

October 2018

State Orange Book 2018

Policy priorities for states and territories

John Daley, Stephen Duckett, Peter Goss, Marion Terrill,
Danielle Wood, Tony Wood, and Brendan Coates



Grattan Institute Support

Founding members



Australian Government



Endowment Supporters

The Myer Foundation
National Australia Bank
Susan McKinnon Foundation

Affiliate Partners

Medibank Private
Susan McKinnon Foundation

Senior Affiliates

Google
Maddocks
PwC
McKinsey & Company
The Scanlon Foundation
Wesfarmers
Westpac

Affiliates

Ashurst
Corrs
GE ANZ
Jemena
Urbis
Woodside

Grattan Institute Report No. 2018-16, October 2018

This report was written by John Daley, Stephen Duckett, Peter Goss, Marion Terrill, Danielle Wood, Tony Wood and Brendan Coates. All of the current and previous staff of Grattan Institute have made substantial contributions to the materials on which this report is based.



This project was generously supported by a grant from the Susan McKinnon Foundation.

The opinions in this report are those of the authors and do not necessarily represent the views of Grattan Institute's founding members, affiliates, individual board members, reference group members or reviewers. Any remaining errors or omissions are the responsibility of the authors

Grattan Institute is an independent think-tank focused on Australian public policy. Our work is independent, practical and rigorous. We aim to improve policy outcomes by engaging with both decision-makers and the community.

For further information on the Institute's programs, or to join our mailing list, please go to: <http://www.grattan.edu.au/>.

This report may be cited as: Daley, J., Duckett, S., Goss, P., Terrill, M., Wood, D., Wood, T., and Coates, B. (2018). *State Orange Book 2018*. Grattan Institute.

ISBN: 978-0-6483311-6-2

All material published or otherwise created by Grattan Institute is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License

Overview

Election season is looming. Voters in Victoria go to the polls within weeks; in NSW within months. These elections are an opportunity to take stock of how Australia's states are doing, where they are going, and what state governments can do about it.

This report surveys policy recommendations from ten years of Grattan Institute reports and outlines what the policy priorities should be, not only for the governments in Australia's two biggest states, but state governments across the nation.

The problems aren't hard to find. Per capita income has been flat for five years as the mining boom subsided. State governments continue to announce large infrastructure projects without doing enough homework beforehand. Home ownership is falling fast among the young and the poor, those on low incomes are spending more on housing, and homelessness is rising, particularly in NSW. Our schools are not keeping up with the best in the world. In most states, people are waiting longer for medical treatments. Wholesale electricity prices have increased significantly over the past few years while Australia is not on target to reach its emissions commitments.

Many worthwhile reforms have been implemented over the past decade. Victoria's hospitals cost less per patient and contribute more to better health outcomes than elsewhere. Queensland's school students learn more in Years 3–5, and this has improved significantly in the past few years. Western Australian school outcomes have improved in many areas. The ACT has started to replace inefficient stamp duties with a much more efficient broad-based property tax. NSW has used the good times to improve its budget position. NSW, Victoria, South Australia and the ACT have all increased the transparency of political decision-making and tightened controls over money in politics.

But every state could learn from the others and do better.

State governments – particularly NSW and Victoria – face population pressures. They should resist political pressure to wind back planning reforms that have helped to increase housing supply, and instead should go further to ensure enough housing is built, particularly in established suburbs, to accommodate rapidly growing populations. NSW and Victoria should commission work to enable the introduction of time-of-day road and public transport pricing to manage congestion in Sydney and Melbourne. All states should stop announcing transport projects before they have been analysed rigorously, and they should evaluate completed projects properly.

There are other important priorities for economic reform. All states should follow the lead of the ACT and replace stamp duties with broad-based property taxes. States should reform electricity markets to encourage reliability and reduce emissions – whether or not the Commonwealth cooperates.

States could deliver services better. Other states should follow Victoria's lead and reduce the overall cost and the variation in cost between public hospitals. And they should develop more prevention programs to reduce the disparity between regional and urban health outcomes. States should lift progress for all school students by identifying and spreading good teaching practices at the same time as strengthening the evidence base. They should also invest more in early learning for the most disadvantaged students.

Institutional reforms are needed as well. States need more visibility of their long-term budget positions. While institutional accountability is improving in many states, Western Australia, Tasmania and the Northern Territory need to limit election spending, and make political donations and lobbying more transparent.

State Scorecard: how states rate

	Performance metric	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Economic development	Real GSI per capita (\$1,000)	73	64	67	97	60	56	93	106	71
	Employment rate, 25–64 year-olds (%)	77	77	76	79	76	74	83	81	77
	Not in education or employment and w/o qualification rate, 19–24 year olds (%)	8.9	7.5	10.3	9.6	9.9	13.8	5.2	26.1	9.3
Regional development	Regional incomes, median per capita (\$1,000)	44	42	44	50	42	42		54	
	Regional incomes compared to capital city median (%)	86	87	90	93	88	90		87	
	Regional employment rate compared to capital city (%)	-3.7	-2.9	-2.5	1.7	0.1	-4.7			
Transport and cities	Post-completion reviews published in last 4 years (number)	2	7	2	2	2	1	1	0	
	Commutes by walking or cycling, 2016 (% of commutes in capital city)	5.2	4.9	4.5	3.5	3.8	7.6	7.9	6.7	4.8
	Commute distance (bee-line) in capital cities, median (km)	7.7	8.7	8.2	9.1	7.7	6.7	7.8	7.8	8.2
Housing	Housing stock (per 100 people aged 20 or over)	54	56	57	58	60	62	55	54	56
	Rental stress, share of bottom 40% of income earners (%)	51	47	36	49	39	26	34	36	45
	Homelessness rate (per 10,000 people)	50	42	46	36	37	32	40	599	50
School education	Progress, relative to national average, Year 3–5 NAPLAN (months)	-0.4	-0.3	1.4	0.3	-1.0	-0.4	-2.3	1.4	
	High achieving Year 9 students (top two NAPLAN bands) (%)	27	22	19	24	16	16	27	10	23
	Low achieving Year 9 students (at or below NAPLAN NMS) (%)	19	20	22	19	25	27	16	48	21
	Government funding to state schools as a percentage of target (%)	89	82	90	100	88	95	112	89	89
Health	Avoidable mortality rate, capital city areas (per 100,000)	121	119	139	131	135	177	104	202	126
	Avoidable mortality rate, regional areas (per 100,000)	172	157	155	192	164	191		367	168
	Cost per weighted patient treated, average per separation (\$1,000)	5.1	4.7	5.1	6.4	5.7	5.2	6.3	6.7	5.2
	Waiting time for elective procedures, median (days)	54	30	32	34	39	45	46	28	38
Energy	Electricity price, average residential retail (cents/kWh)	32	34	33	33	41	29	26	28	
	Emissions intensity of grid-purchased electricity (tonnes of CO2e/MWh)	0.9	1.2	0.9	0.8	0.6	0.2	0.9	0.7	0.9
	Unplanned outages (average annual minutes per customer over the last 5 years)	213	139	357	227	369	312	44	324	236
Taxes	Share of state taxes collected from tax bases with high economic costs (%)	34	33	29	22	23	26	20	20	31
Budgets	Net Operating Balance (% of GSP)	0.7	0.5	0.4	-0.5	-0.4	0.3	-0.4	-2.0	0.3
	Net Debt (% of GSP)	-1.6	4.6	-0.1	9.0	5.1	-2.1	3.4	7.6	2.2
	Interest and depreciation (% of GSP)	1.4	1.3	1.7	1.0	1.7	1.9	2.2	2.8	1.4
Institutional reform	Transparency score (A – best to E – worst)	A	B	A	C	B	E	A	E	
	Accountability score (A – best to E – worst)	A	B	A	C	C	C	D	C	
	Caps on political expenditure? (Y/N)	Y	N	N	N	Y	Y	Y	N	
	Caps on political donations? (Y/N)	Y	Y	N	N	N	N	N	N	

State Scorecard: how states have changed

	Performance metric	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Economic development	Real GSI per capita, % change per year over 5 years	0.8	0.1	-0.1	-2.5	-0.2	0.7	1.0	2.4	-0.1
	Employment rate of 25–64 year olds, ppt change over 5 years	2.2	2.9	1.2	1.4	2.6	4.1	0.1	0.7	2.1
	Not in education or employment and w/o qualification, 19–24 year olds, ppt change over 5 years	-0.3	-0.1	-0.3	0.7	-0.3	0.4	0.4	1.6	0.1
Regional development	Regional incomes, median per capita, % change per year over 5 years	1.4	1.0	1.4	1.6	0.8	0.9		1.5	
	Regional incomes compared to capital city median, ppt change over 5 years	0.3	0.2	0.8	1.4	-0.9	-0.8		-3.4	
	Regional employment rate compared to capital city, ppt change over 5 years	0.3	-0.3	-0.2	3.3	4.0	0.0			
Transport and cities	Post-completion reviews published in last 4 years									
	Commutes by walking or cycling in capital city, ppt change over 5 years	-0.2	0.1	-0.2	-0.4	-0.4	0.3	0.5	-1.8	-0.1
	Median commute distance in capital cities, % change over 5 years	3	2	3	5	2	4	2	16	3
Housing	Housing stock, change in houses per 100 people aged 20+ over 5 years,	-1.5	-0.7	-0.9	-0.2	-0.6	-0.8	0.3	-0.4	-0.9
	Rental Stress, share of bottom 40% of income earners, ppt change over 4 years	10.8	2.2	-9.4	16	5.8	-7.5	3.1	7.3	4.2
	Homelessness rate, change in people per 10,000 people	10.7	0.2	2.2	-4.6	0.7	0.8	-8.5	-124	2.2
School education	Progress, relative to national average, Year 3–5 NAPLAN (months)									
	High achieving Year 9 students (top two NAPLAN bands), ppt change over 5 years	3.3	-0.4	3.2	4.0	-0.9	-0.6	-1.9	-0.6	1.9
	Low achieving Year 9 students (at or below minimum NAPLAN standard), ppt change over 5 years	-6.2	-2.4	-6.0	-7.4	-2.6	-3.2	-2.3	-3.3	-5
	Government funding to state schools as a percentage of target, ppt change over 3 years	3.6	1.9	2.8	0.3	-0.2	2.4	-2.0	2.8	2.3
Health	Avoidable mortality rate in capital city areas per 100,000, % change over 5 years	-11.4	-8.4	-10.1	0.2	-6.3	12.2	-11.7	8.7	-8.0
	Avoidable mortality rate in regional areas per 100,000, % change over 5 years	-1.4	-8.8	-6.2	0.3	-2.8	7.2		-9.4	-4.1
	Cost per weighted patient treated, average per separation, % change over 5 years	3.2	4.4	-4.4	27	18.2	-12.8	17.5	18.7	5.7
	Waiting time for elective procedures, change in median days over 4 years (%)	10	-17	19	13	15	18	-27	-28	6
Energy	Average residential retail electricity price, change in cents/KWh over 5 years	1.9	1.9	5.1	2.6	5.2	-4.7	-0.8	-0.7	
	Emissions intensity of grid-purchased electricity, change in tonnes of CO2e/MWh over 5 years	-0.07	-0.18	-0.02	-0.09	-0.11	-0.02	-0.07	-0.06	-0.08
	Unplanned outages, minutes per customer, average annual change over previous 5 year period	58	-23	-61	-115	165	18	10	-153	2
Taxes	Share of state taxes collected from tax bases with high economic costs, ppt change over 5 years	9.3	2.6	6.0	-2.3	1.7	5.2	-2.2	-8.1	5.1
Budgets	Net Operating Balance as % of GSP, ppt change over 5 years	0.4	-0.1	0.3	-0.8	0.7	1.2	0.7	-1.9	0.1
	Net Debt as % of GSP, ppt change over 5 years	-4.1	-1.1	-0.9	7.1	-0.4	-2.6	3.1	-0.9	-0.8
	Interest and depreciation as % of GSP, ppt change over 5 years	-0.1	-0.2	-0.4	0.2	0.2	-0.1	0.1	0.5	-0.1
Institutional reform	Transparency: positive (↑), neutral (—), or negative (↓) change over 5 years	↑	↑	↑	—	↑	—	↑	—	
	Accountability: positive (↑), neutral (—), or negative (↓) change over 5 years	↑	↑	↑	—	↑	↑	↑	↑	
	Expenditure caps introduced (↑), not introduced (—) or repealed (↓) over past 5 years	—	—	↓	—	↑	—	↑	—	
	Donations caps introduced (↑), not introduced (—) or repealed (↓) over past 5 years	—	↑	↓	—	—	—	↓	—	

Recommendations

Economic growth

Land use

- State governments should reform land-use planning rules to allow more housing to be built close to the centres of our major cities, where high value jobs are growing fastest.
- The Council of Australian Governments should ask the Productivity Commission to assess the costs (both direct and indirect) and the benefits of land-use planning regulations.

Innovation and competition

- State governments should promote innovation by encouraging competition and adoption of new technologies, but generally avoid industry subsidies.
- State governments should redesign markets to encourage competition in concentrated industries.
- State governments should not boost the value of privatised assets by limiting competition or regulation at the expense of users.
- State governments should engage with the peer-to-peer economy to increase competition and help workers, rather than to protect traditional industries.

Regulation

- State governments should review regulations and red tape to ensure they achieve the right balance between social benefits and economic costs.

Regional development

- States should perform high quality evaluations of any regional development project to ensure money is not wasted, and provide a better evidence base for future spending.
- States should publish which regions receive what subsidies in the form of increased services and infrastructure spending.
- States should limit drought subsidies to extreme events and target those most in need.
- States should remove unnecessary regulations which prevent job creation in the regions.
- State governments should not defer changes to city planning by relying on wishful thinking that a significant portion of city population growth can be diverted to regions by either big transport projects or subsidies.

Transport and cities

Congestion

- The NSW and Victorian governments should introduce time-of-day congestion pricing in the most congested central areas of Sydney and Melbourne, charging at peak periods to enable freer-flowing roads.
- Beyond central city areas in Sydney and Melbourne, state governments should measure and publish delays for individual roads and routes, to enable better-informed public debate about thresholds at which congestion pricing should be introduced.
- State governments should increase the differences in public transport fares depending on the time of day, to spread demand.
- The Victorian Government should increase the CBD parking space levy in Melbourne from about \$1,400 to about \$2,400 per year.
- States should increase the clarity and assignment of parking rights, including a right to trade them.
- State governments should routinely publish performance against 'active transport' (walking and cycling) targets.

Project selection

- State governments should impose a more rigorous process for selecting infrastructure projects through legislation that:
 - prohibits funding infrastructure projects unless a full business case has been prepared, and then evaluated by an independent organisation with relevant expertise;
 - requires the business case and evaluation to be tabled in Parliament;

- for projects valued at \$50 million or more, requires an independent organisation with relevant expertise to publish a reliability rating of the business cases; and
- requires standalone legislation before proceeding with projects with an estimated construction cost of \$1 billion or more.

Project assessments

- State governments should assess proposed infrastructure projects more rigorously by:
 - developing more realistic assumptions for cost-benefit analysis of projects;
 - acknowledging the widespread adaptation that occurs under the base-case scenario used to quantify a project's benefits, particularly arising from changes in land-use;
 - comparing the impacts of the project with non-construction options to achieve the same objective; and
 - using lower discount rates that reflect the cost of money and the systematic risk of the project.

Project reviews

- State infrastructure bodies should review and publish the benefits and costs of each completed transport infrastructure project.
- As an interim measure, state governments should support a move by the Commonwealth Department of Infrastructure to publish to data.gov.au the post-completion report already provided as a condition of funding.

Housing

Housing supply

- State governments should change planning processes to allow more medium-density housing in established suburbs.
 - Fewer small-scale urban infill projects should require development approvals.
 - More dense development should be allowed ‘as of right’ along key transport corridors.
- State governments should set housing targets and make sure local councils meet the targets.
 - When local councils fail to meet housing targets, state governments should transfer responsibility for assessing development applications to independent planning panels.
- State governments should maintain a long-term supply of greenfield land for development, particularly in Sydney.

Tenancy laws

- State governments should amend tenancy laws to make renting more secure and enable tenants to make their rental property feel more like their home.

Social housing

- The stock of social housing should be expanded, but targeted much more tightly at applicants at greatest risk of becoming homeless.

Subsidies and incentives

- Stamp duty concessions and other giveaways to first-home buyers should be wound back.
- Incentive schemes for downsizers should be abolished.

School education

Spreading good teaching practices

- State governments should improve teaching effectiveness.
 - Better spread teaching practices where the evidence is clear.
 - Create explicit jobs for top teachers with deep subject expertise to spread effective practice within and across schools.
 - Put better data on individual student learning progress into the hands of teachers.
 - Make teacher professional learning more tightly focussed on improving the daily work of teaching.
 - Encourage standardisation of some teaching practices to improve the allocation of teacher time.
 - Better support teachers on how to engage students and create effective classroom learning environments.

Evidence base

- State governments should better understand what is happening in classrooms and how government settings impact it.
 - Commission research on groups of schools making above average progress.
 - Collect better data on teaching effectiveness in schools.
 - Find out more about what works well in classrooms and how to implement at scale.
 - Invest in how to measure and teach general capabilities such as critical thinking and non-cognitive outcomes.

Funding

- State governments should better align state funding to student need under the new Commonwealth funding model, ensuring that state support for government and non-government schools is consistent.

Early learning

- State governments should invest more in early learning for the most disadvantaged students, but don't expand the scale of early childhood education too rapidly at the expense of quality.

Health

Regional healthcare

- State governments should develop community-based prevention programs to reduce the disparity in avoidable mortality rates between urban and rural Australians.
- State governments should develop telehealth strategies to improve access to specialist services and work closely with Primary Health Networks to strengthen primary care services in rural areas.

Hospitals

- State governments should use their funding policies to put more pressure on public hospitals to become more efficient, including by improving the safety of patient care.
- State governments should strengthen hospital accountability to reduce combined outpatient and inpatient waiting times.

Performance management

- States should publish consistent dental and outpatient waiting time data.
- State governments should agree on an improved set of performance indicators to measure the adequacy of public mental health services.

Energy

Electricity generation

- State governments should pursue the reliability element of the National Energy Guarantee (with or without the Commonwealth Government).
- State governments should pursue a nation wide state-based emissions reduction scheme unless the Commonwealth Government develops a credible national emissions reduction policy.
- The Victorian Government should abandon its policy to subsidise the installation of 650,000 rooftop solar systems.

Electricity networks

- The NSW, Queensland and Tasmanian governments should write-down the value of the electricity network businesses they own, and the NSW Government should provide a rebate to customers of its recently partially privatised networks.
- States and territories should transfer responsibility for setting network reliability requirements to the Australian Energy Regulator.
- The Victorian Government should move small customers onto cost-reflective tariffs. Other governments should also do this, within the limitations of available metering infrastructure.

Electricity retail

- NSW, Queensland, South Australia and ACT governments should require electricity retailers to provide prominent information that makes it easy to meaningfully compare offers, alongside other reforms, to end the 'confusopoly' in retail electricity.

- The Western Australian, Tasmanian and Northern Territory governments should move towards full retail competition, while learning lessons from other jurisdictions.

Gas

- The Victorian and Tasmanian governments should lift their moratoria on natural gas exploration and production, and approve or reject projects on a case-by-case basis.

Energy system governance

- The Queensland, Western Australian, Tasmanian and Northern Territory governments should consider privatising publicly owned electricity assets.
- States and territories should pursue nationally consistent energy policy wherever possible, including strengthening the Australian Energy Market Agreement.

Taxes

Property taxes

- State governments should replace stamp duties on property with a broad-based property levy of between \$5 to \$7 for every \$1,000 of unimproved property value.
- The property levy should be expanded to replace other inefficient taxes on insurance and stamp duties on motor vehicle sales.
- State governments should broaden land taxes to include owner-occupied housing, raising \$7 billion nationally, which could help fund the abolition of more economically costly taxes.
- State governments should switch to a progressive land tax assessed on the value of each property owned, rather than the combined value of an owner's total landholdings.
- Alternatively, state governments could abolish land taxes outright and instead increase the rate of the broad-based property tax by around \$2 for every \$1,000 of unimproved property value, raising no additional revenue.

Betterment taxes and infrastructure charges

- State governments should introduce explicit 'betterment taxes' to capture some of the windfall gains from re-zoning of land.
- State and local government infrastructure charges should be reformed to align with the Productivity Commission's general principles on infrastructure costs.

Payroll taxes

- State payroll taxes should be broadened by abolishing carve-outs for small businesses, and payroll tax rates should be reduced.

Budgets

- State governments should adopt the tax and spending recommendations discussed elsewhere in this report to improve their structural budget positions.
- State governments should set clear fiscal targets and enshrine them in legislation.
- All states should follow the lead of Victoria and NSW and establish a parliamentary budget office to provide parliamentarians with independent policy costings.
- State governments should work with the Commonwealth to establish a national Intergenerational Report that produces long-term budget projections across all levels of government. Alternatively, state governments should periodically produce their own long-term budget projections.

Institutional reform

Limiting influence

- States and territories that do not cap political advertising expenditure during election campaigns should do so.
- Ministers should be subject to a stringent code of conduct, which is independently administered and contains meaningful sanctions for misconduct.

Transparency

- All states and territories should follow the lead of Queensland, NSW and the ACT by requiring ministers to publish their diaries.
- Tasmania should follow the lead of the territories and all other states by disclosing all political donations of \$5,000 or more.
- Tasmania, Western Australia and the Northern Territory should join the other states and territories by disclosing donations at least every six months, and within 21 days during election campaigns.
- State lobbyist registers should list in-house lobbyists as well as third-party lobbyists, and lobbyists should be required to publish their contacts with ministers and shadow ministers.

Table of contents

Overview 3

1 Overarching considerations 16

2 Economic development 23

3 Regional development 31

4 Transport and cities 41

5 Housing 51

6 School education 58

7 Health 68

8 Energy 75

9 Taxes 83

10 Budgets 94

11 Institutional reform 102

A Metric details 107

List of Figures

2.1	Real per-capita incomes have stagnated in some states and risen in others since the Global Financial Crisis	24
2.2	Australia scores highly on most 'ease of doing business' metrics	29
3.1	Australia is becoming more centralised	33
3.2	Regional areas report higher well-being	33
3.3	Costs of providing many government services are higher in the regions	34
3.4	Governments disproportionately spent on infrastructure in regional areas	37
4.1	People living in larger capital cities manage with less infrastructure per person than those in smaller cities	42
4.2	Projects announced prematurely have larger cost overruns at all stages of the project's lifecycle	43
5.1	The amount of housing per person has fallen in all states since 2011, and in all states except Tasmania since 2006	52
5.2	Record housing construction will need to be maintained to meet city plan housing targets	53
7.1	Avoidable mortality has similar patterns across Australia, with higher rates in regions	70
7.2	Some major hospitals are much more expensive than others in the same state	71
7.3	A significant minority of patients wait a very long time for an elective procedure	72
7.4	Survey data suggests public dental waiting lists are long and vary substantially across states	73
8.1	Consumers in NSW, Queensland and Tasmania pay a lot more because of past over-investment in the grid	78
8.2	Higher rates of customer switching increases costs	79
9.1	The states rely heavily on economically destructive taxes	85
9.2	The ACT has Australia's most efficient tax system; NSW the least	85
9.3	Effective rates of stamp duty have risen sharply in all states and territories in the past two decades	86
9.4	Taxes on property transactions are especially volatile revenue sources for state governments	87
9.5	A broad-based flat-rate land tax could fund the abolition of stamp duties	88
10.1	Growth in NSW stamp duty revenues outpaced the broader economy	95
10.2	Health was the biggest area of spending growth for state governments	96

List of Tables

2.1	State Scorecard for economic development	23
3.1	State Scorecard for regional development	31
3.2	Auditors General have found significant mismanagement in state regional development funds	36
4.1	State Scorecard for transport and cities	41
5.1	State Scorecard for housing	51
6.1	State Scorecard for education	58
7.1	State Scorecard for health	68
8.1	State Scorecard for energy	75
9.1	State Scorecard for taxation	83
10.1	State Scorecard for budgets	94
10.2	Fiscal principles or targets by state	100
11.1	State Scorecard for institutional reform	102
A.1	Policies to increase transparency in the states and territories	113
A.2	Policies to increase accountability in the states and territories	113

1 Overarching considerations

1.1 Scope

This report aims to help Australia's state and territory governments to set priorities for reform.¹ Drawing primarily on work published by Grattan Institute over the past decade, it identifies policy changes that state governments should adopt to make the most difference to the lives of Australians.

