4.8. **Employment protection legislation and tax wedge**



1. The OECD indicators of employment protection are synthetic indicators of the strictness of regulation on dismissals and the use of temporary contracts. Version 3 of the overall indicator is the weighted sum of sub-indicators for regular employment (weight of 5/12), temporary employment (5/12) and collective dismissals (2/12). It incorporates 21 data items and is available for OECD member countries and 10 emerging economies for 2008. For more information and full methodology, see *www.oecd.org/employment/protection*.
2. Single individual without children at the income level of the average worker.

Source: OECD, *Employment Protection Database* and OECD (2010), *Taxing Wages 2008-2009*.

StatLink http://dx.doi.org/10.1787/888932344881

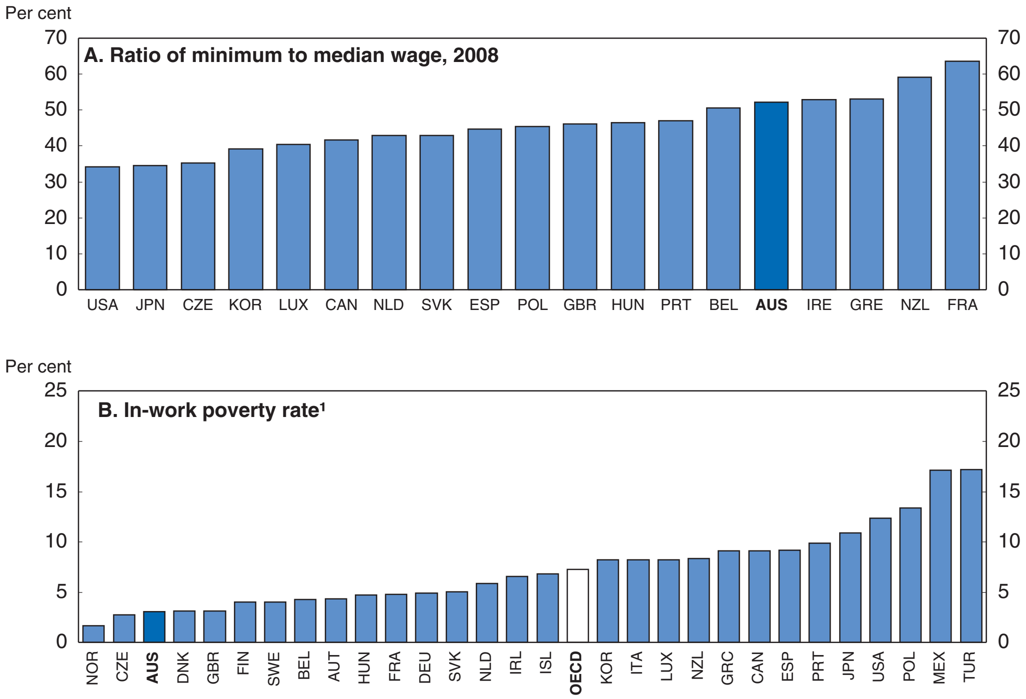
rules for arbitration of industrial disputes than in the Fair Work Act, should be applied so that it does not impair flexibility.[17] This may imply excluding smaller companies.

Minimum wages are not the best tool to fight poverty and social exclusion

Minimum wages are high in Australia by international comparison (Figure 4.9, Panel A). In combination with existing benefits, the minimum wage enables full-time workers to escape relative income poverty and promotes social inclusion (Immervoll, 2010). Australia thus has low in-work poverty rates (Figure 4.9, Panel B). Minimum wage workers tend to be those with low levels of education, older part-time workers, migrants from non-English speaking backgrounds working full-time and those in casual jobs who tend to need a safety net (Nelms and Tsingas, 2010).

High minimum wages have mixed effects on labour market outcomes. They may contribute to out-of-work poverty by reducing employability of low-productivity workers, especially when minimum labour costs are high relative to the cost of an average worker as in Australia (Immervoll and Pearson, 2009, Figure 6). However, there is no clear cut evidence of such a strong disemployment effect, although this may reflect the relative large share of employees (15% of total, mainly adults) receiving less than the minimum wage (Healy, 2010). Moreover, high minimum wages can increase incentives to work, especially for lone parents (Buddelmeyer and Kalb, 2008). The challenge is to set the minimum wage at a level that minimises the potential employment losses relative to the income gains of

Figure 4.9. **Minimum wages and in-work poverty: An international comparison**



1. Percentage of individuals living in households with disposable income below 50% of the median income, among all individuals living in a given type of household with a head of working-age and at least one worker.

Source: OECD (2009), *OECD Employment Outlook* and OECD (2008), *Minimum Wage Database.*

StatLink http://dx.doi.org/10.1787/888932344900

lower paid workers (OECD, 2009a). Given the already relatively high minimum wage in Australia, future increases should be moderate and take account of productivity developments to avoid exclusion of vulnerable and low-skilled workers.

In work benefits (IWBs) can be a better tool than minimum wages to address income inequality and support living standards of low paid workers. If employment-related benefits were to be introduced, these could be combined with a lower minimum wage. The previous *Survey* considered this policy mix to be a potentially better strategy for protecting vulnerable workers by making it easier to get jobs and improving their income prospects (OECD, 2008a). Australia utilises both the minimum wage and a highly targeted tax-transfer system to reduce income disparities and encourage workforce participation of low skilled workers. More extensive IWBs[18] could complement the current tax/benefit system, and provide a more comprehensive approach to increasing incentives to work. A growing number of countries have introduced IWB schemes over the past two decades (Box 4.3) to achieve both employment and distributional objectives. Their advantage over high minimum wage floors is that they can support the incomes of the low-skilled without simultaneously reducing firms' demand for low-skilled workers, or raising EMTRs at low wages (OECD, 2010b). In addition, IWBs can be more targeted than minimum wages at low income earners households. Their disadvantage is that they can lead to higher effective marginal tax rates higher up in the income distribution as they are phased out. Moreover, IWB policies are often criticised as being difficult to administer and/or expensive (Immervoll and Pearson, 2009). Designing an in-work benefit scheme that raises labour force participation, redistributes income and comes at a moderate fiscal cost and without

Box 4.3. **In-work benefit schemes in OECD countries**

Main features*

About half of the OECD countries had in place employment-conditional benefit schemes in 2007 with different designs, but too broadly similar dimensions:

- *Type of benefit.* In-work benefit (IWB) schemes can be transitional or permanent. The former are one-off or time limited payments designed to increase the payoff for moving into a new job, applied in Australia, Belgium, Canada, Ireland, Japan, Korea and Slovak Republic. A larger group of countries (Belgium, Canada, Ireland, Korea, Slovak Republic, Finland, France, German, Hungary, the New Zealand, Sweden, United Kingdom and United Sates) operate permanent IWB programmes which provide payments to a defined group for eligible low-income workers usually in the form of (refundable) tax credits. The generosity of IWBs varies widely across countries, depending on the benefit level and, in the case of earning-conditional benefits, the phase-in and withdrawal rates (temporary benefits are usually not income dependent). The number of children also affects the generosity of IWBs in a number of countries. Moreover, IWBs can be conditional on minimum number of hours worked (the United Kingdom, Ireland and New Zealand). The Employment Entry Payment in Australia requires a move into full time employment.
- *Beneficiary population.* The targeting of IWBs varies across countries. First, IBWs can be targeted towards low paid individuals or low-income families, depending on whether the emphasis is on the employment or distributional objectives of IWBs. Family-based in-work benefits exist in Canada, France, Ireland, New Zealand, Slovak Republic, the United Kingdom and the United States. Second, many countries restrict the entitlement of IWBs to families with children, with the aim of reducing child poverty. Finally, a small number of countries target recipients of social assistance or unemployment-insurance that enter or re-enter employment. Australia, along with Japan, and Korea (until 2009) operate solely this kind of IWBs schemes. The Employment Entry Payment, in particular, is available either to lone parents receiving parenting payment or to long-term income support recipients.

Are the IWB schemes effective?

