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OVERVIEW

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BETTER POLICIES FOR BETTER LIVES

This Overview is extracted from the Economic Survey of Australia. The Survey is published on the responsibility of the Economic and Development Review Committee (EDRC) of the OECD, which is charged with the examination of the economic situation of member countries.

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BASIC STATISTICS OF AUSTRALIA

(Data refer to 2017 or latest available. Numbers in parentheses refer to the OECD average)*

LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million)	24.60		Population density per km²	3.2	(37.7)
Under 15 (%)	19.0	(18.0)	Life expectancy (years)	82.5	(80.1)
Over 65 (%)	15.5	(16.5)	Men	80.4	(77.6)
Foreign-born (%)	27.7		Women	84.6	(82.8)
Latest 5-year average growth (%)	1.6	(0.7)	Latest general election	July 2016	
ECONOMY					
Gross domestic product (GDP)			Value added shares (%)		
In current prices (billion USD)	1,378.6		Primary sector	3.0	(2.4)
Latest 5-year average real growth (%)	2.4	(2.1)	Industry including construction	24.8	(26.7)
Per capita (000 USD PPP)	49.7	(42.3)	Services	72.2	(70.9)
GENERAL GOVERNMENT Per cent of GDP					
Expenditure	35.7	(40.7)	Gross financial debt	43.1	(109.8)
Revenue	35.1	(37.7)	Net financial debt	-12.7	(71.0)
EXTERNAL ACCOUNTS					
Exchange rate AUD per USD	1.30		Main exports (% of total merchandise exports)		
PPP exchange rate (USA = 1)	1.47		Crude materials, inedible, except fuels	33.0	
In per cent of GDP			Mineral fuels, lubricants and related materials	30.2	
Exports of goods and services	21.5	(29.2)	Food and live animals	12.2	
Imports of goods and services	20.9	(28.8)	Main imports (% of total merchandise imports)		
Current account balance	-2.62	(0.40)	Machinery and transport equipment	40.8	
Net international investment position	-55.9		Miscellaneous manufactured articles	13.9	
			Mineral fuels, lubricants and related materials	10.3	
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate for 15-64 year-olds (%)	73.0	(67.8)	Unemployment rate, Labour Force Survey (age 15 and over) (%)	5.6	(5.9)
Men	77.9	(75.5)	Youth (age 15-24, %)	12.6	(11.9)
Women	68.1	(60.1)	Long-term unemployed (1 year and over, %)	1.3	(1.7)
Participation rate for 15-64 year-olds (%)	77.4	(72.1)	Tertiary educational attainment 25-64 year-olds (%)	45.4	(36.9)
Average hours worked per year	1 676	(1759)	Gross domestic expenditure on R&D (% of GDP)	1.9	(2.3)
ENVIRONMENT					
Total primary energy supply per capita (toe)	5.4	(4.1)	CO_2 emissions from fuel combustion per capita (tonnes)	15.8	(9.2)
Renewables (%)	6.5	(9.7)	Water abstractions per capita (m^3)	697	(804)
Fine particulate matter concentration ($PM_{2.5}$, µg/m^3)	6.1	(14.9)	Municipal waste per capita (kilogrammes)	561	(523)
SOCIETY					
Income inequality (Gini coefficient)	0.337	0.317	Education outcomes (PISA score, 2015)		
Relative poverty rate (%)	12.8	(11.9)	Reading	503	(493)
Median disposable household income (000 USD PPP)	31.7	(23.0)	Mathematics	494	(490)
Public and private spending (% of GDP)			Science	510	(493)
Health care, current expenditure	9.3	(9.1)	Share of women in parliament (%)	28.7	(28.7)
Pensions	6.9	(9.1)	Net official development assistance (% of GNI)	0.23	(0.39)
Education (primary, secondary, post sec. non tertiary)	3.9	(3.3)			

Better life index: www.oecdbetterlifeindex.org

* Where the OECD aggregate is not provided in the source database, a simple OECD average of latest available data is calculated where data exist for at least 29 member countries.

Source: Calculations based on data extracted from the databases of the following organisations: OECD, International Energy Agency, World Bank, International Monetary Fund, Inter-Parliamentary Union.

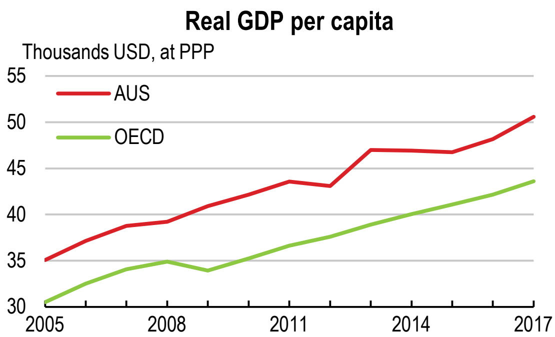
EXECUTIVE SUMMARY

Economic growth has been resilient…

Australia's long span of positive output growth continues, demonstrating the economy's resilience to shocks **(Figure 1)**. The labour market has been equally resilient, with rising employment and labour-force participation. Life is good, with high levels of well being, including health, and education.

Continued robust output growth of around 3% (Figure 2) is projected in the near future. Exports and investment will support the economy, and wage growth and price inflation will gradually pick up. Risks to the outlook relate to the housing market, and uncertainty in export demand due to rebalancing in China and potential escalation of international trade disputes.

Figure 1. GDP per capita performance has been strong



Source: OECD Productivity Database.

…but there are socio-economic challenges…

Globalisation and automation, while overall positive, have disrupted the life of several groups of people. This is the theme of the in-depth chapter of this *Survey*.

Certain groups are vulnerable with low labour force participation and high risk of poverty. The substantial gaps between indigenous Australians and the rest of the population are narrowing too slowly.

… and climate-change policy still lacks clarity and stability

Australia has made little progress in reducing its environmental footprint in large part because frequent changes in core climate-change instruments have created uncertainty for emitters, which has also discouraged energy sector investment.

Biodiversity is also a core environmental issue for Australia. The country is host to around 10% of the world's biodiversity, with many fragile situations.

The housing market poses macroeconomic risks

Australia's housing market is a source of vulnerabilities due to elevated prices and related household debt (Figure 3). House prices have fallen, although only gradually since late last year; the current trajectory would suggest a soft landing, but some risk of a hard landing remains.

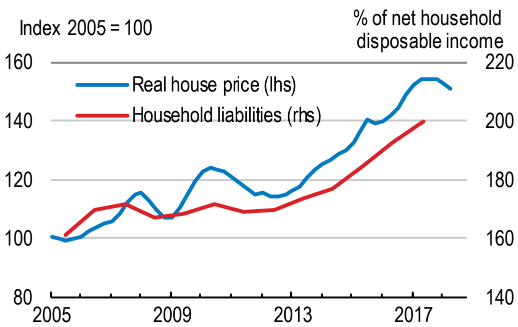
Figure 2. Economic growth will remain robust

(annual growth rates, unless specified)	2017	2018	2019
Gross domestic product (GDP)	2.3	2.9	3.0
Private consumption	2.7	2.0	2.0
Government consumption	3.8	2.9	2.0
Gross fixed capital formation	3.2	3.3	3.9
Exports of goods and services	4.0	4.3	3.8
Imports of goods and services	7.7	4.2	6.1
Unemployment rate (*% of labour force*)	5.6	5.4	5.3
Consumer price index	2.0	2.1	2.3
Government net lending *(% of GDP)*	-0.5	-0.2	0.2

Source: OECD Economic Outlook 103 database.

A direct hit to the financial sector from a wave of mortgage defaults is unlikely. However, if house prices collapse consumer spending could suffer, via negative impact on wealth, including from exposures to bank shares, which would encourage deleveraging. Together with reduced housing-related expenditures, this would put pressure on the whole economy.

Figure 3. High levels of house prices and household debt pose risks



Source: OECD Analytical database.

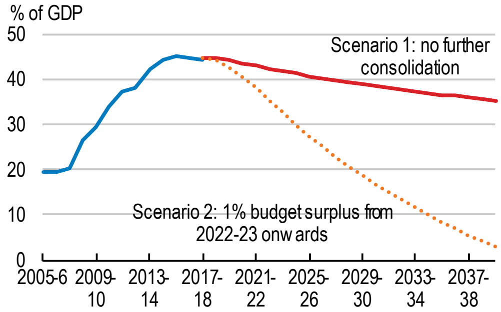
Financial supervisors and bank regulators should be prepared in the event of a hard landing in the housing market. They should also continue to address shortcomings in the financial sector identified in recent inquiries, particularly competition, misconduct and fraud.

In the absence of negative shocks, policy rates should start to rise soon. Monetary conditions remain very accommodative, with the risk of imbalances accumulating further if the low-interest rate environment persists. In the absence of a downturn, a gradual tightening should start as inflation edges up and wage growth gains momentum.

Budget repair needs to continue

Fiscal discipline will still be required to bring fiscal balances to surplus. Robust output growth is helping lift revenues, however this can also prompt increased pressures to expand public spending. No further consolidation would bring only slow reduction in public-debt-to-GDP ratio.

Figure 4. Fiscal policy needs to get to surplus



Source: OECD calculations based on OECD Analytical Database and Government of Australia.

The federal government has underscored commitment to small government by incorporating its tax-to-GDP ceiling in its fiscal strategy and setting a limit to growth in payments. There is welcome focus on lightening personal-income tax, reforming private-pension tax treatment and tackling tax avoidance and evasion. Yet there remains considerable opportunity for further tax reform.

Greater use of value added tax (the Goods and Services Tax, GST) would provide fiscal space for tax reform in other areas. At 10%, the GST rate is comparatively low and the coverage is at around the OECD average. An increase in the rate or base could fund the removal of less efficient taxes, and be used to further shift the tax mix.

Opportunities to improve infrastructure efficiency with environmental benefits include road transport, where there is scope to shift away from fees based on car-ownership towards those based on car use, such as distance charging or congestion charging.

Australia would benefit from higher public spending efficiency. Recent policy has sensibly focused on improving productivity in health care and long-term care. Accelerated spending on roads, telecoms infrastructure, disability support and defence needs to be monitored in terms of costs and benefits.

Urban environments need further improvement

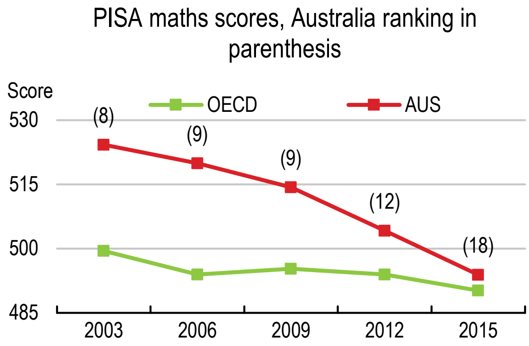
Rapid population growth is supporting Australia's economic growth but concentration in metropolitan areas is straining infrastructures and fuelling traffic congestion, noise and air pollution.

Major transport investment is underway, which is welcome. While political considerations will always influence project selection, decisions should be informed by transparent and rigorous cost-benefit analysis. Some metropolitan areas would benefit from amalgamations of local government or more shared service provision. Also, most of Australia's land-use zoning systems remain overly complex and restrictive.

Education reform and fine-tuning activation policy are crucial

Slippage down PISA rankings (Figure 5) signals a need to press on with education reform, especially in a context of fast technical change and globalisation. Focus on disadvantaged students in schools (notably, via funding reform) and early childhood education should continue, as a means of tackling gaps in educational outcomes.

Figure 5. Australia's PISA scores have worsened



Source: OECD Program for International Student Assessment (PISA), 2003,2006, 2009, 2012, and 2015.

Vocational education and training (VET) needs to provide adequate skills for changing labour-market demands. Immediate problems arising from an explosion of poor quality providers and courses look set to be resolved. Beyond this, the sector needs to better provide core skills to weak students. Also, there remains policy bias in student support towards university studies.

Australia's tertiary-education expansion, while welcome, has also brought challenges. Supply may have overshot as many graduates do not find degree-level jobs. Rapid expansion is also pushing up the fiscal cost. Better information would help students and providers connect choices and course content with evolving labour demand. In addition, new technologies in education, such as Massive Online Open Courses (MOOCs) should be nurtured.

There is still scope to encourage greater labour-force participation, helping reduce poverty and keeping individuals connected with evolving technologies and skills**.** Australia's system of contracted private employment services could be given greater incentives for long-term employment retention. A new focus on providing support to all displaced workers is promising. Australia's below-par participation of women with children will be improved by recent changes to child-care benefits, but more comprehensive support to mothers is needed.

Business needs to be competitive and innovative

Follow-up of a major competition-policy review (the "Harper Review") continues, and conditions for firm dynamics have improved thanks to amendments to insolvency legislation. Nevertheless, there remains scope for improving market functioning.

Targeted business policy continues to focus on innovation. Recent policy moves have included announced reforms to refocus the R&D Tax Incentive towards supporting high-intensity R&D and progress in reforming intellectual property legislation. However, there has been no pruning of the large number of SME support programmes.

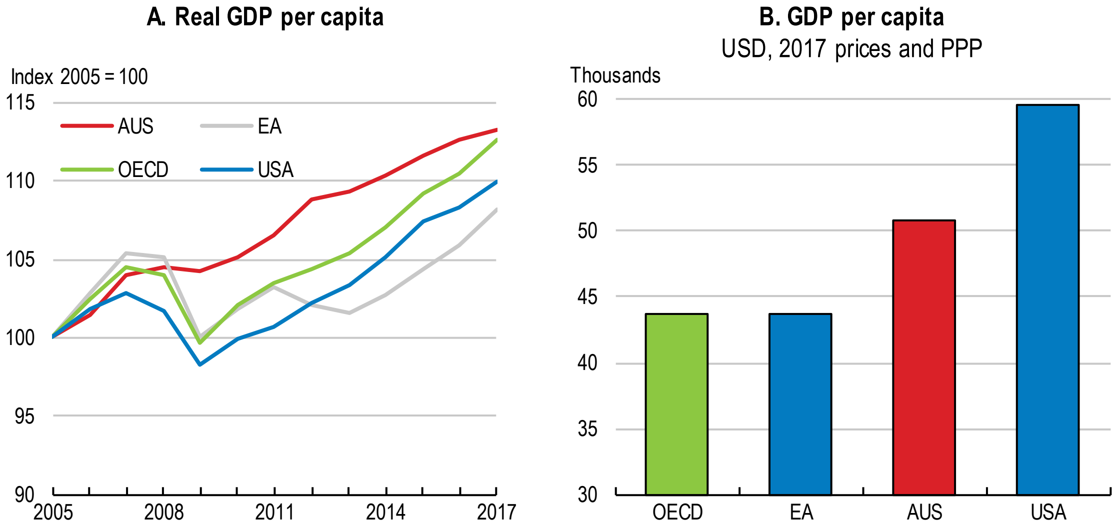
MAIN FINDINGS	KEY RECOMMENDATIONS
Monetary policy, housing market and financial regulation	
Upswing in activity continues and inflation is projected to rise gradually. Elevated house prices and mortgage debt remain sources of risk.	In the absence of a downturn, gradually remove monetary accommodation through a policy rate increase. Prepare contingency plans for a possible significant correction in the housing market including a loss-absorbing regime (including bail-in provisions) in the case of financial-institution insolvency.
Competition is lacking in the banking sector and inquires have revealed misconduct.	Assure strong accountability, transparency and competition in the financial sector including an appropriate response to the banking Royal Commission.
Fiscal policy, tax and spending reform	
Deficit reduction remains on target but continued fiscal discipline is required.	Ensure fiscal balances remain on track to reach surplus ("budget repair").
Taxation should support welfare and economic growth.	Further shift the tax mix from direct taxes (corporate and personal) and inefficient taxes (including real-estate stamp duty) and towards the Goods and Services Tax and land taxes.
Improving the efficiency of public services is important given current and upcoming spending commitments and continuing budget repair.	Follow up on the recommendations for improving public services made by the Productivity Commission's “human services” inquiry, notably those in health care and long-term care.
Improving transport, urban environments and utilities	
Rapid population growth is supporting Australia’s economic growth but concentration in metropolitan areas is straining infrastructures and fuelling traffic congestion, noise and air pollution.	Improve infrastructure project selection by raising the prominence of cost-benefit analysis and economic returns. Accompany accelerated road investment with improved road charging, including distance charging and urban congestion charging. Strengthen urban-area governance through greater leadership from federal and state initiatives in planning, and continued efforts to amalgamate small local authorities.
Deepening skills and increasing inclusiveness	
Students' performance in PISA tests is worsening and the skills demands are shifting.	Continue focus on disadvantaged students in early childhood education and schools. Improve VET education including by improving basic-skills provision and reducing policy bias in favour of university education. Provide better information for education choices including through a single platform with career information, education pathways and employment outcomes.
Activation policies could be better geared towards long-term outcomes and labour force participation among women with children is below par.	Incentivise jobactive providers to achieve longer job retention, provide better quality training and on-the-job support. Focus further on lone-parents in terms of childcare availability and affordability, and career guidance and training. Give indigenous communities a greater role in policy design and implementation.
Ensuring competitive and innovative business	
Australia's business environment is good but impediments to market functioning remain in specific areas.	Reforms should include adopting lighter product standards, paring back professional and occupational licensing, and reducing operating restrictions in shipping.
Environmental sustainability	
Frequent change in core climate-change instruments has created uncertainty in emission reduction and discouraged energy sector investment.	Stabilise and strengthen climate-change policy. Develop and implement a national, integrated energy and climate policy framework for 2030 based on a low-emission development strategy for 2050, in line with the Paris Agreement objective. Guide the energy transition through an emissions reduction goal for the power sector supported by a market-based mechanism.
Australia contains around 10% of the world's biodiversity and more than 1 800 species are listed as threatened.	Give greater priority to biodiversity in project approval and land use.

1. Key Policy Insights

1. With 27 years of positive economic growth, Australia has demonstrated a remarkable capacity to sustain steady increases in material living standards and absorb economic shocks. During the global financial crisis, comparatively limited exposure, but also good economic management, saw output growth hold up well (Figure 1.1). Also, the economy's adjustment in the wake of the commodity super-cycle has been reasonably smooth. This good macroeconomic performance has strengthened the country's standing in terms of GDP per capita (Figure 1.1). Furthermore, scores are favourable on many other indicators of well-being. Australia scores particularly well in health status, ranking first among OECD countries with life expectancy of 82.5 years compared with an OECD average of 80.1 years and a high score in self-reported health (Figure 1.2). It also scores well in terms of air pollution, ranking 5th in the OECD, subjective well being and social connections (both 7th place in the rankings) Immigration has played a fundamental role in the demographic, economic and cultural development of Australia, and continues to do so with broadly successful integration of new migrants.