The report discusses policy reforms that promote economic growth, tax reform and sustainable budgets, cities and transport, energy, school education, hospitals and health, and the health of our political institutions and democracy itself. Grattan Institute has focused on these because they make a big difference to the lives of Australians, because analysis can chart a path to better policy, and because outcomes are too often driven by vested interests rather than the public interest. These areas cover more than 70 per cent of state government spending.²

The report does not cover state government responsibilities such as vocational education and training, childcare, policing, legal aid and the justice system, Indigenous affairs, community services and child protection. These areas matter, but have not been part of Grattan Institute's work to date. We didn't want to offer opinions on important issues where we had not done the work to sort through the evidence, which is essential to high-quality policy.

1. In this report, "states and territories" is abbreviated to "states".

2. Grattan analysis of ABS (2015, table 239). The major state government expenditure items in the ABS analysis not covered by Grattan's work to date are: vocational education and training; public order and safety; sanitation; and social protection.

The report focuses on issues that state governments can influence directly rather than those that are primarily Commonwealth responsibilities. It selectively identifies areas where coordination between the states or cooperation with the Commonwealth would assist.

1.2 Measuring what matters

This report also includes a State Scorecard of key performance metrics for the states in each of the main policy domains covered in the report (on page 4), and how they've changed over the past five years (on page 5). The Scorecard is intended to allow citizens to compare states, and evaluate the performance of state governments over time.

For each of the key domains, the Scorecard focuses on what we should care about most. The metrics chosen are intended to capture the performance of state government services, as well as final outcomes. Most are sourced from publicly available data; we have produced a few of them where no appropriate data was publicly available.

The metrics primarily measure outcomes – the things that make a direct difference to peoples' lives. Inevitably these outcomes have many causes, some of them beyond state government control. But they are all things that state government policy can at least influence.

An alternative Scorecard might have focused on outputs – the intermediate measures that state governments can influence more directly. For example, the Scorecard could measure new homes constructed, or average wait times to secure planning approval, rather than the number of homes per head of population.³ But peoples' lives are directly affected by the net change in housing (including

3. This is the approach of the NSW Premier's Priorities: see NSW Government (2018a).

demolitions) relative to population growth⁴ – and so the Scorecard measures this.

The Scorecard could have used a more comprehensive set of metrics that would provide a more nuanced and detailed view of outcomes.⁵ But while our shorter list loses detail, it provides an overview on a single page that helps overall priority setting and is more approachable for a general public.

The Scorecard covers the policy domains discussed in the remainder of the report. It does not attempt to cover domains that Grattan has not studied to date (Section 1.1). Metrics about vocational education and training, emergency services, criminal justice, Indigenous affairs and community welfare all matter, but they should be identified by those more familiar with these areas than we are.

1.3 A framework for setting policy priorities

Within the policy areas highlighted, state governments are typically trying to enable Australians to live fulfilled lives by increasing economic growth, providing valuable services, and promoting fairness, while ensuring a sustainable budget. Inevitably, these aims require trade-offs. The remainder of this section sets out these objectives in more detail.

1.3.1 Economic growth

The size of the economy is a measure of the resources available to the community. Although an imperfect proxy for measuring prosperity, it

is usually closer to reality than the alternatives. Of course, individual choice, human connection, health, artistic expression and an unpolluted environment are all part of a valuable life, even if they are not measured as economic activity. But usually they are easier to sustain with the resources of a larger economy.⁶

Economic growth has been slowing around the developed world. In Australia, growth has slowed as the mining boom winds down. National per capita incomes have flat-lined for the past six years⁷ and wages growth has been slow.⁸ Most importantly, the prospects for faster economic growth are dim. Many believe that growth will be lower for longer, in Australia and around the world.⁹

The pace of economic reform has slowed in Australia. There have been fewer economy-wide reforms over the past two decades than in the 1980s and 1990s,¹⁰ perhaps because there was less impetus for reform while the mining boom buoyed the economy. It may also be that many of the reforms of the deregulatory agenda articulated in the 1980s have been completed, and policy thinkers need to articulate a new agenda, more focused on issues such as city shape and the delivery of human services, often largely funded by government.¹¹

Public anxiety about Australia's future economic prospects is rising. Economic optimism peaked in 2013 – when incomes per capita peaked at the top of the mining boom. As of 2016, fewer Australians expect their financial situation to improve than at any time since 2001.¹²

Many economic drivers are beyond the control of Australian governments altogether – not least, the performance of the global

4. Daley et al. (2018).

5. For example, the Productivity Commission's *Report on Government Services* (Productivity Commission (2018a)) runs to 3,360 pages over 19 chapters and 7 volumes. The COAG Reform Council produced a large number of detailed reports on government performance on a variety of domains: see COAG (2013) and COAG (2018). The Queensland Government Plan provides a set of metrics somewhere in between: see Queensland Government (2014).

6. Daley et al. (2014, p. 10).

7. ABS (2018a, table 1).

8. Lowe (2018).

9. Minifie et al. (2017a, p. 8).

10. Daley (2016a).

11. See Productivity Commission (2017a).

12. D. Wood et al. (2018a, figure 4.2.).

economy. Of the levers that governments do control, many are the responsibility of the Commonwealth Government, including tax, trade and competition policy, as well as welfare and childcare subsidies that could drive workforce participation.¹³

But there are some economic levers that state governments do control, and these are outlined in Chapter 2. States can make their taxes more efficient, as discussed in Chapter 9. State governments can improve how well Australia's cities function, by reforming planning rules, as discussed in Chapter 5, and investing only in high-quality transport infrastructure, as discussed in Chapter 4. Reforms to improve the quality of school education (Chapter 6) and health services (Chapter 7) would also make a big difference to economic growth in the long term.

But even if state governments pursued all the reforms recommended in this report, incomes would only rise by a few percentage points. And it would be unprecedented if any state government successfully prosecuted many of these reforms within a single term of government.

Governments would therefore be wise not to create 'Great Expectations'¹⁴ that their potential reform agendas cannot fulfil. As a highly developed economy, Australian economic growth is limited above all by the pace of global innovation, which Australian governments can do little to influence. Yet while there are limits to the influence of governments on economic growth, there are worthwhile reforms that would help.

13. Our 2012 *Game changers* report identified the three largest opportunities to boost economic growth within 10 years, where there is strong evidence for the policy changes that would make a difference, as reform of the tax mix, and increasing the workforce participation rates of women and of older people: Daley et al. (2012). The policies that would affect these most are primarily Commonwealth Government responsibilities, although states are responsible for stamp duties and land taxes, which present one of the largest opportunities to improve the economic efficiency of taxation.

14. See Tingle (2012).

1.3.2 Provision of services

State governments are responsible for the bulk of public services in Australia, including hospitals and healthcare, schools, roads and public transport, and public housing. Services provided by state governments are central to Australians' quality of life, and to economic productivity. Improving the quality and efficiency of services, particularly in the two largest areas of health and education, should be close to the top of any state government's agenda. Chapters 7 and 6 discuss these areas in more detail.

While state governments can *fund* services, often third parties can *provide* them better. The 2015 Harper Review of competition policy advocated commissioning a diversity of service providers where possible.¹⁵ While this is a sensible idea in theory, execution is everything. The recent examples of aged care and vocational education and training reinforce previous experiences: taxpayer funding of for-profit entities to provide services at the behest of individual citizens inherently creates opportunities for poor outcomes, or even fraud, that must be carefully managed. The risks of outsourcing to the private sector are much higher for services like aged care and child protection, where 'customers' are vulnerable, and it is difficult to specify and enforce service quality.¹⁶

1.3.3 A sustainable budget

State governments must promote economic growth and provide services while ensuring that budgets add up over the economic cycle. Balanced budgets are better than the alternative: persistent government deficits incur interest payments, and limit future

15. Harper et al. (2015, p. 35).

16. Private sector operators might be more entrepreneurial, but some of their entrepreneurial spirit will be channelled into finding ways to cut costs and quality while remaining within the strict letter of their contract with government. See: Hart et al. (1997) and Hart (2003).

borrowings.¹⁷ As a result, they can unfairly shift costs between generations,¹⁸ and reduce flexibility during a crisis.¹⁹ And weak state budget positions also constrain other government priorities discussed in this report, even where the benefits of public investments outweighs the costs.

State budgets are mainly in good short-term health, but long-term pressures loom (Chapter 10). Record stamp duty revenues in NSW and Victoria will fall as housing prices and turnover fall in the aftermath of the property boom. Spending on infrastructure has ramped up as states cope with increasing population and concerns about congestion, but higher interest and depreciation costs will weigh on state budgets in the years ahead.²⁰

Most importantly, spending in health and education and other vital areas is growing faster than GDP. If spending per person continues to grow faster than inflation, then it is unlikely that other areas can be cut enough to make up the gap. Nor can the states rely on larger transfers from the Commonwealth to solve their problems for them: the Commonwealth faces its own long-term budget challenges.²¹ Recent state government budgets provide no insight into how they will respond to the looming funding gap.²² Instead, state governments will need additional revenues to keep their budgets balanced, while inefficient spending should be curtailed. Some opportunities to do so are discussed in the following chapters.

17. Daley et al. (2013a, pp. 8–9).

18. Daley et al. (2014).

19. IMF (2018, p. 22).

20. The depreciation on this capital spending and the interest on any borrowings required to fund it affects net operating balances in future budget years.

21. Hockey (2015).

22. Daley and D. Wood (2015).

1.3.4 Fairness

Fairness is a further objective for government. Of course fairness, like beauty, is in the eye of the beholder. There are at least four relevant conceptions of fairness.

One ideal aims for a more even distribution of resources (particularly income and wealth) among the community. Whether this is an appropriate end for government, and how much should be redistributed, remains contested.

Another ideal of fairness aims to ensure that those towards the bottom of society (often identified as the bottom 20 per cent by income) have enough resources to enable them to pursue lives with meaningful opportunities. This ideal tends to have broader support across political divides.²³ It is less concerned with redistribution from high incomes to middle incomes, and more focused on redistribution towards those on low incomes.

A third ideal, fairness between generations, also matters. Under almost any theory of ethics, it is unfair for one generation to adopt policies that leave the next generations worse off at a similar age, especially when they have no say in those policies.²⁴ Australia has increasingly adopted age-based tax, welfare, and other spending policies, accompanied by recurrent budget deficits, that increase the risk that the next Australian generation will be less well off than its parents. These policies also tend to increase inequality *within* generations over the long term.²⁵ And they undermine incentives by increasing the value of inheritance relative to individual effort.²⁶

Finally, procedural fairness matters. People value being able to make plans under stable rules. Like other conceptions of fairness, however,

23. Daley et al. (2013a, p. 21).

24. Daley et al. (2014, p. 10).

25. Ibid. (p. 36).

26. Kindermann et al. (2018).

this value is not absolute. The biggest concerns arise if new rules impose adverse consequences as a result of a past action. Yet this does not mean that every rule affecting investments (such as the exemption of owner-occupied housing from land taxes) should be grandfathered. There is no adverse consequence as a result of past action if those investments would probably have been made anyway. The rule changes simply mean that individuals benefit *less* from their investments.²⁷ In any case, procedural fairness must be balanced against other considerations: grandfathering unsustainable tax arrangements for all current property owners, for example, tends to benefit one generation over the next.

1.3.5 Complexity

Managing complexity is another objective of government. Complexity can bring benefits by making more choices available to people. But there are costs of dealing with complexity (in time, effort, or cost of expert advice), and often complexity induces indecision that can be the worst choice of all.²⁸ Some of the additional choices may be bad ones, with real costs.²⁹ And these costs can be especially high for the most disadvantaged members of our community.

For example, competition in electricity retailing hasn't delivered what was promised: lower prices for consumers.³⁰ Lower price deals are available, but most consumers find the market so complicated that they give up trying to find them. Thus many Australians are paying more than they should.

Complex government rules can have hidden costs.³¹ Complexity imposes additional costs on individuals, businesses and government

27. Daley (2016b).

28. Kahneman (2003).

29. Gorecki and J. Kelly (2012).

30. T. Wood et al. (2017, p. 3).

31. Teles (2013).

administrators. It discourages innovation. More worryingly, complexity makes it easier for vested interests to extract rents by lobbying for rules that benefit them. The complexity and detail both obscures the impact to all but insiders, and exhausts the limited resources of those representing the public interest.³²

For example, planning law has become a textbook example of “kludgeocracy”. Complexity, originally driven by the search for fair outcomes, has ultimately provided large benefits to vested interests with the time and resources to push for technical changes and discretionary decisions that serve their interests.³³

1.4 The role of government

State elections are occurring at a time of growing scepticism about the benefits of competition and free markets, and louder calls for more government intervention.

Over the past three decades, Commonwealth and state governments embarked on a substantial privatisation and deregulation agenda. Formerly state-owned industries have been privatised and deregulated, including state-owned banks, railways, ports, public transport and electricity.³⁴ Meanwhile other microeconomic reforms have extended competition in previously sheltered industries such as agricultural production, retail trade, and some professional services.

The push towards privatisation and deregulation has, in many cases, delivered considerable improvements in the quality of service delivery and lower prices for consumers.³⁵ Competitive markets provide strong

32. D. Wood et al. (2018b).

33. Daley et al. (2015a, p. 70).

34. For example, see: Productivity Commission (2005a) and National Commission of Audit (2014, pp. 220–21).

35. For example, Productivity Commission (2005a, p. xvii) estimates that implementation of the National Competition Policy and other microeconomic reforms have boosted Australians' incomes by 2.5 per cent.

incentives for firms to innovate, operate efficiently and offer competitive prices.³⁶ For example, the privatisation of electricity poles and wires substantially lowered prices in Victoria and South Australia by avoiding the ‘gold plating’ and cost padding that occurred under government ownership in New South Wales and Queensland.³⁷

But there has also been a string of serious problems with this reform agenda, including vocational education and training,³⁸ retail electricity,³⁹ and hospital privatisation.⁴⁰ Privatisation has not always been coupled with effective regulation, resulting in higher prices and poor service. Privatisation itself created well-resourced and highly motivated interests that lobby against better regulation.

So now there is a backlash against deregulation and privatisation. Governments are again becoming more actively involved in markets. For example, both sides of politics have argued for more government intervention in the Australian energy market: some in the federal Coalition have called for parts of the energy system to be nationalised,⁴¹ and Victorian Labor Premier Daniel Andrews says that energy privatisation “has not worked”.⁴²

But when intervening in markets, governments should always be careful of the (often hidden) costs. Regulation itself is not free: staffing and funding regulators involves costs, as does complying with regulation. Regulation can often have unintended impacts, such as raising the costs of goods and services.⁴³ Increasing complexity and

regulation can also stifle innovation, and increase the costs of doing business and the potential for interest groups to capture public policy.⁴⁴

1.5 Federalism

Australia’s federal system matters. The Commonwealth and the states share responsibility for many policy areas covered in this report – particularly in health, education, transport, energy and climate change. Lines of responsibility are often blurred, leading to the ‘blame game’ between different levels of government.

Many argue that changing the division of responsibility between Commonwealth and the states would improve political outcomes (by clarifying accountability) and efficiency (by reducing overlaps, and clarifying administrative responsibility).⁴⁵ But views diverge on whether to centralise, decentralise, or retain the current arrangements.⁴⁶

Others argue that the states should receive a greater proportion of government taxes, to combat ‘vertical fiscal imbalance’⁴⁷ whereby states collect less revenue than they spend. The mismatch is much worse than in comparable federations.⁴⁸ The ultimate effect on the quality of government is debated:⁴⁹ ultimately what taxes are raised may matter more than who raises them.⁵⁰

36. King (2014).

37. T. Wood et al. (2018a).

38. Senate (2015).

39. T. Wood et al. (2017).

40. For example, the Victorian Government exercised ‘step-in rights’ under its contract with the private operators of the Latrobe Regional Hospital: Productivity Commission (2014, box 1). See also English (2005).

41. Koziol (2018); and T. Wood (2018).

42. SBS (2018).

43. Banks (2003, pp. 6–7).

44. Teles (2013).

45. See: Williams (2017) and Maher (2013).

46. Daley et al. (2014, p. 28). For example, the principle of subsidiarity states that responsibility for regulation and service delivery should be devolved to the lowest level of government practicable. For many services, that means state governments. Twomey and G. Withers (2007, p. 4).

47. Galligan (2014).

48. Twomey and G. Withers (2007).

49. For example, Musgrave (1959) and Oates (1972) argue that national governments are better placed to raise most taxes because sub-national taxation tends to be particularly costly. See also: Henry et al. (2010a, pp. 669–674).

50. As noted in Chapter 9, the economic costs of state taxes vary greatly between 3 cents per dollar of revenue raised (broad-based property taxes) to more than 70

Overall this report demonstrates that federalism is only a minor barrier to better state government. The report tries to identify high-level reform priorities for state governments. Not one requires wholesale changes to Australia's federation. Most don't even require coordinated action among the states. Instead, states largely have the power to control their own destinies. Consequently, states shouldn't use the bleak prospects for federalism reform⁵¹ as an excuse for inaction and delay.

1.6 Guide to this report

The rest of this report considers priorities for reform in more detail.

Reforms that would promote **economic growth** and boost Australians' living standards are outlined in Chapter 2.

Many believe that the economic divide between Australia's capital cities and regions is getting bigger. The truth is more complicated: many regions are doing well, while others are not. But government spending cannot make economic water flow uphill and accelerate slow-growing regions. Chapter 3 considers reforms to **regional development** policies to help people, not places.

Australia in an unusually urbanised country: two-thirds of us live in capital **cities**, which are vital to the economy. Where things happen also depends on **transport** networks. Reforms to improve the functioning of our cities and transport networks are considered in Chapter 4.

Housing is of paramount importance. It fulfils many objectives, from basic shelter to the emotional security of a refuge where a family can be nurtured. But housing in Australia is increasingly unaffordable. Housing policy priorities are discussed in Chapter 5.

cents per dollar of revenue raised (stamp duties). It is unlikely that different federal structures have similarly large differences in their economic costs.

51. Brown (2016); and K. Smith (2017).

Providing education consumes a large part of government budgets. In the long term, education makes more difference to economic growth than almost anything else. Reforms to **school education** are discussed in Chapter 6.

The other crucial determinant of quality of life is **health**, and it is also the largest area of state government expenditure. Policy reforms to improve health outcomes and reduce costs are explored in Chapter 7.

Our lives depend on the supply of **energy**. The sector is so large that its efficiency makes a difference to overall economic outcomes. It must also respond to climate change. Priorities for energy policy are examined in Chapter 8.

All of this must be paid for. Chapter 9 examines potential reforms to **state taxes** to boost economic growth and reduce volatility in government revenues.

State budgets are mostly in good short-term health, but long-term challenges loom. Reforms to state budget frameworks and institutions – including legislated fiscal targets, parliamentary budget offices and long-term budget reporting – are discussed in Chapter 10.

All of this depends on good **political institutions** to run the day-to-day business of government and to implement reform. Political donations and lobbying are vital components of a healthy democracy. But without adequate checks and balances, there's a risk that mixing money and access with politics can translate into undue influence and poor policy. Chapter 11 recommends reforms to strengthen state political institutions to safeguard them against special interests.

2 Economic development

2.1 Where we are

Ten years after the Global Financial Crisis (GFC), economic growth remains weak in many rich nations. Australia had been an exception to the global malaise between 2008 and 2013, but since then economic growth has been much slower as the mining boom winds down. There is a risk that economic growth will now be lower for longer, in Australia and around the world.⁵²

Per capita incomes have flat-lined in Australia for the past five years.⁵³ WA has been hit hardest by the end of the mining investment boom, with real per-capita incomes falling 2.3 per cent since 2013 (Table 2.1), although incomes are still 11 per cent higher than a decade ago (Figure 2.1). Per-capita incomes have also substantially increased in the NT, the ACT and NSW over the past decade, whereas they have stagnated in Victoria, SA and Queensland. Residents in the NT and ACT have the highest per-capita incomes in Australia; residents in Victoria, Queensland and Tasmania have per-capita incomes below the national average.

Income per capita has flat-lined even though the share of working-age Australians in employment (the 'employment rate') has increased in all states in the past five years (Table 2.1). The employment rate is above the national average in the ACT, the NT and SA, and below average in Tasmania, Victoria and Queensland.

Increases in the employment rate across Australia reflect improvements in the labour market, especially an increase in the share of working-age Australians in work or seeking work (the 'participation rate').⁵⁴ The

Table 2.1: State Scorecard for economic development

	Real GSI per capita		Employment rate for 25–64 year-olds		Share of 19–24 year-olds not in education, employment or training, and without a qualification	
	'000s (\$)	Change in past 5 years (%)	% (2018)	Change in past 5 years (ppts)	% (2016)	Change in past 5 years (ppts)
NSW	73	0.8	77	2.2	8.9	-0.3
VIC	64	0.1	77	2.9	7.5	-0.1
QLD	67	-0.1	76	1.2	10.3	-0.3
WA	97	-2.5	79	1.4	9.6	0.7
SA	60	-0.2	76	2.6	9.9	-0.3
TAS	56	0.7	74	4.1	13.8	0.4
ACT	93	1.0	83	0.1	5.2	0.4
NT	106	2.4	81	0.7	26.1	1.6
AUS	71	-0.1	77	2.1	9.3	-0.1

Note: See Appendix A for notes and sources.

52. Minifie et al. (2017a, p. 7).

53. ABS (2018a, table 1).

54. Increased labour force participation has been driven particularly by higher participation among women aged 25–54; participation among men has remained

share of Australians currently in the labour force and unemployed is down slightly from five years ago.⁵⁵

One in 11 younger Australians are disengaged from the workforce – broadly unchanged from five years ago (Table 2.1).⁵⁶ The share of people aged 19–24 not in employment, education or training, and without a qualification, has fallen in NSW, Victoria, Queensland and SA. But it has increased in WA, Tasmania, the ACT and especially the NT.