Empirical evidence, based largely on the results for the United States and the United Kingdom with the longest experience with IWBs, suggests that these schemes promote employment overall, even though they may reduce incentives to work for second earners (when targeted towards low-income families), or, the incentives for additional work effort (in the case of individual-based IWBs) (Immervoll and Pearson, 2009). In this regard, in-work benefits can reduce poverty. Recent analysis also suggests that permanent IWBs reach low-income families, as in most countries benefit payments start well below the poverty threshold. In addition, the benefit amount reaches its maximum level around the poverty threshold in almost all countries employing such schemes (OECD, 2009a).

What works?

The cross-country experience shows that IWBs have been most effective in meeting their equity and efficiency objectives when they are large enough to significantly change the benefits of working *vis-à-vis* not working; are relatively simple to access by eligible individuals and households; distinguish between low-wages and low working hours to ensure efficient targeting; target all low-skilled individuals facing large work disincentives rather than solely families with children; and do not create parallel disincentives to work for second earners (OECD, 2010b).

Box 4.3. **In-work benefit schemes in OECD countries** *(cont.)*

The effectiveness of the IWBs schemes also depends on a number of "framework" conditions, including the elasticity of labour supply among the targeted groups, the tax system and the shape of the income distribution before the introduction of the scheme. Bassanini *et al.* (1999) conclude, for example, that a simplified earned-income tax credit system, where workers with higher earnings finance the tax credits for the low paid, yields better overall results in countries with wider income distributions and lower marginal tax rates, such as the United States and the United Kingdom. By contrast, a narrower income distribution makes it much more difficult to target and finance IWBs like in Germany and Sweden, where reservation wages and labour taxes are high. A recent analysis by Immervoll *et al.* (2007) for EU15 confirms that a lower tax burden is required to raise revenue for IWBs in countries with relatively widespread distributions. The need for IWBs is reduced particularly in countries with high minimum wages, as they tend to compress the earning distribution at the bottom of the wage ladder (OECD, 2009a). In this context, if employment-related benefits were to be introduced in Australia, these could be combined with a lower minimum wage. To avoid potential disincentives to work for second earners, IWBs could be targeted to groups such as lone parents, given the high degree of labour supply responsiveness of this group to financial incentives (Creedy and Kalb, 2005).

* The discussion draws on Immervoll and Pearson (2009) and OECD (2009a).

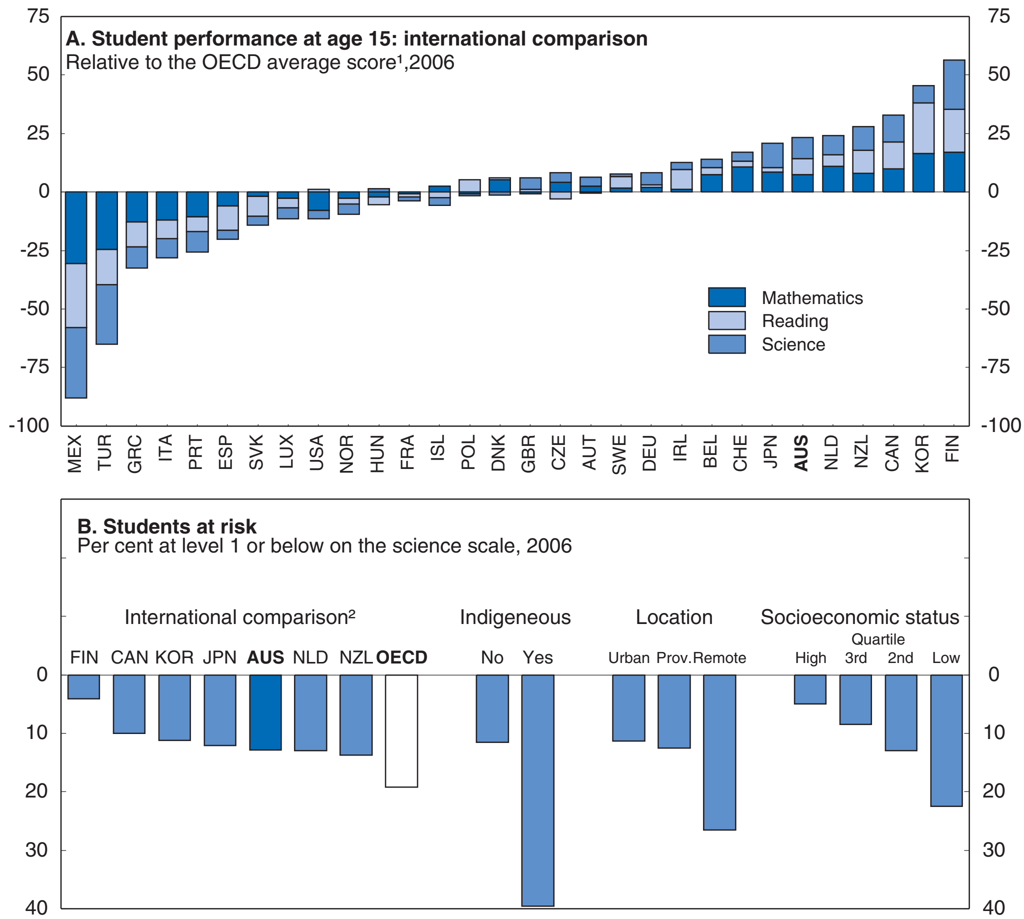
substantially adding to complexity would be challenging in Australia, which already has as a well-developed welfare system including generous and extensive family benefits paid to working parents.

Better education and training can reduce educational disadvantages for disadvantaged groups and prevent emerging skill shortages

Overall, Australia's education system fares well internationally in terms of student achievement, based on the results from the Programme of International Student Assessment (PISA) (Figure 4.10, Panel A). The education system also fosters intergenerational social mobility, as the influence of parental background on students' secondary education achievement is lower than in many other advanced countries (Figure 4.11, Panel A). Moreover, Australia ranks relatively high in terms income mobility, with less than 20% of the earning advantage being passed on from parent to offspring (Figure 4.11, Panel B).

There is still scope for improvement, however. Despite good performance, gaps in education outcomes remain for some groups (Figure 4.10, Panel B). The PISA findings suggest that young Australians from low socio-economic backgrounds tend to lag at least one school year behind the Australian average, and more than two years when compared to students in the highest socio-economic quartile. Ensuring equity in education is of great importance not only to help break the cycle of disadvantage but also to increase the employment potential of the economy. At the same time, to sustain growth, the education and training system needs to provide the "right" skills required by a rapidly changing economy and to address skill shortages. Recent projections for the demand for qualifications in the decades to come indicate that about two-thirds of employed people need a higher qualifications profile (Certificate III and higher) by 2015, which rises to 70% in 2025 (Skills Australia, 2010). Only half of employed people hold such qualifications now. Hence, the future labour force will not only need more skilled people but higher level skills.

Figure 4.10. **Education outcomes**



1. The three skills are weighted equally in the total score. Data for the United States in reading proficiency is from PISA 2003.
2. Australia is compared to the six countries with the highest mean performance.

Source: OECD (2007), *PISA 2006: Science Competencies for Tomorrow's World* and ACER (2007), *At Risk Students, PISA 2006 National Report: Fact sheets*, Australian Council for Educational Research.