2. Economic reforms largely completed during the 1980s and 1990s are often considered as a key ingredient to Australia's economic success. Financial-sector reform included liberalising the banking sector, opening the capital account and floating the Australian dollar. There was also extensive trade liberalisation, labour market reforms and microeconomic reforms (including utilities). These reforms supported a move towards a more market-based economy. Macroeconomic policy frameworks were strengthened through adoption of an inflation target and central bank independence and the Charter of Budget Honesty. Some consider a practical approach to policymaking, independent reviews and stakeholder involvement have been keys to success (Berger-Thomson et al, 2018).

Figure 1.1. Strong GDP per capita performance



Source: OECD Analytical database; and OECD Productivity database.

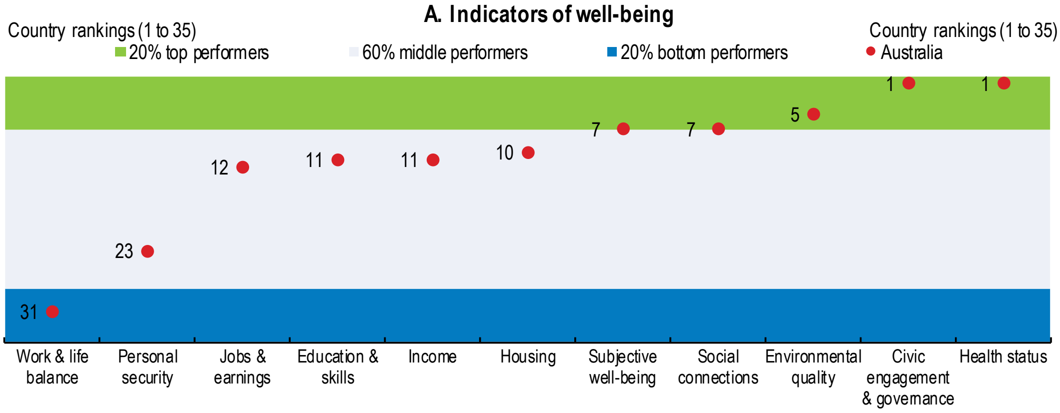
3. However, Australia faces economic challenges that, if not handled well, could see an end to its strong track record. Risks include potential instabilities from high house prices (Figure 1.3) and large household debt, along with exposure to global uncertainties in policy and politics, notably as regards trade disputes. Also, as do many economies, Australia faces challenges in productivity growth (Figure 1.3).

4. Globalisation and technological change, while overall beneficial, have brought challenges for some segments of society. This is the theme of Chapter 2 of this *Survey*. Furthermore, there remain long standing socio-economic challenges, most notably the substantial gaps between indigenous Australians and the rest of the population (Figure 1.3), which are narrowing only slowly. In addition, Australia is somewhat below par in terms of work life balance (Figure 1.2, Panel A), although the gaps in outcomes with other countries are in fact not large. For instance, 13.2% of employees in Australia work 50 hours or more compared with an OECD average of 12.6% (Panel B).

Figure 1.2. Favourable well-being scores

Well-being rankings

A. Indicators of well-being



B. Australia well-being sub-indicators selected rankings

	Dimension	Sub-indicator	Rank	Measure	Australia	OECD average
In the top 5	Education	Years in education	1	Years	21	17
In the top 5	Civic engagement	Voter turnout	1	% of population	91	69
In the top 5	Environment	Air pollution	2	$PM_{2.5}$, $\mu g/m^3$	5	14
In the top 5	Housing	Rooms per person	4	Ratio	2.3	1.8
In the top 5	Health	Self-reported health	4	% of population who report "good" or "better" health	85	69
In the top 5	Health	Life expectancy	5	Years	82.5	80.1
In the bottom 10	Safety	Feeling safe walking alone at night	27	% of people aged 15 and over	63.6	68.6
In the bottom 10	Work-Life Balance	Employees working very long hours	28	% of dependent employed working 50 hours or more per week	13.2	12.6
In the bottom 10	Work-Life Balance	Time devoted to leisure and personal care	30	Hours per day	14.4	14.9

Source: OECD Better Life Index 2017 database.

5. Although Australia scores well in terms of particulate air pollution (Figure 1.2), as highlighted in the OECD's upcoming *Environmental Performance Review*, the country faces considerable environmental challenges. Achieving targets in greenhouse gas emissions (Figure 1.3) poses difficult policy trade-offs in shifting away from heavy reliance on fossil fuels for energy. Biodiversity challenges are also considerable. Australia contains around 10% of the world's biodiversity, according to the upcoming *Review*, and there is much fragility. For instance, more than 1 800species are listed as threatened and much of this fragility relates to human activity, including land clearing for grazing, urban development, infrastructure and extractive industries, water use, pollution and climate change. Biodiversity loss can eventually have significant adverse impacts on economic growth and human well-being by threatening the resilience of ecosystems that humans rely on.

6. Against this background this *Survey's* main messages are:

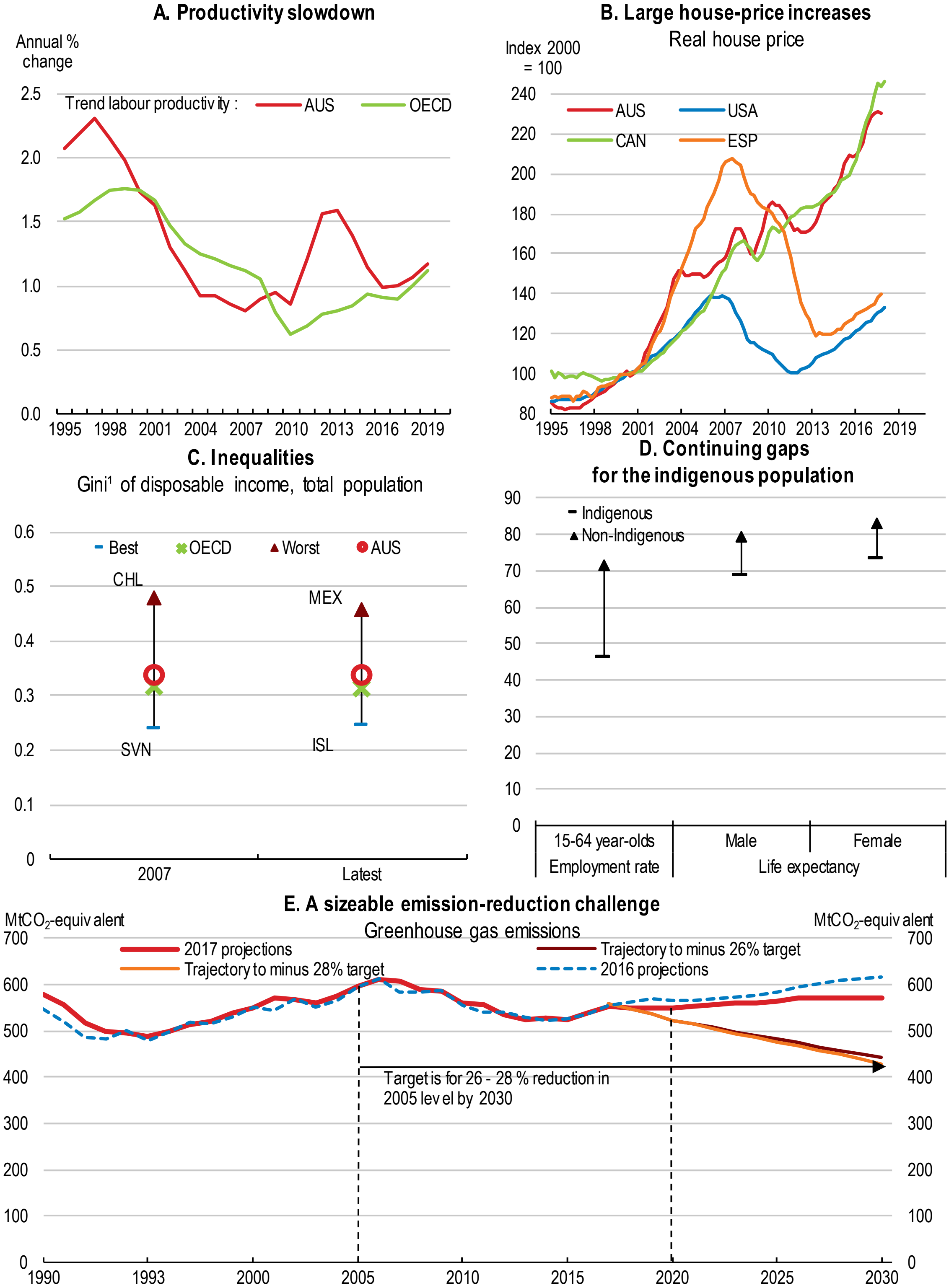
- Continued strength in macroeconomic policy and sound financial-sector institutions and policies are required to navigate an exit from the low-interest rate environment, while lowering housing-market risks and building resilience to external shocks.

- Creating conditions for stronger productivity growth requires not only sound macroeconomic policy, but also continued structural-policy reform including reforming the tax mix to be more conducive to growth and innovation, further efforts to make markets competitive and ensuring education and training keep pace with evolving skill demand.
- Risk of widening social tensions from technological change and globalisation, alongside longstanding issues of inclusion (notably Australia's indigenous population) call for emphasis on improving education, labour-market engagement, and transport and utility services (particularly for excluded groups).
- Fully addressing environmental challenges to the benefit of current and future generations of Australians, and the global community, calls for a concerted policy effort and a balanced integration of environmental issues into mainstream policy making.

1.1. Macroeconomy: a good near-term outlook but risks remain

7. In recent years the Australian economy has been adjusting to the end of the commodity super-cycle along with the legacy of the global financial crisis. As for many economies, unemployment rose in the wake of the crisis and fiscal deficits and public debt rose significantly. The substantial decline in global commodity prices from their very high levels in 2011, notably for iron ore and coal, curtailed plans for new investment and prompted cost-cutting by producers. At the same time, some large multi-year construction projects in the resources sector reached completion, further reducing investment activity (Figure 1.4, Panel D). Moreover, the low-interest rate environment, driven by accommodative monetary policy to support the economy, has incentivised borrowing, pushing up house prices and mortgage debt.

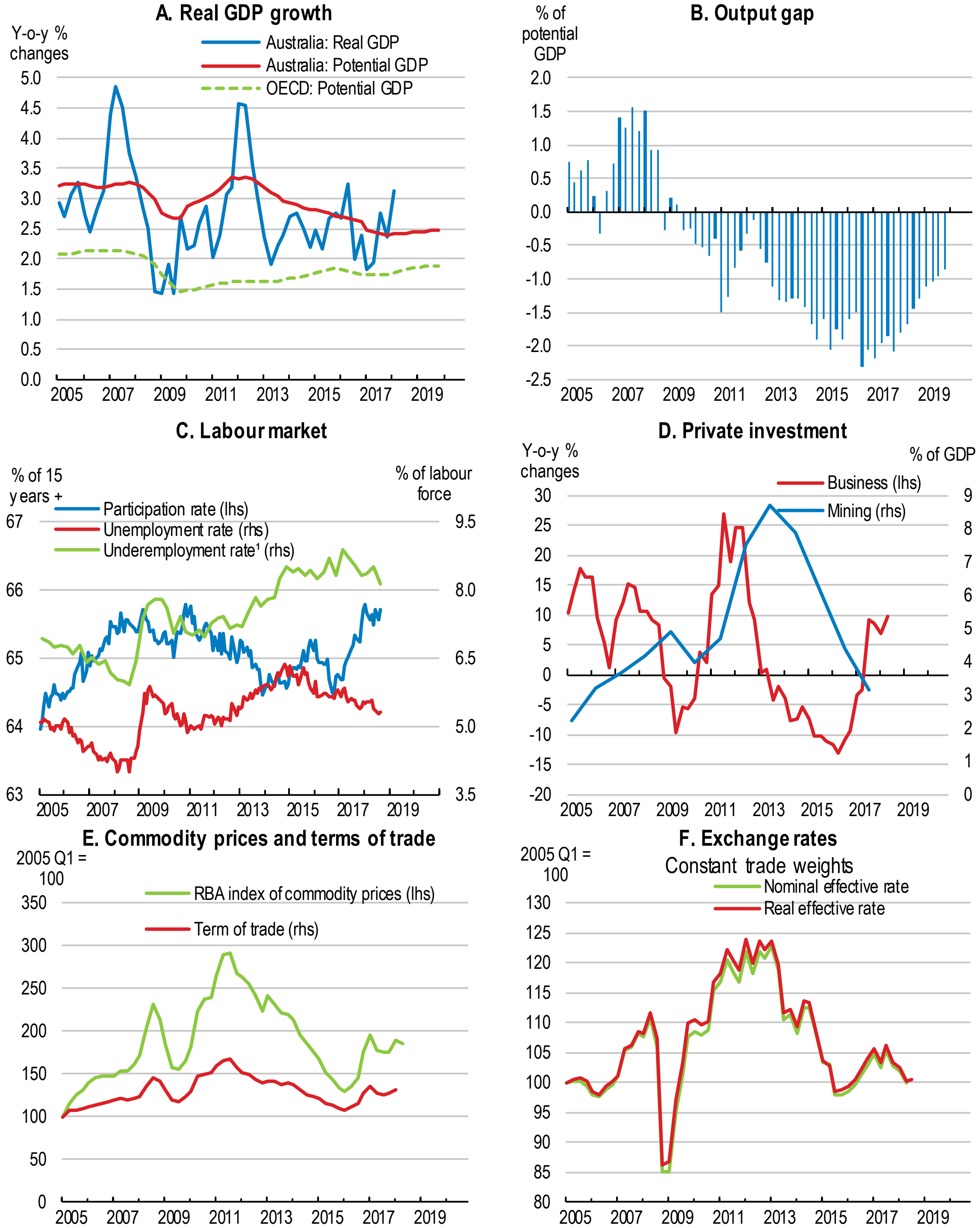
Figure 1.3. A range of economic, social and environmental challenges



1. The Gini coefficient ranges from zero to 1, zero indicating all individuals have the same income; 1 indicating one individual receives all income.

Source: OECD Economic Outlook 103 database; OECD Database on Income Distribution; Closing the gap: Prime Minister's report 2018; and Department of the Environment and Energy.

Figure 1.4. Robust output growth with recovering investment and falling unemployment



1. Employed persons aged 15 years and over who want, and are available for, more hours of work than they currently have. They comprise: persons employed part time who want to work more hours and are available to start work with more hours, either in the reference week or in the four weeks subsequent to the survey; or persons employed full time who worked part time hours in the reference week for economic reasons (such as being stood down or insufficient work being available). It is assumed that these people wanted to work full time in the reference week and would have been available to do so.

Source: OECD Economic Outlook 103 database; and Thomson Reuters.

8. Output growth has been gathering strength in recent quarters (Figure 1.4). Partial recovery in iron ore and coal prices boosted incomes in some segments of the resource sector, and there was an increase in resource sector investment, notably in LNG projects that are nearing completion. In addition, data indicate an investment pick-up in the wider economy, partly fuelled by heightened public investment. Resource exports continues adding to growth as more capacity comes on stream, while drought conditions in the farming sector will likely serve as a temporary drag. The OECD's central projection envisages output growth in 2018 and 2019 of around 3% (Table 1.1). The economy is in upswing, with growth above potential. However, the output gap is expected to remain negative and, accordingly, consumer-price inflation will remain benign over the projection, staying within the Reserve Bank of Australia's (RBA's) medium-term target range of 2-3% (Figure 1.5).

9. As for some other OECD economies, wage growth has remained surprisingly weak considering the strength of demand and employment growth. The large boost in employment has been accompanied by a sharp hike in labour force participation, suggesting some hidden labour supply. Moreover, elevated numbers in employment report that they would prefer to work more hours (under-employment) (Figure 1.4, Panel C) indicating more labour-market slack than suggested by the rate of unemployment. Nevertheless, economy-wide wage data show signs of pick up (Figure 1.5) and there are reports of wage increases and difficulties in recruiting in certain labour-market segments.