2.2 Where we should be

Economic reform is important to improving the well-being of citizens in the long run. Greater economic growth increases individuals' material living standards, and enables societies to invest in many of the non-material assets that improve people's lives. But the pace of economic reform has slowed over the past two decades.⁵⁷

The Commonwealth controls many economic levers, including most aspects of tax, trade and competition policy. The Commonwealth is also responsible for monetary policy and financial regulation, which are critical to employment and macroeconomic stability. But other key domains are primarily state governments responsibilities.

Land-use planning policies are arguably the biggest policy lever for state governments to boost economic growth. Geography matters

broadly unchanged. Increases in the preservation age at which workers can access their superannuation may also be influencing retirement decisions for people aged below 65. See: RBA (2018, box B).

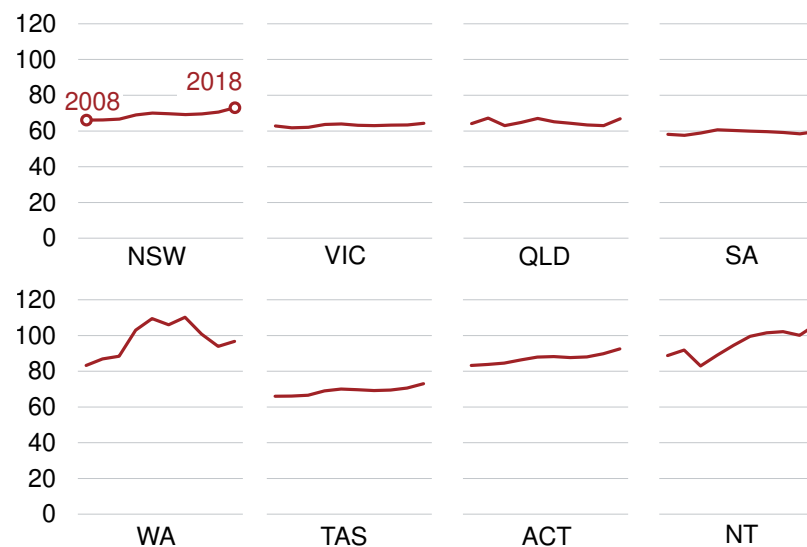
55. The share of Australians in the labour force and unemployed was 5.3 per cent in August 2018, down from a peak of 6.3 per cent in late 2014, and compared to 5.7 per cent in August 2013. ABS (2018b, table 1, trend series).

56. The proportion of young people neither working nor studying offers an insight into how well economies manage the transition between school and work. Lopez (2013).

57. Daley (2016c).

Figure 2.1: Real per-capita incomes have stagnated in some states and risen in others since the Global Financial Crisis

Real gross state income per capita (\$thousands), 2007–08 to 2017–18



Note: Chain volume measure.

Source: Grattan analysis of ABS (2018a).

a lot to economic growth.⁵⁸ An advanced economy like Australia is dominated by services industries,⁵⁹ which often benefit from colocation, and tend to concentrate in major cities.⁶⁰ Cities tend to be more productive, as is reflected in higher wages, GDP and rates of innovation per person,⁶¹ particularly towards the centre of big cities.⁶² How much businesses can colocate is affected by planning rules that guide the availability of land both for businesses and the homes of the people that work in them. Fewer restrictions on land use and subdivision will increase economic growth by enabling more people to access more jobs, while allowing firms to optimise their location. In addition, these policies will reduce inequality of wealth and suburb-based segregation (see Section 5.3.1 on page 54).⁶³ While local planning restrictions benefit local landowners, studies assessing the costs and benefits of restricting building generally conclude that the benefits of restrictive regulation are not large enough to justify the costs.⁶⁴

State taxes are another large lever for economic reform. All taxes drag on economic growth, but some do so more than others. State governments rely too heavily on taxes that drag more on growth. Changing the tax mix would boost economic growth, as set out in Chapter 9.

58. Moretti (2012).

59. Daley (2016b).

60. J.-F. Kelly and Donegan (2015).

61. Romer (2015); and SGS Economics & Planning (2018, p. 2).

62. For example, new medium-sized and large businesses mainly choose to locate in Melbourne's CBD and its immediate surrounds, or close to the airport. Rasmussen (2016); Knowledge intensive jobs are particularly concentrated towards the centre of large cities (Rawnsley (2018, p. 13)), where productivity per worker is higher (J.-F. Kelly et al. (2013a)).

63. Daley et al. (2018, p. 86).

64. See Cheshire and Sheppard (2002), Glaeser et al. (2005) and Turner et al. (2014), as cited in Daley et al. (2018, p. 57).

Reforms to education and training could increase economic growth enormously in the long term.⁶⁵ Reforms to improve the effectiveness of school education are set out in Chapter 6.

Better choice of infrastructure projects – by only spending public money on infrastructure that has been properly assessed – would also boost economic growth by conserving resources for projects which will make the most difference, as set out in Chapter 4.⁶⁶

The remainder of this chapter focuses on economic growth priorities for state governments not covered elsewhere in this report.

By definition, **innovation** is central to boosting productivity – it is 'ideas successfully applied'.⁶⁷ But innovation doesn't require invention. Australia is only a small share of the global economy; the vast majority of innovations in Australia are invented elsewhere, and then adopted or adapted for local use.⁶⁸ Removing barriers to global innovations spreading to Australia matters much more to economic growth than subsidies for Australian inventions.

The biggest spur to innovation is vigorous **competition**. Government policy can alter the dynamics of competition, but the regulatory settings that matter most to vigorous competition are often sector-specific. With many of the economy-wide reforms already completed, industry-specific reforms – especially in traditionally government-dominated

65. The economic benefits from better education outcomes cumulate over decades as higher-skilled school leavers gradually make up an increasing share of the workforce. While the short-term impact is small, the long-term rewards are very large. Goss et al. (2016a, p. 35).

66. Terrill et al. (2016a); and Daley et al. (2012, p. 26).

67. Dodgson and Gann (2010). A little more descriptively, the OECD defines innovation as: 'the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations': OECD (2005).

68. Daley et al. (2012, p. 9); and Minifie (2016).

sectors such as education and health care – may well comprise the bulk of the productivity opportunities that can be spurred by state government reforms.⁶⁹

Improving the quality of state government **regulations** could also boost economic growth. State governments play a major role in making the rules that are essential to creating efficient markets and reducing power imbalances. But regulation can also be abused, add to costs, weaken competition and reduce the incentives for investment and innovation. Optimal regulation requires a careful balancing of interests on a case-by-case basis that is generally too detailed for this report, but is crucial for effective state-government administration.

2.3 How to get there

2.3.1 Reform land-use planning rules

State governments should reform land-use planning rules to allow more housing to be built close to the centres of our major cities, and to provide firms more flexibility in where they locate.

Planning systems play an important role in managing the growth of cities. Land-use planning rules set out how competing land uses should be managed to coordinate the provision of infrastructure and to minimise the costs that some land users impose on their neighbours – such as pollution, noise, congestion or poor design.⁷⁰

But current planning rules make it hard to build homes in the inner and middle-ring suburbs of our major cities.⁷¹ Recent US studies estimate that GDP would be between 2 per cent and 13 per cent higher if enough housing had been built in cities with strong jobs growth such

as New York and San Francisco.⁷² If planning rules push people to live on the edge of cities, then this will also push some employers to the edge who would prefer on commercial grounds to locate elsewhere. Influencing business decisions in this way is likely to lead to lower productivity.

State governments should change planning rules to allow more medium-density housing in established suburbs, closer to high-productivity jobs. Specific reforms to boost the supply of housing in attractive inner and middle-ring suburbs are set out in Chapter 5. But reforming land-use planning rules would have benefits well beyond improving housing affordability.

Australia's land-use planning rules are highly prescriptive and complex. States should reduce the number and complexity of restrictions on land use created by overly prescriptive zoning systems, which discourage investment and create unnecessary barriers to business entry and diversification.⁷³

Of course, land-use planning rules benefit other land users by, for example, preserving the views of existing residents or preventing increased congestion. But studies generally conclude that the benefits of restricting development are much less than the costs imposed.⁷⁴

69. Harper et al. (2015).

70. Daley et al. (2018, box 4).

71. Ibid. (pp. 56–58).

72. Glaeser and Gyourko (2018, pp. 22–24) and Hsieh and Moretti (2017). Even under conservative assumptions, the GDP impact of increasing housing supply in high-productivity cities is large. Even when planning rules largely restrict movement *within* our three major cities as they do in Australia, rather than between cities as they do in the United States, they impose economic costs.

73. Productivity Commission (2017b, p. 2).

74. See: Cheshire and Sheppard (2002), Glaeser et al. (2005) and Turner et al. (2014). For example, in a review of the literature, Gyourko and Molloy (2015) conclude that while the benefits of land use planning rules are difficult to quantify, 'recent studies suggest that the overall efficiency losses from binding constraints on residential development could be quite large'.

2.3.2 Encourage innovation, particularly through competition

State governments should remove barriers to innovation, rather than wasting money in its name. New businesses form faster in Australia than in other countries,⁷⁵ and Australian consumers adopt new consumer technologies relatively quickly.⁷⁶ But while small firms in Australia tend to be early adopters of new technologies, large firms in Australia are less likely to use cloud computing services than large firms in many other countries.⁷⁷ A lot depends on whether the workforce has the skills to use these new technologies, but at heart, technology adoption is a business decision. Australia's university researchers and industry also collaborate less than in the most innovative economies,⁷⁸ and Australian businesses see university research as much less important to innovation than do suppliers, customers, and industry consultants.⁷⁹

Innovation drives productivity, but governments' ability to enhance productivity through innovation is limited. There is little evidence that government intervention can successfully create growth export industries.⁸⁰ Even though innovation is much broader than invention, most government support for 'innovation' goes towards basic research in public organisations.⁸¹

75. World Bank (2018a).

76. Australia is ranked fifth out of 20 selected countries in the proportion of consumers adopting selected Fintech services such as borrowing used peer-to-peer platforms, investing in crowdfunding platforms and mobile money transfer and payments. EY (2017, figure 3).

77. Ellis (2017).

78. Banks (2012); and ABS (2018c).

79. ABS (2018c).

80. For example, see: Daley et al. (2013b) and Minifie et al. (2013, pp. 28–29).

81. Daley et al. (2013b, p. 1). For example, the Queensland Government's major innovation initiative from July 2015 was the Advance Queensland Program. Most funding under the program supports Queensland inventions and their commercialisation rather than the adoption of innovations from elsewhere: Grattan analysis of Queensland Government (2018).

Setting the right conditions to increase competition will do more to encourage innovation than direct subsidy. But after the extensive deregulation and privatisations of the past three decades, especially in areas such as electricity, the largest such opportunities seem to have been captured⁸² – and they haven't always delivered everything that was promised. The remaining opportunities largely involve careful industry-specific interventions that design markets better to promote competition.

State governments should consider amending regulations and planning rules to reduce barriers to entry, particularly in concentrated markets such as supermarkets – where there has been material progress over the last decade – and fuel retailing.⁸³

And state governments should stop using procurement policies to prop up unsustainable industries.⁸⁴ As the Harper Review recommended, promoting competition – rather than promoting local providers – should be a central feature of government procurement and privatisation frameworks and processes.⁸⁵

2.3.3 Tighten regulation of natural monopolies such as ports and electricity

Natural monopolies such as ports face little direct competition, so many of them are regulated with the aim of constraining prices while still

82. Daley et al. (2012, p. 13).

83. Productivity Commission (2011a). While the incumbents have built profitable businesses with large market shares in liquor and petrol retailing, they have lost market share to new entrants in their core supermarket businesses (Minifie et al. (2017b, p. 45)).

84. Harper et al. (2015, p. 8) found that government procurement guidelines and decisions can significantly affect the range of goods and services available to consumers. Procurement can also shape the structure and functioning of competition in markets. See also: Productivity Commission (2017a, p. 154).

85. Harper et al. (2015, p. 8).

providing strong commercial incentives for investment and innovation. But the needed regulation is not working well everywhere. The high profits earned in ports and electricity generation distribution and transmission suggest that regulation may be too lax.⁸⁶

These regulatory failures transfer surplus from consumers to producers and reduce overall welfare. A poorly constrained monopolist will rationally maximise profit by raising prices above the competitive price. At the monopoly price the value to the user of consuming more of the service is higher than the cost to the monopolist of providing more of the service, but these additional welfare-enhancing trades don't occur. Unconstrained monopoly infrastructure providers can also reduce investment and innovation in upstream or downstream industries.⁸⁷

In particular, state governments should toughen regulation of prices and access to ports. If a monopoly port is unconstrained by regulation when it negotiates access and prices, then prices are likely to be much higher than costs.⁸⁸ The problems are mitigated if state governments put in place a regulated process of arbitration, regulated caps, or competitive pressure from nearby ports.⁸⁹

Instead, state governments have often boosted the prices of assets to be privatised by limiting competition or regulation at the expense of users.⁹⁰ They should stop doing so. Recent high-profile privatisations that have raised competition concerns include the Port of Hastings in Victoria and Port Botany and Port Kembla in NSW.⁹¹ As part of the sale of Port Botany and Port Kembla, the NSW Government committed to effectively preventing the Port of Newcastle from becoming a container

port. This reduced the potential competition for Port Botany and Port Kembla.⁹²

State governments should also write down electricity network assets to reduce prices, as set out in Chapter 8. Poor regulation has allowed operators returns that are high relative to the risk.⁹³ Because operators are allowed to pass on the cost of their investments, past over-investment by state and territory-owned networks has led to excessive prices.⁹⁴ These prices may well lead to inefficient outcomes such as discouraging energy-intensive industries, or encouraging consumers to over-invest in stand-alone batteries to avoid network charges.

2.3.4 Encourage the peer-to-peer economy

Peer-to-peer business models (such as Uber and Airbnb) are among the technologies that could significantly increase productivity. States are responsible for many policy settings that affect the spread of such innovations (such as by regulating ride-sharing services or residential leases).

Embracing the peer-to-peer economy could encourage growth. Not all traditional industries will be happy – but consumers, workers and even the taxpayer should come out ahead, because these platforms can often provide better services to customers, increase the utilisation of fixed assets, and introduce timed pricing that encourages both suppliers and customers to make better choices.⁹⁵

Peer-to-peer operators boost employment and incomes for people on the edge of the labour market. But governments must take care to protect work standards, consumer safety and local amenity.

86. Minifie et al. (2017b, p. 43).

87. Sims (2016).

88. Sims (2016); and Victorian Essential Services Commission (2014).

89. Sims (2016).

90. Minifie et al. (2017b, p. 43).

91. B. Potter (2016).

92. Kirkwood (2018).

93. T. Wood et al. (2012).

94. T. Wood et al. (2018a).

95. Minifie and Wiltshire (2016).

State governments should also bring workers in riskier industries such as transport into workers' compensation schemes. Workers' compensation can be administratively less costly than individually purchased insurance, it pools risks and it prevents workers from being underinsured.⁹⁶ But state governments need to ensure that these worries are not used as an excuse to limit competition from online platforms.

2.3.5 Improve business regulation

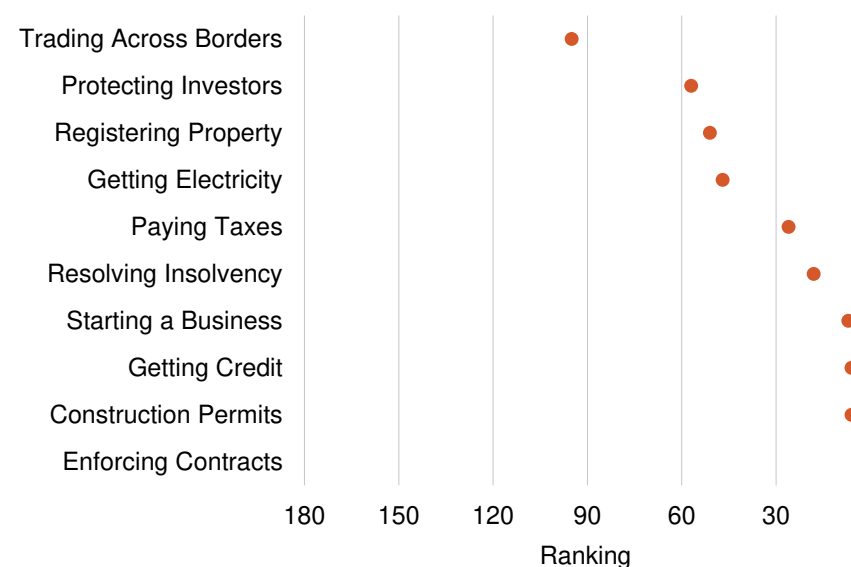
Australia is a relatively business-friendly environment, and ranks highly on international comparisons of the ease of doing business (Figure 2.2). But we should not be complacent. Regulations and red tape that unjustifiably drag on business activity should be adjusted or abandoned.

The Productivity Commission's 2017 report, *Shifting the Dial*, identified regulatory reforms that could boost GDP by \$3 billion a year.⁹⁷ Many are Commonwealth responsibilities, but there is a suite of state government regulatory changes that could boost GDP by up to \$1 billion a year.⁹⁸

For instance, if Queensland, SA and WA abolished restrictive rules on retail trading hours, around \$600 million would be added to the economy as fixed retail assets were utilised better and greater access to retail services better met the needs of consumers.⁹⁹ Reforms in

Figure 2.2: Australia scores highly on most 'ease of doing business' metrics

Australia's ranking on the World Bank 'Ease of Doing Business' rankings (of 183 economies)



Source: World Bank (2018b).

96. Ibid.

97. Productivity Commission (2017a, p. 154).

98. Grattan analysis of Productivity Commission (ibid., tables B.1 and B.5). This includes removing restrictions on retail trading hours, bans on genetically modified crops, and reforms to taxi and ride-sharing services.

99. Productivity Commission (2017b, p. 224).

areas ranging from occupational licensing¹⁰⁰ to genetically-modified crop restrictions¹⁰¹ should also be investigated.

States should work through COAG to align regulations across state and Commonwealth jurisdictions, with the aim of creating a seamless national economy. Harmonisation has progressed well over the past 20 years in areas such as product safety and consumer law, but less so in areas such as electrical goods safety, occupational licensing and responsible service of alcohol.¹⁰² States should also avoid a 'lowest common denominator' approach that may reduce the social benefits of regulations.

100. Professional and occupational licensing can promote important public policy aims, such as quality, safety and consumer protection, especially in fields such as health care. However licensing that restricts who can provide services can prevent new and innovative businesses from entering the market. It can also limit the scope of existing businesses to evolve and innovate. Harper et al. (2015, pp. 140–41).

101. For example, Productivity Commission (2017a) estimated that removing state bans on genetically-modified crops could boost GDP by around \$330 million.

102. Daley et al. (2012, p. 17).

3 Regional development

3.1 Where we are

Australia is an unusually urbanised country; just a third of the population lives outside of the capital cities, in what are often described as the ‘regions’.

Many believe that the economic divide between Australia’s capital cities and regions is getting bigger. But the truth is more complicated.

3.1.1 Economic outcomes

Regional incomes have always been lower than city incomes, but over the past five years they have grown a little faster. In four states, incomes grew faster in the regions than the capital cities (Table 3.1).

The mining boom has led to different patterns in WA and Queensland. Incomes are higher, and have grown faster, across these states. In mining regions such as the Pilbara, incomes, income inequality, and tertiary education levels are particularly high, and populations grew faster over the past decade.¹⁰³

Employment outcomes in regions have distinctive patterns. Young people tend to enter the workforce sooner in the regions, but have less education. As a result 15–19 year-olds are more likely to be employed in regions than cities, but 25–64 year-olds in the regions are less likely to be working, particularly in NSW, Victoria, and Queensland. Employment rates are lowest for men, because there are fewer jobs in the manufacturing and agricultural sectors – 25–64 year-old men are 7 percentage points less likely to be employed in regional NSW and Victoria than in Sydney and Melbourne.¹⁰⁴

103. Daley et al. (2017, p. 12).

104. ABS (2018b). Some of this is due to regions having a greater proportion of older people, who are less likely to be employed. But for a given age group (e.g.

Table 3.1: State Scorecard for regional development

	Per capita incomes in regional areas		Regional incomes compared to capital city median		Regional employment rate compared to capital city	
	\$000s	Real change per year in past 5 years (%)	%	Change in past 5 years (%)	%	Change in past 5 years (%)
NSW	54	1.4	86	0.3	-3.7	0.3
VIC	42	1.0	87	0.2	-2.9	-0.3
QLD	44	1.4	90	0.8	-2.5	-0.2
WA	50	1.6	93	1.4	1.7	3.3
SA	42	0.8	88	-0.9	0.1	4.0
TAS	42	0.9	90	-0.8	-4.7	0.0
NT	54	1.5	87	-3.4		

Note: See Appendix A for notes and sources.

3.1.2 Regional economic activity

Although agriculture is central to the cultural image of regional Australia, it comprises only 7 per cent of regional jobs.¹⁰⁵ About another 5 to 6 per cent of jobs are in food processing.¹⁰⁶ Regional employment levels in construction, health, and education are similar to those in cities.¹⁰⁷ Manufacturing is a shrinking share of employment in both cities and regions.¹⁰⁸

Although agriculture and food processing employ a small share of regional population, productivity is high and rising. More food is being produced with better technology that requires fewer people. Farms are getting larger, delivering higher crop yields. Australian farms have increased labour productivity by 150 per cent in the past three decades – much faster than the rest of the economy.¹⁰⁹ As a corollary of rising productivity, employment across Australia in agriculture has fallen from 6 per cent to 2.5 per cent during that time.¹¹⁰

Most state government marketing boards that limited competition in agriculture have been wound up over the past four decades. Exceptions include the NSW rice marketing board.¹¹¹ A variety of other

restrictive sale arrangements persist in other products. Nevertheless, subsidies to farmers are the second lowest in the OECD.¹¹²

3.1.3 Regional populations

While agriculture and food processing are employing fewer people, service industry companies are gravitating towards the big cities. Service sectors now employ 79 per cent of Australian workers, up from 73 per cent in 2000.¹¹³ Some services jobs – such as healthcare – are distributed across regions. But higher-end services jobs tend to cluster in large cities, particularly towards their centres (Section 2.2 on page 24).¹¹⁴

As a result, Australia is becoming even more urbanised. Around 80 per cent of the population occupy less than 1 per cent of the land mass.¹¹⁵

The population has not shrunk in all regions. The populations of towns close to capital cities and coastal areas have typically grown about as fast as the capital cities. The populations of inland cities that are not capital city satellites have grown more slowly (Figure 3.1 on the following page). In many inland areas the total population of the area including both towns and hinterland has fallen.¹¹⁶

3.1.4 Regional well-being and culture

Those who live in the regions report higher well-being as shown in Figure 3.2 on the next page. Results are consistently better on a range of measures, including personal relationships, standard of living and

35–39), employment rates for men are materially lower in regional NSW than in Sydney.

105. Including forestry and fishing: ABS (2018d). Agriculture excluding forestry and fishing comprises 3 per cent of Australian employment: International Labor Organisation (2018).

106. About 2 per cent of the Australian workforce is in food processing: Australian Workforce and Productivity Agency (2013). We assume that most of these jobs are in regional areas.