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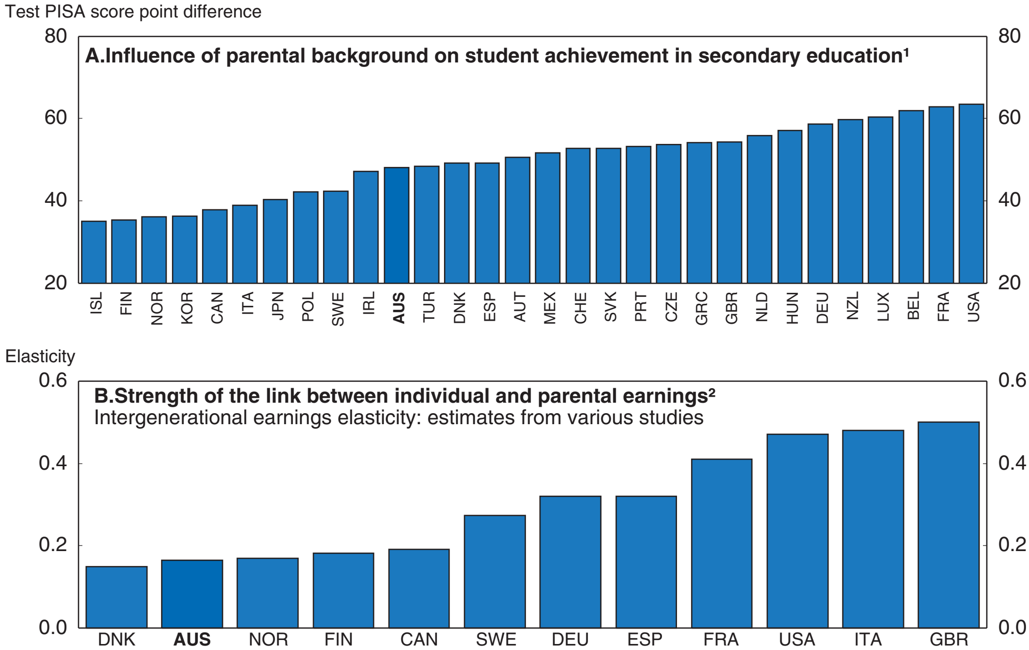
A more effective use of immigrants would help to address skill shortages and social exclusion issues for this group. Australia compares well internationally in employing immigrants (Figure 4.3). This is also helped by the country's immigration policy which favours skilled migration linked to the labour market needs. Recent empirical evidence also suggests good outcomes for children of immigrants in terms of educational (measured by the PISA scores) and employment outcomes (Liebig and Widmaier, 2009). However, there is still scope for improving labour market integration of immigrants, as discussed in the previous *Survey*. Participation of immigrant women remain low in international comparison (OECD, 2007c). Moreover, while immigrants from the main English-speaking countries tend to perform better than the native-born, those coming from non-English-speaking countries have more difficulties in the labour market and tend to be more exposed to the problem of overqualification (*i.e.* working in jobs/occupations where the worker is overqualified) (Box 4.4).

Figure 4.11. **Education and intergenerational mobility**



1. Change in PISA science score due to an improvement of one country-specific inter-quartile change in the PISA index of student socio-economic backgrounds. For details, see O. Causa and C. Chapuis, 2009.
2. The height of each bar measures the extent to which sons' earnings levels reflect those of their fathers.

Source: OECD (2010), *Economic Policy Reforms 2010: Going for Growth.*

StatLink http://dx.doi.org/10.1787/888932344938

Box 4.4. **Making effective use of migration**

Migration is an important contributor to labour supply in Australia, helping alleviate skill shortages (Figure 2.3, OECD, 2008a). Net overseas migration currently accounts for around two thirds of population growth. Over the past decade, Australia has increasingly favoured skilled immigration by increasing the size of the Skill Stream within the annual permanent Migration Programme (OECD, 2008a). Migrants are rated with a test that gives bonus points for age, Australian qualifications, fluency in English, and skilled work experience. Another entry option is temporary migration (including international students and business visas). This has grown rapidly in recent years, and now adds more to population than the permanent programme.

Within the skill stream, there has been a marked shift towards demand-driven migration since 2009 with an employer directly sponsoring an overseas worker. Employer sponsored skilled migration places will grow by 26% in 2010-11, whereas general skilled migration places will fall by 5.2%. A number of reforms are currently underway aiming to better align skilled entry programmes with labour market requirements to help alleviate skill shortages. Initiatives include: a revision of the skilled visa processing priorities to give highest priority to employer and state sponsored visas; a tightening of eligibility requirements for the general stream migration programme through the introduction of a new, more targeted, Skilled Occupations List (reducing the critical skills list from 400 to 181 occupations); and a review of the points test used to assess applicants under the programme to better target skilled migrants. Moreover, reforms to the subclass 457 visa (temporary business long stay visa) increased the protection for temporary workers through the introduction of market-based

Box 4.4. **Making effective use of migration** *(cont.)*

minimum salary rates for the holders of such visas, although as with all other temporary residents no access is granted to the social support programmes. Official estimates suggest that net overseas migration will fall by 20% in 2009-10 (about 56 000 people) compared to the previous year in response to changes in migration policies and economic conditions (Australian Government 2010c).

Restrictions on migration would undermine the demand driven approach and potentially exacerbate supply bottlenecks

Migrants make up around a third of total employment in Australia. However, distinct patterns of labour market outcomes remain, with differences between immigrants originated form English-speaking countries and those from non-English-speaking countries, with the latter group also ranking low in other indicators of social exclusion (see above). In addition, evidence suggests room for a more adequate use of immigrants' human capital, as overqualification tends to be greater for immigrants (OECD, 2007c), even though Australia is close to OECD average. Immigrants from non-English-speaking countries are more exposed to the problem: around half with degree-qualifications achieved a professional or managerial outcome, according to the 2006 Census (OECD, 2008a).

Recent moves towards a more demand-driven skilled migration will not only facilitate full-time employment in highly skilled jobs, but reduce social exclusion among immigrants. A more effective system of assessment and recognition of foreign qualifications and experience is still necessary to limit exposure to over-qualification (OECD, 2008a). The development of a national licensing regime, agreed by COAG in April 2009, will contribute to this, as it will introduce a benchmark for offshore assessment arrangements for skilled workers. By removing inconsistencies across states the new regime will also facilitate mobility. It would also be advisable to assess carefully the longer-term impact of restrictive social security rules for newly arrived immigrants (the two-year waiting period before they become eligible for income support) on immigrants' occupational patterns. This policy was found to have a positive impact on the probability of immigrants finding a job, but a negative effect on their probability holding a good job based on previous qualifications (Junankar and Mahuteau, 2005). In case that this initial downgrading has long-lasting adverse effects, the length of the waiting period could be reconsidered, as it was advised by the previous *Survey*. Making workplacements in skills jobs more broadly available during this waiting period which affects eligibility for most job support schemes could help addressing issues of overqualification among immigrants (OCED, 2007c).

Migration will remain an important tool to address skill shortages, especially in light of the critical demographic challenges of an ageing population and the differentiated labour demand across states and industries because of the mining boom (McKissack *et al.*, 2008). Official estimates suggest net migration of between 150 000 and 230 000 a year would ensure that the labour force continues to grow quite strongly over the next 40 years (Australian Government, 2010b). Migration is also expected to deliver fiscal benefits. The 2008-09 permanent entry programme is estimated by the government to have a positive impact on the budget ranging between AUD 609 million (in 2010) to AUD 1.3 billion (in 2030). To ensure further increases in migration inflows, given their importance for the resource states in the years to come, reforms are necessary to improve water resource management and address infrastructure bottlenecks. Improving housing availability and affordability, and enhancing education and health services are also important issues to be addressed. Migration policy should be pursued as part of a broad strategy of population growth, and in this context, the assessment of migration policy in a long term perspective is welcome.

Promoting better educational equity can reduce social exclusion

Early interventions tend to be key to reducing intergenerational inequalities (Causa and Chapuis, 2009). Participation in early education, and spending on such services, are low in Australia (OECD, 2008a). Only a third of three to four year olds were enrolled in pre-primary programmes in 2008 – less than half of the OECD average – and public spending on these services at 0.04% of GDP is a tenth of the OECD average (OECD, 2010c).[19] Many disadvantaged children are left behind, although they have the highest payoff from early childhood education services (Heckman and Masterov, 2007). The Australian Early Development Index also suggests that high proportions of "developmentally vulnerable" children enter full-time school directly from the disadvantage groups (ASIB, 2010). The implementation of the National Partnership Agreement on Early Childhood Education, targeting the provision of universal access to pre-school for all children in the year before formal schooling by 2013, should be a key priority (Box 4.5). In the longer term and as fiscal

Box 4.5. **Recent measures to address education challenges**

Reducing educational disadvantage features high in the policy agenda. Recognising the importance of early childhood development, the Council of Australian Government (COAG) has developed the National Partnership Agreement on Early Childhood Education aiming, among others, to provide by 2013 universal access to quality preschool (delivered by a university educated early childhood teacher) for 15 hours per week, 40 weeks a year to all children in the year before they start school. Reforms are also underway to reduce fragmentation and complexity in the ECEC sector, through replacing current licensing and quality assurance processes by a unified national system, and providing a single set of national quality standards, incorporating an Early Years Learning Framework. Children will benefit from improved staff qualifications and staff-to-child ratios, while annual benchmarking will monitor preschool participation of disadvantaged Indigenous children.