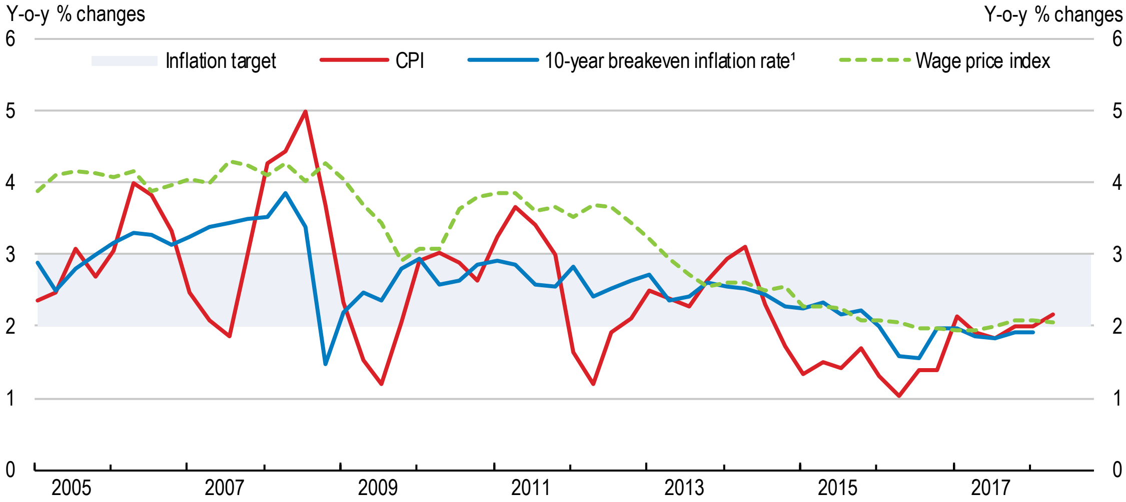
Table 1.1. Macroeconomic indicators and projections (to be updated with autumn Economic Outlook (EO 104))

	2015 Current prices (AUD billion)	2016	2017	2018	2019	2020
Gross domestic product (GDP)	1,638	2.6	2.2	2.9	3.0	..
Private consumption	949	2.9	2.7	2.0	2.0	..
Government consumption	301	4.0	3.6	2.9	2.0	..
Gross fixed capital formation	421	-2.1	3.2	3.3	3.9	..
Housing	92	8.7	-2.2	-2.1	-2.2	..
Business	219	-9.5	2.6	3.8	5.3	..
of which mining[1]	102	-27.3	-24.8	..	..	..
General Government investment	50	14.0	16.0	9.4	7.1	..
Final domestic demand	1,671	1.9	3.0	2.5	2.4	..
Stockbuilding[2]	1	0.1	-0.1	-0.4	0.0	..
Total domestic demand	1,675	1.9	2.9	2.1	2.4	..
Exports of goods and services	323	6.8	3.5	4.3	3.8	..
Imports of goods and services	360	0.5	7.9	4.2	6.1	..
Net exports[2]	-37	1.2	-1.0	0.0	-0.5	..
Other indicators (growth rates, unless specified)						
Potential GDP	..	2.7	2.4	2.4	2.5	..
Output gap[3]	..	-1.9	-2.0	-1.5	-1.0	..
Employment	..	1.7	2.3	2.0	1.8	..
Unemployment rate	..	5.7	5.6	5.4	5.3	..
GDP deflator	..	1.1	3.5	0.6	0.8	..
Consumer price index	..	1.3	2.0	2.1	2.3	..
Core consumer prices	..	1.5	1.7	1.9	2.2	..
Household saving ratio, net[4]	..	4.8	2.8	2.4	2.0	..
Trade balance[5]	..	-0.8	0.6	..	..	..
Current account balance[5]	..	-3.3	-2.6	-2.6	-3.0	..
General government fiscal balance[5]	..	-1.5	-0.5	-0.2	0.2	..
Underlying government fiscal balance[3]	..	-0.6	0.6	0.7	0.7	..
Underlying government primary balance[3]	..	-0.4	0.9	1.0	1.0	..
General government gross debt[5]	..	42.2	43.0	41.3	39.2	..
General government net debt[5]	..	-11.8	-12.3	-11.8	-11.5	..
Three-month money market rate, average	..	2.0	1.7	1.9	2.2	..
Ten-year government bond yield, average	..	2.3	2.6	2.8	3.0	..

1. Data are based on a financial year.
2. Contributions to changes in real GDP, actual amount in the first column.
3. As a percentage of potential GDP.
4. As a percentage of household disposable income.
5. As a percentage of GDP.
Source: OECD Economic Outlook 103 database; Australian Bureau of Statistics.

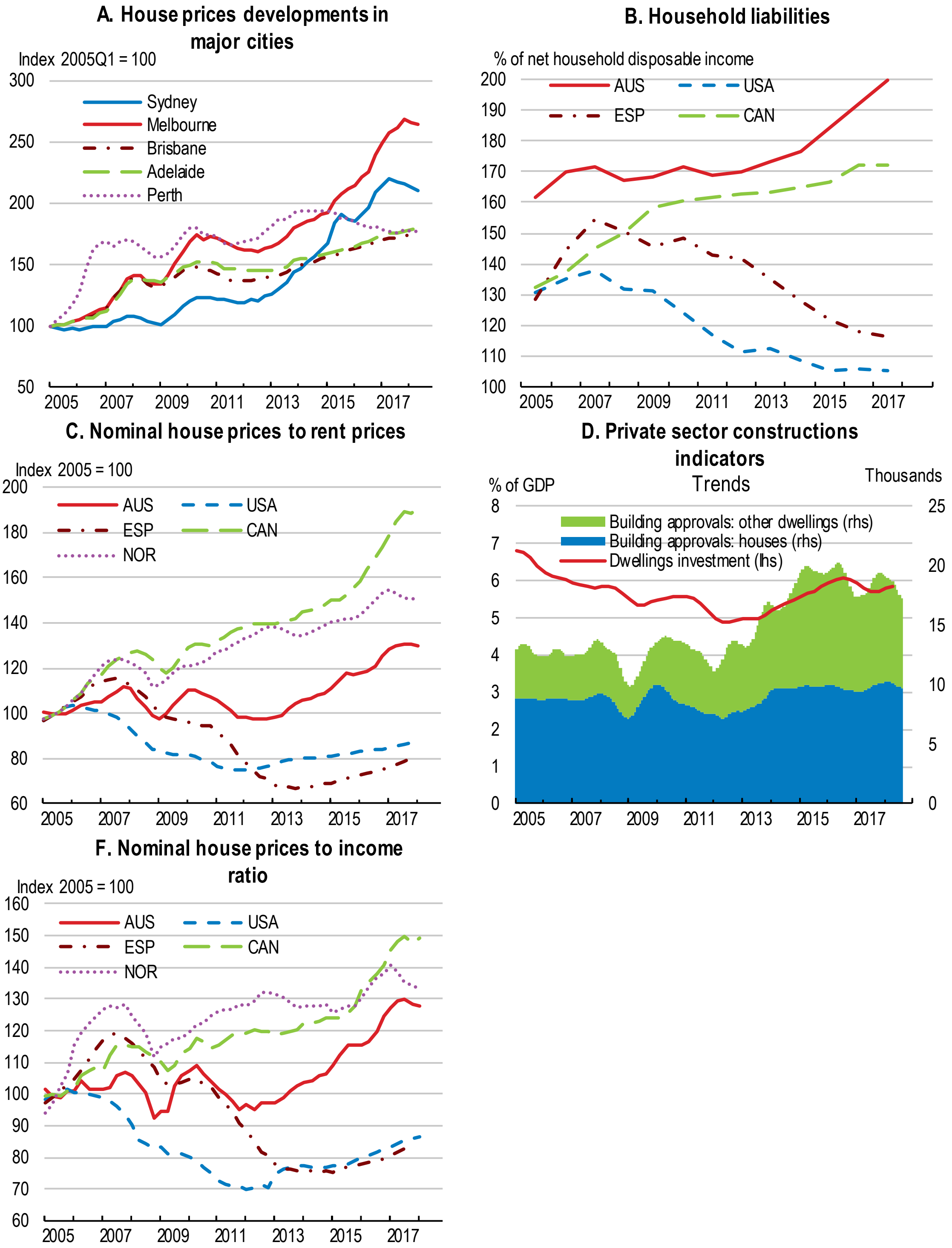
10. After several years of rapid increase, a welcome cooling of house prices is underway (Figure 1.6). Most notably, average prices in Sydney and Melbourne have begun to fall. Contributory factors include prudential measures taken by the Australian authorities (see below) and a sizeable pick up in new housing supply. Price easing may also reflect a fall off globally in the appetite for housing as an asset class (IMF, 2018) as well as domestic rule changes and alterations to state-level taxes that may have deterred some foreign buyers.

Figure 1.5. Wage and price inflation remain subdued



1. Average annual inflation rate implied by the difference between 10-year nominal bond yield and 10-year inflation indexed bond yield; end-quarter observation.
Source: OECD Analytical Database; and Reserve Bank of Australia.

Figure 1.6. House prices are easing but the household-debt burden continues to rise



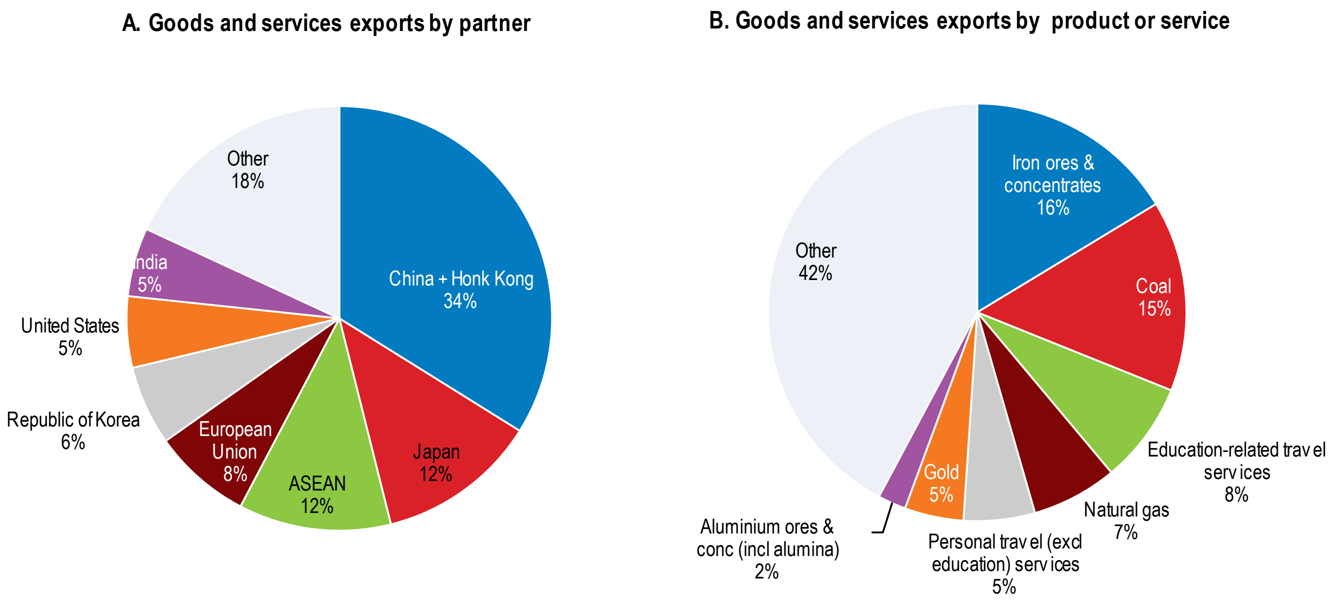
Source: OECD Analytical Database; and Thomson Reuters.

11. Risks surrounding the central projection are broadly balanced, downside concerns notably include:

- Risk relating to housing market and related debt: though house prices have eased recently, they remain high in level terms (they have more than doubled in Sydney and Melbourne since 2005). Also, the ratio of house prices to incomes has increased substantially in recent years and the ratio of mortgage debt to household income remains elevated (Figure 1.6).
- Uncertainty in export demand. Australia's concentration of exports in commodities (Figure 1.7) is a key element in Australia's risk profile. Most critical are developments in demand and prices for iron ore and coal, particularly the impact of China's economy on these. China is also of growing importance for Australia's trade in services, notably in tourism.
- Global uncertainties in policy and politics, including escalating trade disputes. Scenarios assessed by the Productivity Commission (2017a) suggest the impacts on Australia of higher US tariffs on imports from China and Mexico are probably not large but a widespread increase in tariffs globally could have substantial impact.

Figure 1.7. Exports of commodities to Asia remain dominant

2017



Source: Australia Department of Foreign Affairs and Trade, https://dfat.gov.au/trade/resources/trade-statistics/trade-in-goods-and-services/Pages/australias-trade-in-goods-and-services-2017.aspx

12. Assessing probability of downturns using the OECD's resilience indicators suggests that there is no emerging downturn at present (Box 1.1). Some low-probability, but potentially dramatic, scenarios (tail-end scenarios) are nevertheless listed in Table 1.2. House-price correction could trigger substantial weakening in activity via a fall-offs in consumption growth and house construction (see discussion on monetary policy and financial markets below). Externally, Australia, as always, is exposed to the vagaries of

global commodity markets and could face a renewed plunge in commodity prices. Significant downturn is likely to entail compounding processes. For instance, a negative external shock could prompt a sharp cut to incomes, rise in unemployment and downturn in consumption. This would in turn increase mortgage stress and further escalate falls in house prices. A currency depreciation would also be likely and would be expected to provide support to the Australian economy. Risk from Australia's persistent current account deficit is not considered a substantial concern because a large proportion of foreign-held debt is either denominated in Australian dollars or is hedged against exchange-rate fluctuations.

Table 1.2. Tail-end scenarios for the Australian economy

Vulnerability	Possible outcome	Possible policy actions
Dramatic house-price correction	A large drop off in house prices could cut household consumption, prompt collapse in the construction sector, increase mortgage defaults and freeze bank lending to business.	Monetary and fiscal support. The latter could focus on low-income households. Relaxation of selected prudential measures on mortgage borrowing. Restore confidence and flows of funds in the financial sector.
Renewed plunge in global iron ore and coal prices, possibly in relation to global enviornmental policy	Further cost-savings and retrenchment of investment among mining companies with impact on jobs and incomes, with effects on the wider economy. The exchange rate would be expected to depreciate, which would assist economic adjustment.	Monetary and fiscal support. The latter could include extra support for states most affected by the downturn, additional support for displaced workers.
Acceleration in global trade disputes or pronounced slowdown in China's economy	Impact on export demand is contingent on how tariffs and other trade instruments develop in the dispute. Impact depends on policies used by the Chinese authorities to counter slowdown and the impact on the Australia's terms of trade and the exchange rate.	Continue to work (in the context of international collaboration) towards free markets and improvements to the rules-based trade system. Strengthen the economy's resilience and workforce adaptability to changes in the global economy.

13. The authorities consider that they are well equipped to handle shocks such as those described in Table 1.2. Room for monetary and fiscal support in the event of a shock, though smaller than might ideally be the case (see below), is larger than in many other OECD economies. Furthermore, the speed and strength of the rebalancing processes in response to the global financial crisis and the end of the commodity boom indicate the economy has good capacity for absorbing shocks. In addition, Australia has continued to establish free trade agreements, most recently with Singapore and Peru as well as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership.

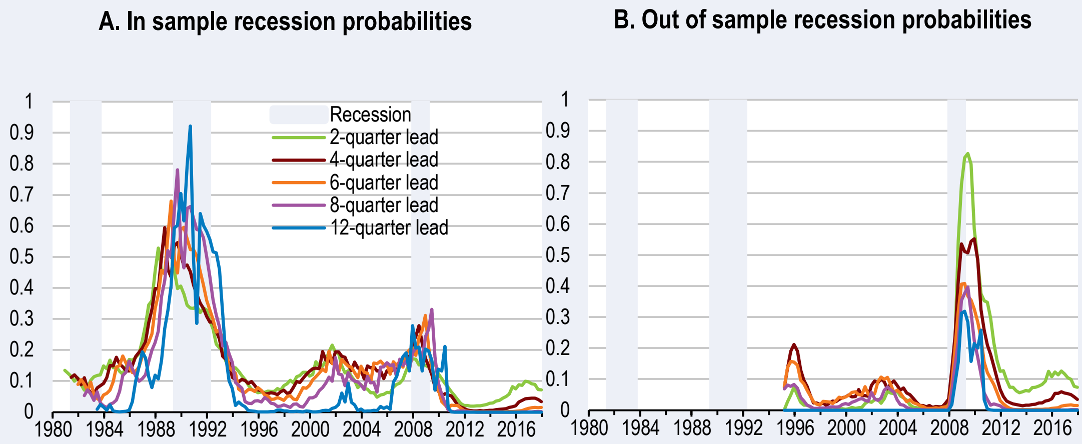
14.

Box 1.1. Predicting downturns using the OECD's Resilience Database

The OECD's database of vulnerability indicators (Hermansen and Röhn 2015; Röhn et al., 2015) can be used to assess the risk of downturn. The database comprises over 70 indicators across six categories of vulnerability (five domestic, one international).

Three downturns (not all are recessions as they do not fulfil the usual definition of at least two consecutive quarters of falling output) were identified for Australia in the period spanned by the resilience data (which begin in the 1980s). Principal components analysis was used to develop a single-number leading indicator. As similar exercises for other countries have found, the indicator developed from the resilience database is not very accurate. The in-sample results predict the 1990s and 2000s downturn reasonably well however the out-of-sample results are late in predicting the 2000s downturn (Figure 1.8). Bearing this low accuracy in mind, neither the in-sample nor out-of-sample results suggest an emerging downturn at present.

Figure 1.8. Recession probabilities



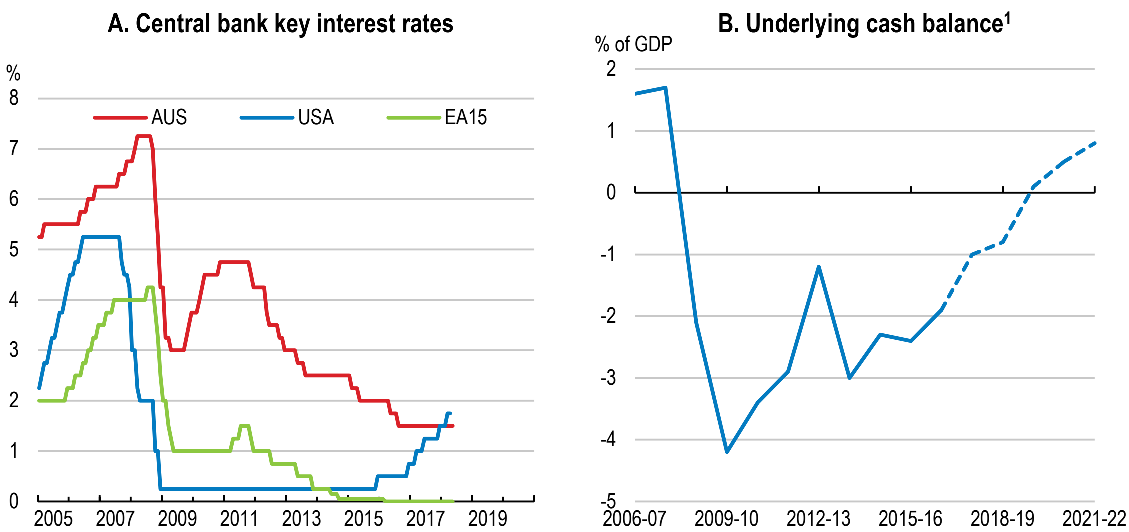
Source: OECD calculations.

1.2. Monetary policy, housing and financial markets: emerging from the low-interest rate environment

1.2.1. Policy-rate normalisation will ease tensions

15. Similar to many other OECD economies, Australia still has accommodative monetary conditions. Though there has been some tightening in short-term money markets, borrowing rates for households and businesses remain low (RBA, 2018). This reflects concerns about the pace of the domestic economic recovery, a negative output gap, in combination with a fiscal-policy focus on curbing deficits. Low outcomes and expectations in consumer-price inflation over recent years have allowed the monetary stimulus to remain consistent with the RBA's medium-term inflation target band of 2% to 3% (Figure 1.9).