107. SGS Economics & Planning (2018).

108. Australian Workforce and Productivity Agency (2013).

109. Campbell and H. Withers (2017, p. 6).

110. Productivity Commission (2005b, p. 6).

111. Almost all Australian rice is produced in NSW.

112. Gray et al. (2014, p. 1).

113. Daley et al. (2017, p. 5).

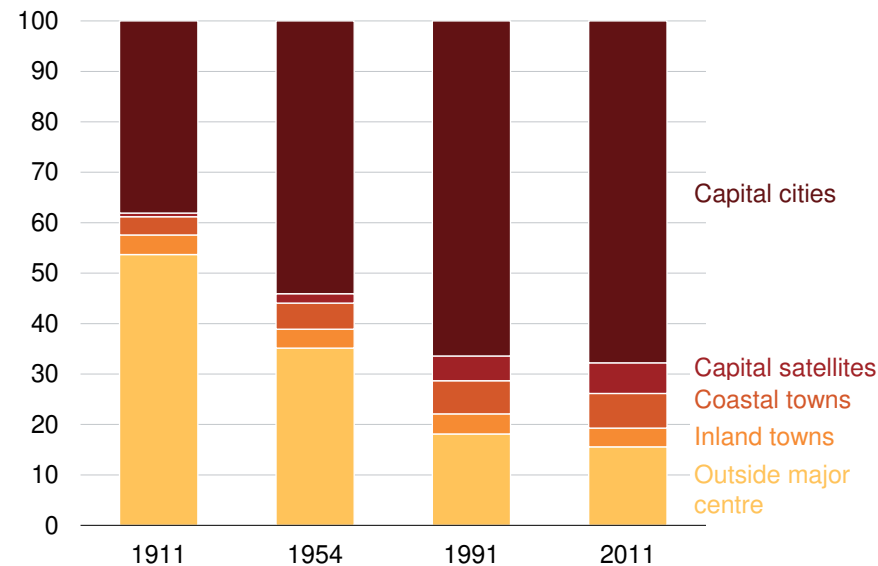
114. J.-F. Kelly and Donegan (2015, pp. 23–36); and Rawnsley (2018).

115. Daley et al. (2017, p. 20).

116. Ibid. (p. 23).

Figure 3.1: Australia is becoming more centralised

Population in urban areas of more than 10,000 people, 1911–2011.

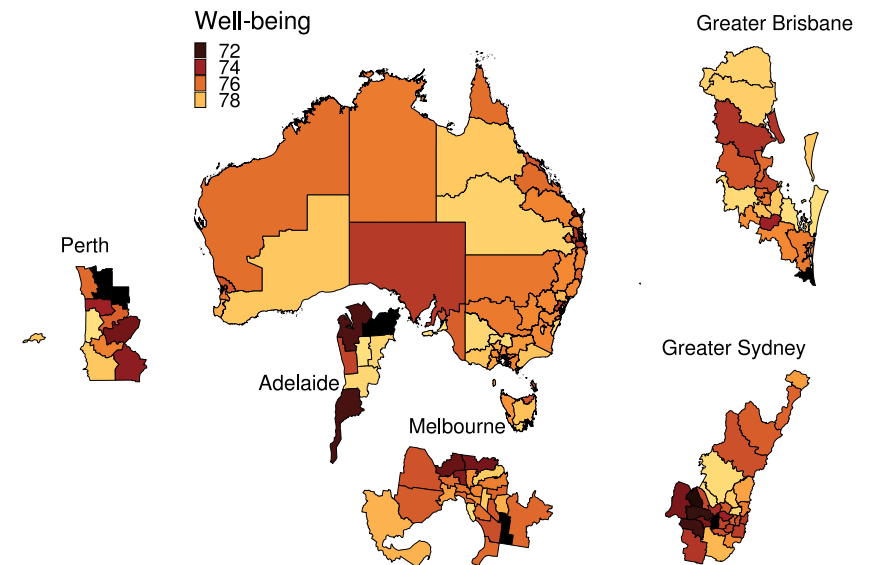


Notes: 'Major Centre' is an urban area as defined by the ABS. The smallest town in this category in 2011 was Mount Gambier with a population of 28,279. There is a series break in 1991 because observations are not available for some Statistical Districts before this date.

Sources: Daley and Lancy (2011, p. 10) and ABS (2014). Grattan Analysis.

Figure 3.2: Regional areas report higher well-being

Overall satisfaction (per cent).



Notes: The Australian Unity Index is calculated from nominated levels of satisfaction with various aspects of life including health, personal relationships, standard of living and sense of community. Satisfaction is expressed as a percentage score, where 0 per cent is completely dissatisfied, and 100 per cent is completely satisfied. These findings are consistent with evidence from Victorian Government (2018a).

Source: Grattan analysis of Capic et al. (2017).

sense of community. A substantial literature shows that inter-personal interaction matters as much as income to overall well-being.¹¹⁷

Nevertheless, many in regions perceive a widening cultural gap to the big cities.¹¹⁸ A few more people in regions are likely to think that ‘there is too little emphasis on traditional values’.¹¹⁹ Their concerns are less about social issues such as same-sex marriage,¹²⁰ and more about the relative emphasis on city and regional culture in national identity. Many more people in regions are concerned about migration¹²¹ – even though there are far fewer recent migrants in the regions. This increasing *cultural* gap appears to explain in large part why the vote for minor parties is higher, and rising faster, in the regions.¹²²

3.1.5 Regional government services

State government spending per person on services tends to be higher in regional areas. Social services – particularly health and education – are more expensive to deliver to dispersed populations, so governments spend more per person to ensure that service quality in regional areas doesn’t fall too far behind (Figure 3.3).

While some regional areas are lagging on health and educational outcomes, Grattan Institute analysis of both sectors has shown that socio-economic status and other risk factors – not distance – are the biggest drivers of outcomes (see Section 6.1.4 on page 59 and Section 7.3.1 on page 69).

117. e.g. Welsh and Berry (2009) and Helliwell (2003). Other measures of well-being are favourable for those in regional areas, as explored by Biddle et al. (2009).

118. D. Wood et al. (2018a, pp. 56–58).

119. Ibid. (p. 64).

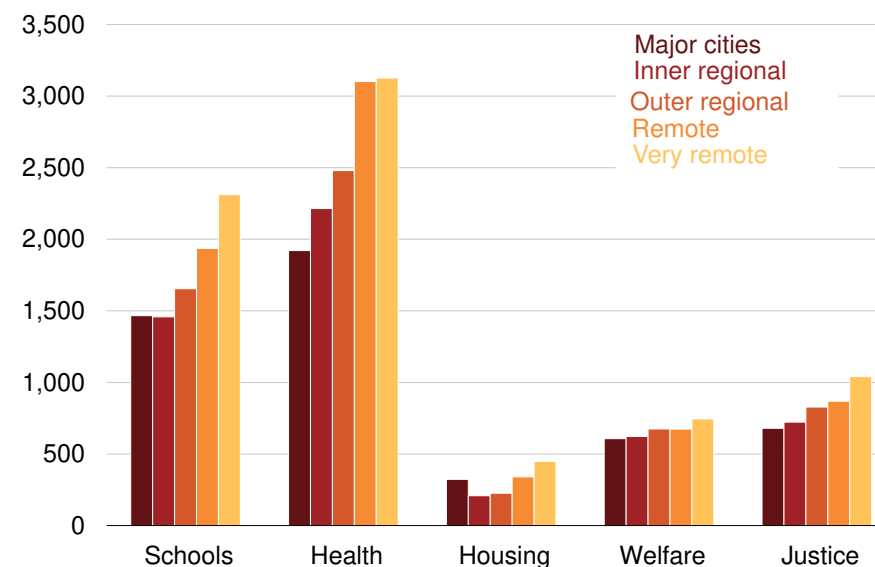
120. Ibid. (pp. 54–55).

121. Ibid. (p. 64).

122. Ibid. (pp. 56–58).

Figure 3.3: Costs of providing many government services are higher in the regions

Average spend on services per capita by state governments, 2013–14, \$



Notes: Differences are those attributed by the CGC to remoteness rather than socio-demographic composition. For example, the impact of larger Indigenous populations in remote areas has been excluded from this impact. Chart excludes post-secondary education and services to communities because these categories account for relatively low amounts of state government spending. There is very little variation between spending in most regions in these categories.

Source: Commonwealth Grants Commission (2015, p. 84).

3.2 Where we should be

Governments owe obligations to people, not places. They are responsible for enabling those who live in regions to have a high quality of life. But they are not responsible for ensuring that the populations of regions grow. This is why we have chosen metrics for regional development in this report that focus on income per capita and employment rates, rather than population growth.¹²³

Governments should ensure that those who do live in regions have adequate services and infrastructure. Assistance should follow people where they choose to live. Spending on regional services and infrastructure should accord with a clear strategic plan for each region. Plans should be based on realistic extensions of historic population and industry trends rather than wishful thinking.

But government programs should not be designed to hold people and jobs artificially in the regions if economic opportunities pull them towards capital cities and large regional towns. State governments can't make economic water flow uphill. State governments can't control where people live or what natural resources are available to a community. Attempts to control where new jobs are created are invariably expensive and usually ineffective.¹²⁴

Government spending for regional economic development should usually build on strengths that are already apparent. Large projects should proceed only once rigorous cost-benefit analysis has been completed. All significant initiatives should be comprehensively evaluated to measure which are effective, so that future spending is more informed by experience, and better targeted to programs that are more likely to succeed.

123. Our choice of metrics differs from Queensland's 30-year plan, which includes an aim to double regional population. Queensland Government (2014, p. 37).

124. Daley and Lancy (2011, p. 20).

3.3 How to get there

3.3.1 Industry assistance

Where regional assistance is provided to regions with declining industries – such as Victoria's Latrobe Valley – it should be focused on helping the people who are most severely affected. Government assistance should be directed primarily to providing retraining and income assistance to people made redundant by industry closures – regardless of whether they choose to stay in the affected region.

Nevertheless, most states have had regional development funds over the past 20 years that spent money on infrastructure and grants to encourage business investment in regions. In the decade to 2011, governments (including the Commonwealth) spent around \$2 billion on explicit regional assistance each year.¹²⁵ The 'Royalties to Regions' program in WA spent \$7 billion between 2008 and 2017.¹²⁶

Often these programs are poorly administered. Auditors General from NSW, Victoria, Queensland and WA have found in a variety of studies, regional development money being spent with no business case, with only poor documentation, or without reference to application guidelines (Table 3.2). NSW and WA's programs have been dogged by accusations of pork barrelling, a claim substantiated in Queensland by its Auditor General.¹²⁷

Grattan analysis in 2011 found that for programs where data was available, government industry assistance had not materially accelerated economic or population growth in slow-growing regions.¹²⁸

State governments need to start collecting and analysing data on the effectiveness of regional development programs. Auditors General

125. Ibid. (p. 21).

126. Productivity Commission (2017c, p. 25).

127. McCarthy (2017); and Queensland Audit Office (2016, p. 5).

128. Daley and Lancy (2011).

routinely criticise regional development programs for failing to do so (Table 3.2). The Victorian Auditor General criticised government claims about the success of its regional growth fund, which were based on how many jobs projects were *expected* to create, rather than an evaluation of how many jobs they *actually* created.¹²⁹

Successful applicants for Victoria's \$500 million Regional Jobs and Infrastructure Fund are now required to collect data to enable Regional Development Victoria to conduct a 'robust evaluation' of whether projects meet their stated outcomes and objectives.¹³⁰ It remains to be seen whether these provisions will be enforced, and whether the evaluations will be published.

3.3.2 Government services

Additional spending on transport and other services to the regions may well be justified given a desire to promote national unity, partly by delivering roughly comparable levels of government services to as much of the Australian community as possible. But even if the numbers suggest otherwise, many people in regional areas believe that they do not get a "fair share" of Australia's resources.¹³¹ If governments do not address this perception, they run the risk of exacerbating growing cultural divides between cities and regions.¹³²

Policy makers should recognise that much development, infrastructure and services spending is in fact a subsidy that can only be justified on social equity grounds rather than because it is likely to sustainably drive increased rates of economic growth.¹³³

Table 3.2: Auditors General have found significant mismanagement in state regional development funds

State	Program	Spending	Auditor comments
NSW	Restart NSW	\$1.3 billion 2011–2017	No project completion reports and poor documentation
VIC	Regional growth fund	\$750 million 2010–2015	No value-for-money demonstrated, fundamental flaws in performance evaluation
QLD	Royalties for Regions	\$500 million 2013–2015	Application guidelines 'irrelevant', with money instead given to government electorates
WA	Royalties for Regions	\$4.2 billion 2008–2014	No metrics for success, incomplete business cases and few evaluations of projects

Note: NSW's Auditor General was broadly positive about its program despite these criticisms.

Sources: Queensland Audit Office (2016), Victorian Auditor General (2015), NSW Audit Office (2018) and Western Australia Auditor General (2014).

129. Victorian Auditor General (2015).

130. Regional Development Victoria (2018, Clause 4.2).

131. Brett (2011).

132. D. Wood et al. (2018a, pp. 61–65).

133. Daley and Lancy (2011).

Subsidies provided to the regions should be measured and published. As well as answering the popular misconception that governments ignore regional interests, this may provoke a more honest conversation about what level of service governments are prepared to fund in more remote areas, given the costs of servicing them.

3.3.3 Infrastructure spending

New transport infrastructure should reflect population and economic growth. Some of this is in regions. But over the past decade, governments spent much more on transport infrastructure in regions than would be expected given the distribution of population and economic growth (Figure 3.4). Brisbane and the Gold Coast populations have grown at 1.7 per cent per year over the past five years, twice as fast as the rest of Queensland – and yet nearly half of new infrastructure spending in the 2017–18 state budget was directed elsewhere.¹³⁴

This trend has reversed somewhat in NSW and Victoria, with several recent large transport projects directed towards growing suburban populations of the major cities.¹³⁵

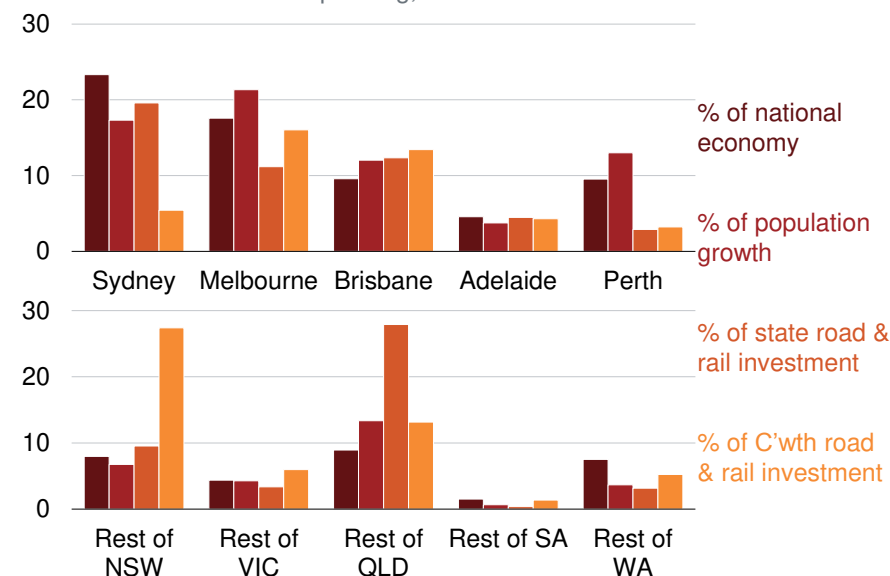
3.3.4 Redirecting population to the regions

Housing is least affordable in capital cities,¹³⁶ where populations are growing much faster than in regions (Section 3.1.3 on page 32).

Some have called for rules or incentives for people to move to regional areas,¹³⁷ or substantial investment in regional rail.¹³⁸ But such policies should be avoided by state governments: they are unlikely

Figure 3.4: Governments disproportionately spent on infrastructure in regional areas

Per cent of roads and rail spending, 2005–06 to 2014–15.



Notes: Road and rail investment is over the 10 years from 2005–06 to 2014–15. Road and rail investment excludes private sector contributions to public-private partnerships. If included, the urban share of spending would be slightly higher.

Source: Terrill et al. (2016a, figure 3.4.).

134. Productivity Commission (2017c, p. 25).

135. Pascoe (2018).

136. Daley et al. (2018, p. 18).

137. Carey (2018).

138. Bracks and McNamara (2018).

to encourage many people to relocate who wouldn't have done so anyway, and such policies could have large economic costs if large numbers did relocate.

Since Federation, state and federal governments have tried to lure people, trade and business away from capital cities. It has mostly been an expensive policy failure. Despite substantial government spending on regional development aimed at promoting decentralisation (Section 3.3.1 on page 35), the trend to city-centred growth has accelerated in the past decade. With the exception of Western Australian and Queensland mining regions, capital city economies over ten years have grown faster than regional economies, primarily because of faster population growth (Section 3.1.3 on page 32).¹³⁹

These are global trends: around the world large cities are typically growing much faster than less densely populated areas. The economic advantages of cities over regions appear to be growing as the economy shifts towards services. Services businesses often benefit more from the presence of other business, more readily found in large cities.

Regional growth programs have a poor record of influencing people to move. The NSW regional relocation home buyers' grant of \$7,000 to people who moved from cities to regions began in 2011. Initial take-up was projected at 10,000 per year; in practice only 4,800 grants were made over three years, and many of these were probably made to people who would have moved anyway – many of them retirees.¹⁴⁰ A parallel scheme, the skilled regional relocation incentive, which provided \$10,000 grants to people moving to a regional job, was closed in 2015.¹⁴¹

139. Daley et al. (2018, p. 139).

140. Norington (2017).

141. Revenue NSW (2017). The combined budget for the two regional relocation programs was capped at \$10.4 million in 2013–14 after poor take-up in their initial years. (NSW Office of Finance & Services (2014, p. 140)).

Policies to encourage more jobs in regional areas also have a poor record: monetary incentives from government are rarely large enough to outweigh the economic advantages for businesses of locating in cities.¹⁴²

In the unlikely event that government policy actually succeeded in encouraging substantially more people and employers to move to regional areas, it would also slow growth in incomes. Cities are important for innovation and economic growth. Cities offer more opportunities to share ideas, which both attracts skilled people and increases their skills once they arrive. Despite the rise of the internet and reduced telecommunication costs, innovation seems to rely on regular face-to-face contact between people in different firms, which therefore tend to aggregate in large cities.¹⁴³ The greater productivity of cities is reflected in higher wages, GDP and rates of innovation per person.¹⁴⁴ Pushing people to regional areas may therefore reduce productivity growth and per capita incomes.

Another strategy is to encourage the growth of regional towns as dormitory suburbs for people working in cities. Obviously this only works for regional towns that are relatively close to capital cities, with good transport links. But it is unclear why regional dormitories are better than building suburbs on the city fringe that involve similar travel times to jobs. And in any case, the transport infrastructure needed to ferry people from homes in regional areas to jobs in the city is typically very expensive relative to the number of people who use it.

142. There is little evidence that such programs succeed (Productivity Commission (2017c, pp. 176–187)) – partly because they are very rarely evaluated (Productivity Commission (ibid., pp. 148–152)). See also Daley and Lancy (2011).

143. Daley and Lancy (2011); and J.-F. Kelly and Donegan (2015).

144. Romer (2015).

Nor is housing that much more affordable in regional areas.¹⁴⁵ While regional house prices are lower, average incomes are lower too.¹⁴⁶ Regional house prices have risen rapidly in response to falling interest rates. Median house prices in regional NSW have already risen from 4.2 times annual household incomes in those areas in 2001 to 6.6 times now. In many states, regional house-price-to-income ratios are higher than those in capital cities 15 years ago. It is possible that price-to-income ratios in some regional areas have been pushed up due to a growing population of asset-rich, income-poor retirees. If more people move to the regions, this would reduce affordability for those already residing in these regional areas.

Despite both economic theory, and policy experience, in both Australia and other advanced economies, wishful thinking persists that government policy can somehow shift significant populations from capital cities to regions. The fantasy is popular: many people who live in congested cities, or that already own their home there, would much rather that additional population went elsewhere. But it is a dangerous fantasy. It provides an excuse for state governments to avoid making the hard decisions on planning and transport policies that would improve housing affordability (Chapter 5) and how our cities work (Chapter 4).

3.3.5 Drought assistance

Climate change is increasing the frequency and severity of drought.¹⁴⁷ Agricultural businesses should be designed so that they are financially sustainable through periodic droughts. This implies saving through the good times, storing feed and carefully managing stock levels. Well-managed farms should not need government assistance in

drought any more than other businesses that periodically face adverse conditions.¹⁴⁸

But not all farms are sufficiently prepared. The NSW Government has announced a \$500 million package of relief to support farmers through the current drought.¹⁴⁹ Most of that money is being spent on programs that the Productivity Commission specifically recommended should not be used as drought assistance. Transport subsidies, rate waivers and other rebates prolong the life of businesses that are inefficient, and punish farming businesses that have prepared well for drought.¹⁵⁰

Where governments do provide drought subsidies, they should be reserved for extreme events, and targeted towards those who are struggling the most. Subsidies should be directed in a way that encourages farmers to self-insure against future droughts.¹⁵¹ Instead of expensive transport and grain subsidies, governments should help individuals through programs such as the Farming Family Income Support program.¹⁵²

3.3.6 Regulatory reform

Excessive regulations can make it harder for businesses to thrive (Section 2.3.5 on page 29), including those in regions. Complex development approval processes and restrictive zoning are damaging regional areas. Restrictions on agricultural development can reduce farm productivity.¹⁵³ Zoning makes it harder to increase business in the tourism and industrial sectors. Simplifying permit application processes would encourage more businesses to create jobs in the regions.

145. Daley et al. (2018, figure 2.4).

146. Daley et al. (2017, p. 8).

147. CSIRO (2016).

148. Productivity Commission (2009, p. 407).

149. NSW Government (2018b).

150. Grigg (2018).

151. Hughes and Hatfield-Dodds (2018).

152. Productivity Commission (2009, p. XLIX).

153. Productivity Commission (2016, p. 79).

The Victorian Government has instituted a program of stamp duty rebates in the La Trobe valley as part of a support package in response to the closure of the Hazelwood power station.¹⁵⁴ Stamp duty is a significant impediment to the movement of people and businesses. It should be abolished everywhere – not just in the Latrobe Valley – and replaced with a broad-based land value tax. (Section 9.3.2 on page 86).¹⁵⁵ But tax zones specific to a particular region are expensive and distort economic activity away from where it is most efficient.

154. Victorian Government (2018b).

155. Daley et al. (2015b).

4 Transport and cities

4.1 Where we are

While some people are concerned about the slow pace of growth in many of Australia's regions, Australia's total population is growing rapidly. Sydney and Melbourne, in particular, are booming. And population has also grown quickly from the Gold Coast to the Sunshine Coast, and in Geelong and Darwin.

Many people are asking whether recent population growth rates are sustainable. This is to be expected, because rapid population growth has costs as well as benefits.