In the school sector, the Smarter Schools National Partnerships target additional resources to the most disadvantaged schools and help to ensure that highly performing teachers are recognised and rewarded in schools in low socioeconomic areas. Particular attention is given on early intervention in primary education to improve literacy and numeracy skills of underperforming students, especially for Indigenous students (Australian Government 2010a). Publicly available information on individual school performance (My School website) and contextual information about the school also aim at improving outcomes for disadvantaged children. Finally, in various locations in Northern Territory and Queensland, the income support payments to parents became conditional on child school attendance. The COAG's agreed target for school education is to lift the Year 12 or equivalent attainment rate from around 75% to 90% by 2015, and to halve the gap in literacy and numeracy in the Year 12 attainment rate for Indigenous people by 2020.

At the tertiary level, following a comprehensive review of the sector (the Bradley Review), significant reforms are being implemented to raise participation among students from low socio-economic backgrounds by easing the highly restrictive conditions for accessing the student income support scheme and an uncapping of university places. The age of dependence for the purposes of receiving student support will be lowered* and the personal income test and family income test thresholds will increase, allowing students who

* Students' eligibility for income support (Youth Allowance) is assessed against parental income and assets. The age of independence from parental means testing is 25. Students at, or above, this age are eligible for means-tested Austudy grants while younger students who can demonstrate financial independence, through meeting specific workforce participation requirements, are eligible for Youth Allowance. The age of independence is set to be reduced from 25 years to 22 in 2012.

Box 4.5. **Recent measures to address education challenges** *(cont.)*

work to keep more of their income support. Other initiatives include the Higher Education Participation and Partnerships Program (HEPPP) and the new Performance Funding framework for universities. The HEPPP targets directly students from low SES backgrounds through outreach activities, as well as financial incentives and funding for necessary intensive support for universities. In addition, the proposed Performance Funding framework for universities includes financial incentives for universities to enrol students from low SES backgrounds. The move to an uncapped system from 2012 onwards is expected to enable around 50 000 new students by 2013, helping to meet the set target that 40% of all 25-34 year olds will attain a bachelor level qualification or above by 2025 (Australian Government 2009a). A more robust quality assurance process, through an independent national quality and regulatory agency, and performance funding, with reward funding attached to targets for teaching quality, participation and completion rates will provide additional benefits.

Moreover, a strategy for skills was announced in the May 2010 budget (the *Skills for Sustainable Growth* package of AUD 660 million over four years), complementing measures taken during the downturn (Australian Government, 2009b). This aims at: *i)* addressing emerging skill shortages through the provision of new training places, co-funded with industry, in resources and related sectors, and further support for apprenticeships including a more flexible competency-based apprenticeship system and extension of ongoing programmes (Kickstart); *ii)* delivering literacy and numeracy courses for up to 140 000 Australians to develop their foundation skills; and *iii)* increasing the quality and capacity of VET system, as well as its transparency and comparability. Announced initiatives in this regard include expanding income contingent loans for higher VET qualifications in return for significant training reforms by the states, the establishment of a National VET regulator, and provision of information (My Skills website) on the performance of vocational institutes in assisting unemployed people to choose training options better matching their needs (Australian Government, 2010e).

circumstances allow, consideration should be given to further improving the quality of early childhood education and extending its access to three-year olds, focusing initially on the disadvantaged groups. Consideration could also be given to extending the duration of provided services, to better accommodate child care and education needs and facilitate labour participation of parents, particularly single ones. Efforts underway towards a less complex and fragmented early childhood education and care (ECEC) system are welcome and need to continue. Greater consistency in policy and services across the child-care and early education sectors would bring benefits in terms of access and service quality, as highlighted by the previous *Survey*. The relatively low share of employees with a relevant formal qualification and high child-to-staff ratios in approved child-care services raise particular concerns (OECD, 2008a). The National Quality Framework for ECEC, being progressively implemented from 1 June 2010, will improve qualification requirements for child care staff and the staff-to-child ratios.

Increasing the social mix in schools, financial incentives to teachers and effective mechanisms for allocating public resources to schools would promote equality of opportunities and the overall performance of the education system. Teacher quality is critical for skill formation and educational equity (Causa and Johansson, 2009), yet the academic aptitude of new teachers and teacher students has declined over the past two decades (Leigh and Ryan, 2008). The previous *Survey* recommended changing the system of career progression, which imposes an upper limit for salaries 9 years after graduation, to keep the best teachers. The wage dynamics of teachers' salaries remain weak in Australia in international comparison (OECD, 2008a, Figure 3.8). The influence of family background on student achievement is lower in countries where teachers' wage progression is higher. To promote equity in education, the teacher remuneration system should create appropriate incentives for teachers to move to schools where high-quality teaching is most needed. Initiatives to ensure that highly performing teachers are recognised and rewarded in schools in low socioeconomic areas are therefore a move in the right direction (Box 4.5).

Additional funding to the low socioeconomic status (SES) schools is also welcome and may have greater payoffs than is anticipated in light of recent evidence that good quality schools are an effective crime prevention strategy (Leigh, 2010). Counteracting the effects of weak SES backgrounds on performance would further benefit from better taking into account the difference of socioeconomic backgrounds between students in school funding.[20] Delivering on a 2007 election commitment, the government has commissioned a comprehensive review into the funding arrangements for schools to report by end 2011. The review will provide recommendations for a funding system that is transparent, fair, financially sustainable, and effective in promoting educational outcomes for all students. Accountability, autonomy and choice are important determinants to student achievement (Wößmann *et al.*, 2007). The recently introduced nationally consistent testing system of literacy and numeracy standards of school students (NAPLAN), along with the provision of information (My School website) on individual school performance, are welcome steps towards strengthening accountability and monitoring outcomes for less disadvantaged students. The single national school curriculum, currently under development, would also contribute to this end. Giving autonomy to school principals in recruiting and rewarding teaching staff would help to attract and keep experienced teachers (OECD, 2008a). The new government has committed to introduce a range of school reform initiatives aiming to increase the responsiveness and quality of teaching and schooling. These include reward payments for best performing teachers and schools delivering improvements across areas (such as school attendance and literacy and numeracy performance), as well as enhancements to principal autonomy.

Australia's Higher Education Loan Program (HELP) – an income-contingent government loan provided to tertiary students to cover the cost of tuition – is an innovative programme, setting a model for other countries (OECD, 2008b). However, educational disadvantage at the tertiary level could be reduced further through better income support mechanisms for financially weaker students, as recommended in the previous *Survey*. HECS helps students to overcome fee-barriers to higher education, but students also need support in the years of study. A relatively large proportion of undergraduate students (23% of full-timers and 37% of part-timer students) reported that they regularly missed classes for work related reasons, especially in the case of Indigenous students (James, *et al.*, 2007). A reform of the student income support system is currently underway following a comprehensive review of the system (Box 4.5). The government's target is to have 20% of higher education enrollments at the undergraduate level from low socioeconomic background by 2020.

Increasing the capacity of the vocational education and training system would reduce skill shortages

The vocational education and training (VET) system is a well developed, flexible national qualification system that actively engages employers and allows people of all ages to participate (Hoeckel *et al.*, 2008). To further improve the system, however, it should be made more responsive to changing skill needs. The high exit rates of apprentices during training (around 50%) is a very important policy issue in view of skill shortages (Karmel and Mlotkowski, 2009). A number of reasons, both employment- and training-related, such as alternative job opportunities, low training wages, and the long duration of contract term can be risk factors for completion rates. There also has been a sharp fall in the 15-24 year old apprenticeship commencements during the economic slowdown (declining by 23% in trade occupations in the year to March 2009), that may reflect the fact that apprentices tend to be concentrated in industries where employment itself is cyclical or the high costs to employers of supervising apprentices during a downturn (Karmel and Misko, 2009).