Figure 1.9. Policy-rate normalisation yet to begin, federal budget consolidation continues



1. The "underlying cash balance" is a main reference balance in federal-government budgeting. It is equal to receipts less payments, less net Future Fund earnings.
Source: OECD Analytical Database; and Budget documents.

16. A start to policy-rate normalisation is now firmly on the horizon. Current OECD projections for Australia's economy envisage a gradual tightening as inflation moves firmly inside the central bank inflation target band. Though there are risks to this process, it could potentially bring welcome unwinding of the tensions and imbalances that have accumulated from the low-interest environment, notably housing-related issues.

1.2.2. Vigilance and policy action are still required on mortgage debt and housing

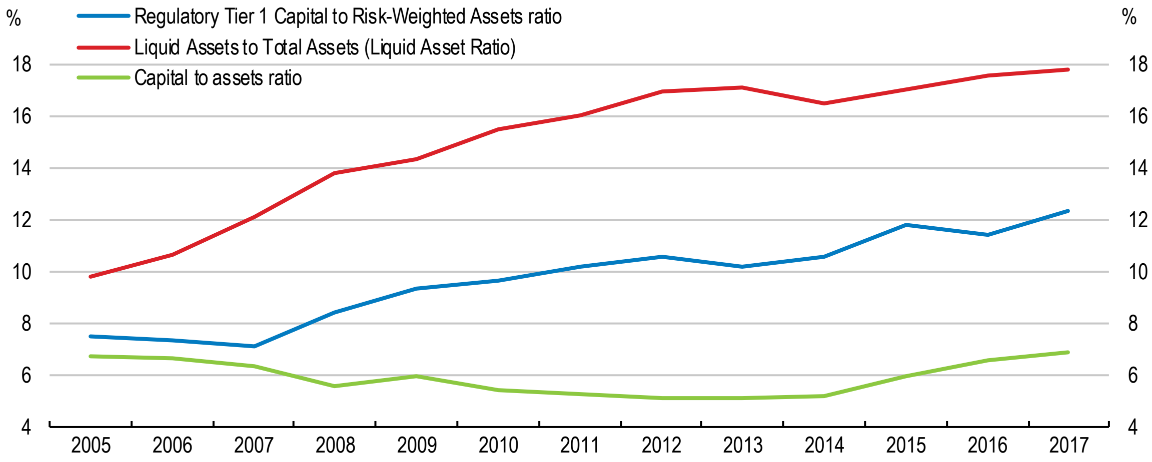
17. The evidence of housing-market cooling (see above) is welcome following a period of rapid price growth. IMF estimates indicate that as of Q3 2017 Australia's prices were overvalued by between 5 and 15% (Heilbling and Li, 2018), which is relatively modest and provides grounds for expecting a soft landing. So far, the evolution of prices has borne this out. Yet risk of an overshoot in the price correction – a hard landing – remains. However estimates of housing valuation are highly uncertain. Furthermore, a correction in average

prices can contain substantial adjustment in market segments. Past OECD work has found soft landings are rare (Rae and van den Noord, 2006).

18. Direct risk to the financial sector from mortgage defaults, triggered for instance by a hard landing in house prices or interest rates hikes, is viewed as limited by the authorities (for instance, see, RBA, 2018). A particular feature of the housing loan market is that it comprises mainly variable rate mortgages. This makes household loan repayments more sensitive to movements in interest rates; although at the same time also supports the transmission of monetary policy. Products related to variable rate mortgages have enabled many mortgage holders to accumulate a substantial buffer of advance payments ("mortgage prepayments"), making them less sensitive to immediate shifts in interest rates. Furthermore, household-survey data indicate declining financial stress in recent years, despite rising house prices and mortgage debt, and indebtedness is concentrated in middle- and high-income households, rather than low-income households. Risk of financial stress from the large numbers of mortgages with interest-only phases that are due to transition to principal-plus-interest repayment is also not considered substantial.

19. Prudential measures have been employed to halt deterioration in lending standards as banks competed for share in the mortgage market. (Table 1.3). Also, banks have become better capitalised and their liquidity position has improved (Figure 1.10) and in 2017 the banking regulator, the Australian Prudential Regulation Authority (APRA), ramped up requirements further by adopting "unquestionably strong" capital targets by 2020 (this is in addition to other mechanisms). These targets notably include the four major Australian banks achieving Common Equity Tier 1 (CET1) capital ratios of around 10.5%. (these figures are around 5 percentage points higher when constructed on an internationally comparable basis). Nevertheless, given past experience with financial crises across the OECD, including the challenges in identifying and dealing with emerging issues, efforts to ensure financial stability need to continue.

Figure 1.10. Capital and liquidity positions of banks have improved



Source: IMF Financial Soundness Indicators.

20. However, substantial impact of a hard landing in house prices on the wider economy may occur through other channels. A likely route is via weakening household consumption demand and construction activity. Household consumption could be dented by negative wealth effects, precautionary saving responses and reduced expenditures related to

the purchase and sale of housing (such as spending on renovation and interior decoration). This could, inter alia, lead to losses on loans to businesses thus putting stress on the financial sector, as well as affecting the wider economy via aggregate demand.

21. Prudential tools should continue to encourage judicious mortgage lending. The authorities should also continue to pursue structural reforms to improve the functioning of the housing market, in particular measures to increase housing supply. Though recent price developments suggest that, broadly speaking, the gap between supply and demand has narrowed, housing affordability remains an issue (see Box 1.2).

22. The authorities should prepare contingency plans for a severe collapse in the housing market. These should include the possibility of a crisis situation in one or more financial institutions. Stress tests conducted by APRA show banks' capital remains above regulatory minimum levels under a scenario centred on a housing-market downturn (APRA, 2018). Nevertheless the possibility of financial-institution crisis should not be discounted entirely. For account holders there is a deposit insurance scheme, the Financial Claims Scheme, which provides protection up to a limit of AUS$250,000 per account holder at each bank. As regards the institutions, a crisis would put recently passed crisis-resolution legislation (the *Financial Sector Legislation Amendment (Crisis Resolution Powers and Other Measures) Act,* 2018) under test. Unlike in the United States or European Union the legislation does not include explicit bail-in provisions on senior debt or deposits owned by financial institutions. This gives flexibility to adjust resolution plans to the specific characteristics of the crisis. On the other hand, the absence of explicit bail-in provisions could slow down the speed of resolution and risk encouraging financial institutions to gamble for resuscitation. APRA has indicated that it will start a consultation on its loss-absorbing capacity framework in late 2018; loss-absorbing and recapitalisation capacity should consist of a financial entitiy’s equity as well as debt instruments on which losses can credibly be imposed in a resolution.

Box 1.2. Housing affordability initiatives continue

Long-term growth in house-prices has deepened and widened housing-affordability issues, particularly in urban areas. While the cooling of the market has brought some relief, housing affordability remains an issue including for some households in the rental market. There has been welcome breadth to policy initiatives, with supply as well as demand-side measures. For instance, the 2017-18 federal budget announced several measures including assistance for first-time buyers (the *First Home Super Saver Scheme*) and new programmes to increase the supply of affordable housing. Also, state governments have launched multi-pronged campaigns, for instance the "Homes for Victorians" in 2017 including steps towards abolishing stamp duty, planning reform, tenancy-legislation reform and increased funding for social housing.

1.2.3. High-profile cases of misconduct in the financial sector have emerged

23. While Australia's financial sector is considered in good health in prudential terms, market concentration and the quality and price of financial services have often come under review. Banking has received the greatest attention, where retail services are dominated by four big players. Measures have included introduction of a levy on major banks in 2017 that,

inter alia, reduces the largest banks' funding cost advantage and provides a more level playing field for smaller banks.

24. The financial sector has come under sharp scrutiny through the government establishing a Royal Commission to investigate misconduct of banks and other financial services entities (still underway, final report expected by February 2019). In addition, the government is conducting a range of other reviews into the financial sector including: Productivity Commission inquiries on competition (completed) and superannuation (in progress) and the Australian Competition and Consumer Commission (ACCC) reporting on mortgage pricing (interim report released). The ACCC has charged some senior bankers with criminal cartel offences, and the Australian Transaction Reports and Analysis Centre (AUSTRAC) has imposed a large fine on one of the main banks for contravention of anti-money laundering rules and counter-terrorism laws. While it is important to identify and penalise cases of individual and corporate misconduct, the inquiries should also focus on recommendations that provide lasting solutions that assure strong accountability, competition, transparency and law-abiding conduct in the financial sector.

Table 1.3. Past OECD recommendations on monetary and financial stability

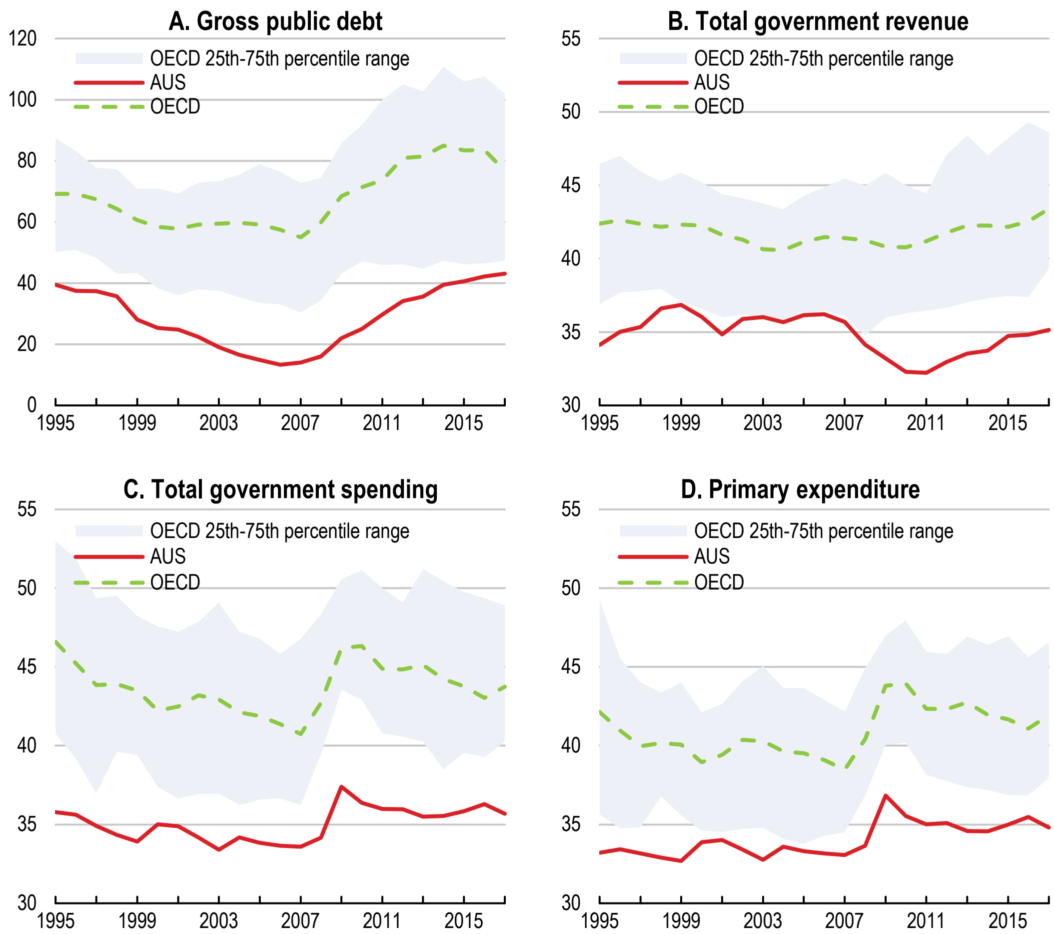
Topic and summary of recommendations	Summary of action taken since 2017 *Survey*
Improving the housing market and related credit markets	
Maintain tight prudential measures	Active use of prudential measures to shape mortgage lending continues. Steps announced in March 2017 included limiting the share of interest-only mortgages in new mortgage lending. In July 2018 the 10% investor lending cap was removed for banks that could demonstrate adequate lending standards.
Facilitate housing supply	Federal- and state-level government actions continue. For instance, the 2017-18 federal budget announced several measures to increase the supply of affordable housing. At the state level, "Homes for Victorians", includes some steps towards abolishing stamp duty and planning reform.
Strengthening financial-sector resilience, competition and conduct	
Inter alia reduce banks' implicit guarantees by developing a loss absorbing and recapitalisation framework	A framework for loss absorbing and recapitalisation capacity is planned. APRA indicated in January 2018 that a consultation on proposals is expected to commence in 2018. A levy on major banks was introduced in 2017. Several official inquiries have recently been launched into competition and conduction in the financial sector.

1.3. Fiscal policy: deficit reduction continues

25. Australia has a comparatively small government in terms of revenues and spending (Figure 1.11). Nevertheless there are fiscal challenges. A swing into fiscal deficit from surplus and close-to-zero net debt during the global financial crisis prompted a rapid increase of debt and putting a brake on this has required a concerted policy effort. Also, there are long-recognised opportunities for making taxation more efficient and better tuned for businesses and households. Meanwhile, maintaining a small government on the spending side is challenged by reforms and commitments that require additional spending, and pressures from population ageing. Making progress on revenue and spending reform in the Australian context is often complicated by the interplay between federal and state governments.

Figure 1.11. Low public debt and comparatively low government spending

% of GDP, 1995-2017



Source: OECD Analytical Database.

1.3.1. Completion of "budget repair" is on the horizon

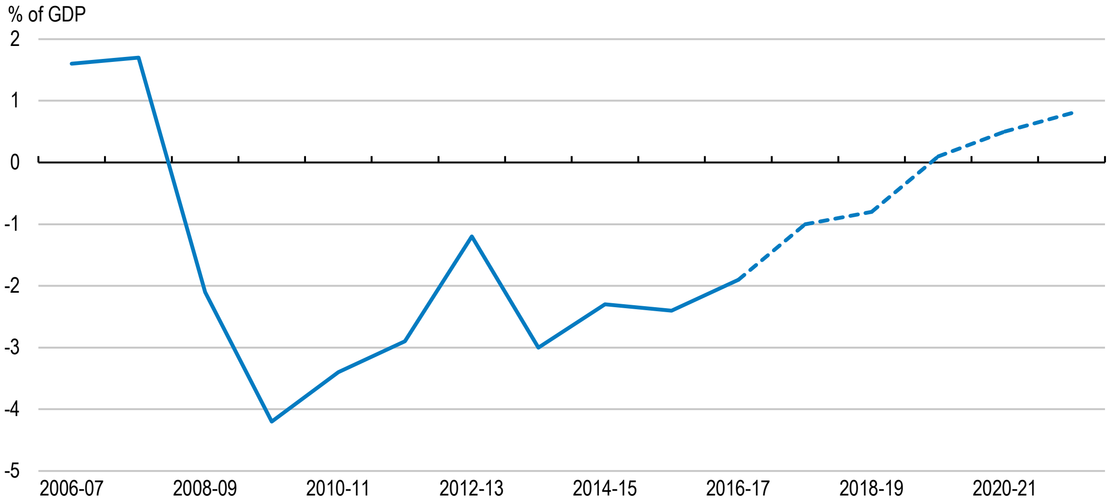
26. Federal fiscal policy in recent years has centred on returning to a positive budget balance ("budget repair") following the deficit that emerged during the global financial crisis (Figure 1.12). This focus reflects the strong priority given to Australia's broad (and longstanding) fiscal rule of achieving a balanced budget (or surpluses) in the federal budget “over the cycle” (state governments do not substantially affect the overall fiscal stance because their balances are comparatively small). The rule gives room for deficits arising from macroeconomic shocks but also implies these are followed by a high priority in returning to surplus as the economy recovers. By implication the rule means fiscal policy will, in the absence of shocks, aim to bring Australia's public debt back to low levels.

27. To achieve budget repair, budget proposals have typically envisaged deficit reduction averaging around ½ a percentage point of GDP a year over the four-year horizon focused on by budgets. The deficit outcomes, on average, have been a little lower. Between 2009/10 and 2016/17 the deficit decreased from 4.2% to 1.9%, implying an average deficit reduction of about 0.3 percentage points per year. One influence on this performance has

been the negative revenue impact from the substantial fall in commodity prices between 2011 and 2015 (Figure 1.4, Panel E).

Figure 1.12. Federal budget consolidation since the global finance crisis

Underlying cash balance



Note: Underlying cash balance is equal to receipts less payments, less net Future Fund earnings. The "underlying cash balance" is a main reference balance in federal-government budgeting. It is equal to receipts less payments, less net Future Fund earnings. Dotted line: balance-projections from the 2018-19 federal budget.
Source: Australia budget documents.

28. Fiscal policy needs to retain a high priority on achieving budget-repair. Robust output growth has been helping lift revenues and growth projections suggest this positive effect is set to continue. However, this does not remove the need to exert fiscal discipline to remain on track with budget repair, as upswing in revenues can prompt increased pressures to expand public spending.

29. Once budget repair is achieved, policymakers will need to reflect on what level of fiscal surplus ought to be aimed for in the longer term. This primarily entails a trade-off between buffer building (i.e. gross public debt reduction) and fiscal space (less debt reduction means more room to lower tax-burdens, accommodate spending pressures or for targeted expansion in public services and investment). The 2018-19 Budget's projections suggest intention for a surplus in the order of 1% GDP from 2022-23 onwards. If a surplus of this magnitude were indeed maintained over the long term, and assuming just over 5% nominal GDP growth (as reckoned in OECD long-term projections) then there would be fairly rapid decline in the debt-to-GDP ratio (to the pre-GFC level by 2029/30), implying high priority on buffer building (Figure 1.13). Australia's vulnerability to external shocks given its reliance on foreign capital and a significant share of exports in commodities suggests buffer building is indeed important, and this is commonly cited as the reason for conservative fiscal policy. Nevertheless, reflection on long-term fiscal strategy ought to review the strength of this argument and implied trade-offs with fiscal space.