On the one hand, larger cities have significant economic advantages over smaller centres, and offer people a greater range and diversity of jobs, leisure and cultural activities. The more Australians choose to live in cities, the wealthier the country can expect to be.¹⁵⁶ People in larger cities tend to have higher incomes than those living elsewhere, are prepared to pay higher rents, and generate more economic output per person.¹⁵⁷ Cities grow because more and more people want to take advantage of these opportunities (Sections 2.2 and 3.1.3 on pages 24 and 32).¹⁵⁸

But, on the other hand, fast-growing cities are more crowded, and their roads and public transport can become congested. Understanding how city-dwellers have responded to fast population growth is important if Australia is to continue to manage growth effectively in the years and decades ahead.

Table 4.1: State Scorecard for transport and cities

	Commute distance		Active transport		Post-completion reviews of major infrastructure projects
	Median distance to work in capital city, 2016 (km)	Change since 2011 (%)	Commutes by walking or cycling in capital city, 2016 (%)	Change since 2011 (ppts)	Number of reviews published in past 4 years
NSW	7.7	3	5.2	-0.2	2
VIC	8.7	2	4.9	0.1	7
QLD	8.2	3	4.5	-0.2	2
WA	9.1	5	3.5	-0.4	2
SA	7.7	2	3.8	-0.4	2
TAS	6.7	4	7.6	0.3	1
ACT	7.8	2	7.9	0.5	1
NT	7.8	16	6.7	-1.8	0
AUS	8.2	3	4.8	-0.1	

Note: See Appendix A for notes and sources.

156. Gibbons and Graham (2018); and Romer (2015).

157. Terrill et al. (2018, pp. 9–10).

158. O'Flaherty (2005); and Glaeser (2008).

To date, Australian commuters have adapted remarkably well to the challenges of rapid population growth (Table 4.1).¹⁵⁹ In Sydney and Melbourne, the total increase in the median commute distance between 2011 and 2016 was just 3 per cent and 2 per cent, respectively.

And in all of Australia's five largest capital cities, commuting times have been fairly stable from 2004 to 2016.¹⁶⁰ In Sydney and Melbourne, for example, half of workers have commutes that are no longer than 30 minutes, and this proportion has not changed in 12 years.¹⁶¹

This remarkable stability of commutes has implications for how state governments think about the relationship between population growth and infrastructure requirements. There is no simple formula for how many lane kilometres of road or track kilometres of rail, or how many trains or buses, are needed per person. But recent Australian experience indicates that people living in bigger cities can make do with less infrastructure per person than those in smaller cities, while still keeping their commutes stable (Figure 4.1).

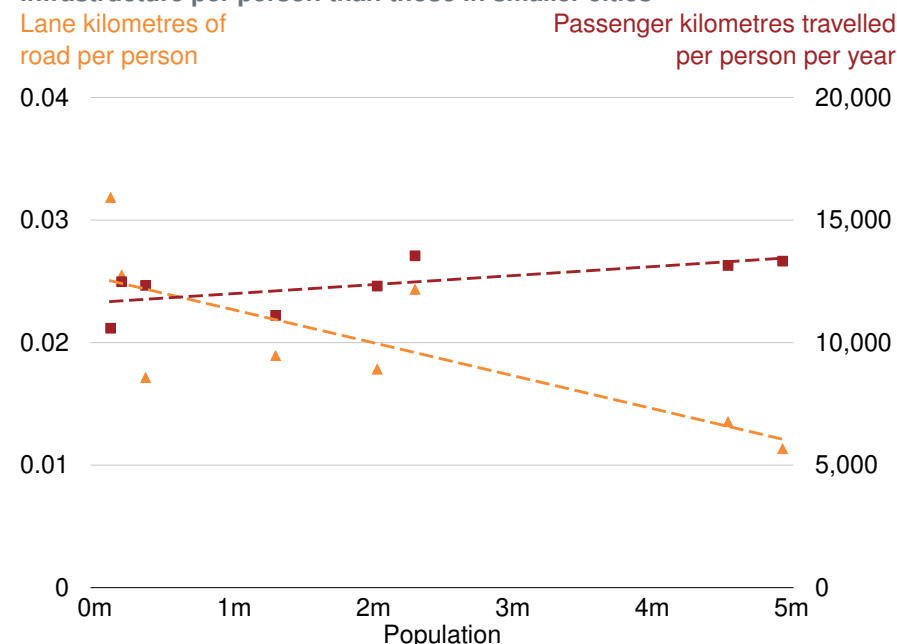
159. Darwin is an outlier. In general, a given rate of population growth has less impact on how far commuters travel and how long it takes them in large cities than in small ones.

160. Some recent media reporting has cited data showing declining average road travel speeds in capital cities (for example, Galloway and Harris (2018)). Data from the Australian Automobile Association (AAA) has been cited as revealing 'traffic chaos' (Rooney (2018)), but this seems difficult to justify. The AAA's analysis shows that, over the period from 2013–2018, the average travel time for a 5-kilometre trip in Sydney increased by 11 seconds, in Melbourne by 24 seconds, and in Brisbane by 9 seconds. And in all three of these cities, the AAA notes that travel speeds were static between 2013 and 2015, but have since declined (AAA (2018)). The Minister for Urban Infrastructure recently noted that a 30-kilometre trip to work on a freeway takes 11 minutes longer than it did a decade ago. The great majority of people travel much shorter distances to work; the average Melbourne commute distance is 16.2 kilometres, and the median is 11.5 kilometres.

161. Terrill et al. (2018, p. 13), based on HILDA (2016). While there was an increase in commute times at the 75th percentile in Sydney, Melbourne, Brisbane and Perth, this was not the case in Adelaide or Canberra.

Of course, even though commute distances and times are barely changing, the level of congestion in cities is still a community concern. There is overcrowding on public transport at certain times in some cities, and commuting times can be unreliable.¹⁶²

Figure 4.1: People living in larger capital cities manage with less infrastructure per person than those in smaller cities



Notes: Data is for 2015. Chart shows Australia's capital cities, from left: Darwin, Hobart, Canberra, Adelaide, Perth, Brisbane, Melbourne and Sydney. Dashed lines are lines-of-best-fit. Canberra's lane length is for the entire ACT.

Sources: Grattan analysis of BITRE (2017a) and BITRE (2017b).

162. Terrill et al. (2017); O'Sullivan (2018); Jacks (2018); and Bathersby and Herald (2018).

But the general stability of commute distances and times highlights that people are not hapless victims of population growth, depending for their well-being on governments building the next freeway or rail extension. City-dwellers have coped even though major infrastructure projects such as WestConnex in Sydney, Melbourne Metro, and Brisbane's Cross River Rail have not yet been completed. We should be sceptical of "congestion-busting" election pledges. Building new infrastructure is far from the only way to cope with population growth.

Nevertheless, governments have been building a lot of new infrastructure. Over the decade to mid-2018, construction work on new transport projects for the public sector cost more than \$180 billion.¹⁶³ But much of this money was not well spent. Governments are not accountable to the public for the way they invest in new transport projects, in three ways.

First, governments commit to projects before the analysis needed to support the project has been done.¹⁶⁴ This is a problem because once politicians have announced a project, they and the public treat that announcement as a commitment. They are right to do so: two thirds of announced projects end up being built.¹⁶⁵ And premature project announcements – when a politician promises to build a road or rail line at a particular cost, often in the lead-up to an election, without proper analysis first – are the biggest culprit behind cost overruns in Australian transport projects (Figure 4.2).

Over the 15 years to 2016, Australian governments spent \$28 billion more on transport infrastructure than they told taxpayers they would. The cost overruns amounted to nearly a quarter of total project

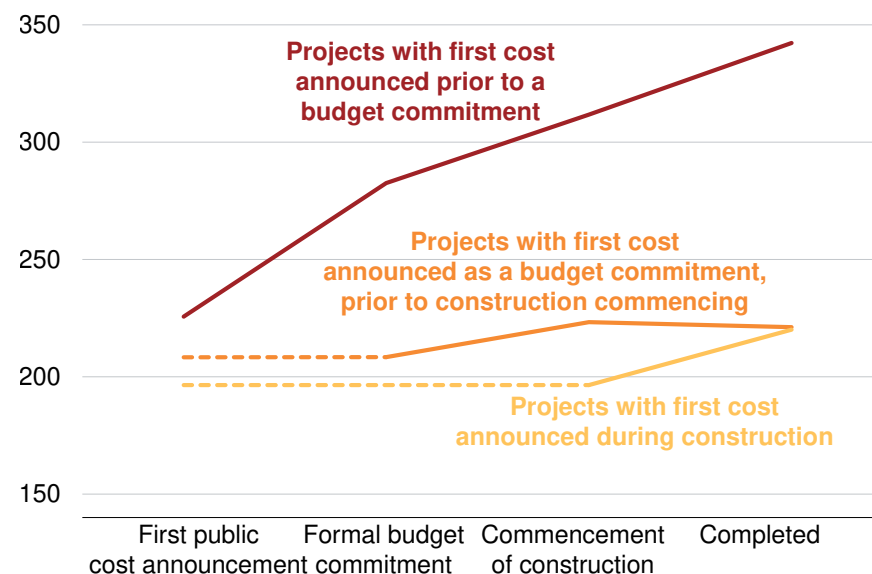
163. Grattan analysis of ABS (2018e). This amount has been converted into real 2018 dollars. It includes expenditure on road, railway, bridge and harbour projects, but does not include the cost of land or maintenance.

164. Terrill et al. (2018, p. 49).

165. Terrill et al. (2016b, p. 26).

Figure 4.2: Projects announced prematurely have larger cost overruns at all stages of the project's lifecycle

Average project size of each cohort, by project stage, \$2016 millions



Notes: Australian transport projects, completed between 2001 and 2015. Projects' maturities at the time of initial cost announcements are inferred from each project's stated maturity when the project entered the Deloitte Investment Monitor. Where initial cost announcements were very low-profile, it is possible that Deloitte Access Economics (2016) may have missed the announcement and erroneously recorded the first cost announcement as having occurred when the project reached a more mature stage. Given this data collection methodology, it should be noted that late initial cost announcements may in fact reflect that earlier cost announcements were of a particularly low profile.

Sources: Deloitte Access Economics (ibid.); Grattan analysis.

budgets. Most cost overruns were caused by a small number of projects: 90 per cent of the additional costs were explained by 17 per cent of projects that exceeded their promised cost by more than half.¹⁶⁶

The second way that governments are not accountable is that they rarely publish outcomes from completed projects, as shown by the very small number of post-completion reviews published in the past four years (Table 4.1). Since 2005, the Bureau of Infrastructure, Transport and Regional Economics (BITRE) has conducted two rounds of post-completion evaluations of road investment projects (one in 2005–2007 and the other in 2014–2016).¹⁶⁷ This is a step in the right direction – but it is a small step. The BITRE analysis covered just 12 state government projects, completed between 1994 and 2013 and costing \$2.2 billion in total.¹⁶⁸ This compares with construction work done for the public sector of nearly \$175 billion over the same period.¹⁶⁹ The findings of BITRE's post-completion evaluation case studies suggest there is much room for improvement in the quality of cost-benefit analysis.¹⁷⁰

The third way that governments are not accountable for transport infrastructure decision-making is when they fail to track policy goals over time. In recent years, all state governments have expressed support for greater levels of travel by walking and cycling, and some state governments have claimed they are seeking to increase the *share* of travel by walking and cycling.¹⁷¹

166. Ibid. (p. 9).

167. All projects included in these evaluations were completed in 2013 or earlier.

168. One of the projects included in BITRE (2018) – Victoria's Goulburn Valley Highway project – was excluded from our metrics, on grounds that the published evaluation was not provided and the published summary of the evaluation was very limited.

169. Grattan analysis of ABS (2018e).

170. BITRE (2018).

171. Aspirations for a greater mode share by active transport are set out in Victorian Department of Environment, Land, Water and Planning (2017, p. 62), NSW

Nevertheless, over the past five years, the proportion of commutes by 'active transport' – by foot and bicycle – has fallen. It increased fractionally in only one of the five largest capital cities – Melbourne (Table 4.1).¹⁷²

Even in the relatively densely populated inner-city regions of Sydney and Melbourne, active transport commutes declined as a proportion of all commuting trips over this period.¹⁷³

4.2 Where we should be

State governments should tread more lightly on people's own adaptations to adapt to population growth, and they should be held to account for their transport investment decisions.

Population growth in Australia's cities is forecast to remain strong in coming years. State governments can do much more to enable people to adapt to growing cities in ways that respect individuals' values and

Government (2013, p. 5), NSW Government (2018c, p. 28), Queensland Department of Transport and Main Roads (2011, p. 6), Tasmanian Department of Infrastructure, Energy and Resources (2010, p. 3) and NT Department of Infrastructure, Planning and Logistics (2018, p. 3). Other states and territories have also released strategic documents that include aspirations for greater levels of walking or cycling – for example, WA Department of Transport (2017a), SA Government (2015a, pp. 10–12) and ACT Government (2012a).

172. ABS (2011) and ABS (2016). The increase was just 0.06 percentage points, which has been rounded up to 0.1 percentage point. Larger but still modest increases were evident in Hobart and Canberra. Even though active transport's share of trips has been steady or declining in most cities, population growth has increased the total number of workers who commute by walking and cycling in some cities over the five years to 2016: for example, by 7,900 in Sydney, 10,800 in Melbourne and 1,100 in Brisbane.

173. ABS (2011) and ABS (2016). Broad inner-city regions refers here to the ABS's SA3 areas. In Sydney, for example, this takes in Zetland to the south, The Rocks to the north, and Surry Hills and Camperdown to the east and west. In both Sydney and Melbourne, walking and cycling by people living in these inner-city regions declined by around 1.5 percentage points between 2011 and 2016.

tastes, while constraining the negative impacts on others. There are two ways this can be done.

First, governments should concentrate on policies that minimise the extent to which they lock people out or reduce their choices. In particular, governments should reduce taxes that discourage people from moving home (Chapter 9), and they should change planning regulations that reduce people's access to preferred housing locations.

Governments provide very generous concessions to people to buy and own a home, but then penalise people severely if they sell up and buy a different home. Stamp duties are imposed on people buying a property, whether residential or commercial. Home buyers in Melbourne and Sydney pay between 4 and 6 per cent of the sale price of the median property.¹⁷⁴ State governments should replace stamp duties on property with a broad-based land tax (Section 9.3.2 on page 86).

Planning regulation can take the form of zoning, heritage-related restrictions, or the way the relevant building code governs building heights and setbacks and the proportion of a plot of land that may be occupied by a building. State governments should relax planning restrictions (see Sections 5.3.1 to 5.3.3 on pages 54–55).

The second way that governments can do more to enable people to adapt to growing cities is by introducing congestion charges, so that people take into account the full cost of the delays they impose on others when they travel on busy roads at busy times of day.

Each new driver on the road in a busy city contributes to the congestion that others suffer, but they don't personally suffer from their own contribution – just from everyone else's. Situations like these are harmful to the community because each person is inclined to drive

more than they would if they truly faced the cost of their own small contribution to the delay of others. Congestion charges discourage people from driving if the benefits are less than the costs of delay they impose on others.

Governments are also not sufficiently accountable to the public for transport infrastructure decisions. Many state governments have established infrastructure advisory bodies to increase accountability for infrastructure choices.¹⁷⁵ But much government spending on roads and rail is announced before these bodies have assessed it. And the assessments need to be much better than they are.

Better assessments of proposed projects require much better evaluations of completed projects so that assumptions about new projects are based on experience, rather than on repeated wishful thinking. Post-completion reviews would improve understanding of the relationship between cost estimates and cost outcomes, and therefore would support better-informed and more realistic decision-making on major infrastructure investments.¹⁷⁶

As well as improving the project assessments, a post-completion review provides accountability to the public about whether investments have represented value-for-money. Every project should finish with a post-completion review that publishes the actual cost, traffic and user volumes, and other outcomes, and compares these to the original cost-benefit assessment.

Better project assessment also requires routinely examining key inputs. A critical input is the discount rate – the device for placing project costs

174. The effective rate of stamp duty on the median dwelling sale price is 4.0 per cent in Sydney and 5.3 per cent in Melbourne (Grattan analysis of NSW Treasury (2018a) and CoreLogic (2018a)).

175. Infrastructure NSW was established in 2011, and Infrastructure Victoria and Building Queensland in 2015. Infrastructure South Australia was a recent election commitment of the South Australian Government, and the West Australian Government has this year sought public feedback on a proposal to establish Infrastructure Western Australia.

176. Terrill et al. (2016b, p. 34).

and benefits that occur at different points in time on an equivalent footing. While Australian governments can borrow money more cheaply today than at any time in their history, they have chosen to persist with a discount rate frozen at 7 per cent since at least 1989.¹⁷⁷

A discount rate frozen at 7 per cent also fails to differentiate between those projects that are more risky and those that are less risky. The impact of a frozen discount rate is not only that many projects appear less worthwhile than they really are, but also that the ranking of projects is contaminated to the detriment of those where the benefits take longer to eventuate.

Of course, low interest rates should only be used in assessing projects if the other inputs are also rigorous. But overseas evidence suggests that artificially high discount rates contribute to poor-quality and opaque business cases – because in the face of unrealistic discount rates, both proponents and assessors are more likely to accept dubious modelling inputs to make their projects stack up.¹⁷⁸

4.3 How to get there

4.3.1 Stop penalising people for moving house

Generous Commonwealth Government tax concessions and welfare subsidies encourage home-ownership,¹⁷⁹ but state government stamp duties penalise people severely if they sell up and buy a different home.

177. The South Australian Government's economic evaluation guidance is an exception – it recommends a discount that varies in line with market conditions: Terrill and Batrouney (2018, p. 13).

178. Gollier (2013, p. 9).

179. Most of the subsidies for home-ownership are Commonwealth tax expenditures. While renters must pay rent out of post-tax income, homeowners in effect rent their home to themselves and 'pay' that rent out of untaxed income (known as 'imputed rent'). In addition, home owners do not pay capital gains tax on their home. Owner-occupied housing is also treated more favourably by social security assets tests than other kinds of assets.

These stamp duties are a major barrier to people moving home to adapt to population growth (Section 9.3.2 on page 86). Homeowners are moving home less than they were in the early 2000s.¹⁸⁰

The consequence of discouraging people from moving home is that people commute longer than they otherwise would,¹⁸¹ may not take up better job opportunities that they might have, or may reduce how much they work so as to keep their commuting times within a tolerable range.¹⁸²

There is nothing new about the idea of abolishing stamp duty. The ACT is already doing so, replacing it with a broad-based land tax levied via municipal rates, and phased in over 20 years. This should now be the goal of every state and the NT (Section 9.3.4 on page 89).

4.3.2 Stop locking out new residents from their preferred locations

Zoning restrictions play a significant role in restricting residential development in Australia and overseas (Section 5.3.1 on page 54), and the costs typically outweigh the benefits (Section 2.2 on page 24).

State and local governments face a difficult situation in balancing the rights and desires of existing homeowners with the rights and desires of potential future homeowners in the area. Established residents are generally reluctant to see their neighbourhood change. People react negatively to *any* changes that would put at risk their freedom to park outside their home, or that might encourage a different kind of neighbour to the established population. Any of these could lessen the

180. Leal et al. (2017, pp. 22–23).

181. BITRE (2016).

182. A 'place of work' variable is not available as part of the Australian Census Longitudinal Dataset, so analysis of people's commutes pre- and post- moving home is not possible.

value of their home – in financial or neighbourhood amenity terms – without a commensurate benefit to them.

Established homeowners therefore tend to oppose change and development. And current planning and zoning arrangements do not define clearly all of the property rights that homeowners feel are theirs. While one might technically buy just a home, people tend to operate on the assumption that that includes a right to park on-street outside it, and a right to a neighbourhood that is substantially as it was at the time of purchase.

4.3.3 Define on-street parking rights more clearly

Governments should address the most tractable of poorly-defined property rights – on-street parking. If established homeowners had a legal right to the parking space outside their home, for example, they could trade it if they could find a willing buyer. Governments and councils should codify who owns what parking rights, and allow people who value the rights most highly to own them. When a property is sub-divided, this should not affect the number of parking rights available. Governments should encourage trading from those people who don't value the right to park in a particular spot very highly to those who do.

Such reforms would address directly resident concerns about subdivisions increasing local traffic and pressure on parking spaces.

4.3.4 Stop making motorists pay for congestion through delays and unreliability

State governments should reduce the costs of congestion with a variety of policies.

Building new infrastructure to alleviate congestion works best in under-developed cities or areas, where there simply isn't enough road

space for the task. In most parts of Australian cities, this is not the case. There is plenty of road capacity, which is heavily used for a small proportion of the day but mostly has a relatively free flow of vehicles.

Mid-sized and larger cities can both benefit from strategies to manage congestion. Parking taxes that make it more expensive to park in busy places at busy times of day have been implemented with some success in the CBDs of Sydney and Melbourne. More differentiation of public transport fares depending on the time of day would encourage people who can take their trip outside of peak hour to save money by doing so.

By themselves, each small policy may not go far toward alleviating congestion, but in combination these policies can make considerable impact.¹⁸³ In Australia's two biggest cities, Sydney and Melbourne, the case is mounting for a more thorough policy approach, as has been successfully applied in a number of cities overseas. In Sydney and Melbourne, road-user charging now looks like the policy with the greatest potential to reduce congestion at the lowest cost.¹⁸⁴

If drivers were confronted with the delay they impose on others in the form of a financial charge, many would still travel, but some would do so at a different time or travel by a different method.

Congestion charges would also encourage a more compact urban footprint.¹⁸⁵ Without any meaningful price on congestion, Sydney and Melbourne residents have been encouraged to live in more distant, lower-density locations.

In the long run, allowing a city's size and shape to adjust in response to both congestion charges *and* planning reforms has a bigger impact than either scheme would on its own. That's because while some

183. Arnott et al. (2005, p. 10).

184. Terrill et al. (2017).

185. Langer and Winston (2008).

people respond to a congestion-pricing scheme by changing their travel habits, others do so by changing where they live.¹⁸⁶

To date, congestion charging has been formulated at an abstract level, with little serious thought about how to translate principles into practical policy on the ground.¹⁸⁷ Overseas experience shows that congestion charging schemes may be viewed with suspicion at first but come to be accepted and supported once implemented.¹⁸⁸ Substantial design work is needed to create a suitable scheme for each of Sydney and Melbourne, and both NSW and Victorian governments should commission this work as soon as possible.

Ultimately, the NSW and Victorian governments should introduce time-of-day congestion pricing in the most congested areas of each capital city, charging a low rate at peak periods. The cost to drivers should be offset by a discount on vehicle registration, with revenue from the congestion charge earmarked to spending on public transport improvements.¹⁸⁹

More immediately, state governments should take other actions to tackle congestion. First, greater differentiation of public transport fares in peak and off-peak periods would help to spread demand on public transport and encourage people to leave the car at home.¹⁹⁰ And second, the Victorian Government should increase the Melbourne CBD parking space levy from about \$1,400 a year to about \$2,400, to match Sydney.¹⁹¹

186. Langer and Winston (2008); and Arnott et al. (2005).

187. This is a long-standing issue, as noted by Arnott et al. (2005, p. 5).

188. Terrill et al. (2017, p. 42).

189. Ibid. (pp. 39–43).

190. Ibid. (pp. 43–45).

191. Ibid. (pp. 45–46).

4.3.5 Publish performance against ‘active transport’ goals

State governments say they are committed to increasing walking and cycling (sometimes referred to as ‘active transport’). But in most states the metrics for active transport commuting suggest these aspirations are not being met.