Initiatives in recent years have aimed to increase the flexibility of the training system. Regarding apprentices, reforms in 2006 and recent commitments by the Council of Australian Governments, are moving to competency-based apprenticeships from time-based approaches. However, these reforms need to be translated into action, as in practice apprenticeships still tend to have standard lengths. New measures were introduced during the downturn to sustain apprenticeships, helping commencements to return to their pre-recession levels (Gillard, 2010). These include incentive payments for employers upon completion of apprenticeships and, subsidies for hiring redundant apprentices.[21] The 2010-11 budget announced further action on apprentices (Box 4.5). An Expert Panel was appointed to analyse apprenticeship training arrangements, and Fair Work Australia is also examining the consequences on setting minimum wages from a shift from time-based apprenticeships to competency-based ones. A key focus of the measures in the latest budget is on tackling literacy and numeracy deficits and improving the quality of the VET system. The initiatives include the establishment of a national VET regulator and the provision of Commonwealth support to the states for training improvements (including access to training). The provision of financial support, which includes access to income contingent loans for eligible VET students, is also key to stimulating demand for these programmes and improving the capacity of the training system to meet skills needs.

Steps towards reforming the vocational education and training (VET) system are welcome and need to continue. A more flexible apprenticeship system hinges upon the effective implementation of competency-based apprenticeships. An overhaul of the training packages (providing a comprehensive list of the competencies required to work in an industry sector and ways to assess them) is also critical, making them less cumbersome and more frequently updated to meet changing skill demands. Designing training packages around generic tasks, rather than certain jobs, could increase their attractiveness for students who want to study in a certain area but do not have a particular job in mind (Hoeckel *et al.*, 2008). A national assessment procedure to determine whether the necessary skills have been acquired would be necessary and in line with international experience. Greater competition in VET would increase its labour market responsiveness. The 2008 *Learning for Jobs: OECD Review of Vocational Education and Training* recommended enabling students entitled to public funding to choose providers, highlighting at the same time the need for ensuring that competitive pressures do not limit the quality and quantity of provision to students from disadvantaged backgrounds (Hoeckel *et al.*, 2008). VET represents the main pathway for Indigenous students to continuing education and schooling, as they are, in general, less likely than their non-Indigenous counterparts to obtain a high enough score for university entry (SCRGSP, 2009). The majority of the Indigenous students, however, are at lower-level VET courses which may not meet the demands of employers. In seeking to address the issue, one should assess carefully the shorter term employment concerns against the potential benefits for VET courses to promote intergenerational mobility of Indigenous Australians by offering them a stepping stone for social and economic market integration.

Social inclusion calls for comprehensive service delivery

Much can be done to improve social inclusion of people with disability and mental illness

People with disability need comprehensive support services to deal with a combination of homelessness, poor health, limitations in the capacity of education system to meet special needs, and lack of social networks. Shortcomings in the current system of disability services and support is a critical issue. The system is considered, according to a recent survey among people with disability, as being highly fragmented, under-funded and under-resourced, with large unmet demand and wasted resources on managing demand and rationing services. Effectiveness is also reduced by a "one-size-fits-all" approach (NPWDACC, 2009).

A range of services is funded by the government, but people with disabilities and their families have no guaranteed access to specialist disability services. In 2007-08, it is estimated that a fifth of the population (0-64 years) with profound or severe disability accessed disability support services delivered by the states (broadly, in-home accommodation support, community access, community support and respite services). Disability employment services provided by the Commonwealth were accessed by 16% of people with profound disability (COAG Reform Council, 2010a). It is difficult to assess the level of current unmet demand for services as there are no available data. Proxied by the proportion of people with profound disabilities who need assistance, 43% stated in 2003 that they needed more assistance than they are currently receiving, especially among the 15-24 age group (COAG Council Reform, 2010a). While this figure needs to be treated with care, as it includes the need for informal assistance, it is indicative of underlying pressures in the existing system. This is likely to increase further, as the population with a high level disability is projected to grow over the next 70 years (between two and three times the overall population growth rate), and the availability of informal care is set to decline (DIG, 2009). A more effective disability service system is needed, especially for those with mental health problems. Around a third of disability support pension inflows in 2008 were due to mental and psychological problems, especially for younger groups.

Efforts underway to improve disability policies (Box 4.6) are welcome and should continue, with a special focus on people with mental illness. Addressing better the shortcomings in the current system of support and services is critical, as the government has recognised. A less fragmented and complex system would facilitate access to services and improve quality. The revised national standards for health care, currently under development, are an appropriate policy initiative in this regard, including state specific legislation, sector accreditation and professional regulation. Efforts towards developing a national quality assurance system for disability services are welcome.

Problems associated with mental illness tend to be less severe and of shorter duration when detected and treated early (COAG, 2006). Early intervention is, therefore, a better and less costly approach than hospital care. The extension in 2010 of school-based early prevention programmes to pre-school and long-day care services and recent budget initiatives to this end need to continue. Also, moving swiftly to a more individualised approach to services as agreed by the governments under the National Disability Agreement and lifelong planning for individuals with disabilities, are indispensible to help them prepare for key transitions, such as young people moving from school to work or

Box 4.6. **Policy initiatives to promote employment and social outcomes for people with disabilities**

The government is taking steps to develop a *National Disability Strategy* (NDS) to guide disability policy across states and territories. The strategy aims to improve the opportunities of people with disability to participate in social and economic life through the better performance of the disability service system and mainstream systems for people with disability and their carers in a whole-of-government, whole-of-life manner (NPWDACC, 2009).

Recent government initiatives further include an increase in income support to people with disabilities and their carers through the *Secure and Sustainable Pension Reform* package. The government also increased funding for state disability services through the National Disability Specific Purpose Payment under the *National Disability Agreement* (NDA) providing approximately AUD 5.8 billion over a five year period to states and territories starting in 2008-09 (around 0.5% of GDP in 2009-10 dollars). Under the *NDA*, which commenced in January 2009, state governments have committed to a number of reforms, including a person-centred approach to service delivery, simplified access to services, improved measurement of unmet demand, quality assurance and benchmarking. There is also a renewed focus on early intervention and planning to ensure that people with disabilities receive a timely and appropriate support. Increasing access to services for Indigenous Australians is also a priority action area under the agreement (Australian Government, 2010a). Support and services will be further enhanced by the *National Mental Health and Disability Strategy*, encompassing a new demand-driven Disability Employment Service (discussed above) and incentives to encourage employers to hire people with disability and/or mental illness.

Mental health is a priority area in the disability reform agenda. The *Fourth National Mental Health Plan*, an agenda for a collaborative government action over the period 2009-14, provides a framework for developing a mental health system for early intervention based on integrated services in health care and social domains, with particular attention on support for children and young people. This is because mental health problems can appear in childhood and infancy. The initiative has so far had positive results in terms of health outcomes and high degree of satisfaction with the services (Australian Government 2010a; 2010f).

In addition, the Fourth Plan has a focus on social inclusion. This is to be achieved by the development of integrated approaches between health, education, employment, housing and aged care systems sectors and health support services (Australian Government, 2010a).The May 2010 budget set out, under the comprehensive health reform package (Chapter 2), some additional initiatives for mental health care (AUD 176 million over four years), including an extension of early intervention services for young people 12-25 years, individualised care packages for people with severe mental illness in primary care, and an expansion of community-based residential mental health services, providing an alternative to hospitalisation.

leaving home (DIG, 2009). This can be achieved by making the system of services more client-oriented. Individual planning must help people with disabilities to develop new skills and realise their potential. Better integrated mainstream systems such as health, ousing, education for people with disability and/or mental illness, increased co-ordination between mainstream and specialist disability services, and an effective system of employment services are important for improving participation outcomes for people with disabilities. Furthermore, the welfare system needs to be reformed in a way that does not reduce work incentives (see above).

Access to community-based residential health services also needs to improve. According to some analysts, 40% of the acute beds in public hospitals could be freed up if there were better community-based services for people with mental illness (Breusch, 2010). This would reduce costs of hospitalisation, and facilitate social inclusion. Some steps in this direction were taken in the latest budget, but efforts need to continue (Chapter 2). COAG agreed to do further work on the scope of additional mental health reform in 2011. Encouraging people with mental illness to seek assistance is also of great importance only a quarter of young Australians aged 16-24 years who had a mental disorder in 2007 used mental health services in the previous year (ABS, 2010b).