30. The federal government's 2018-19 Budget signalled stronger commitment to retaining a small government by adopting a tax-to-GDP ceiling. Previous budgets' medium-term projections (beyond the first five years) included a tax-to-GDP 'cap' assumption which was adopted for technical purposes and did not represent a government

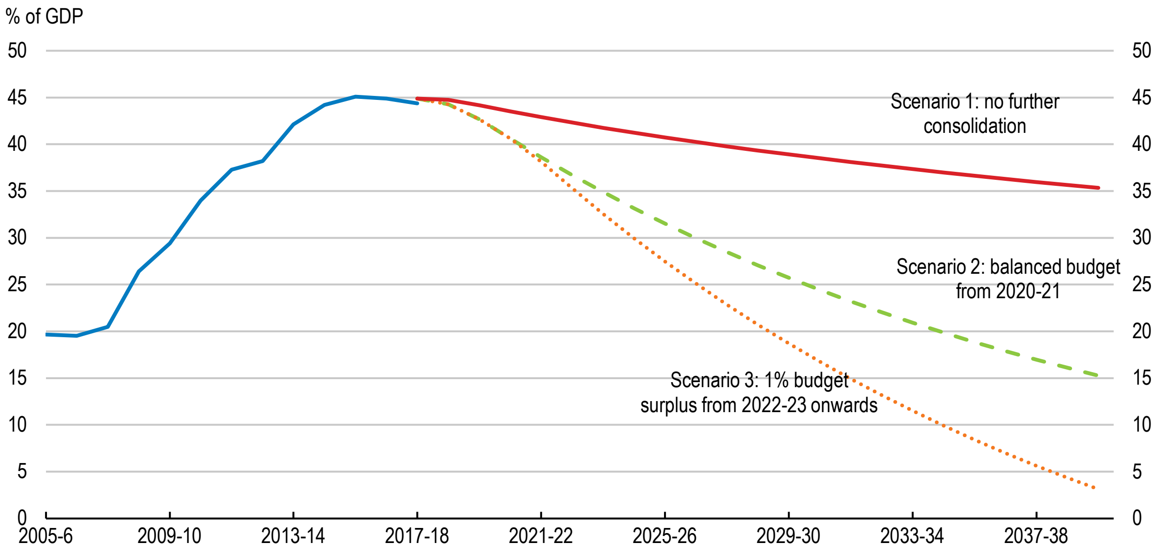
policy or target. In the 2018-19 Budget, the government announced that this will become part of its fiscal strategy. Neither the tax-to-GDP ceilingnor any of the other fiscal rules are hard-wired into legislation.

31. As with all such budgeting rules, the usefulness of these additional fiscal rules depends on whether the potential gains outweigh the downside risks. A tax-to-GDP ceiling combined with a spending cap can, for instance, bring positive pressure for increasing public-service efficiency or alternative delivery modes to tax-financed public spending. However, the tax cap might, for instance, prompt inappropriate pro-cyclical tax cuts or the spending ceiling may mean excessive constraints on funding public services. Risk of such undesirable consequences is diminished by the fact that neither the tax ceiling nor payment-growth limit are hard-wired in legislation, and so can be treated with discretion and adjusted to suit circumstances. However the requirement to have a fiscal strategy is legislated in the *Charter of Budget Honesty Act 1998* which requires the elected Government to publish a fiscal strategy set in a sustainable medium-term framework as a benchmark for evaluating the its conduct of fiscal policy.

32. The strong discipline on federal-level public spending implied by the budget-surplus goal and the new auxiliary rules implies that the call for greater use of stabilisation funds made in previous *Surveys* is less pertinent at the federal level. However, this remains a potentially useful way forward in state budgeting to cope with fluctuating revenue, in particular to counter tendencies to overspend during revenue upswings.

Figure 1.13. A wide range of debt-reduction speeds can be followed

Gross debt



Note: These debt projections use a simple model that uses various deficit trajectories and projection of GDP growth to calculate debt-to-GDP ratios looking forward. The model does not explicitly incorporate the channels of interaction between deficit profiles and GDP, nor structural influences on deficit developments and GDP growth, such as the impact of population ageing.
Source: OECD calculations based on OECD Analytical Database and Government of Australia.

1.3.2. Progress on tax reform but room for more

33. Australia's tax mix remains tilted towards direct taxes, which can diminish potential output growth (Akgun et al., 2017). Also, some prominent inefficiencies and distortions in

taxation remain, particularly in state-government taxation and in the tax treatment of private pension savings. As for many countries, issues in tax avoidance and evasion by multinational enterprises have come to the fore in recent years (OECD, 2018a).

34. A welcome focus on tax reform by the federal government is bringing advances on several fronts, most notably:

- Lightening of personal-income tax (PIT) has been legislated following its announcement in the 2018-19 Budget, including a new tax offset for low and middle income earners, and a multi-year plan for threshold increases and the removal of one PIT bracket.
- Reforms to pension tax treatment, including reduced tax concessions that principally benefit higher income earners. For instance lower ceilings on the tax concession provided in the contribution phase have been introduced.
- A concerted campaign to reduce tax avoidance and evasion ("tax integrity") continues. Notably, the 2018-19 Budget included measures in relation to the black economy and multinationals. Stronger enforcement of illicit tobacco, an economy-wide cash-payment limit and establishment of a taskforce to strengthen information sharing across agencies are among the specific measures proposed.
- A legislated series of corporate tax rate cuts for SMEs is underway, the rate has already been cut to 27.5% and is due to reach 25% in 2021-22 (the standard rate is 30%).
- Although royalty regimes (operated by States as owners of mineral resources) continue to be adjusted in light of market developments, further policy adjustments are considered desirable.

35. However, there remains considerable opportunity for further reform, in particular:

- Greater use of value added tax (the Goods and Services Tax, GST), as underscored in previous *Surveys*, could provide fiscal space for tax reform in other areas. At 10%, the GST rate is among the lowest of this type of tax in the OECD area (Figure 1.14), and as in other countries a range of goods and services are exempt. Substantial VAT rate hikes in other OECD countries seem generally to have occurred during times of substantial fiscal stress (Box 1.3), making a case during more benign circumstances may be more challenging. In light of this, and given that GST revenues are distributed to the states, moving ahead on reform may be most tractable if part of a wider reconfiguration of federal-state fiscal relations, something which is advocated in the Productivity Commission's latest five-year review (Productivity Commission, 2017b). Although the Government has recently announced that it will change the way that GST revenues are distributed among the states such reform could also incorporate improvement to the GST redistribution mechanism, (Productivity Commission, 2017c). Reworking of the GST base through alterations to exemptions may also be a way forward. Careful consideration should be given to the distributional effects of an increase in the rate of GST. Targeted income tax relief and cash transfers will be necessary in order to minimise the adverse distributional impacts of such reform on those on low incomes.

- Corporate tax rates for large business ought to eventually be reduced to align with those on SMEs, as was previously intended by government. A two-rate system risks distorting how firms are structured and how they behave, especially around the threshold between the two rates. Furthermore, to the extent that SME support is required, it is arguably better channelled through targeted instruments that focus on particular SME segments—such as businesses in innovative sectors.
- Despite some progress, inefficiencies and distortions in state-level taxation remain substantial, with heavy reliance on real-estate transactions taxes (greater use of land tax would be preferable), exemption-ridden payroll taxes and too many small charges and fees. Australian Capital Territory remains the only jurisdiction with a substantial reform of real-estate stamp duty underway.
- Natural-resource taxation (also primarily a state-level responsibility, the federal government only has exclusive power for taxing offshore natural resources) remains sub-optimal. As discussed in the 2014 *Survey*, a shift towards taxing resource rents, rather than royalties could improve the climate for resource-sector investment and exploration, helping bring further recovery in the sector.
- Opportunities to better address environmental issues include road transport taxation and charging where there is scope to shift the mix away from systems based on car ownership towards those based on car use, notably distance charging and congestion charging. The upcoming Environmental Performance Review also underscores scope to further improve the tax treatment of company cars and waste disposal charging, and flags the environmental downsides of Australia's tax concessions on fuels.

Box 1.3. Hikes in VAT rates: examples from other countries, impact on inflation

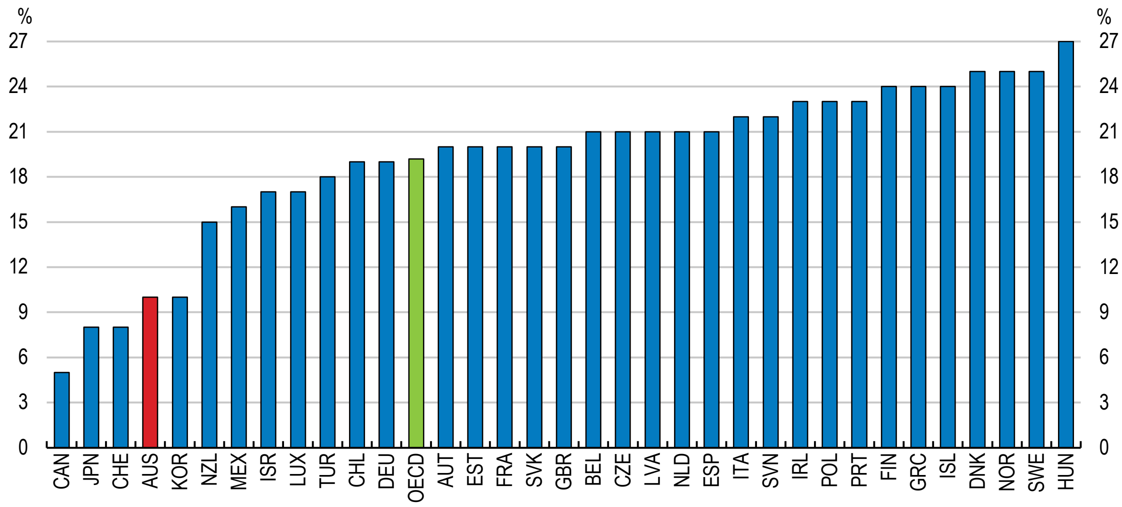
There was a wave of substantial hikes in standard rates of VAT across OECD countries in the early 2010s. Most were made when countries were experiencing very substantial fiscal deficit and debt problems and so revenue-raising will have been a primary driver. Between 2010 and 2011 there were hikes in Greece (19 to 23%), Portugal (20 to 23%), and Spain (16 to 18%), for example. VAT rate hikes in rather less critical fiscal conditions occurred in the Netherlands (19 to 21% in 2013), New Zealand (12.5% to 15% in 2011) and the United Kingdom (17.5 to 20% in 2011). This experience suggests that a substantial VAT hike during benign times is possibly challenging, requiring more offsetting measures to be (politically) feasible.

As regards impact on consumer-price inflation, assessment from the introduction of Australia's GST (Valadkhani and Layton, 2004) suggests every 1-percentage-point hike in GST would lead to an approximately 0.3% one-off increase in CPI (a similar scale of impact was seen in the United Kingdom's VAT hike of 2011, Office For National Statistics, 2011) . This suggests, an increase, say, from 10 to 15% in GST would generate a roughly 1.5% price inflation spike.

Source: OECD, VAT-GST Rates data

Figure 1.14. The Goods and Services Tax rate is low in international comparison

Standard rates of Value Added Tax, as of 1st Jan 2018.



Source: OECD Tax database.

1.3.3. Efficiency in public services is increasingly important

36. In general, Australian policymaking in recent decades has been adept at policy approaches that deliver on outcomes while involving comparatively light fiscal cost. Examples include mandatory private savings in the pension system, tightly targeted welfare

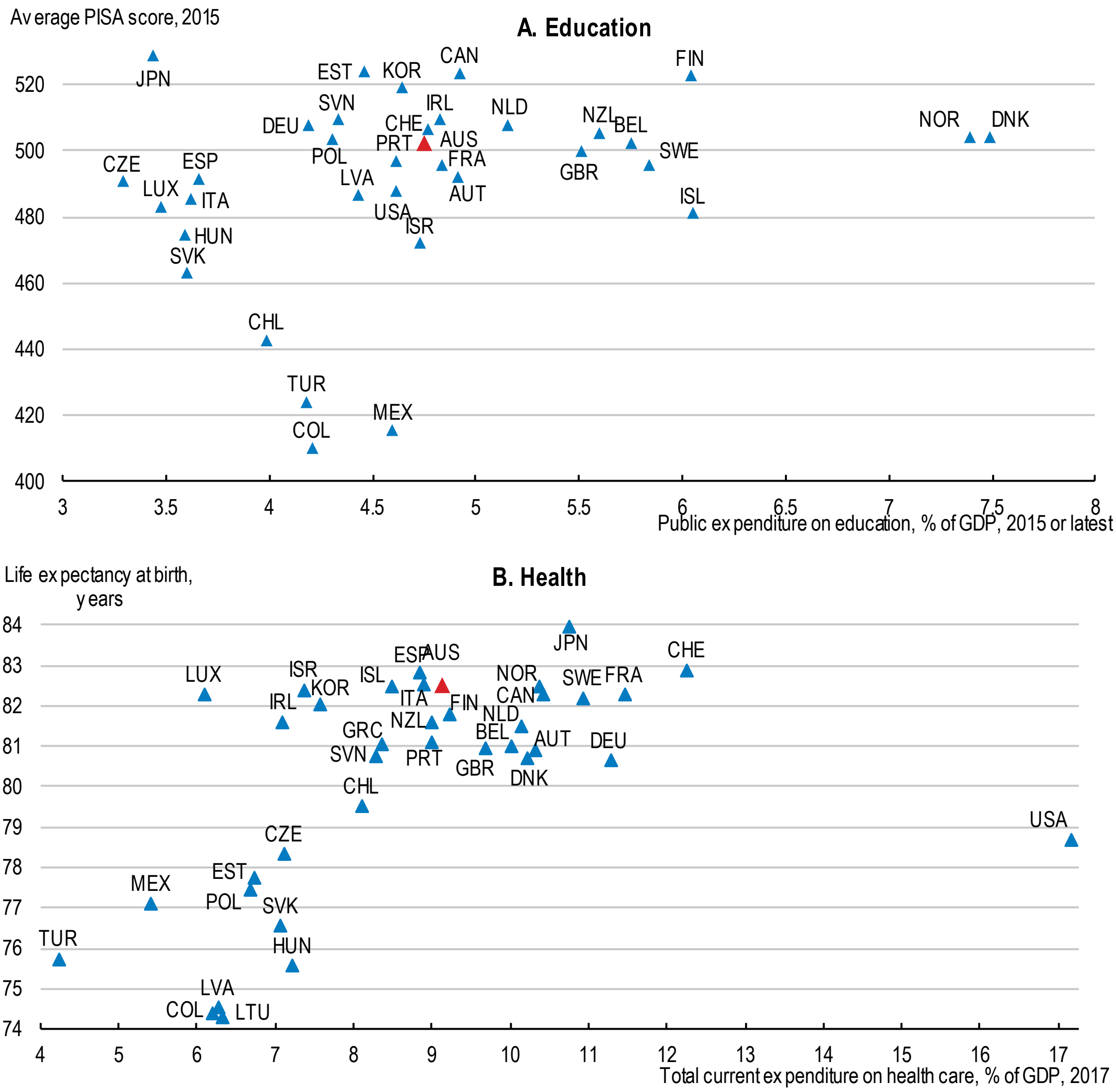
support through means testing, student support via loans and co-funding of infrastructure. Approaches such as these have helped the government provide comprehensive safety nets and maintain a core role in areas such as education and health (Figure 1.15) while remaining comparatively small in fiscal terms. Furthermore, there is an openness to explore new technologies for policy development, as illustrated by the use of data analytics to target public expenditure by the Ministry of Finance (OECD, 2018b).

37. Tapping into fiscally efficient solutions will remain important given current and upcoming spending commitments and continuing budget repair. Spending is being ramped up in several areas, including road and telecoms infrastructure (see below), disability support (implementation of the National Disability Insurance Scheme) and defence. Also, Australia faces the common prospect of increasing public spending on health care, long-term care and pensions as the population ages and as new treatments emerge. OECD analysis suggests that public health care and long-term care costs in Australia may be increasing public spending by as much as 1.5 percentage points of GDP per decade (de la Maisonneuve and Oliveria Martins, 2013). Although Australia is only middle-ranking in this regard, implementing fiscally efficient solutions to these issues, and making efficiency gains in other areas of public spending is important.

38. Human services are currently a focus of policy, which is sensible given the importance of these for public spending and the challenges in identifying routes for improvement due to complex nature of outputs and inputs, and the shared responsibility between federal and state governments. A Productivity Commission report (Productivity Commission, 2017d), identified six areas with scope to improve user choice, competition and contestability: end-of-life services, social housing, family and community services, services for remote indigenous communities, patient choice in health care and in public dental care.

39. Pressing on with review and reform in areas of public-spending that are inherently vulnerable to sub-optimal outcomes is important. Past *Surveys* have, for instance, flagged the large number of innovation-related support schemes, which are mostly aimed at SMEs, as a potential source of policy inefficiency. This *Survey's* in-depth chapter underscores that Australia faces the common challenge of ensuring value for money in transport infrastructure investment (see below).

Figure 1.15. Education and health indicators point to middle-ranking spending, yet room for better outcomes



Source: OECD Education at a glance; PISA 2015 database; Health Statistics database and World Bank WDI.

Box 1.4. Quantifying the fiscal impact of structural reforms

The following estimates roughly quantify the fiscal impact of selected recommendations. The estimated fiscal effects are first-order only, abstracting from behavioural responses and consequent GDP effects that could be induced by the given policy change. Limitations in available estimates and data mean the reform examples differ from those shown in the companion box illustrating GDP impacts.

Table 1.4. Illustrative fiscal impact of recommended reforms

Policy	Measure	Annual fiscal balance effect % of GDP
Rebalancing taxation	Increase GST rate (from 10% to 15%, estimate includes compensatory welfare expenses)	+1.1
	Further income-tax reduction: corporate (approx. 10% revenue reduction)	-0.4
	Further income-tax reduction: personal (approx. 5% revenue reduction)	-0.6
	Reduce stamp duty increase land tax (50% revenue shifts each)	-0.4
Improving human services	Efficiency gains (10%) in selected areas, including health services	+0.8
Deepening skills and increasing inclusiveness	Education spending increase (10% increase in spending)	-0.5
	Early Childhood Education and Care (ECEC) spending increase (10%)	-0.1
	ALMP spending increase (50% increase)	-0.1
Balance		-0.2

Notes: 1. GST effect is based on reported results of an in-house assessment by Australian Treasury plus an estimate of the cost of a 5% increase in welfare payments using the OECD's Social Expenditure Database.
2. Income-tax reduction calculations are based on assuming corporate and personal tax revenues represent around 3.5 and 11.5% of GDP respectively. The revenue reductions refer to percentage reductions these revenue shares.
3. Stamp duty and land tax based on estimates that these account for about 1.3% and 0.5% of GDP (from ABS data on Government Finance Statistics)
4. Impact of efficiency gains in human services and in early childhood education calculation are based on the OECD's Social Expenditure Database.
5. Education spending calculation based on OECD data on public expenditure on education.
Source: OECD calculations.