While most state governments publish some measures of *cycling* numbers,¹⁹² in many cases existing measures do not report progress against the targets state governments set for themselves. State governments should routinely publish their performance towards their active transport goals, in such a way that provides the goal and the progress towards the goal side-by-side.

4.3.6 Improve accountability for transport project assessments

At present, there is too little accountability for infrastructure decision-making. Other spheres of government spending offer far less scope for discretionary decisions. For example, the *Social Security Act 1991* lays out in exhaustive detail the conditions under which a person may qualify for unemployment benefits through Newstart or Youth Allowance, the rate at which they may be paid, and the arrangements for recovering incorrect payments.

Politicians frequently bemoan waste in the welfare system and talk about the need to reduce fraud, improve compliance and get better value for money. They rarely do the same for transport infrastructure.

To increase accountability for appraisals, governments should introduce legislation that prohibits the provision of funding for infrastructure projects unless a full business case has been prepared, and then

192. See VicRoads (2018a) for data from 38 bicycle counters across Melbourne, NSW Roads and Maritime Services (2018) for bicycle counter data for Sydney, Queensland Department of Transport and Main Roads (2017) for statistics about cycling in Queensland, and WA Department of Transport (2017b) for Perth.

evaluated by a state infrastructure body, and the business case and evaluation have been tabled in Parliament.¹⁹³

Further requirements should be placed on large projects. For all projects valued at \$50 million or more, state governments should ask a state infrastructure body to publish a reliability rating of the business cases within a month of their publication.

And large, high-risk projects should be more closely scrutinised, and parties promoting them should seek to negotiate bipartisan support. Before they proceed, public infrastructure projects that are anticipated to cost \$1 billion or more should require the support of parliament, not just the party in or seeking office.¹⁹⁴

4.3.7 Better inform cost estimates of future projects by publishing reviews of completed projects

Cost overruns are a significant problem in transport infrastructure. In part, this is because the lessons of past projects are not incorporated into assessments of possible future projects.

State infrastructure bodies should thoroughly review the benefits and costs of each completed project, and provide these reviews to their parliament.¹⁹⁵

As an interim measure, state governments should support a move by the Commonwealth Department of Infrastructure to publish on data.gov.au the post-completion report already provided as a condition of providing final milestone payments for transport infrastructure projects.¹⁹⁶

193. Terrill et al. (2016a, pp. 47–48). In those states and territories that do not have an independent state infrastructure body, the work should be done by a similarly independent organisation with relevant expertise.

194. Terrill et al. (2016b, pp. 30–31).

195. Ibid. (pp. 23–24).

196. Ibid. (pp. 23–24).

4.3.8 Adopt more realistic assumptions for cost-benefit analysis

Effective project assessments require an appropriate point of comparison, known as a ‘base case’. The base case typically entails doing nothing, or only a minimum.¹⁹⁷ In many cases, however, this assumption is too simplistic. There are two ways to make them more realistic.

First, evaluations should acknowledge that there is a reasonably predictable minimum spend each year. Over the past decade, for example, annual expenditure on new transport infrastructure in NSW was never less than \$5.7 billion; in Victoria never less than \$2 billion; and in Queensland never less than \$2.7 billion.¹⁹⁸

Consequently, if projects are assessed only against a world in which no more infrastructure is built (or only the “minimum” of projects to which the government is already committed) then they will be compared to an unrealistically low level of future infrastructure capacity. Assuming so little capacity to meet future demand makes the project’s impact appear larger than it actually will be.

The Victorian Government does better on this score. It compares prospective projects against a base case that includes a broader set of future projects, known as the ‘reference case’ set of projects. The reference case is an attempt to set out the list of projects that are expected to be built over the period of the economic evaluation, based on historical infrastructure expenditure levels.¹⁹⁹ Other states should follow Victoria’s lead.

197. Transport and Infrastructure Council (2018, pp. 9–10).

198. Grattan analysis of ABS (2018e). These amounts have been converted into real 2018 dollars. They do not include the cost of land or maintenance. There are, of course, potential scenarios where infrastructure spending might not reflect recent historical trends. This situation can and should be dealt with through sensitivity testing of a business case’s core findings.

199. Victorian Government (2016, p. 178).

The second way that assessments are not realistic is that the impacts of new infrastructure are based on *today's* projections of where people will live and work in the future. But today's official population forecasts do not consider how future changes to infrastructure capacity might affect population trends.

It is difficult to forecast how people and businesses might change locations as a result of new infrastructure. Cost-benefit analysis for very large infrastructure projects should require analysis of the different scenarios that may unfold as a result of the new infrastructure, rather than a simple comparison of a world with, and without, the prospective project. Before construction of new road capacity, for example, governments should publish economic analysis of the impacts of the project in comparison with non-construction options to achieve the same objective. Non-construction options might include using congestion charges or different public transport fares as a means of managing demand.

4.3.9 Adopt a lower central discount rate and routinely assess it

Australia does not have routine and transparent processes for setting discount rates. Authorities refer to one another in a circular fashion, and rates have been frozen at a 7 per cent central standard for decades.²⁰⁰

A new approach is needed. A discount rate that relies on a view about the next-best use of time and effort cannot be frozen in time. The cost of capital is not immune to changes in the economy, and a discount rate that relies on the idea of the cost of capital should change as the economy changes.

Given that there is minimal difference in the cost of money between the Commonwealth and the states and territories,²⁰¹ an organisation

such as the Parliamentary Budget Office would be best placed to publish annual guidance on the discount rates regime that will apply to transport infrastructure projects for the year ahead in all jurisdictions. But in the short term, state governments should themselves classify most projects as having either 'very low' or 'somewhat low' systematic risk, and act unilaterally to lower discount rates based on market conditions in 2018.²⁰²

Projects with very low systematic risk should use a discount rate of 3.5 per cent.²⁰³ Projects with somewhat low systematic risk should use a discount rate of 5 per cent.²⁰⁴ Sensitivity testing should be made public, using discount rates 2 percentage points above and below the headline discount rate.

200. Terrill and Batrouney (2018, p. 12).

201. Terrill and Emslie (2017, p. 21).

202. Terrill and Batrouney (2018, p. 21).

203. These may typically include bus, urban road, and urban passenger rail projects.

204. These may typically include ferry and freight rail projects.

5 Housing

5.1 Where we are

Australian housing is becoming increasingly expensive, and public anxiety about housing affordability is rising. House prices have grown much faster than incomes,²⁰⁵ and rents have also risen, especially for cheaper homes.²⁰⁶ In part, housing prices and rents have risen because interest rates fell and incomes rose, while tax and welfare settings and rapid migration fed demand. But housing costs would have risen less if there had been more housing.

Australian cities have not built enough housing to meet the needs of Australia's growing population, so there is less housing stock per adult (Table 5.1). All states except ACT had less housing per adult in 2016 than in 2011 (Figure 5.1).

Lower income households are spending more of their income on housing,²⁰⁷ which increases income inequality.²⁰⁸ In all states except Queensland and Tasmania, an increasing proportion of low-income earners are in rental stress.²⁰⁹ The share of low-income earners in rental stress has increased particularly quickly in NSW (up 11 per cent) and WA (up 16 per cent) in the past four years.

Rising housing costs contribute to increased homelessness. About 50 Australians out of every 10,000 were homeless in 2016. Rates of homelessness have increased in the past five years in all states except

Table 5.1: State Scorecard for housing

	Housing stock per 100 people aged 20 or over		Share of bottom 40% of income-earners in rental stress		State homelessness rate per 10,000 people	
	Number of houses per 100 people (2016)	Change in past 5 years (houses)	(2016)	Change in past 4 years (ppts)	Number of people (2016)	Change in past 5 years (people)
NSW	54	-1.5	51	10.8	50	10.7
VIC	56	-0.7	47	2.2	42	0.2
QLD	57	-0.9	36	-9.4	46	2.2
WA	58	-0.2	49	16	36	-4.6
SA	60	-0.6	39	5.8	37	0.7
TAS	62	-0.8	26	-7.5	32	0.8
ACT	55	0.3	34	3.1	40	-8.5
NT	54	-0.4	36	7.3	599	-123.9
AUS	56	-0.9	45	4.2	50	2.2

Note: See Appendix A for notes and sources.

205. Daley et al. (2018, p. 161).

206. Productivity Commission (2018b, figure 6.1.).

207. Daley et al. (2018, p. 15).

208. Ibid. (p. 69).

209. Defined as the share of those in the bottom 40 per cent of households by equivalised disposable income (excluding Rent Assistance) who rent and who spend more than 30 per cent of their total income on housing costs.

WA, ACT and the NT.²¹⁰ But the NT has the worst homelessness rate, reflecting concentrated disadvantage among Indigenous Australians.²¹¹ Next worst is NSW, probably reflecting high housing prices. Homelessness is lowest in Tasmania, WA and SA.

5.2 Where we should be

Affordability – both to buy and to rent – will only get a lot better if governments ensure more homes are built. This is primarily a problem for state governments: they set the overall framework for land and housing supply, and they govern the local councils that assess most development applications. Building an extra 50,000 homes a year for a decade could leave Australian house prices 5-to-20 per cent lower than what they would have been otherwise, stem rising public anxiety about housing affordability, and increase economic growth (Section 2.2 on page 24).²¹²

The NSW, Victorian and Queensland governments have all changed planning rules and processes over the past five years or so,²¹³ which

210. In the NT, the Commonwealth Remote Housing Strategy has helped reduce severe overcrowding (a form of homelessness). Department of the Prime Minister and Cabinet (2017).

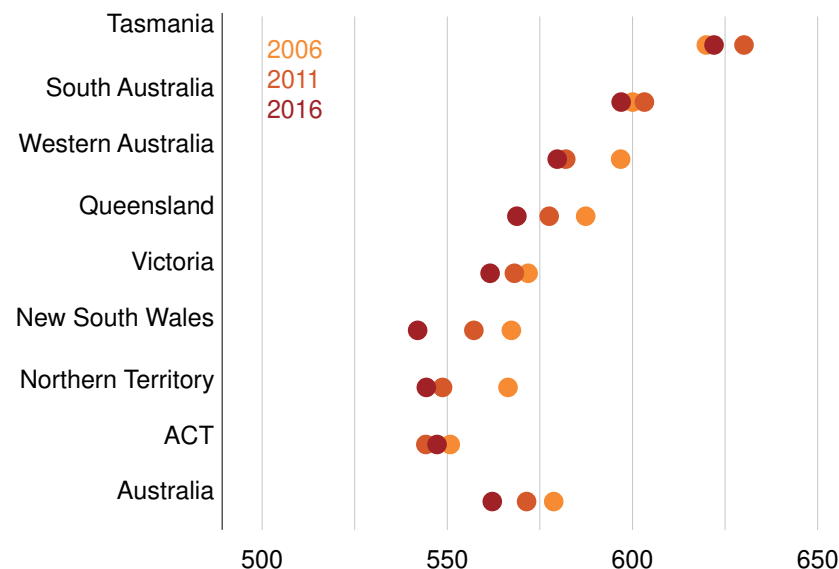
211. Of the homeless people counted in the 2011 Census, 90 per cent identified as Aboriginal. NT Department of Housing and Community Development (2017).

212. Daley et al. (2018, p. 1).

213. The NSW Government expanded use of independent panels and its fast-track development process. The Victorian Government made modest improvements to zoning rules, and invested in reducing the time for council decision-making. Brisbane City Council substantially improved planning rules, which led to increased apartment supply on the CBD fringe. Meanwhile Tasmania's Affordable Housing Strategy recognised the importance of releasing land for residential development, and SA and WA noted in their housing affordability strategies that planning was a key reform area. See Daley et al. (2018, p. 58), WA Department of Housing (2010), SA Department of Human Services (2013) and Tasmanian Department of Health and Human Services (2015).

Figure 5.1: The amount of housing per person has fallen in all states since 2011, and in all states except Tasmania since 2006

Dwellings per 1000 people aged 20 and over, 2006, 2011 and 2016



Note: Figures are for total occupied and unoccupied private dwellings.

Sources: ABS (2006), ABS (2011) and ABS (2016). Grattan analysis.

resulted in new building finally catching up with additional demand. The increase in housing supply has contributed to housing prices and rents flattening off in Sydney, Melbourne and Brisbane.²¹⁴

But today's record level of housing construction is the bare minimum needed to meet record levels of population growth driven by rapid migration (Figure 5.2); and the backlog of under-supply remains.²¹⁵ If the population grows as projected, future rates of construction will need to be even higher than current elevated levels.

And housing policy is showing signs of going backwards. Authorities in NSW and Queensland are now making it harder to increase density, in response to NIMBY political pressures.²¹⁶

State governments can also make good-quality housing more affordable by improving rental conditions. Home-ownership is declining, especially among the young and poor,²¹⁷ so many more Australians will be renting for longer. Yet renting is relatively unattractive given current rental markets and policies: it is generally much less secure; many tenants are restrained from making their house into their home; and renters are forced to move far more often than homeowners and are less satisfied with their housing.

Governments also need to provide more support to low-income Australians who rent. The stock of social housing – currently around 400,000 dwellings – has barely grown in 20 years. But boosting social housing will be expensive.²¹⁸ Given its costs, social housing should be

214. See Daley et al. (2018, pp. 58–59) and Productivity Commission (2017a, p. 127).

215. The National Housing Supply Council (2012) estimated there was a shortage of 228,000 dwellings in 2011. The NSW Treasury's Intergenerational Report estimated there was an undersupply of 100,000 dwellings in NSW in 2016, with the bulk of this undersupply in Sydney: NSW Treasury (2016, p. 57).

216. Saulwick (2018) and McCosker (2018).

217. Daley et al. (2018, p. 71).

218. Ibid. (p. 132).

Figure 5.2: Record housing construction will need to be maintained to meet city plan housing targets

Annual average net housing construction



Notes: Draft Greater Sydney Region Plan: 725,000 additional dwellings from 2016–2036 (excludes the Central Coast). Plan Melbourne 2017: 1,550,000 additional dwellings from 2015–2051 (based on Victoria in Future projections). For 2006 to 2016 data, growth in dwelling stock is calculated using 2016 Greater Capital City Statistical Areas. Data for 2017 dwelling completions in Sydney is from NSW Department of Planning and Environment (2018). No 2017 completions data is available for Melbourne or Brisbane.

Source: Daley et al. (2018, figure 3.16.).

reserved for those most in need, and at significant risk of becoming homeless for the long term. Beyond those at risk of homelessness, most extra support for the housing costs for low-income earners should be delivered through the Commonwealth Government boosting Rent Assistance.

5.3 How to get there

If governments are serious about making housing more affordable, they're going to have to make the tough choices rather than continuing to succumb to the temptation to do the politically easy things,²¹⁹ such as first home-owners' grants, that have been shown to be ineffective.

5.3.1 Relax planning rules to allow more density in inner and middle-ring suburbs of major cities

Current rules and community opposition make it very difficult to create extra residences in the inner and middle-ring suburbs of the capital cities,²²⁰ and the same forces are at work overseas.²²¹ State and local governments should change planning laws and practices to make it easier to subdivide in these suburbs.

A new Small Redevelopment Housing Code would protect neighbours, reduce planning uncertainty, and improve the quality of new developments.²²² The Code would include the things that worry

219. Ibid. (p. 96).

220. Daley et al. (2018, pp. 56–58), Kendall and Tulip (2018) and Lees (2017). Shoory and Rosewall (2017) note evidence that the complexity of the planning system has made redevelopment in established areas less attractive compared to development on the fringes of major cities.

221. Hilber and Vermeulen (2015) and Glaeser and Gyourko (2018). In a review of the literature, Gyourko and Molloy (2015) conclude that while the benefits of land-use planning rules are difficult to quantify, 'recent studies suggest that the overall efficiency losses from binding constraints on residential development could be quite large'.

222. J.-F. Kelly et al. (2011, pp. 26–27); and Daley et al. (2018, p. 115).

neighbours most, such as privacy, height and overshadowing of their outdoor areas, and the appearance of new developments from the street. It would cover all developments that provide two-to-ten new dwellings, depending on the lot size, and are one or two storeys high. And it would apply to all residential areas, unless there are heritage or environmental restrictions.

As an alternative, state governments should consider nominating high-quality designs for medium-density dwellings that would be permitted automatically in middle-ring suburbs. The designs could be selected through an architectural competition. They would be designed to maximise interaction with the street and to respect the concerns of neighbours. A variety of designs might be approved for different lot sizes.

State governments should also ensure that appropriate developments are allowed 'as of right' on major transport corridors and around train stations, within specified height limits.²²³

5.3.2 Set housing targets and make sure local councils meet them

To ensure that approval processes work properly, state governments should set housing targets for each council. The targets should be linked to plans for the growth of the city as a whole. Each council should be required to identify how its target will translate into additional housing for each particular area within its jurisdiction. These targets and plans must emerge from a process that engages the community in understanding the rationale for increased housing.

But state governments also need to make sure these targets are met. They need to carry bigger 'sticks', to ensure councils don't ignore future targets as they have past targets. The sticks might include creating

223. Daley et al. (2018, p. 118).

powers for the state government to take over authority for a larger share of development approvals if councils fail to back appropriate development.²²⁴ State governments could also offer ‘carrots’, such as bonus payments for councils that meet or exceed housing targets.²²⁵

5.3.3 Empower independent panels to determine more planning applications

Local councils tend to reflect the interests of existing rather than potential residents. Where councils fail to meet planning targets, independent panels should step in. In order to reflect the broader public interest, some states have already shifted responsibility for determining development applications from councils to independent panels. These panels can speed-up approvals, reduce the risk of corruption, and provide greater certainty for developers. For example, the NSW Government recently announced that Independent Hearing and Assessment Panels (IHAPs) will be mandatory across all Sydney and Wollongong councils and will assess applications for developments valued at \$5 million to \$30 million.²²⁶ Other states should follow suit.

5.3.4 Increase the supply of greenfield land and make it easier to develop greenfield housing

Limited release of land, slow planning approval processes, excessive infrastructure charges, fragmented ownership, and geographical

constraints have increased the price of greenfield land and restricted the supply of greenfield housing developments in Australia’s major cities.²²⁷

To reduce the cost of greenfield land, state governments should:

- Introduce **housing codes for greenfield developments**, to speed-up greenfield developments.
- **Maintain a long-term supply of new land for development of around 15–20 years**,²²⁸ ready to meet housing targets set by the states (as suggested in Section 5.3.2).
- **Tighten statutory time frames for re-zonings** and planning decisions. This would make the regulatory processes more disciplined and give developers a better idea of the time they should allow for each project.²²⁹
- **Reform infrastructure charges** in line with the Productivity Commission’s general principles on infrastructure costs.²³⁰ This would involve levying charges on developers when local residents will primarily benefit from local public infrastructure such as parks and roads.
- **Use state government land organisations as the initial developer** in greenfield areas.²³¹

224. Ibid. (pp. 115–117).

225. For example the NSW Government is providing up to \$2.5 million for each priority council to update their Local Environment Plan (LEP), and for incentive payments to other councils that volunteer to update their LEPs. NSW Department of Planning and Environment (2017a).

226. NSW Department of Planning and Environment (2017b). The upper threshold was recently increased from \$20 million to \$30 million. A Sydney Planning Panel operates in each of the five districts in Greater Sydney and these panels will assess development applications with an investment value of more than \$30 million. NSW Department of Planning and Environment (2018).

227. Daley et al. (2018, pp. 60–62).

228. It can take up to ten years after rezoning commences before a subdivision of land is completed, infrastructure is installed and building can commence. If processes outside of planning are included, it can take up to 15 years between site assembly and building construction, Productivity Commission (2011b). Developers complain of a lack of serviced land.

229. Ibid. (p. XLIX).

230. Ibid. (p. XLVI).

231. Productivity Commission (ibid., p. 137). The NSW Government’s housing affordability package suggested that the government-owned developer, Landcom, take an active role to improve housing affordability.

- Require developers to **build a mix of lot sizes and housing types in new developments**.²³² Such diversity will increase the flexibility of new suburbs as demographics and preferences change.

5.3.5 Make renting more attractive by changing tenancy laws

As well as boosting supply, state governments should make renting more attractive by changing residential tenancy laws to increase the security of renters and help renters make their property feel like their home. Governments should:

- Remove ‘no grounds’ evictions by clearly prescribing grounds for termination.²³³
- Extend minimum notice periods that apply when landlords terminate a lease.²³⁴
- Create a different regime for long-term leases, which provide more security of tenure, but shift responsibility for some maintenance and minor repairs to tenants.²³⁵
- Increase tenants’ freedom to make their house their home, by allowing them to own pets and to make minor modifications such as hanging pictures.²³⁶
- Increase the transparency of ‘bad tenants’ lists, so tenants who are on such lists know why, and can seek to clear their name.²³⁷

232. NSW Government (2017); and J.-F. Kelly et al. (2012).

233. J.-F. Kelly et al. (2013b).

234. Ibid.

235. Tenancy laws require landlords to ensure rented premises are provided fit for habitation and maintained in a reasonable state of repair, except in Tasmania where the property must be maintained in the condition it was when the lease began, Martin (2017).

236. J.-F. Kelly et al. (2013b); and Victorian Government (2017).

237. Irvine (2017); and National Shelter et al. (2017).

The Victorian Government recently tipped the balance more towards tenants.²³⁸ Such changes in tenancy laws in favour of renters could reduce the supply of rental housing and increase rents, but the effects are likely to be vanishingly small. The evidence of recent years shows there is no lack of investment capital available for housing investment.²³⁹

Changing tenancy laws may also shift the prevailing social attitude that renting is inferior to owning a home.

5.3.6 Boost the supply of public housing to reduce homelessness

There is a powerful case for additional public support to help those worst-off to cope with rising housing costs. But not all policies will be equally effective.

Boosting social housing will be expensive: increasing the stock by 100,000 dwellings – broadly sufficient to return the total social housing stock to its historical share of the total housing stock – would require additional *ongoing* public funding of around \$900 million a year, or an upfront capital cost of \$10-to-\$15 billion.²⁴⁰ Even then social housing would only house one-third of the poorest 20 per cent of Australians – most low-income Australians would remain in the private rental

238. The major changes include: abolishing ‘without grounds’ evictions for ongoing leases; allowing tenants to keep pets and make minor modifications to the property unless the landlord has a reasonable reason to refuse; faster bond repayments; and only allowing rent increases every 12 months instead of every six months. See *Residential Tenancies Amendment Act 2018 (Vic)*.

239. Economic theory suggests that stronger tenancy rules will reduce the long-term supply of housing. But as noted in Daley et al. (2018, p. 127), with tight constraints on supply of land suitable for urban housing, any impact would be likely to be very small.

240. Coates and Wiltshire (2018).

market. Those in social housing receive a much greater average level of assistance than Rent Assistance provides to private renters.²⁴¹

There is also little ‘flow’ of social housing available for people whose lives take a big turn for the worse.²⁴² Tenants generally take a long time to leave social housing; most have stayed for more than five years.²⁴³ Existing tenants tend to have ‘squatters rights’, because it is politically difficult to force an existing low-income tenant to leave, even if the aim is to free up a place for someone else who needs the housing even more.