Long-term solutions to funding and delivering disability services are also needed to meet the growing pressures on the system. A feasibility study, commissioned by the government from the Productivity Commission, is currently underway. Better measurement of demand for disability services is essential to design a system that will meet future needs and develop population benchmarking of key service types one of the priority areas under the National Disability Agreement. Further data development is also necessary to develop sound performance indicators of the disability services system (COAG Reform Council, 2010a).

Addressing homelessness

Reducing homelessness is of key importance to combat social exclusion. The causes of homelessness are many and diverse, and often interacting, including problems of housing affordability, long-term unemployment, mental health problems, addiction and family violence. Housing is deemed to be "affordable" when a low income household (in the bottom 40% of disposable income distribution) pays no more than 30% of its gross household income on housing cost (ASIB, 2009). Homelessness can be a once-in-a-lifetime event, a cyclical phenomenon or a chronic condition. For many people, especially young ones, the experience of homelessness can lead to an entrenched disadvantage, and exclude them from full social and economic participation. This in turn can exacerbate existing problems, such as mental illness (AIHW, 2009).

Addressing homelessness is an integral component of the government's social inclusion agenda. The White Paper on Homelessness (*The Road Home 2008*) sets out a new national response to the problem, with new investment and reform of existing services. The White Paper adopts two headline objectives: to halve overall homelessness by 2020 and to provide shelter to those who seek it by that date, setting interim targets for 2013 to measure progress towards these objectives (FaHCSIA, 2008). The focus of the strategy is on prevention and early intervention through tackling the structural drivers of homelessness, such as shortage of affordable housing and targeting groups at risk, including Indigenous Australians and women faced with family violence. Emphasis is also put on breaking the cycle of homelessness by rapidly connecting homeless people to long-term housing, while assisting them to reconnect with education, employment and the community so that homelessness does not recur.

The social inclusion agenda on homelessness is administered through the National Affordable Housing Agreement (NAHA) (AUD 6.2 billion over five first years). In addition to funding public social housing, NAHA has provided funding to states for housing and specialist homelessness services since 2009. The federal and state governments have agreed to work together to reduce homelessness, improve housing affordability and reduce Indigenous disadvantage (AIHW, 2009).

Other reform initiatives underway include an expansion of social housing (both new dwellings and renovating) under the Nation Building Economic Stimulus Plan and partnership agreements on homelessness, social housing and remote Indigenous housing planning. The National Rental Affordability Scheme is offering financial incentives to encourage the supply of new housing to be rented out to low income households at below market rents.[22] Innovative housing models to break the cycle of homelessness are also under development. The Foyer model provides young homeless people, or those at risk of homelessness, affordable accommodation along with support and guidance to job search and get improved skills and education. Further benefits are expected from the introduction of specialist community engagement officers (CEO) in Centrelink (the agency delivering a range of government services) to provide outreach services to homeless people, or those at risk of homelessness, who have difficulty in accessing mainstream services (Australian Government, 2010a). These officers will also collaborate with local service providers to help prevent homelessness. It is expected that the CEOs will have 216 000 contacts per year.

These policy initiatives are welcome as a comprehensive and co-ordinated approach is needed to support the affected groups across their full range of needs, given the multi-dimensional nature of the problem. Improving housing affordability for low-income households is a central element in this regard. Nationally, more than 37% of low-income renter households were in rental stress in 2007-08, and 47.5% of those households were in the private rental market (COAG Reform Council, 2010b). Declines in the supply of low-rent private rental dwellings and in the social housing stock as a proportion of total stock have exacerbated pressures (NHSC, 2010). Hence part of the approach to reducing homelessness and housing stress should be to increase the supply of appropriate low-rent housing. Recent government measures under the National Rental Affordability Scheme, which offers financial incentives to the business sector and community organisations to build and rent dwellings to lower income households, are expected to boost the private rental stock housing affordable to low-income household, although they have not yet had a substantial impact (NHSC, 2010). Social housing, accounts for only 4-6% of the housing stock in Australia, paying a smaller part in housing supply than in European countries (Cowans and Maclennan, 2008). This is targeted at households who may have both low incomes and other disadvantages. However, it is set to increase through the funding provided by the Nation Building Economic Stimulus Plan. In some remote rural regions, social housing may be the only accessible housing for Indigenous people. It is important to ensure that any additional supply of low-rent housing is closely tailored to the household status of tenants, and provide them with access to housing in locations that facilitate social inclusion. Provision of accommodation options is of great importance for people with disabilities, especially those with mental health problems.

However, social housing is a relatively expensive way of providing assistance, compared to rent subsidies in the private rental market and it tends to reduce incentives to work and geographical mobility as people get locked into subsidised dwellings. It also tends to be poorly targeted, raising equity concerns with regards to those renting privately, with similar means, who receive less subsidy (Australian Government, 2010d). Under current arrangements, low-income households receiving income support or family payments and renting privately can receive payments towards their rental costs through Commonwealth Rent Assistance scheme ("rent assistance"), the structure of which has been carefully designed to minimise its costs while targeting those who need it most. Alternatively, low-income households may be eligible for public housing, where rents are typically set at a maximum of 25% of tenants' incomes, the implicit assistance being the difference between the rent charged and the market rent. As of 2009, more than one million households were receiving rent assistance, at a cost of AUD 2.6 billion, while about a third of a million households were in public housing, receiving a subsidy of AUD 1.6 billion (Australian Government, 2010d). Public housing is thus relatively more costly to fund (per household) than rent assistance because the subsidy element is relatively more generous. To remain on a waiting list, potential tenants must be on low income, which can discourage job search and degrade their human capital. Employment rates of public housing tenants are far lower than those in private rented accommodation (30% compared to 80% for males).

To promote equity, work incentives and efficient provision of social housing, consideration could be given to allowing public housing tenants (except those in the remotest rural areas) to access rent assistance, while charging them rents that are close to, or even at, the market rent, as proposed by the AFTS review. Care should be taken that the new system ensures equity in access to social housing while it attempts to address efficiency concerns.

The effectiveness of the rent assistance system can also be improved. Its low cost per household reflects in part a lower degree of assistance than envisaged when the system was put in place. The rent caps for maximum assistance are indexed to the consumer price index (CPI), but the rent element of the CPI has risen considerably more than the overall CPI in recent years. Consequently, those living on low incomes, and especially on other social transfers, are obliged to use a rising part of their incomes to pay their rents. More generous rent assistance, indexed to the rent component of the CPI, or to market-rate rents actually applied to dwellings occupied by those benefiting from income support as suggested by the AFTS review could be considered, provided that upward pressures on rents are contained (Chapter 1) and fiscal costs are not prohibitive. In any case, the principle of co-payment of rent by tenants must remain.

Affordable housing is of major importance in reducing homelessness. Some people, however, may have access to affordable housing but are not able to keep it. Severe mental health illness, for example, may mean that people forget to pay the rent. In the case of homeless youths, care settings that replicate as far as possible a family situation may be more important than housing affordability (Johns, 2010). This highlights the complexity of the needs of homeless people and the importance to ensure that the way services are delivered can provide the full range of support, on an individualised basis, for these people. Involvement of homeless people in service planning and evaluation is important in order to adequately respond to their needs (for example, specific needs for housing of aboriginal population). The development of a national research agenda on homelessness, to improve the evidence base for tackling the problem is a welcome step. Performance benchmarks for inclusion in the National Affordable Housing Agreement, as recommended by the COAG Reform Council (2010b), would allow a better monitoring of progress towards achieving outcomes.