Box 1.5. Potential impact of structural reforms on per capita GDP

Selected reforms proposed in the *Survey* are quantified in the table below, based on the framework from Égert and Gal (2017). The estimates are based on cross-country empirical relationships between past structural policy settings and productivity, employment and investment. The estimates assume swift and full implementation, and being based on cross-country estimates, do not incorporate Australia's particular institutional settings. As such, these estimates are illustrative.

Table 1.5. Illustrative GDP-per-capita impact of recommended reforms

Reform	Percentage increase in GDP per capita	
	10 year effect	Long-run effect
Reduced Product Market Regulation in Energy, Transport and Communication sectors	1.0%	2.5%
Increased spending on Active Labour Market Policy	1.1%	2.1%
Reduced Corporate Income Tax	0.3%	0.4%
Increased spending on family benefits in kind	0.5%	0.7%

Notes: The permanent policy changes that assumed for the scenarios in the table are:
1. Reducing product market regulation in energy transport and communication sectors half way towards the best performer among OECD countries (reducing PMR indicator from 1.5 to 1.2);
2. Increasing spending on Active Labour Market Programmes (as measured by spending per unemployed as a share in GDP p.c.) toward the median of top third of OECD - equivalent to increasing spending by about 50%;
3. Reducing Corporate Income Tax revenue by 10%;
4. Increasing spending on family benefits in kind to the level of New Zealand, equivalent to raising expenditure by about 10%.
Source: OECD calculations based on Égert and Gal (2017).

Table 1.6. Past OECD recommendations on maintaining fiscal prudence and ensuring efficient tax and public spending

Topic and summary of recommendations	Summary of action taken since 2017 *Survey*
Maintaining fiscal prudence	
Consider a spending ceiling to contain expenditure growth in booms and targeting debt in the long term	The 2018-19 Federal Budget announced a cap on the ratio of federal tax revenue to GDP of 23.9% in its fiscal strategy
Create stabilisation funds using resource revenues, or make greater use of existing funds, to insulate budgets from commodity price changes	No progress has been made in widening the use of stabilisation funds
Tax and spending reform	
Further shift from corporate income taxes and, raise the Goods and Services Tax Reform state financing, including through removing inefficient taxes and raising land taxes, further reduction in grant conditionality Address federal-state responsibilities in major spending areas: improve co-ordination and co-operation, notably in health care, consider a reallocation of responsibilities	Corporate-tax reform includes rate cuts for small business (27.5% for 2018-19 and scheduled to reach 25% 2021-22). GST was extended to low-value goods imports as of July 2018 Measures to combat base erosion and profit shifting continue Australian Capital Territory remains the only sub-national jurisdiction implementing major land-tax reform. The reform is increasing land taxes, reducing transfer duties on conveyances and abolishing insurance taxes

Source: OECD

1.4. Transport, urban environments and utilities: substantial ongoing challenges

40. Well-planned and cost-efficient road networks and public transport, plus high quality and competitively priced energy, telecoms and water services contribute to household well-being and are key ingredients to a competitive business environment. Australia's current challenges include strain on urban infrastructure from rapid population growth (see in-depth chapter), supply and price issues in electricity and gas markets, and challenges in the telecommunications sector. In addition, utilities provision in Australia's rural and remote areas faces considerable economic and technical challenges.

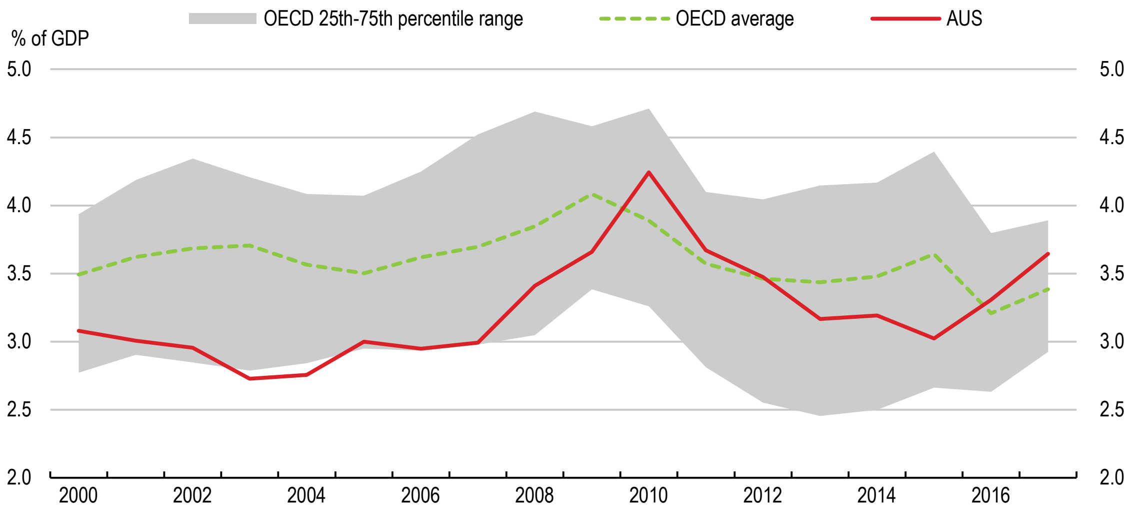
41. Alongside traditional approaches to resolving these issues (see below), the government is demonstrating a welcome openness to seeking new solutions. For example, the federal government is implementing the "Smart Cities Plan", which aims to provide greater federal-government support and steerage on developing and implementing technological solutions to infrastructure and other issues in urban areas.

1.4.1. A major push to improve urban transport infrastructure is underway

42. Given the growing transport challenges it is welcome that the government is implementing a major programme of investment in transport infrastructure, mainly roads in and around metropolitan areas. This is reflected in a new surge of government investment (Figure 1.16).

Figure 1.16. A new surge in government investment is underway

Gross government fixed capital formation



Source: OECD Analytical database.

43. In common with many other countries, despite formalised processes (in Australia these include checks and assessments provided by independent agencies), politics can overshadow economics in infrastructure project selection. There appear to be instances of bias in economic calculation to help projects pass approval and cases where economic assessment has simply been overridden (Terrill, 2016). Despite some strengthening of the infrastructure agencies, there is room for improvement in project selection. Chapter 2 recommends raising the prominence of cost-benefit analysis.

44. Tackling urban road congestion also requires attention to alternative transport modes (public transport, walking and cycling) along with the wider use of road pricing (mentioned above). In addition, adapting electric and hybrid vehicle incentives and infrastructure as technology evolves further and continued encouragement of autonomous vehicle trials will help transport development.

1.4.2. Urban environments would benefit from governance and land-use reform

45. In Australia, state governments take a lead on most urban issues and have been conducting welcome efforts to give urban development stronger direction. For example the New South Wales government plans for a three-centred urban conurbation (*A Metropolis of Three Cities - The Greater Sydney Regional Plan*). Some metropolitan areas would benefit from amalgamations of local government, or from efforts to ensure opportunities for combined provision and decision making across jurisdictions are fully exploited.

46. Australia's land-use zoning systems (a state-level responsibility) have long been criticised as having too many categories and excessive direction on allowable activities within each zone. A range of efforts is underway to improve zoning, and planning more generally. However, only Victoria has substantially decluttered its system. Also, such reform does not necessarily remove the risk that land-use planning (largely in the hands of local government) fails to align well with wider community interests and strategic objectives. Chapter 2 suggests accompanying zoning reform with limits on local-government powers

for add-on restrictions and removing proximity restrictions that still feature in some retail sectors, pharmacies are a prominent example.

1.4.3. Some underlying energy sector problems have yet to be resolved

47. High prices for electricity and gas users and supply problems, notably a state-wide blackout in South Australia in 2016, prompted immediate remedial action (including installation of a large battery for back-up supply in South Australia) and investigation of the underlying problems. One contributory factor has been the commencement of gas exports, a broadly positive development, but nevertheless with impact on domestic supply and prices. Other strains on the energy sector represent uncertainty in policy and regulation. Most notably, piecemeal solutions and changing policy directions in greenhouse gas emission reduction policy to date (see environmental section below) have, inter alia, created difficulties in planning new electricity generation capacity. Other problems include widespread over investment in electricity transmission network (Grattan Institute, 2018), and poor market information flows and instances of monopoly pricing in the gas sector.

48. The policy response has brought good progress on some fronts and has included agreements with energy retailers and gas companies for improved information and service levels; strengthening of supply guarantees, increased scrutiny of the energy market competition authority. Also, a large pumped hydro facility (Snowy 2.0) is planned, which will increase capacity to harness solar and wind energy, and additional pumped hydro facilities are being explored. Proposals for a new energy-sector instrument, the "National Energy Guarantee" that would place reliability and emissions requirements on electricity retailers were made in 2017, but this was withdrawn from the government's agenda in August 2018. The government remains commited to working with the states and territories to implement the reliability component of the National Energy Guarantee framework.

1.4.4. Progress but also remaining challenges in ensuring access to low cost-high speed ICT

49. With regards to fixed-line services, and as detailed in the previous *Survey,* Australia is rolling out a wholesale-only fixed-line, wireless and satellite network via a publically-owned enterprise (NBN Co.). By mid-2018 over 60 per cent of Australian premises could access the National Broadband Network with 100% access expected by mid-2020.

50. With respect to mobile services, the previous *Survey* highlighted the growing view among experts that a fourth operator may raise competition significantly (OECD, 2014). Over the next eighteen months several countries will add a fourth operator, including Hungary, Italy, Japan and Singapore. Entry of a fourth operator in Australia could prove beneficial for competition.

51. Other issues include ensuring wholesale fixed-line pricing is competitive and bringing greater flexibility in how mobile access numbers ("international mobile subscriber identities", IMSIs) are issued and stored. Progress on the latter is important for connecting products, such as cars and appliances, to the internet (the "Internet of Things") thereby facilitating services such as feedback to owners and manufacturers on wear and tear.

Table 1.7. Past OECD recommendations on infrastructure and utilities

Topic and summary of recommendations	Summary of action taken since 2017 *Survey*
Improving infrastructure investment	
Ensure robust and transparent cost-benefit analysis Simplify infrastructure investment processes Improve public-private partnership processes	In July 2018, Infrastructure Australia published its Infrastructure Decision-making Principles and in March 2018 it also updated its Assessment Framework
Working towards better transport	
Simplify and harmonise road and rail regulation across states Bring in a road-freight pricing scheme Consider reforming arrangements for managing and funding road infrastructure	In May 2018, the Council of Australian Governments' Transport and Infrastructure Council agreed a framework for developing a 20-year national freight and supply chain Strategy
Improving energy-sector efficiency	
Harmonise interstate regulation Continue privatisation Remove ceilings on retail electricity prices Bring in smart meters	No major policy developments
Ensuring access, competitive pricing, and quality in telecommunications	
Facilitate the entry of a fourth operator in mobile telephony via a spectrum auction	No major policy developments

1.5. Skills: evolving to new needs

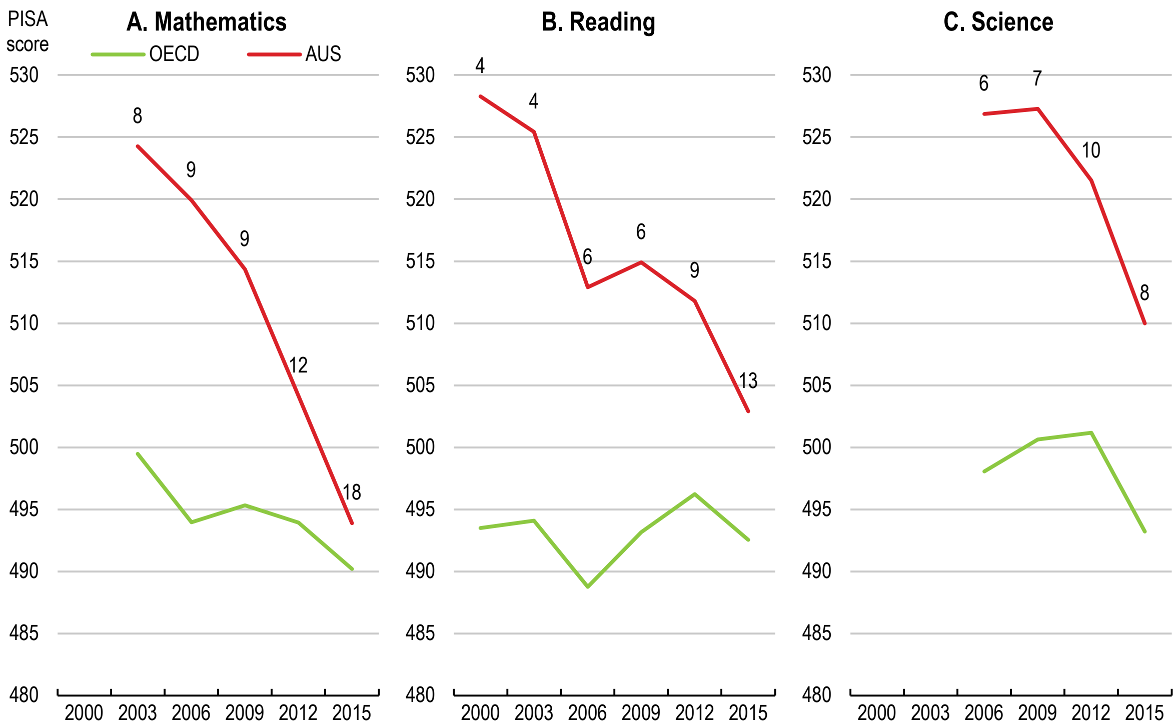
52. Ensuring education and skills training reflects evolving labour demands under rapid technological change and globalisation is important for improving productivity performance and for ensuring that individuals are not "left behind" in terms of access to employment and earnings due to weak or inappropriate skills (see Chapter 2).

53. Australia's high level of GDP per capita reflects high levels of educational attainment and skills. As for many countries, participation in tertiary education has increased significantly over recent decades and Australia also scores well in participation in adult learning. As regards outcomes, Australia has above-average scores in the OECD's PISA tests (which test 15 year-olds) and in PIACC (which tests adult skills). The latter also indicate a good ranking in computer and ICT skills and strong learning skills at work.

54. However, there are challenges:

- Australia's PISA scores have been edging down both in absolute terms and relative to other participating countries (Figure 1.17).
- Australia appears to have wider gaps in student performance compared with many other countries, and by certain measures, equity has worsened over time. Despite policy efforts, the proportion of high achievers among disadvantaged students has remained roughly constant, and the impact of socio-economic status on science proficiency appears to have increased (OECD, 2016a).
- The rapid expansion in tertiary education, though largely welcome, has generated cost challenges for university funding and student loan support. It has also contributed to falling completion and weaker labour-market outcomes. Indeed, the expansion may have been too large, i.e. supply may have overshot.

Figure 1.17. Australia's PISA performance is weakening



The numbers beside the lines in the charts indicate the ranking of Australia, 1 being the country with the highest PISA score.
Source: OECD Program for International Student Assessment (PISA), 2000, 2003, 2006, 2009, 2012, and 2015 Reading, Mathematics and Science Assessments.

55. Improving skills and education requires work at all points in the educational supply chain. A major reform affecting early childhood education initiated in 2009 expanded access and improved quality assurance. Reforms have also been introduced to better target and streamline childcare support, partly with the aim to facilitate labour supply of women. This underscores the importance of continued resourcing of universal access to early childhood education and quality improvement. It also suggests offering further targeted support to disadvantaged families by reducing barriers to attend early childhood education and more monitoring of the quality of service.

56. Primary and secondary school reform in recent years has most notably included changes to the funding system. A first wave of reform ("Gonski 1.0") has introduced more socio-economic variables in school funding formulae with a view to bringing a more "needs based" approach. A second wave is planned that will, in addition, connect funding to learner progression. Continued progress on these reforms is required and could include the establishment of a research institution to improve the evidence base in education.

57. Australia's VET system has been through severe difficulties following a reform that successfully brought new providers and competition but failed to accompany this with adequate checks on provider quality. This resulted in an explosion of providers and courses, many of them of poor quality and focused on profiting from government support to cover fees via student loans. Reforms look set to fix this problem but close monitoring is nevertheless required. On other fronts, policy should push for greater general-skills content in VET courses in light of a significant share of adults with low numeracy skills and a bias

towards job specific content. The authorities should also remove up-front payments for students that feature in VET but not university education, which biases education choices towards degree-level courses.

58. Tertiary education's expansion has generated rapid increase in current and future fiscal cost through grants to universities and implicit costs in the accumulation of student-loan debt from interest subsidy and the non-repayment of debt from graduates whose incomes never surpass the repayment threshold. The current government has, in effect, abandoned the demand-driven university funding model that was adopted in 2012 by imposing a two-year spending freeze on university grants and signalling intent to then link spending increases to population growth and other (yet to be determined) criteria. Given the fast paced rise in costs, this approach seems sensible. For the longer term funding will have to accommodate the large population cohorts reaching the end of high school. Some tweaks to the student-loan repayment rules have been introduced, including reduction in the initial repayment threshold, but further reform is needed to collect more of the outstanding debt. One challenge is to achieve this without significant impact on low-income households.

59. As for education systems everywhere, better information about provider quality and developments in skill and vocation demand in the labour market can make for better decisions by students, keep courses up to date and more generally better connect demand with supply. In the school sector more regular knowledge updates for school career advisors and less bias towards gearing pupils towards university education would help. A recent *Getting Skills Right* (OECD, 2018c) review of Australia includes examination of skills assessment and anticipation (SAA) processes and suggests including more regular assessment, more consistency across regions and sectors, and greater assessment in remote areas. Centralisation of online career and education platforms is also recommended. Furthermore, amid rising non-completion in university education, prospective students should be given better information about employment prospects, and about risks and costs of undertaking university education.