To overcome these issues governments should build more social housing, and tightly target allocations towards those at risk of homelessness. Given its costs, social housing should be reserved for those most in need, and at significant risk of becoming homeless for the long term.²⁴⁴

In the meantime, the existing social housing stock needs to be better managed: it is not well allocated to those that most need it;²⁴⁵ it is often not well-suited to their needs;²⁴⁶ and it is often of poor quality.

Therefore, governments need to pursue the reforms set out in this chapter that will improve housing affordability more generally. Making

housing cheaper overall will help low-income earners. Beyond those at risk of homelessness, most extra support for the housing costs for low-income earners should come via the Commonwealth Government boosting Rent Assistance.²⁴⁷

5.3.7 Abolish grants and concessions for first home-buyers

Over recent decades, Commonwealth, state and territory governments have spent billions of dollars on cash incentives and stamp duty concessions for first home-buyers.²⁴⁸ These policies have typically resulted in spikes of first home-buyer activity as they bring forward purchases, then there is a lull in activity, and in the end housing affordability is actually worse because additional demand drives up prices.²⁴⁹ While first home-buyers’ grants may help some individuals to outbid an investor and buy a house, at an aggregate level most of the benefits flow to existing home-owners, and in the long-run first home-buyers may be worse off.²⁵⁰ Economist Saul Eslake has suggested such policies are more accurately described as “second-home vendors’ grants”.

241. Productivity Commission (2018b).

242. Productivity Commission (2018a, chapter 18).

243. AIHW (2017a).

244. New allocations of social housing are better targeted to those most in need. Of all social housing allocations in 2017, almost three quarters went to ‘greatest needs’ applicants – that is, low-income households which at the time of allocation were either homeless, had their life or safety at risk in their current accommodation, had housing inappropriate to their needs, or had very high rental housing costs, Productivity Commission (2018a, chapter 18).

245. M. Potter (2017); and KPMG (2012).

246. Tenants have little choice over the home they are offered; the type of housing available can be incompatible with their needs. For example, the public housing stock is dominated by three-bedroom houses, yet most recipients are singles or couples without children.

247. For example, boosting the maximum annual rate of Rent Assistance by 30 per cent, or roughly \$1,000 a year for singles, would cost the Budget around \$1.1 billion a year.

248. Eslake (2013). Daley et al. (2013c, p. 49) estimated that abolishing all subsidies for first home-buyers could save Commonwealth, state and territory budgets a combined \$1.3 billion a year. Stamp duty concessions act in a similar way to cash grants for first home-buyers: Davidoff and Leigh (2013).

249. The additional stamp duty concessions for first home-buyers in Victoria introduced in 2017 followed this pattern: there was a rush in demand, and prices increased especially quickly in greenfields areas (typically dominated by first home-buyers). Daley et al. (2018, p. 137).

250. As discussed in Daley et al. (Ibid., p. 137), if the level of leverage is the binding constraint, the stamp duty concession may well lead to first home-buyers paying 20 per cent more for their housing in net terms.

6 School education

6.1 Where we are

School education in Australia is generally good, but it should be better. There are pockets of great practice, but there is also great variation in teaching practice and in outcomes.

6.1.1 Student progress

Success in education is best judged by how much learning progress (*i.e.* growth) students make.²⁵¹ We use Grattan's 'equivalent year level' measure for interpreting student progress in NAPLAN.²⁵²

NAPLAN data shows that students learn more in some states than others. On a like-for-like basis (*i.e.*, taking student background into account), differences in student progress among states are larger than differences among school sectors, or among students who live in the city compared to the country.²⁵³

Queensland has the highest rate of learning growth in primary school; Queensland students make about 1.4 months more progress in reading and numeracy between Year 3 and Year 5 than the national average.²⁵⁴ Students in the ACT make the least progress.

251. Goss et al. (2015).

252. The use of NAPLAN gain scores are avoided given they make it difficult to compare the progress of groups of students who are at different stages of their learning. For an explanation of Grattan's 'equivalent year level' and 'years of learning progress' metrics see Goss et al. (2018).

253. Ibid.

254. NT students also make faster than average progress, but the difference is not statistically significant. The metric excludes highly disadvantaged students.

Table 6.1: State Scorecard for education

	Progress, relative to national average, Year 3–5, NAPLAN	High achieving Year 9 students (top two NAPLAN bands)		Low achieving Year 9 students (at or below NAPLAN NMS)		Government funding to state schools as a percentage of target	
	Months (cohorts 2010–2016)	% (2017)	Change in past 5 years (ppt)	% (2017)	Change in past 5 years (ppt)	% (2017)	Change since 2013 (ppt)
NSW	-0.4	26.7	3.3	18.6	-6.2	89	3.6
VIC	-0.3	22.2	-0.4	19.8	-2.4	82	1.9
QLD	1.4	19.2	3.2	22.3	-6.0	90	2.8
WA	0.3	24.0	4.0	18.9	-7.4	100	0.3
SA	-1.0	15.7	-0.9	25.2	-2.6	88	-0.2
TAS	-0.4	16.2	-0.6	27.0	-3.2	95	2.4
ACT	-2.3	26.8	-1.9	16.3	-2.3	112	-2.0
NT	1.4	9.8	-0.6	48.3	-3.3	89	2.8
AUS		22.5	1.9	20.7	-5.0	89	2.3

Note: See Appendix A for notes and sources.

6.1.2 Achievement

Learning progress is the best measure of school effectiveness, but achievement matters too. Students need strong basic skills – including reading, writing and numeracy – to function well in work and life, and to acquire other, more advanced skills.

In 2017, just over one in four Year 9 students in NSW and the ACT achieved in the top two bands of NAPLAN in Year 9, and just less than one in four students in WA and Victoria.²⁵⁵ This drops to one in five in Queensland, one in six in Tasmania and SA, and less than one in ten in the NT. WA and NSW have made the biggest gains since 2012.²⁵⁶ The proportion of high-achievers in the ACT has dropped by two percentage points over the same period.

6.1.3 Equity

The NAPLAN national minimum standards (NMS) seek to identify students who may need help to achieve the literacy and numeracy skills they require to satisfactorily progress through school. The standards also represent the basic level of knowledge and understanding needed to function at a given year level.

The minimum standards are important not only for schools, teachers and parents, but for policy makers, who need to know which students require extra support. The Year 9 NMS is especially important because it identifies students at risk of finishing school without the basic skills for life and work.

Across Australia, the percentage of students at or below Year 9 NAPLAN NMS varies a lot, from about one in six in the ACT to nearly

255. 2017 NAPLAN data is used here because the shift to online NAPLAN in 2018 means that 2018 data is not directly comparable to previous years of data.

256. This may be linked to a new literacy and numeracy requirement introduced in 2014 for students to receive a Western Australian Certificate of Education, and to a similar but since-dropped change in NSW in 2017.

half in the NT.²⁵⁷ In NSW, Victoria, Queensland and WA, roughly one in five students are at or below NMS. In SA and Tasmania, this proportion is more than one in four.

Over the past five years, WA made the most progress in lifting students above the NMS, followed by NSW and Queensland.

Of-course states with higher proportions of disadvantaged students, such as NT and Tasmania, have a much tougher job in lifting student achievement; but it still must be a priority for all jurisdictions.

6.1.4 Regional outcomes

Student achievement in regional, rural and remote schools is significantly lower than in metropolitan schools. Non-Indigenous students in regional areas are already three-to-six months behind their metropolitan peers by Year 3. This gap roughly doubles by Year 9 for reading, and triples for numeracy. Remote and very remote Indigenous students can be up to six years behind the national average by Year 9.²⁵⁸

The economic impact of this human capital gap in regional, rural and remote schools has recently been estimated at 3.3 per cent of Australia's GDP, or \$56 billion.²⁵⁹ The poorer education outcomes also harm individual life chances.

257. The Australian NMS are very low by international standards. For example, the minimum standard set by the OECD in its Programme for International Student Assessment ('PISA' test) of mathematics for 15-year-olds is about two years above Australia's numeracy standard for Year 9 students (see Goss and Sonnemann (2016a)). For this reason, we report students below and at the Year 9 NAPLAN NMS here.

258. Goss (2018a).

259. Holden and Zhang (2018).

Most of the difference in student performance, however, is explained by higher levels of disadvantage in regional, rural and remote areas.²⁶⁰ This means schools in these country areas are, on the whole, not doing too bad a job given difficult circumstances. Breaking cycles of inter-generational disadvantage in these areas is the priority.

6.1.5 Funding

Two aspects to school funding are important. We aim for productive efficiency – delivering the best student outcomes for every dollar spent. And we aim for distributional efficiency – distributing the funding to where it is needed.

It is hard to estimate productive efficiency in schools. Schools deliver a wide range of outcomes, not just good literacy and numeracy, which need to be taken into account. Productive efficiency comparisons should be on a like-for-like basis, given it costs more to educate students whose parents were poorly educated, live in remote areas, or who have special learning needs. This like-for-like data is not readily available by state.

By contrast, Australia has focused a lot more on distributional efficiency. There is bipartisan support that school funding be better aligned to student need. The best available measure of student need is the School Resourcing Standard (SRS).²⁶¹ In 2017, government schools in Victoria were the furthest away from their SRS target, at 82 per cent of SRS.²⁶² ACT schools were funded beyond their SRS target, at 112

per cent of SRS. Most other jurisdictions funded government schools at about 90 per cent of SRS.²⁶³

6.1.6 Early Childhood Education

Investing time, effort and resources in children's early years – when their brains are developing rapidly – brings lifelong benefits to them and to the whole community.²⁶⁴

The Australian Early Development Census (AEDC) collects data on five key areas of early childhood development: physical health and well-being; social competence; emotional maturity; language and cognitive skills; and communication skills and general knowledge.

Nearly one in four children in the NT are developmentally vulnerable in two or more of these domains. This is followed by Queensland (one in seven) and SA (one in eight). Most states reduced the number of children in this high-risk category between 2009 and 2015. WA and Queensland made the most progress.

6.2 Where we should be

Australia needs to confront three overarching challenges in school education: improve the teaching of core academic skills and content; change some of what we teach and how we teach it so students are better prepared for life after school; and reduce the gaps between the educational haves and have-nots.²⁶⁵

260. Goss et al. (2018).

261. The SRS is a per-student funding amount that is calculated for each school each year, based on the students it enrolls as well as its size and location. See Department of Education and Training (2018a).

262. This chapter focuses only on the relative level of SRS funding to government schools given states have the core responsibility for funding government schools, and those schools educate the bulk of the most educationally disadvantaged

students. The metric includes funding to government schools from both Commonwealth and state governments.

263. By comparison, most Catholic schools were funded at between 90 to 95 per cent of SRS, while funding levels for independent schools varied widely as a percentage of SRS. See Goss et al. (2016b, figures 2.1 and 2.3.).

264. Department of Education and Training (2018b).

265. See Goss (2017, pp. 8–9).

Core academic skills and knowledge still matter, even in the Google era. Mastering content helps underpin more advanced abilities such as the ability to appraise and apply knowledge. The goal is not for all teachers to teach the same material in the same way, but for all teachers to use practices that have been shown to work, and to adapt them to meet the needs of their students.

But we must also go beyond traditional academic skills and content if we are to give all young Australians the capabilities they need for their lives. Skills such as critical thinking, collaboration, resilience and initiative are important. We need to discover how best to teach them.

Finally, we must reduce the impact of socio-economic factors on educational outcomes. In every state, student progress is slowest in the most disadvantaged schools.²⁶⁶ Worse, the impact of socio-economic status tends to grow as students move through school. The students who miss out most are bright children in disadvantaged schools.²⁶⁷ This is a waste of human potential that Australia cannot afford. It is also just not fair.

6.3 How to get there

State policy makers should improve the learning progress of all students by focusing on better instructional practice, including at a subject-specific level. Strengthening school leadership pathways will help, as will aligning funding to student need.

State governments should prioritise early childhood education for the most disadvantaged students, but should do so carefully to ensure that increased access does not come at the expense of quality.

266. Goss et al. (2018).

267. Goss et al. (2016a).

6.3.1 Focus more on student learning progress

School education policy should explicitly aim to improve the learning progress (growth) of all students, not just their achievement at a point in time.

To do this, teachers need better data on student progress so they can adapt their teaching to what their students are ready to learn next. And policy makers need better student progress data so they can better monitor school performance and provide the right settings and support.

Australia also needs to do more research on how to help students progress in general capabilities, such as critical thinking and non-cognitive skills.

6.3.2 Improve teaching effectiveness

Too often we talk about teacher quality as though the individual teacher is the point at issue. No teacher is an island; teachers need more support from the system.

Better spread effective practice where the evidence is clear

Effective teaching is both a science and a craft. Good teaching decisions draw on the best scientific evidence available, combined with teacher judgment and a solution that meets individual student needs.

In areas where the evidence is strong, governments should ensure the right structures are in place to help teachers embed this evidence into their daily practice.

In areas where the evidence is weak or ambiguous, governments should ensure there is adequate system support for teachers to make sound judgments on the ground. Investments in small-scale trials help find out more about what works best in the classroom, followed by larger trials to figure out how to implement at scale. This is especially

an issue in the teaching of general capabilities, discussed further below.

Create explicit jobs for top teachers with deep subject expertise to spread effective practice

There is increasing evidence on what constitutes effective teaching practice, yet there are few structures that enable its spread across schools. Simply reading about what works is not enough to improve teaching practice; teachers need opportunities to see good practice in action, try new ways of working and get specific feedback.

Research shows that teachers learn well from other teachers.²⁶⁸ Australia's best teachers can help lift the effectiveness of the whole workforce, yet they often remain isolated with heavy teaching loads in their own classrooms.²⁶⁹

In high-performing systems, such as Shanghai and Singapore, an elite cohort of specialist teachers sets the direction for effective practice and spreads the message via cross-school networks.²⁷⁰ Importantly, the cohort of elite teachers are subject experts, with an intense focus on what is taught and how to teach it most effectively (an area that has received less emphasis in Australia over past decades).

In many states and territories, the top teachers are expected, on paper, to coach and develop others. But in practice, they rarely get to enact these roles in their schools. They are also not necessarily subject experts, meaning they may only touch the surface of effective classroom practice.

Some states have policies that make more use of top teachers to develop others, but often they have been short-term policies. Coaching

programs abound, but they often chop and change, and coaches are not always subject experts. Queensland introduced a 'Master Teacher' program to use the best teachers to develop others, but it lasted only a few years and did not have a strong subject focus.

Victoria, NSW and WA have introduced longer-term roles for top teachers to develop others, but they are not subject-specific, and it is unclear if these teachers actually get sufficient time to develop others.²⁷¹

State governments should create more explicit jobs for top teachers – and ensure they happen in practice – to develop the workforce. We suggest new 'Master Teacher' and 'Expert Teacher' roles which help to identify key challenges in teaching and improve effective practice. Both roles should be subject-specific. And Master Teachers should work across schools, leading subject-specific cross-school networks that provide practical guidance in classrooms.²⁷²

Give teachers better data on individual student learning progress

State governments must help develop teachers to become more effective in their use of data in the classroom. Teachers need to use classroom data to track the progress of each of their students. This helps them target their teaching to suit what each student is ready to learn next, and adapt their practice for next time around. Unfortunately, this is not the norm in Australian schools, as discussed in Grattan Institute's 2015 report, *Targeted Teaching*.²⁷³

268. Education Endowment Foundation (2017).

269. Goss (2016a).

270. Discussed in Jensen et al. (2012).

271. Victoria introduced 'Learning Specialists', NSW the Highly Accomplished and Lead Teachers (HALT) positions, and Western Australia the Level 3 teachers.

272. The Master and Expert teacher positions have two important differences to Highly Accomplished and Lead Teachers (HALT) in the Australian professional standards: 1) they are both subject-specific, and 2) the Master Teacher role works across schools. Ideally these features should be embedded in the HALT role descriptions in the national standards.

273. Goss et al. (2015).

Some states have teacher development programs to build data literacy. For example, the Early Action for Success (EAFS) program in NSW funds instructional leaders to equip early primary teachers with the skills to assess students effectively and target their teaching in response.²⁷⁴ In SA, the Institute of Educational Assessors (IEA) delivers targeted professional learning on assessment.²⁷⁵ Queensland has a large focus on moderating assessment at senior secondary. But we know too little about which programs are working well. More evaluation is needed.

State governments should also make it easier for teachers to identify high-quality classroom assessment tools and resources. Government should help teachers to evaluate the tools available, for example by introducing a 'star rating' system. Too often, schools and teachers build from scratch, or choose tools based on trial and error, anecdote or a Google search.

Some states have started to increase quality assurance. For example, Victoria has increased access to quality assessment tools through its new Insights Platform.²⁷⁶ But much more could be done, starting with implementing the online formative assessment tool that was recommended by the 2018 Gonski review.²⁷⁷

Focus professional learning more tightly on improving daily teaching practice

Teachers need feedback on their teaching practice. But teachers simply working together in a group does not ensure quality. Collaboration that involves a simple exchange of lesson plans or discussion of administrative duties is unlikely to be productive. In the US there

have been large investments in collaborative professional learning in schools, with little return.²⁷⁸

Professional learning should be more tightly focused on the actual work of teaching and how much students are learning. We need better ways to ensure teacher collaboration involves deep discussions on instruction, interpreting data, and integrating evidence into new ways of working.

The OECD's Teaching and Learning International Survey (TALIS) (2013) indicates that Australia has one of the highest percentages of teachers participating in professional development, but we still know too little about its quality.²⁷⁹ There are few checks and balances at a system-level to know if collaborative groups are focusing on the right things, or if they are adopting the evidence where it is clear.

High-performing education systems such as Shanghai, Singapore and Hong Kong show the way. Their learning communities are tightly focused on student learning, and often guided by subject-expert teachers and school leaders.²⁸⁰

Standardise teaching practice in some areas to improve the allocation of teacher time

Teacher time must be redirected from low-impact to high-impact activities. This means relieving teachers of administrative activities. But it also means more standardisation of some daily teaching practices where it is beneficial and appropriate to do so.²⁸¹

More use of high-quality, tried-and-tested support materials can enhance student learning and reduce 'reinvention of the wheel'.

274. The lessons of the EAFS program are discussed in Wyatt (2017).

275. Institute of Educational Assessors (2018).

276. Victorian Curriculum and Assessment Authority (2018).

277. Recommendation 11 in Gonski et al. (2018).

278. TNTF (2015).

279. OECD (2013).

280. Discussed in Jensen et al. (2012).

281. The first issue is discussed in Jensen et al. (2014) and the second issue in Goss et al. (2015).

Greater standardisation of teaching practice could include more common lesson plans and formative assessments, more guidance on which textbooks to use and how to use them, and careful use of educational technology.

Some states provide packaged, quality assured curriculum resources to schools. For example, Queensland has 'Curriculum into the Classroom' resources, and Victoria provides a new pack of literacy resources to schools.²⁸² These resources should be evaluated for their rigour and impact.

Better support teachers to engage students and create effective classroom learning environments

As many as 40 per cent of students in Australia are unproductive in a given year.²⁸³ Teachers find this very stressful and are calling out for more support.

Students report that many Australian schools have poor classroom discipline. Australia scored significantly lower than the OECD average on this index.²⁸⁴ Across Australia there is variation among states.

Universities and state governments must provide them with better initial training and in-school support in engaging students and creating effective learning environments. We need to better understand the root causes of the problem, and whether it is related to deeper issues such as specific teaching approaches, or the curriculum and how it is taught.

282. Queensland resources are discussed here <https://education.qld.gov.au/curriculum/school-curriculum/C2C> and Victorian literacy resources are here <https://www.education.vic.gov.au/school/teachers/classrooms/Pages/resourceslitteachingtoolkit.aspx>.

283. Discussed in Goss and Sonnemann (2017a).

284. ACER Thomson <https://research.acer.edu.au/cgi/viewcontent.cgi?article=1023&context=ozpisa>.

Strengthen school leadership pathways

School leaders are critical to school improvement, yet Australia doesn't select or properly train people well for these roles. School principal shortages will become much worse unless the career path is made clearer and more attractive. Singapore is a shining example: it identifies outstanding leaders early, provides them with intensive training (a six-month, full-time program), and follows up with strong peer-network support.²⁸⁵

6.3.3 Better understand what is happening in schools and the impact of government actions

Becoming an adaptive education system means learning from what works best. State governments need to monitor and understand the effectiveness of classroom practice, and the impact of their policies and programs on teachers and schools.

Commission research on schools making above-average progress

NAPLAN results enable federal and state governments to track and compare rates of student growth across schools, sectors, regions, states and more. But governments don't do enough with this information. Pockets of above- and below-average student progress should be more systematically identified and then researched to understand the impact of state and regional policies or programs, and whether they should be adopted or avoided elsewhere.²⁸⁶

Grattan Institute's 2018 report, *Measuring student progress*, compares student progress across states and territories, and identifies areas of above-average and below-average performance that should be explored further. We suggest a number of distinctive features of each system that should be explored as a starting point. For example:

285. Discussed in Jensen et al. (2012).

286. Goss et al. (2018).

- Queensland is consistently making more student progress at primary level, in both numeracy and reading. Potential contributing factors that should be explored include: Queensland's strategy to lift primary literacy and numeracy in 2009; increased public focus on NAPLAN results since 2008; teacher development in assessing student work through 'moderation'; and any outstanding practices in initial teacher education.
- NSW is stretching students at the top, with very high student progress among more-advantaged groups of students, especially in numeracy. By contrast, Victoria is supporting students at the bottom, with higher than expected student progress at less-advantaged schools. The policies affecting high- and low-performing students in these states should be further examined.
- The ACT is making consistently low progress at both primary and secondary levels. School leadership and teaching practices should be explored. An ACT Auditor-General's report in 2017 found teachers were not using student performance data to target what students were ready to learn next.²⁸⁷

Across Australia, too little attention is given to evaluating major government policies and programs and their impact on schools.²⁸⁸ This information is critical so that policy makers can adapt and improve their policies.

Collect better data on teaching effectiveness

State governments collect lots of information about student outcomes, attendance and participation, but little systematic data on teaching effectiveness.

287. ACT Auditor-General (2017).

288. PC (2016).

They need to know more about where the challenges lie in teaching, whether system settings and policies are adequately supporting it, and whether programs and structures are having their intended impact on schools, teachers and students.

SA and NSW have taken steps to better use their state-wide student engagement survey to understand teaching practice.²⁸⁹

Find out more about what works well in classrooms and how to implement at scale

Australia needs a more sophisticated approach to building and using the evidence on what works in classrooms.²⁹⁰

State governments need to lift the standards for scientific evidence, and invest more in randomised controlled trials and quasi-experimental as well as longitudinal studies. Governments should not only invest more in research, but also in the organisations and structures that help synthesise, translate and share research findings.

The analytic capabilities of state-based research bodies needs to be improved, so that they can better inform state department policy and programs.

The NSW Centre for Education Statistics and Evaluation (CESE) is a potential role model. Established in 2012, it informs education funding in that state by determining what works and where investment will have the most impact.

The network of state-based education research institutions should be strengthened. Research could be shared more widely across states, and there should be better national coordination of major research efforts to avoid duplication and gaps.