Improving the governance of policy actions is important for effective results

Better co-ordination among the various groups responsible for the delivery of services would make implementation of the Social Inclusion Agenda effective. While the respective responsibilities of states' and the Commonwealth has been clarified by the National Action Plans, implementation seems to lag behind announced objectives in important areas, including for Indigenous Australians. The first reports by the COAG Reform Council assessing performance against National Agreements in health care, housing, Indigenous reform and disability confirm the "overwhelming disadvantage" of the Indigenous population in all these areas (COAG Reform Council, 2010c). A key problem is efficient service delivery to people with multiple disadvantages. For example, young children may not attend school if their health problems go undetected, or housing provision may need to be accompanied by instructions on how to pay bills on time. Such experience highlight the need for a comprehensive approach, that also engages the disadvantaged groups at an early stage of the policy process to adequately respond to their demand, as for example, the case of housing of the aboriginal population mentioned earlier.

All these factors reinforce the need for a close collaboration among – and within – various levels of government, and non-government providers. While this is already being recognised by the government, further gains could be achieved through an individualised approach in line with that adopted by the new employment services system. As discussed above, the system links each job seeker to a provider who has the flexibility to tailor services to the specific conditions of the job seeker. Support for people facing multiple and entrenched disadvantages should cover their full range of needs and be provided by a multi-disciplinary team which would plan carefully on an individual basis.

Going forward, the further development of the comprehensive set of indicators for social inclusion developed by the government will be critical for measuring progress in addressing disadvantage among individual groups or highly vulnerable neighbourhoods or regions.[23] The gaps in data were highlighted by the COAG Reform Council. Accountability could be further enhanced through the frequent reporting of the social inclusion outcomes against pre-set targets. The commitment of the government towards setting up a framework to regularly measure and report on social inclusion outcomes is a welcome and indispensible step for the development and implementation of effective policies (Box 4.7).

Box 4.7. **Increasing labour supply while addressing social inclusion**

Future policy improvements in the area of social policies will also need to ensure the long-term sustainability of the government's finances.

Labour market participation and social inclusion can be improved by reforms to the tax-transfer and child care systems

- To improve the safety net for the unemployed, consider raising, the Newstart Allowance for a limited-duration, the fiscal situation permitting. Maintain job-search requirements for benefit eligibility, active labour market policies and a credible compliance and sanction regime.
- The new system of employment services needs to provide balanced incentives for service providers to place unemployed clients from all streams. The training programmes need to be frequently monitored and assessed to ensure that they can help job seekers facing the greatest barriers to work.
- To improve work incentives, tighten participation requirements for the benefits received by parents with young children, while improving early childhood education and care services.
- Reduce marginal effective tax rates. Consider further cutting rates at low income or raising the tax free threshold. Consider moving to a "single family benefit" and simplifying cumulative withdrawal rates. The withdrawal rate of such a "single" benefit should avoid low wage traps.

Box 4.7. **Increasing labour supply while addressing social inclusion** *(cont.)*

- Make the child care benefit more conditional on employment or job search of parents, except when children face multiple disadvantages. The benefit should reflect better the differences of costs across locations and the higher cost of services for very young children. This can be achieved by moving towards a simple and adequate structure of child care subsidies, set as a percentage of out-of-pocket expenses. The cap on assistance should be maintained.
- Proceed with the announced introduction of paid parental leave scheme in 2011.
- Continue efforts to improve the job capacity assessment for people with disability. The new assessment process should be applied to all recipients of Disability Support Pension (DSP), including those who were granted DSP eligibility before 2006.

Maintain labour market flexibility

- Ensure that the new industrial relations system results in adequate wage differentiation by not extending collective bargaining beyond the company level.
- Given the already relatively high minimum wage, future increases should be moderate and take account of productivity developments to avoid exclusion of vulnerable and low-skilled workers.
- A carefully designed in-work benefits system could be explored as part of changes to existing income support and tax arrangements to reduce disincentives to work.

Labour skills and social inclusion would benefit from reforms to the education system and a more effective use of immigration

- Continue steps towards enhancing access to the early education and care (ECEC) services for more disadvantaged groups, while ensuring quality of services. Move swiftly to an integrated ECEC system.
- Proceed with plans to provide universal access to preschool for all children in the year before formal schooling by 2013. In the longer term and as fiscal circumstances allow, consideration should be given to continuing to improve the quality of early childhood education, and extending its access to three-year olds, focusing. Initially on disadvantaged groups. Consideration could also be given to extending the duration of services.
- The system of teacher career progression in the public sector should change so as not to cap salaries nine years after graduation.
- Modify the school funding mechanism to take adequately into account differences in the socio-economic backgrounds of students. Pay more to attract good teachers to schools servicing disadvantaged students.
- Proceed with the ongoing reform of the student support system for higher education students aiming at improving targeting and raise the level of assistance of those most in need.
- Proceed with the implementation of the announced strategy for skills. Move swiftly to competency-based apprenticeships. The training packages should become less cumbersome and be updated regularly to meet changing skill demands. Introduce a national procedure to assess whether the necessary skills have been acquired.
- Maintain demand-driven migration policies. Make workplacements in skilled jobs more broadly available and enhance the effectiveness of the system of assessment and recognition of foreign qualifications in order to a make a better use of immigrants' human capital. Proceed with the development of a national licensing regime, as agreed by COAG, and the introduction of a benchmark for offshore assessment arrangements for skilled workers.

Box 4.7. **Increasing labour supply while addressing social inclusion** *(cont.)*

Improving outcomes for people with disability and mental illness would enhance social inclusion

- Pursue efforts to improve disability services, especially for people with mental health problems. Reduce the fragmentation and complexity of the system. Proceed swiftly with the development of the revised national standards for health care. Develop a national system of quality assessment for disability services.
- Move swiftly to a person-centred approach to disability services, as agreed by the governments under the National Disability Agreement. Further extend services focusing on early intervention.
- Improve access to community-based residential health for people with mental health problems.
- Improve measurements of demand for disability services. Develop sound performance indicators.

Addressing homelessness contributes to social inclusion

- Continue efforts to reduce homelessness through a comprehensive policy focusing on early intervention and non-recurrence. Shift to a system of market rents and income-related rent-subsidies in public housing.
- Consider increasing the generosity of rent assistance by indexing it to the rent component of the CPI or to the market rates actually applied to dwellings occupied by income support recipients, provided that upward pressures on rents are contained, taking into account sustainability of fiscal policy.

Improving the governance of policy action would contribute to raising participation and social inclusion

- Improve co-ordination among the various groups responsible for the delivery of services to people with multiple disadvantages. Engage the disadvantaged groups at an early stage of the policy process to adequately respond to their demand.
- Adopt an individualised approach to the provision of services for people with multiple disadvantages, in line to that adopted by the new employment services system. Services should cover the full range of needs of vulnerable people and be provided by a multi-disciplinary team.
- Further develop the comprehensive set of social inclusion indicators developed by the government. Proceed with plans to set up a framework to regularly measure and report on social inclusion outcomes.

Notes

1. The eligibility age for superannuation will be increased to 60 by 2025.
2. Experiencing disadvantage in three or more of six selected economic, social or personal areas (covering income, work, health, education, safety and support) (ASIB, 2010).
3. A number of recent changes in the tax and transfer system may affect summary measures of income inequality: across the board reductions in personal income tax from 1 July 2008, including a rise in the thresholds for low and middle income taxpayers and in the low income tax offset; further cuts in personal income tax from 1 July 2009 and 1 July 2010, focused on lower and middle income taxpayers, as well as further increases in the low income tax offset; and significant increases in pension payments.