60. New ways of delivering education using digital technologies, such as Massive Online Open Courses (MOOCs) and Open Educational Resources (OER) have an increasing presence in Australia, though remain still comparatively small compared with traditional education. Some providers are using new methods to deliver education to remote communities, the further development of which can only be welcomed, especially given the socio-economic challenges of these communities. Policy could assist a more general take up of digital education technologies by a more generalised accreditation system that is more neutral to the learning method.

1.6. Inclusiveness: scope to narrowing gaps remains

1.6.1. Some shortfalls in labour-force participation

61. Labour-force participation in Australia is higher than many countries, yet for some groups - mothers, lone parents and indigenous people - participation lags behind. Encouraging greater labour-force participation would help reduce poverty and keep individuals connected with evolving technologies and skills.

62. Australian welfare policy entails comparatively light fiscal demands, helping keep tax wedges on labour low and therefore supporting jobs and competitiveness. Strong emphasis on activation schemes, combined with means and activity testing, limit the number of welfare-dependent households. Nevertheless, as discussed in Chapter 2, there are challenges.

63. Activation policy centres on a system of contracted out employment services (*jobactive*), and participation in activities (career advice, training, voluntary work, etc.) is among the eligibility requirements for benefit receipt. While this approach merits much praise, getting the incentive structure for providers right is challenging. As pointed out in recent OECD reviews (OECD, 2017 and 2016b), payments to providers for placing a worker are made at the 4th, 12th and 26th weeks of employment. Providers are thus incentivised to get the unemployed into work quickly but there is a risk that attention to employment longevity and stability is limited. An additional payment, beyond 26 weeks, could incentivise provision of more relevant and higher quality training and greater employment retention. Experience from the UK Work Programme, which offered employment services for the long-term unemployed, shows that for certain groups of jobseekers prolonged support and incentives can have a positive impact on job retention.

64. In addition, support for displaced workers (dismissed for economic reasons), or facing the prospect of displacement for instance in mass lay-offs could be improved. *Jobactive*´s focus on jobseekers facing the highest barriers to re-employment means it is not geared to this task. Past response to mass layoffs has seen substantial ad hoc federal and state level intervention, but this has been focused on politically high-profile cases and risks inconsistency. Introduction of the temporary federal package (*Stronger Transitions*) to provide early intervention is therefore welcome. Another new initiative, *Job Change* (due to commence in July 2019), will make employment services immediately available for all retrenched workers (and their partners). Improving policy response to lay-offs would also be helped if employers could provide more advanced warning and ensure workers' records on skills and training are up to date.

65. Australia's labour-force participation of women with children is relatively low (Figures 1.18 and 1.19), especially among lone mothers, suggesting issues in family-related benefits and taxation, and in support for child care services. High and uneven marginal effective tax rates related to benefit tapering are potentially dissuasive factors to employment (especially full time) for many women. A recent move to replace two child-care benefits with one scheme will, inter alia, bring welcome simplification to the tax-benefit situation. Nevertheless, the benefit tapering issue remains an inherent challenge of means-tested benefits and ongoing efforts to minimise negative employment incentives are required. Roll out of a pilot activation and support programme for parents that uses private providers (*ParentsNext*) is welcome, in particular as many lone parents face multiple barriers to employment, including weak skills, health conditions and limited work experience (OECD, 2017). However, there is also scope for tougher incentives, in particular, Australia's benefit eligibility conditions for lone parents do not require a full work test until all children are 6 years old; in many countries this threshold is 3 years.

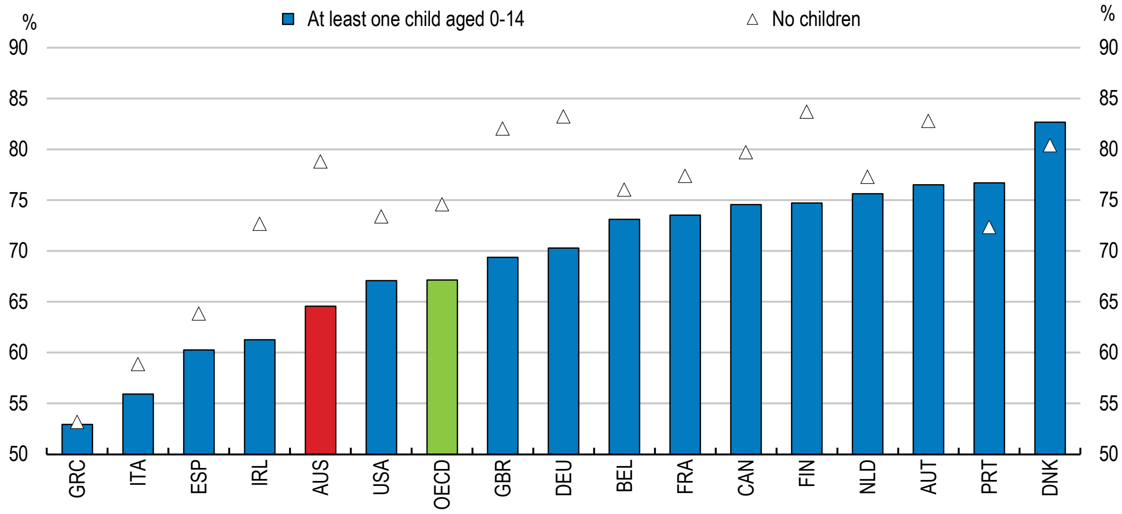
1.6.2. Mixed progress in closing the gaps for indigenous populations

66. Australia's greatest inclusiveness challenge remains the substantial and multiple socio-economic disadvantages faced by many Aboriginal and Torres Strait Islander communities. The population of Aboriginal and Torres Strait Islanders is around 750 000, approximately 3% of the total population. The top-level strategy and assessment process, *Closing the Gap*, annually monitors progress on narrowing gaps in socio-economic outcomes (Box 1.6). The 2018 report finds mixed progress. Targets on track are in the areas of child mortality, attendance of four-year olds in early childhood education, and Year 12 educational attainment. Meanwhile outcomes are lagging in the areas of school attendance, reading and numeracy, employment and life expectancy. Based on assessment of past policy experience, the 2018 *Closing the Gap*, underscores the key role of good co-

ordination in policy and efficient resource allocation (Box 1.6). In addition, past experience shows the importance of fully involving indigenous communities in policy design and implementation. This is echoed in other reports, including the Productivity Commission's report on human services (Productivity Commission, 2017d).

Figure 1.18. Motherhood has a strong impact on labour market participation

Employment rates for women (25-54 years old) with no children and at least one child aged 0-14 years, 2014



Note: OECD is an unweighted average across the OECD countries.
a) For Canada, children aged between 0-15 and 0-17 for the United States.
b) Data for Denmark and Finland refer to 2012, and to 2013 for Germany.
Source: OECD Family Database.

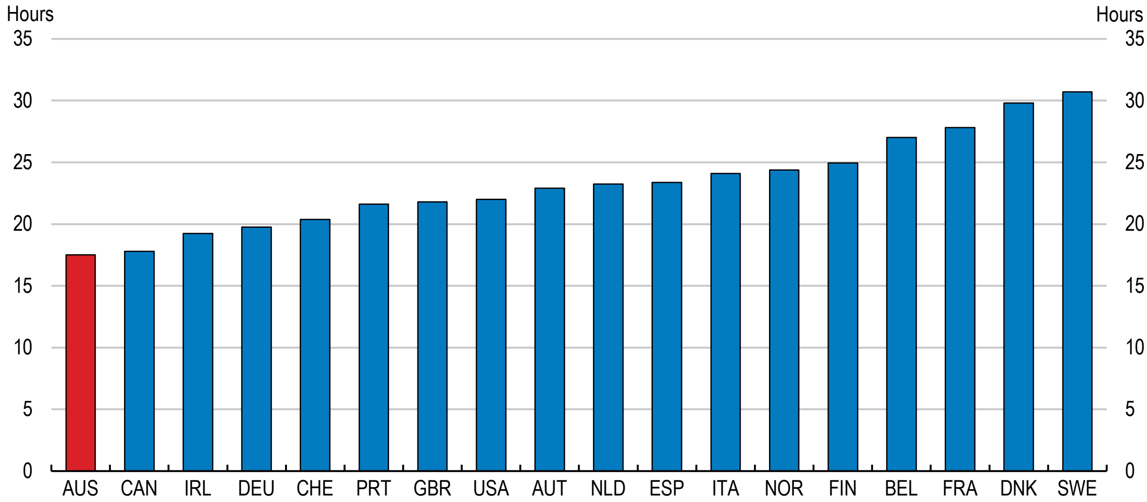
Box 1.6. Keys to successful outcomes in support for indigenous populations

The annual Closing the Gap reports monitor progress on seven targets in narrowing gaps between outcomes for Aboriginal and Torres Strait communities and the rest of Australia's population. The latest Closing the Gap (Australian Government, 2018, p 11-12) report lists several keys to successful outcomes based on past research and policy experience:

- *"holistic approaches that work with Aboriginal and Torres Strait Islander people in ways that take into account the full cultural, social, emotional and economic context of Indigenous people's lives – including an awareness of the ongoing legacy of trauma, grief and loss associated with colonisation;*
- *active involvement of Indigenous communities in every stage of program development and delivery in order to build genuine, collaborative and sustainable partnerships with Aboriginal and Torres Strait Islander people, and build capacity within Indigenous communities;*
- *collaborative working relationships between government agencies and other relevant organisations in delivering services and programs, acknowledging the interrelatedness of key social and economic determinants across multiple life domains for Indigenous Australians;*
- *valuing Indigenous knowledge and cultural beliefs and practices that are important for promoting positive cultural identity and social and emotional wellbeing for Indigenous Australians;*
- *clear leadership and governance for programs, initiatives and interventions. This includes commitment from high-level leadership of relevant organisations and agencies to the aims of reducing Indigenous disadvantage and addressing determinants of health and wellbeing;*
- *employing Indigenous staff and involving them fully in program design, delivery and evaluation, and providing adequate training, where necessary, to build capacity of Aboriginal and Torres Strait Islander staff;*
- *developing committed, skilled staff (Indigenous and non-Indigenous) and providing diversity and cultural awareness training;*
- *adopting a strengths-based perspective that builds and develops the existing strengths, skills and capacities of Aboriginal and Torres Strait Islander people; and*
- *clear plans for research and evaluation to identify successful aspects of programs, provide a basis to amend and improve, demonstrate success and build an evidence base to justify allocation of ongoing resources."*

Figure 1.19. Partnered mothers work very short hours

Average usual weekly hours of partnered mothers working part-time, aged 25 to 45, with at least one child, 2014 or latest



Note: Usual working hours of the employed for European countries, Australia, Canada and the United States. Data refer to total hours worked in all jobs, except for Canada where only hours worked in the main job are considered.

a) For European countries, the distinction between part-time and full-time employment is self-defined – i.e. based on respondents' own perceptions of whether they are in part-time or full-time employment. Part-time status based on weekly working hours below 30 for Australia and Canada and less than 35 hours for United States.

b) Data refer to 2011 for Canada, to 2014 for Australia and the United States.

Source: OECD Connecting People with Jobs: Key Issues for Raising Labour Market Participation in Australia.

Table 1.8. Past OECD recommendations on employment, health and welfare

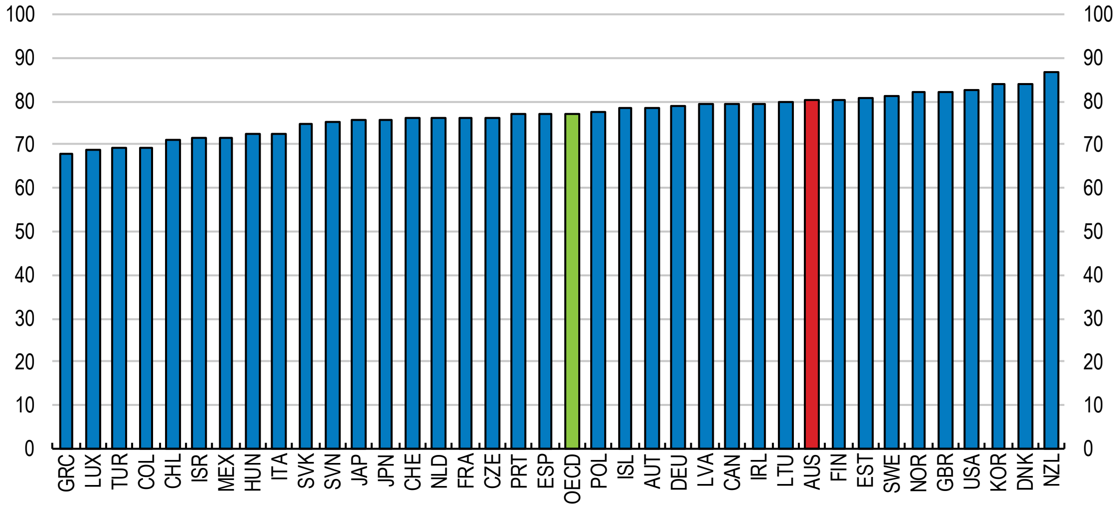
Topic and summary of recommendations	Summary of action taken since 2017 *Survey*
Encourage employment	
Improve early childhood education and care (ECEC) to help parents combine work and family life	An activation and support for parents (*ParentsNext)* is being rolled out
Improve benefit settings to encourage employment in particular in the disability support system	A new Disability Employment Services model has been designed with implementation intended for 2018
Improve employment services: strengthen funding-performance links, stream claimants more	A temporary federal programme to help displaced workers (*Stronger Transitions*) has been announced and a new programme, *Job Change*, is due to commence in July 2019
Maintain labour-market flexibility and address supply constraints through migration	
Make negotiation requirements more flexible for new business operations Reform sector-specific labour regulation in negotiated agreements Increase labour mobility, for instance by lower interstate differences in education and training programmes	The first four-yearly review of Modern Awards (which provides for industry and occupation-specific minimum rates of pay and conditions) is currently underway
Health care, disability and disadvantage	
In health, increase preventative care, improve services for the elderly and mentally ill, promote primary care Reduce complexity of the disability support system, make it more person-centred	The 2018-19 Budget includes an increase in mental health funding, with a focus on suicide prevention, older Australians and research The More Choices For a Longer Life package includes aged care reforms to support choice and a healthy life for older Australians
Welfare	
Better target superannuation (pension) tax concessions Develop an investment approach to welfare policy that focuses on vulnerable groups Improve services for those with multiple disadvantages	A round of reforms to superannuation taxation has been completed The Government will continue to develop the Australian Priority Investment Approach to Welfare, with annual valuation reports of the welfare system and interventions to support greater workforce participation for those who have the capacity to work. The Government is using insights from the Investment Approach to Welfare, to target and invest in groups of young people who are at-risk of long-term welfare dependency, funded under the Try, Test and Learn Fund. Roll out of the National Disability Insurance Scheme (NDIS) continues.

1.7. Business policies: ensuring strong competition and boosting innovation

67. A generally strong and flexible skill base, a low tax burden on the overall economy and broadly favourable indicators of product-market restrictiveness, including for the service sector (Figures 1.20 and 1.21), point towards a competitive environment for business in Australia. However, ongoing efforts are required to ensure well-functioning markets and to avoid unnecessary regulation.

Figure 1.20. A favourable regulatory climate for business

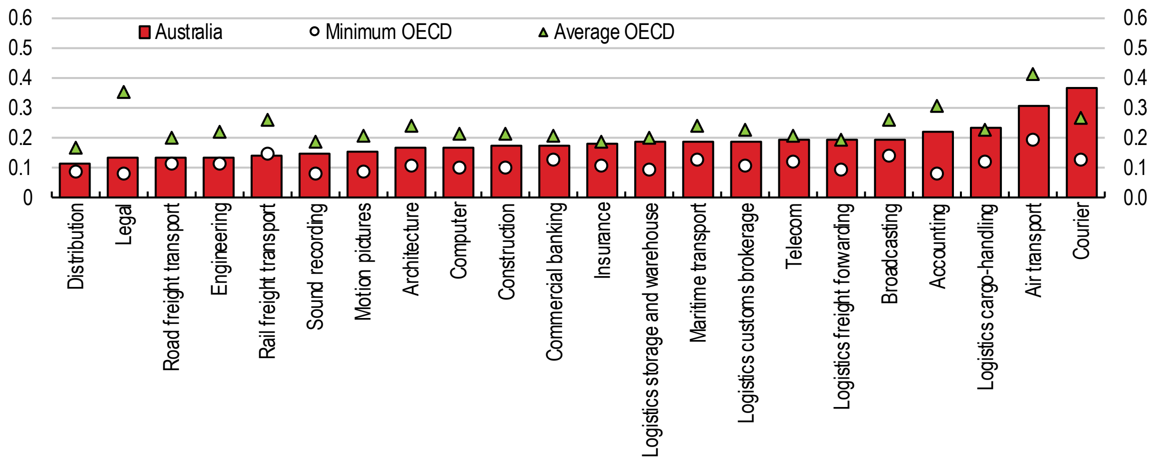
Ease of doing business, distance to frontier, scale 0-100 (best)



Note: The distance to frontier score shows how far a location is from the best performance achieved by any economy on each Doing Business indicator. The score is normalized to range from 0 to 100, with 100 representing the frontier of best practices (the higher the score, the better). The Doing Business 2018 rankings are benchmarked to June 2017 and based on the average of each economy's distance to frontier (DTF) scores for the 10 topics included in the aggregate ranking.
Source: World Bank Doing Business 2018 database.

Figure 1.21. Services Trade Restrictiveness Index

The indices take values between zero and one (the most restrictive) [1], 2017.



1. The index includes regulatory transparency, barriers to competition and other discriminatory measures, restrictions on movement of people and restrictions on foreign entry.
Source: OECD Services Trade Restrictiveness Index (STRI).

1.7.1. Framework conditions: scope for improving market functioning remains

68. Ongoing policy priority on the tax mix and infrastructure reflects a welcome focus on improving framework conditions for business. Progress has also been made in following up on a major review of competition policy (the "Harper Review", Harper et al, 2015). Actions taken include the passing of major amendments to competition legislation (Table 1.9). In particular, these include increased legislative scope by replacing price-signalling laws with a more general prohibition of "concerted practices" (practices which have the purpose, effect or likely effect of substantially lessening competition). In addition, conditions for healthy firm dynamics have been improved through amendments to insolvency legislation that facilitate restructuring (see Table 1.9).

69. Data rights have been receiving particular policy attention. The Consumer Data Right initiative will give consumers, including businesses, the right to direct businesses holding certain data, to transfer it to themselves or a third party. These rights will first apply to the banking sector, followed by the energy and telecommunications sector, with intention for them to eventually apply economy wide. Granting these data rights will potentially promote competition by, for instance, improving comparison and switching of products and services, including inputs for business.

70. Scope remains for improving market functioning on numerous specific issues. This *Survey* elsewhere draws attention to negative impacts from stamp duty, and problems in pharmacy regulation and land-use zoning. Other areas commonly flagged as ripe for reform include product standards (for instance there is room to adopt international product standards more widely to reduce red-tape), professional and occupational licencing (the scope of services controlled by the licencing is often broader than necessary), and shipping regulation (for instance, restrictions on the right to operate at sea, 'cabotage', could be reduced) (see Productivity Commission 2017b, Annex B).

71. To date the authorities’ response to the new wave of "disruptive" businesses has been broadly positive, endeavouring to reshape regulation to accommodate new players while ensuring neutrality of treatment. In particular, most states and territories have now established “cohabitation” arrangements between ride-sharing and taxi services (however, ideally the regulation ought eventually to converge to a common framework for both ride-sharing and taxi services). Also, local governments have been addressing issues raised by accommodation services. However, barriers to disruption in general framework conditions also need to be addressed. In particular, competition policy should counter undesirable defence strategies by incumbents (such as strengthening barriers to entry). Where tax issues arise from disruption, fair treatment should be sought for entrants and incumbents.

1.7.2. Targeted policy for business: a focus on innovation continues

72. A major push to improve Australia's environment for innovation has been made via the *National Innovation and Science Agenda* (NISA), which instigated measures on a wide range of fronts including financial support for innovative business, research-business collaboration, skills, government procurement and data policy. The 2017 *Survey*'s in-depth assessment of innovation in particular underscored the importance of progress on improving research-business collaboration.

73. Active measures to encourage innovation continue. The 2018-19 Budget announced an AUD 2.4 billion investment in research, science and technology capabilities, many of which aligned with recommendations made in Australia 2030Prosperity through Innovation by the independent statutory board Innovation and Science Australia. The Budget also detailed reforms of the R&D Tax Incentive that aim to increase its effectiveness in prompting new R&D activity ("additionality"), while also improving integrity and program administration. Also, there has been progress in reforming intellectual property legislation following the Productivity Commission's 2017 assessment.

74. Some innovation-related policy areas, such as skills and education, will require ongoing policy attention and implementation pressure to bring about change. In other aspects of innovation policy, a phase of finalising implementation of the *Agenda* and assessing impact is probably appropriate in many cases. However, there remain unaddressed issues, notably there has been no substantial pruning of the large number of business support programmes targeting innovative SMEs. There are efforts to facilitate user navigation of the menu of support programmes through one-stop-shop initiatives (*business.gov.au*). This improved accessibility does not address underlying inefficiencies from programme overlap or redundancy.

Table 1.9. Past OECD recommendations on ensuring competitive and innovative business

Topic and summary of recommendations	Summary of action taken since 2017 *Survey*
Promoting competitive markets	
Concentrate on broad support for business: prioritise corporate tax rate cuts, reduce regulatory burdens and tax avoidance	The implementation of tax cuts for small and medium businesses and the campaign to reduce regulatory burdens continues
Strengthen competition and resource allocation, notably: - Improve competition law, notably regarding (abuse of dominant position) - Adjust insolvency legislation -Encourage market entry by innovative business models.	Amendments to competition legislation introduced in 2017 include replacement of price-signalling laws with a broader prohibition on "concerted practices" and a broader definition of the misuse of market power. The amendments also clarify the law and streamline processes, for instance regarding cartels and mergers. Insolvency legislation amendments (2017) introduced: - a "safe harbour" from personal liability for directors for insolvent trading. This allows company directors to retain control of a company undergoing restructuring (instead of ceding control to an external administrator) - provisions for moratoria on “ipso facto” clauses when a company is undertaking a restructure (these clauses allow contracts to be terminated or modified soley due to an insolvency event)
Encouraging innovation	
Make innovation support more effective by enhancing the impact of the R&D Tax Incentive and reducing the number of support schemes for innovative SMEs	Reform of the R&D Tax Incentive with a view to refocus support towards additional high-intensity R&D expenditure and improving integrity and program administration, was annouced in the 2018-19 Federal Budget
Encourage more innovation in public services by opening up procurement to more bidders and further development of digital government services	The National Innovation and Science Agenda included a range of measures along these lines, including: • a digital marketplace to facilitate tendering by SMEs for government IT projects • Grant funding for SMEs to develop innovative solutions for government policy and service delivery challenges (Business Research and Innovation Initiative)
Strengthen innovation policy, especially research-business collaboration, notably through: - incentives in university funding, -improved coordination of student placement programmes - more uniform research assessment across public-sector research organisations - a more integrated, “whole-of-government” approach	Among the measures aiming to increase collaboration: • Changes have been made to university research block grants to incentivise collaboration • Additional funding (AUD 25 million) for the Cooperative Research Centre’s program, with a specific focus on artificial intelligence • additional funding for the Global Innovation Strategy, which includes measures that provide funding to help Australian businesses and research organisations collaborate with global partners • The Entrepreneurs’ Programme Innovation Connections program, which continues to drive collaboration between SMEs and researchers.

1.8. Environmental policy: challenges in climate change and biodiversity

1.8.1. CO_2 emissions remain high

75. Australia’s carbon intensity in relation to GDP has fallen. Nevertheless, intensity remains substantially greater than the OECD average. Per capita emissions are around 50% higher than the OECD average (Figure 1.22). Furthermore, Australia is among the ten largest greenhouse gas (GHG) emitters in the OECD in terms of total emissions.

76. Australia's high CO_2 emissions mostly relate to the energy mix, rather than high energy intensity of production. Energy intensity continues to trend down, though the latest data point showed an increase. Australia's CO_2 emissions come mainly from the power and transport sectors. Growing demand for transport has added to emissions.

77. Energy taxation notably comprises comparatively low tax rates on transport fuels in international comparison. Fossil fuels are untaxed in industrial use and in electricity generation (OECD, 2018d,e). This also applies to coal, which is used heavily in electricity generation. Pricing the carbon content of fossil fuel use consistently, and transport fuels at higher rates, would reduce demand for carbon-intensive energy. No projects for new carbon-fired power plants are being pursued (Global Coal Plant Tracker, 2018), which is welcome in the context of reaching the climate objectives of the Paris agreement. However, there are plans to allow further expansion of coal mining, which runs counter to the need for the global decarbonisation of energy supply to stabilise atmospheric CO_2 concentrations. For example, coal use may need to drop by 78% per cent world-wide by 2060 to keep emissions in line with the Paris agreement, according to a recent scenario by the International Energy Agency (IEA, 2017).

78. Renewable energy production has increased in recent years, though its share in total primary energy supply remains smaller than the OECD average. Falling costs of wind and solar power have supported the increase. Australia is among the few countries to have established a government-owned green bank (the Clean Energy Finance Corporation, CEFC) which helps finance clean energy projects. Stronger pricing of carbon would encourage renewable energy supply, as would more consistent climate policies more generally (see below). More innovation, directed by a clear price signal, could also strengthen renewable energy use and make carbon capture and storage economically viable.

79. Australia's greenhouse-gas (GHG) reduction target, fixed in its Nationally-Determined Contribution under the Paris Agreement, prescribes reducing GHG emissions by 26-28% below 2005 levels by 2030, including emissions from land-use, land-use change and forestry. As for many OECD countries, this target has been assessed as insufficiently ambitious to be consistent with limiting global climate change to well below 2 degrees, as required by the Paris Agreement (Climate Action Tracker, 2018). Emissions projections from 2017 show that these targets will not be reached. No national target beyond 2030 has been set as yet, but the federal government is committed to preparing a long-term emissions reduction strategy for 2050 in 2020. In addition, six states and territories have net zero emissions targets for 2050.

80. As regards other dimensions of environmental performance, exposure to particulate air pollution is low and municipal waste generation has been substantially reduced (though it remains above the OECD average). Meanwhile, according to patent data, the level environmentally related innovation is less than the OECD average. Also, as flagged in the introduction, Australia faces considerable challenges in sustaining biodiversity (see below).

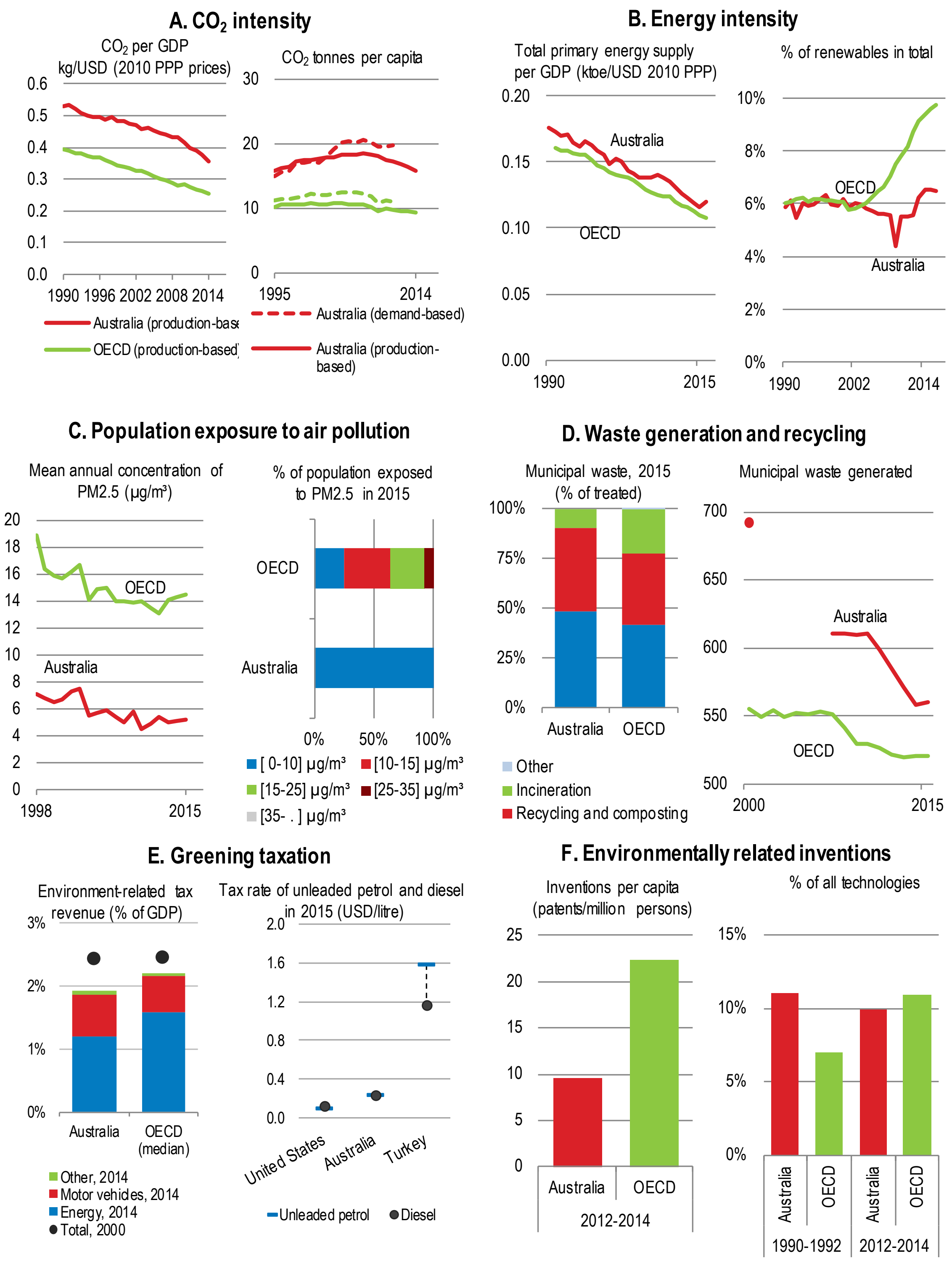
1.8.2. Climate-change policy: clarity and stability are key

81. Climate-change policy is frequently a centrepiece of party-political platforms and political debate in Australia. While this political interest is in many respects welcome, it has brought major changes in policy direction, and, understandably, a supposition of further policy risk going forward. This situation has not only made for stilted and uncertain progress on emission reduction and related innovation but has also contributed to problems in other areas, such as in energy supply (see infrastructure section above). There is a need for more stable, stronger and co-ordinated climate-change policy, including through development of long-term goals and strategy. This is a central strategic message of other policy reviews, including by the government-sponsored review of the electricity sector (the Finkel Review), the Productivity Commission, the International Energy Agency and the upcoming OECD Environmental Performance Review.

82. At present the key elements of Australia's emission-reduction policy comprise: *i)* a scheme that pays enterprises and land owners for emission reductions, the Emissions Reduction Fund (Table 1.8); *ii)* a "safeguard mechanism" which is a baseline-and-offset system that applies to large emitters (including the energy sector); *iii)* a longstanding market-based mechanism to encourage large-scale renewable energy generation, the Large-scale Renewable Energy Target, accompanied by access to two co-financed funds for constructing renewable facilities; *iv*) a programme of energy efficiency measures (the National Energy Productivity Plan); *v*) phasedown of hydrofluorocarbon import and use under the Montreal Protocol and, *vi*) State-level emission-reduction policies that have set typically more ambitious targets than those at the federal level. As a whole, these elements reflect the piecemeal approach to emission reduction in Australia. Furthermore, there are risks in their individual effectiveness. In particular, additionality from the Emission Reduction Fund remains a key watch point (Climate Change Authority, 2017). Also, the appeals provisions to adjust baselines in the safeguard mechanism may dilute its effectiveness

83. As described in the section on utilities above, the government proposed a "National Energy Guarantee" in 2017 but this was withdrawn from the government's agenda in August 2018. The emissions component of the Guarantee would impose emissions reduction target on wholesale electricity purchasers. The central idea was that the target would prompt shift towards less emission-intensive electricity generation through retailers renegotiating with suppliers (or arrange for new supply).Despite the withdrawal of the Guarantee from policy, the electricity sector still has emissions reduction policies in place including the Renewable Energy Target and the National Energy Productivity Plan.

Figure 1.22. Environmental indicators (standard panel of figures)



Source: OECD Green Growth Indicators database.

Table 1.10. Selected components of Australia's current emission-reduction policy

Policy instrument	Selected details
Emission Reduction Fund, introduced in 2014, as the flagship mechanism to replace the "carbon tax"	Through the Emissions Reduction Fund, the government purchases lowest cost abatement (in the form of Australian carbon credit units) that provides an incentive to businesses, households and landowners to reduce emissions. Following a series of auctions, as of June 2018 there was commitment to purchase 192 million tonnes CO_2-eq with a value of AUD 2.3 billion. Most of the emission-reduction projects selected for payment involve land-use management and landfill gas abatement and capture.
Safeguard mechanism (2016), brought in to bolster the Emission Reduction Fund	Facility-level baselines are set for large emitters. Emitters exceeding baseline are required to purchase carbon credits. Emitters exceeding baseline can appeal on the grounds of exceptional circumstances.
Large Scale Renewable Energy Target, part of the Renewable Energy Target, in place (with some changes) since 2001	Large-scale renewable-energy producers generate certificates that are bought by wholesale electricity purchasers (these are mainly the electricity retailers), so as to fulfil renewable energy obligations. Government subsidy for renewable production facilities is available via two co-financing funds, the Clean Energy Finance Corporation and the Australian Renewable Energy Agency. The Target is on track to delivering the goal of 33 000 gigawatt hours of large-scale renewable generation per annum by 2020, no extension of the scheme is planned. The scheme is accompanied by the Small-Scale Renewable Energy Target, which incentivises domestic solar installation etc.
National Energy Productivity Plan (2015-2030)	Includes a target to improve energy productivity by 40 per cent between 2015 and 2030. Currently includes 34 measures to support: • Smarter energy choices (by providing more efficient incentives, empowering consumers and promoting business action). • Better energy services (by driving greater innovation, more competitive and modern markets and updating consumer protections and standards).
Phasedown of hydrofluorocarbons (HFCs)	Australia commenced a phase-down of HFC imports from 1 January 2018. Australia's HFC phase-down commences one year ahead of the global phase-down agreed under the Montreal Protocol on Substances that Deplete the Ozone Layer. Australia will use 25 per cent less HFCs than permitted under the Montreal Protocol over the period from 2018 to 2036.
State-level emissions targets and mechanisms	For instance six states and territories aim for net zero emissions by 2050, which implies substantial decarbonisation of the electricity sector. Feed-in tariffs and auctions are the main instruments.

1.8.3. Biodiversity needs greater priority in decision making

84. As highlighted in the introduction to this Chapter, Australia has considerable biodiversity with many fragilities. Assessment in the OECD's upcoming *Environmental Performance Review* underscores scope for stronger stewardship:

- Strategic initiatives have typically not provided much impetus to reform. For example a recent draft strategy *Australia's Strategy for Nature 2018-30* is criticised for excessively high-level and vague goals and objectives.
- At the operational level (project approval and land use), biodiversity considerations are increasingly considered in project approvals but the review suggests that nevertheless there is insufficient priority given to them.
- Meanwhile, good progress has been made in expanding protected areas though substantial gaps remain.

85. Recommendations put forward by the *Review* include general calls for better strategy making, including stronger Commonwealth Government leadership and regional strategies, and for more resources for biodiversity conservation and ecological restoration. A need for more policy action in the specific areas of abandoned mine inventories, protected areas, and in offset and bio-banking schemes is also underscored.

Table 1.11. Past OECD recommendations on environment policy

Topic and summary of recommendations	Summary of action taken since 2017 *Survey*
Achieve greenhouse-gas emission targets	
Strengthen the recently introduced safeguard mechanism should the Emissions Reduction Fund require additional support to achieve greenhouse-gas reduction	No major reform
Make transport policy greener	
Expand use-based vehicle charges and extend public transport	No major reform
Continue strong commitment to water reform	
Fully implement the Murray-Darling Basin Plan	The implementation phase (which began in 2012) will continue until 2024

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