4. Updated research by Atkinson and Leigh (2010), provides evidence of increasing concentration of incomes, with the top one per cent having doubled their share of household income wealth since 1980.
5. The deprivation approach provides a sharper differentiation between individuals who can and cannot afford essential items than whether income is above or below the poverty threshold.
6. Indigenous children are under-represented in child care but over-represented in preschool enrolments according to the *2010 Report on Government Services* (SCRGSP, 2010).
7. See, Fitzpatrick and Stephens (2007). Comparable cross-country information on homelessness is scared. The definition is particularly broad in Australia including people staying with families or friends. This goes some way of explaining the comparatively high rates of homelessness in Australia.
8. 45% of the homeless population in 2006 were staying with family and friends, 21% were in boarding houses, 19% were in a Supported Assistance Programme and 16% were sleeping out or in improvised dwellings (Chamberlain and Mackenzie, 2008).
9. According to Homelessness Australia (2010), older people are under-represented among people assisted by homeless services: 17% of homeless in Australia are aged 55 and over but only 6% stayed in homeless assistance services in 2006-07.
10. Since September 2009, parenting payment for single parents, although pension, is paid at a lower rate. Also Austudy for full-time students and Australian Apprentices aged 25 years or over is paid at a lower rate than the main Newstart Allowance.
11. In addition to being indexed to price changes, pension rates are also benchmarked to community living standards, as measured in the increases in wages measures (male total average weekly earnings). A third factor, the Pension Beneficiary Living Cost Index (PBLCI), is now taken into account for other pensions apart from the parenting payments for single parents. Allowances, on the other hand, are indexed solely to prices.
12. Current arrangements include the retention of a non-payment period of 8 weeks for serious or repeated participation failures, although case management will seek to avoid unreasonable hardship on eligible recipients (OECD, 2006).
13. See endnote 3.
14. That is, costs in excess of CCB payments received for approved child care.
15. Under the Fair Work Act 2009, Fair Work Australia can facilitate multiple-employer bargaining for certain kinds of employees, being the low-paid who have not had access to the benefits of, or who face substantial difficulty undertaking, enterprise-level collective bargaining. This includes employees working in areas like child care, aged care, community services, security and cleaning, who are often paid the basic award rate.
16. There was a 39% increase in the unfair dismissal applications under the Fair Work Australia over the period July 2009 to June 2010 compared to the number received under the previous industrial relations system in 2008-09. This was not unexpected given the enhanced coverage for unfair dismissal.
17. The Fair Work Act 2009 does not require enterprise agreements to include third party arbitration, but the Fair Work Principle on Procurement does require it as a demonstration of best practice in dispute settlement. Suppliers also have to ensure that their subcontractors comply with principles. Fair Work principles are limited to procurements above a specific threshold (Skulley, 2010).
18. Australia has a "transitional" IWB scheme – the Employment Entry Payment – paid as a lump sum to people moving into full-time employment. Benefits are available to a lone parent on income support payment, or long-term support recipient (12 months and above). See, Immervoll and Pearson (2009).
19. Statistics on pre-primary education in Australia include preschool institutions but exclude preschool programmes delivered in other early childhood education institutions, such as child care centres. As a result, the reported figures can understate the actual levels of expenditure and participation at the pre-primary level.
20. Under present arrangements the federal government is the primary source of public funding to non-government (private) schools, while government (public) schools are mainly resourced by the states. For a discussion on the drawbacks of the current federal funding model, see OECD (2008a).
21. These include a *Securing Australian Apprenticeships* initiative to help employers keep apprentices and the *Apprentice Kickstart*, which began in December 2009, tripling first year incentives for

employers to take on young apprentices in trades like building and construction, electro-technology and engineering.

22. The scheme is offering financial incentives (Commonwealth refundable tax offset or payment and state direct or in kind support) to the business sector and community organisations to build and rent dwellings to low and moderate income households at 20% below-market rates for 10 years.

23. Vinson (2007) concludes that the most disadvantage 3% of localities across the country have at least twice the average share of unemployment, long-term unemployment, disability support, criminal convictions and imprisonment. People in remote and rural areas also have less access to high quality services (see above).

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ANNEX 4.A1

To better understand what influences well-being in Australia, an ordered probit and Weighted Least Squares (WLS) regressions of self-reported life satisfaction were run for various explanatory variables with data from the World Values Survey. This method, which is in line with recent practice in the literature (Stevenson and Wolfers 2008), avoids the problems associated with arbitrary weights with index-based comparisons. The ordered probit approach is justified by the qualitative categories scores defining the variable "life satisfaction", from 0 to 10, and is the common theoretical approach in the literature. However, as both Ferrer-i-Carbonell and Frijters (2004) and Stevenson and Wolfers (2008) point out, in practice the choice of ordered probit or least squares make little difference for life satisfaction data. The WLS coefficients are then used as the basis for our analysis since they are relatively easy to interpret intuitively. The individual fixed effects (age, squared age, sex, marital status, number of children) included in the regression reduce the chance that unobserved heterogeneity, like ability, exaggeration or family background, is driving the observed correlation, making happiness data more comparable across individuals. Finally, the relative importance of well-being determinants is gauged through "compensating differentials", computed as the ratio of the WLS estimated coefficients of each determinant over log income, assorted with a statistical test which concludes on whether they are significant at 5% level or not.

Table 4.A1.1. **Ordered probit regression of life satisfaction on different components**

	Ordered probit regression, micro data, Australia	WLS regression, micro data, Australia	Ordered probit regression, micro data, OECD countries	WLS regression, micro data, OECD countries	Compensating differentials (with respect to log income), Australia	Compensating differentials (with respect to log income), OECD
Material living standards						
Log income	0.130** (0.054)	0.219** (0.074)	0.105** (0.016)	0.271** (0.013)	–	–
Wealth accumulation	0.029** (0.011)	0.036* (0.020)	0.040** (0.003)	0.083** (0.003)	0.16** (0.054)	0.30** (0.038)
Health						
State of health (subjective)	0.341** (0.035)	0.616** (0.066)	0.330** (0.011)	0.717** (0.010)	2.81** (0.177)	2.64** (0.021)
Self-sufficiency and education						
Unemployed	–0.250** (0.103)	–0.485** (0.184)	–0.232** (0.038)	–0.582** (0.040)	2.21 (0.334)	2.14** (0.081)
Educational level	0.057** (0.016)	0.044** (0.025)	0.002 (0.004)	0.086** (0.003)	0.20 (0.68)	0.31** (0.010)
Equity						
Income inequality (perceived)	–0.004* (0.010)	–0.009 (0.018)	–0.024** (0.003)	0.025** (0.002)	0.04* (0.495)	0.09** (0.008)
Personal activities						
Freedom of choice and control (subjective)	0.224** (0.017)	0.368** (0.014)	0.147** (0.005)	0.369** (0.006)	1.68** (0.056)	1.36** (0.007)
Environment						
C02 emissions (national indicator)	–0.002** (0.000)	–0.003** (0.000)	–0.000** (0.000)	–0.000** (0.000)	0.01 (0.104)	0.000 (0.006)
Social cohesion						
Trust in people (subjective)	0.048 (0.052)	0.377** (0.074)	0.111** (0.018)	0.365** (0.027)	1.72** (0.221)	1.34** (0.038)
Interest in politics	0.016 (0.031)	0.012 (0.039)	0.043** (0.010)	0.034** (0.014)	0.05** (0.126)	0.12** (0.044)
Extent of political corruption (sobjective)	–0.123** (0.047)	–0.076* (0.063)	–0.041** (0.011)	–0.193** (0.016)	0.34** (0.183)	0.71** (0.046)
Individual fixed effects						
Age	–0.060** (0.010)	–0.076** (0.011)	–0.042** (0.003)	–0.093** (0.002)	–	–
Squared age	0.072** (0.011)	0.082** (0.012)	0.050** (0.003)	0.099** (0.002)	–	–
Sex	0.104* (0.051)	0.065* (0.053)	0.069** (0.017)	0.116** (0.013)	–	–
Divorce	–0.117** (0.015)	–0.131** (0.018)	–0.065** (0.005)	–0.109** (0.004)	–	–
Number of children	0.009 (0.021)	0.126** (0.032)	0.022** (0.006)	0.013** (0.005)	–	–

Notes: The dependant variable is the answer to the question: "In conclusion, we would like to ask you about your satisfaction with your life in general, please answer according to the following scale, 0 means completely dissatisfied and 10 means completely satisfied: How satisfied are you with your life, all things considered?" The answers range on a scale from 0, completely dissatisfied, to 10, completely satisfied. The method used is ordered probit and WLS regressions of life satisfaction on components, with standard errors in parentheses, adjusted for individual-year fixed effects, for Australia, and individual-country-year fixed effects for OECD countries. The compensating differentials are the explanation power of *each indicator for life satisfaction compared to log income.*
Standard errors are in parentheses. * means this is significant at 10% level; and ** means that this is significant at 5% level.
Source: Data are from the World Values Survey, Australia and OECD countries, 1981 and 2007, 1660 respondents (Australia).

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