289. For example, see NSW Centre for Education Statistics and Evaluation (2017).

290. Discussed in Goss and Sonnemann (2016b).

Finally, policy makers also need to get better at understanding what it takes to translate evidence into practice. A high-calibre cohort of Master and Expert teachers would help, but is not enough. Education departments need strong staff both in the centre *and* in the regions, yet regional groups are often the first to go when costs are cut or the political winds change.

Invest more in how to measure and teach general capabilities

Australia, like many other countries, lacks a concrete understanding of how to measure, and even teach, general capabilities such as critical thinking, teamwork and resilience. Yet teachers are allocating significant time and resources to teaching these skills.

If governments expect teachers to develop students' general capabilities, they should ensure it is done efficiently and effectively. States should make more targeted investments in small-scale research trials on how to measure and teach general capabilities.

The Federal Government's recent commitment to develop new learning progressions in general capabilities is a good first step, but more is needed. Victoria's investment in a new tool to measure critical and creative thinking is also a good contribution, but again it is not enough.²⁹¹ Australia needs to invest more in upfront research on how to measure and teach these skills. These investments should be nationally coordinated to avoid duplication or gaps.

6.3.4 Better allocate funding to student need under the new Commonwealth model

It costs more to educate students who are disadvantaged or have complex learning needs.

Each school in Australia has an SRS that takes into account the needs of its students.²⁹² The SRS base level of funding and loadings need to be reviewed and made more accurate.²⁹³ Nonetheless, the SRS is the best indicator of student need and cost we have.

Under the Commonwealth funding approach legislated in 2018, federal funding is now consistent across states. It's a '80:20' model: the Commonwealth funds 80 per cent of the SRS target for non-government schools, and 20 per cent for government schools. By implication, states are expected to fund non-government schools to 20 per cent of their SRS targets, and government schools to 80 per cent.

The three largest states – NSW, Victoria and Queensland – are falling well short of the 80 per cent target for government schools, while NSW and Queensland are exceeding the 20 per cent target for non-government schools.²⁹⁴ States should be free to fund schools or sectors above the SRS target if they want to, but they should be consistent across sectors.

NSW, Victoria and Queensland should re-balance their school funding so they are consistent across sectors and ensure resources flow to where they are most needed and where they can make the most difference. This means reducing state funding to non-government schools and / or increasing funding to government schools.

Within each state, some independent schools are funded well above their targets, but others well below.²⁹⁵ This inconsistency must be

292. For non-government schools, the SRS also takes into account the ability of parents to contribute to the cost of their children's education.

293. The 2011 Gonski Review recommended more work be done on the SRS formula, but that never happened. We recommended the formula be reviewed, see Goss and Sonnemann (2017b). The recent Chaney Review recommendations on parental capacity to pay should be accepted to improve the SRS formula, see Goss (2018b).

294. Goss and Sonnemann (2017b, figures 8 and 9.).

295. Goss (2016b, figure 2.3.).

291. See Victorian Department of Education and Training (2018).

corrected. Federal funds make up the bulk of funding to independent schools, but state contributions to specific independent schools should be reviewed too.

These changes will need to be managed carefully, and with appropriate transition time. Extra funding does not guarantee better outcomes, but ensuring that all students and schools get adequate resources is a necessary first step. And greater consistency is needed to help de-politicise funding discussions.

6.3.5 Give higher priority to early childhood education

Child brain development is most sensitive in the early years; sensitivity to language, numeracy, social skills and emotional control peaks *before* the age of four. Yet Australia's approach is seriously lagging.

When government does invest in early childhood services, a lot more is spent on 'care' services compared to pre-school programs for children aged three to five.

Universal high-quality early-childhood education for three- and four-year-olds is potentially the right long-term goal. And state governments should immediately invest more in early learning for the most disadvantaged students, given that it provides the best return on investment. But they should also be cautious about rapidly expanding access to all three-year-olds until they are confident in the *quality* of early childhood education.

7 Health

7.1 Where we are

Health spending is the largest single component of state government expenditure in every state, and has been growing rapidly.²⁹⁶ About two-thirds of state government health spending – net of transfers from the Commonwealth – is on public hospitals.²⁹⁷ Just over half the population does not have health insurance and so relies on public hospitals for all their care. For people with private insurance, public hospitals are their principal source of emergency care.

The performance of state health systems is highly variable. A key measure, avoidable mortality rates – defined as deaths from conditions that are potentially preventable and/or treatable through existing primary or hospital care²⁹⁸ – varies significantly between states and within states (Table 7.1).

Service delivery is just as variable: public hospital treatment in the most efficient state (Victoria) is one-third cheaper per admission – after taking into account the complexity of the patient's condition and treatment – than in the most expensive state (SA).²⁹⁹ Patients in Victoria wait almost a month (24 days) less for an elective procedure than patients in NSW.

296. Daley et al. (2013c).

297. AIHW (2017b).

298. This is a modification of the official Australian definition, see AIHW (2018a). The code set we used is the more recently updated one used in the United Kingdom, see Olatunde et al. (2016).

299. The Northern Territory is even more expensive.

Table 7.1: State Scorecard for health

	Avoidable mortality rate in capital city areas, 2016		Avoidable mortality rate outside capital city areas, 2016		Average cost per weighted patient treated, 2015–16		Median waiting time, elective procedures, 2016–17	
	Rate/100,000	Change in past 5 years (%)	Rate/100,000	Change in past 5 years (%)	\$	Change in past 5 years (%)	Days	Change in past 4 years (%)
NSW	120.5	-11.4	172.1	-1.4	5,060	3.2	54	10
VIC	118.5	-8.4	156.6	-8.8	4,707	4.4	30	-17
QLD	138.6	-10.1	155.4	-6.2	5,086	-4.4	32	19
WA	130.6	0.2	191.5	0.3	6,355	27.2	34	13
SA	134.5	-6.3	164.1	-2.8	5,737	18.2	39	15
TAS	177.0	12.2	190.8	7.2	5,157	-12.8	45	18
ACT	103.7	-11.7			6,347	17.5	46	-27
NT	202.2	8.7	366.9	-9.4	6,698	18.7	28	-28
AUS	125.9	-8.0	167.8	-4.1	5,199	5.7	38	6

Note: See Appendix A for notes and sources.

7.2 Where we should be

Australia has a good health system by international standards,³⁰⁰ but there is clear room for improvement in efficiency, outcomes and care delivery.

Improving the efficiency of public hospitals should be a major goal of state health policy. There are reasons why WA's hospitals are more expensive than Victoria's – notably geography. But those reasons do not explain why it costs WA 20 per cent more to treat a patient on average (see Table 7.1) and 50 per cent more to treat a patient in a major metropolitan hospitals than in Victoria (see Figure 7.2).

All states could do better to reduce mortality rates, particularly outside the capital cities. The Commonwealth and states share responsibility for prevention and health care delivery. Some of the differences among states and between metropolitan areas and the regions may be the Commonwealth's responsibility. Medicare expenditure per person, and Medicare expenditure on general practice per person, can vary by up to 10–15 per cent between comparable areas.³⁰¹ Nevertheless the Commonwealth's efforts are mostly equivalent across all states, and so much of the variation is probably the consequence of state government policy and administration.

People's access to care also varies substantially depending on where they live. Too many patients endure unacceptably long waiting times for elective procedures. Patients in NSW, SA and Tasmania wait much longer (Table 7.1).

300. Osborn et al. (2017); and Osborn et al. (2016).

301. Other than Northern Territory. See age standardised rates of GP expenditure classified by Primary Health Networks, AIHW (2018b).

7.3 How to get there

7.3.1 Develop community-based prevention programs to address the disparity in avoidable mortality between capital cities and regions

People in regions have 'avoidable mortality' (death rates from conditions that prevention and health care can reduce) on average one-third higher than people in metropolitan areas. The gap between regions and big cities has widened over the past five years in NSW and Victoria (see Figure 7.1 on the following page).³⁰²

Some may think that regional-urban differences in outcomes are intractable, an inevitable result of sparse populations and better health care when it is delivered in high-volume settings.³⁰³ But in recent years, mortality has reduced primarily from cardiovascular disease and this has been due to reductions in risk factors such as obesity, smoking and physical activity.³⁰⁴ These risks are in turn shaped by the social and economic environment. An Australian review of factors affecting differences between rural and urban outcomes showed that these socio-economic factors – so-called social determinants of health – matter more than geography.³⁰⁵

States should work with rural communities to co-design and implement prevention strategies to improve equity in health outcomes, specifically addressing the underlying causes and risk factors contributing to the differences in mortality rates between rural and urban areas.³⁰⁶

302. In 2011 the avoidable mortality rate in regional Australia was 28 per cent higher than in cities; this increased to 33 per cent higher in 2016.

303. Mesman et al. (2015).

304. Ford and Capewell (2011). This study estimated that changes in risk factors explain approximately 44 to 76 per cent of mortality reduction while better treatments explain the remaining 47 to 23 to 47 per cent.

305. K. B. Smith et al. (2008).

306. Knight (2014); and Hawe (2009).

This should include promoting social inclusion,³⁰⁷ and addressing areas which have reported high rates of potentially preventable hospitalisations over many years.³⁰⁸ As part of a strategy to reduce cancer-related mortality, cancer screening should be increased in rural areas that are missing out.³⁰⁹

States should also reduce workforce shortages in rural areas, especially by promoting workforce reform,³¹⁰ and developing new service models, such as integrating primary care, including general practice, more closely with rural hospitals.³¹¹

Access to services is, of course, important. State governments should work closely with Primary Health Networks to strengthen primary care services in rural areas, including addressing financial barriers to urgent care. Telehealth services should be widely available to provide people outside metropolitan areas with access to specialist services.³¹²

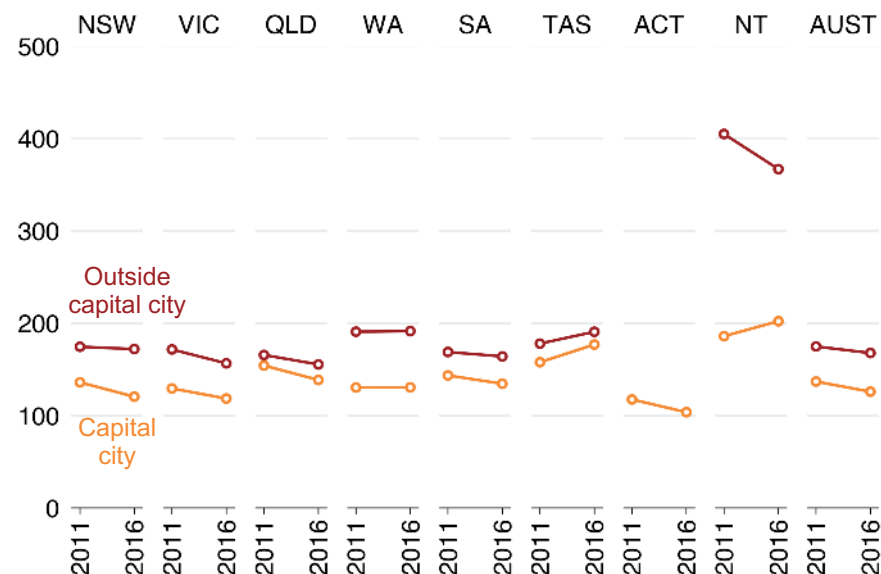
7.3.2 Improve public hospital efficiency

State governments should use their funding policies to put more pressure on public hospitals to become more efficient, including by improving the safety of patient care.

It costs \$1,000 more to treat a patient in a South Australian public hospital than a Victorian public hospital (Table 7.1). Some argue that differences in geography or population density explain the cost differences. But large cost differences between states persist even

Figure 7.1: Avoidable mortality has similar patterns across Australia, with higher rates in regions

Standardised Death Rate for avoidable mortality, 2011 and 2016



Source: Derived from ABS (2018f).

307. McIntosh et al. (2018, in press).

308. Duckett et al. (2016).

309. A recent AIHW report suggests participation in Australia's screening programs are associated with reduced cancer mortality: AIHW (2018c). Screening rates differ among rural areas, see AIHW (2018d).

310. Duckett (2013).

311. Wakerman et al. (2008); and Wakerman et al. (2006).

312. Elbert et al. (2014); and Lin et al. (2017).

if only major metropolitan hospitals are compared³¹³ and the data is standardised for the type of patient (Figure 7.2).³¹⁴

Figure 7.2 also shows substantial variation in costs among hospitals within states. Some hospitals are one-third more expensive than other similar hospitals in the same state – despite having similar professional cultures and operating under the same state policies and industrial agreements. States could save more than \$1 billion a year by reducing intra-state variation in costs.³¹⁵

State governments need to redouble their efforts to reduce variation, by providing swift feedback to hospitals about how they are performing compared with their peers, and helping hospitals improve.

The Independent Hospital Pricing Authority provides a national benchmarking portal website where hospitals can compare their performance with their peers.³¹⁶ This should be used to identify opportunities for improvement and set realistic goals.

Hospitals can also reduce costs – and improve patients' lives – by reducing hospital complication rates.³¹⁷ More than \$1.5 billion could be saved each year if complication rates in all hospitals were reduced to the complication rates in the best 10 per cent of hospitals.

7.3.3 Reduce elective procedure waiting times

State governments should strengthen hospital accountability to reduce combined outpatient and inpatient waiting times. This should include clear consequences and penalties – either governance or financial – for failure to meet targets.

313. The hospitals included are those in the National Health Performance Authority's Large metropolitan and Major metropolitan hospitals groups.

314. Using the national standard National Weighted Activity Unit measure.

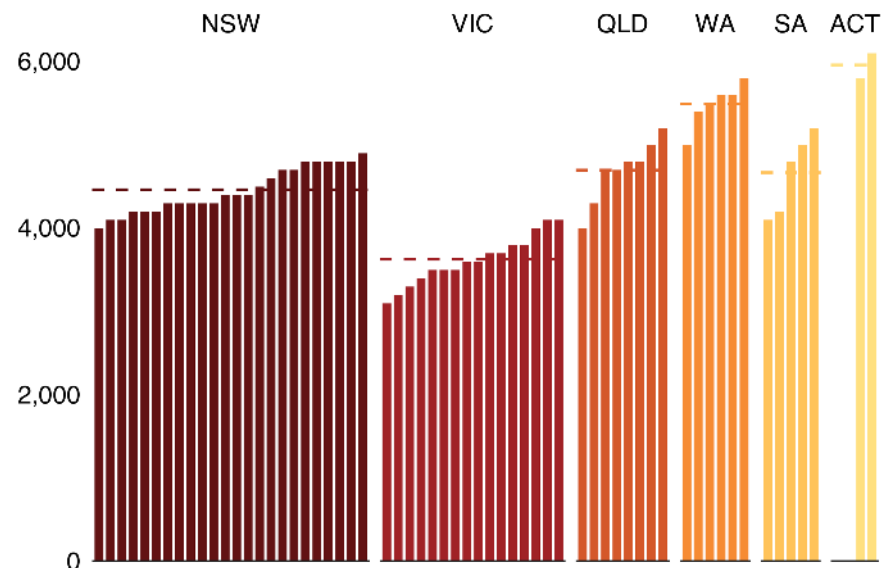
315. Duckett et al. (2014).

316. IHPA (2018).

317. Duckett et al. (2018).

Figure 7.2: Some major hospitals are much more expensive than others in the same state

Cost per patient treated, large and major metropolitan hospitals, 2013–14



Notes: Uses latest data available to Grattan Institute. Average in the figure is the average cost for major hospitals, not weighted for size.

Source: National Health Performance Authority (2016).

Half of all patients across Australia wait more than one month for an elective procedure from the time they were booked (Table 7.1). About 10 per cent wait more than six months (Figure 7.3). In Tasmania, 10 per cent of patients waited more than a year. In NSW, the situation was almost as bad.

Publicly reported data focus on elective procedure or elective surgery waiting times, but there is another important wait: from the time a patient is referred to the hospital to the time they are seen in an outpatient clinic. This is sometimes called the 'hidden waiting list'.³¹⁸

For the patient, the wait for an appointment with an outpatient clinic matters – it delays diagnosis and treatment. These waits are not publicly reported in NSW, WA, or the territories. States that do report outpatient clinic wait times do not use consistent measures. All states should publish consistent outpatient waiting time data and improve outcomes.

7.3.4 Boost dental care

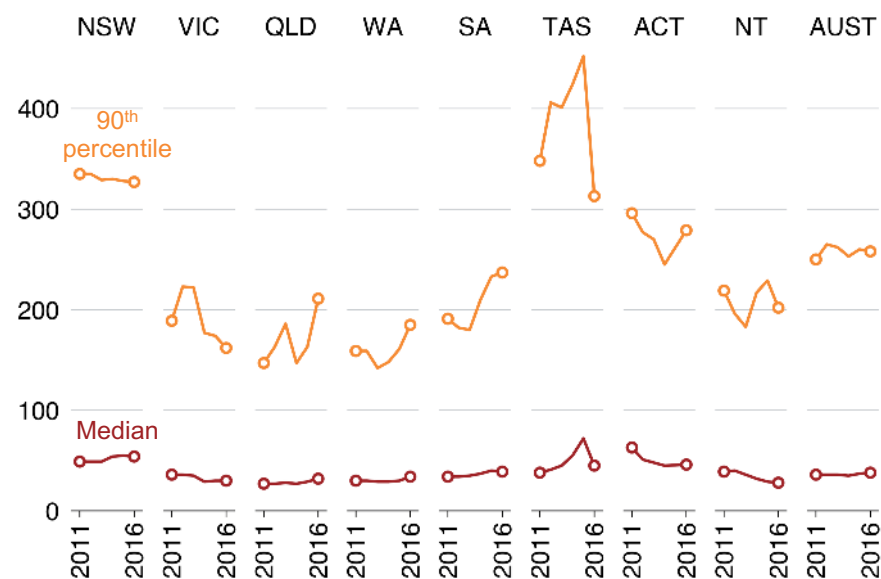
The COAG Health Council says current funding for public dental services allows for treatment of only about 20 per cent of the eligible population. The remaining 80 per cent have to wait for long periods, pay themselves for relatively expensive care in the private sector, or go without care entirely.

The times people have to wait for public dental care varies significantly across states (Figure 7.4 on the next page). Even more concerning, in several states, notably Victoria and SA, waiting times have increased in recent years.³¹⁹

Boosting public dental services will improve people's health and reduce the strain on hospitals. In 2015–16, there were 67,266 hospital

Figure 7.3: A significant minority of patients wait a very long time for an elective procedure

Waiting time (days) for elective procedures for patients, median and 90th percentile, 2012–13 to 2016–17



Source: AIHW (2017c).

318. Duckett (2018).

319. Productivity Commission (2018c).

admissions for potentially preventable dental conditions, more than a fifth of all hospital admissions for potentially preventable acute conditions.³²⁰

The first step should be to enhance the data on dental care. State governments have not delivered on a 2012 commitment to monitor waiting times for public dental care through a National Healthcare Agreement performance indicator.³²¹ Despite this agreement, Australia still does not have nationally comparable data on public dental waiting lists.

Inconsistencies between states and territories mean that it is not possible to reliably compare public dental waiting lists across jurisdictions.³²² The only comparable data is thus from a sample survey conducted by the Australian Bureau of Statistics.³²³

All states should publish consistent public dental waiting time data.

320. AIHW (2017c, table 4.23.).

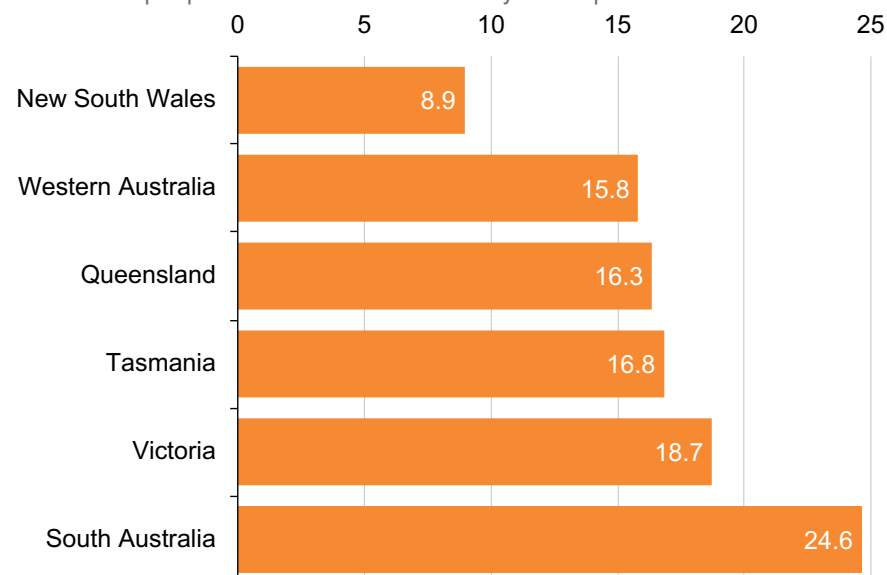
321. A forthcoming Grattan Institute report will deal more comprehensively with the issue of improving access to dental care.

322. AIHW (2018e). The inconsistencies include different: definitions of 'priority populations', members of which aren't included in the main waiting list; triaging processes to determine what types of dental care are general care and thus included in the waiting list, or emergency care and thus excluded; eligibility criteria for coverage under the public dental schemes; waiting list management practices and statistical treatment of 'recall' patients; and co-payment arrangements, with some states levying co-payments on general public dental services and some states not charging co-payments, which may affect demand for services and thus waiting lists. As a result of these differences across states, the AIHW and the Productivity Commission report the available data from states separately, without directly comparing jurisdictions. The concerns about comparability have led NSW to not provide data on public dental waiting lists at all.

323. ABS (2017a).

Figure 7.4: Survey data suggests public dental waiting lists are long and vary substantially across states

Per cent of people who waited more than a year for public dental services



Notes: The figures in smaller states should be regarded as approximate; the percentages are of those who have been seen, and do not include those still waiting at the time of the survey.

Source: ABS (2017a).

7.3.5 Find out more about the adequacy of mental health care

Campaigners say Australia has reached a ‘tipping point’ on access to mental health care.³²⁴ Physicians report nearly one-third of patients with an acute mental illness wait more than eight hours in emergency departments.³²⁵ Long waits for access to community mental health services can lead to poorer outcomes.³²⁶

Yet there is no information about the adequacy of community mental health services in Australia. Australia’s *Fifth National Mental Health and Suicide Prevention Plan* only tracks the use of services. It fails to measure the adequacy of services such as recording waiting times for access, as are used for physical health services.³²⁷ In contrast, Canadian governments³²⁸ have agreed that a wide range of mental health and addictions indicators will be collected and reported from 2019.³²⁹

State governments should agree on an improved set of performance indicators to measure the adequacy of public mental health services.

324. Allison et al. (2017); and Allison and Bastiampillai (2015).

325. Khoury (2018).

326. Reichert and Jacobs (2018, in press).

327. Department of Health (2017).

328. Other than Québec.

329. Zelmer (2018).

8 Energy

8.1 Where we are

Wholesale electricity prices have increased significantly over the past few years – by around 130 per cent in the National Electricity Market since 2015.³³⁰ Household retail prices have increased by less (Table 8.1). Recent increases in wholesale costs have been offset by flat or declining network ('poles and wires') costs, after a period of strong growth. Price increases have been greater for commercial and industrial customers because wholesale costs are a larger share of their bill.

The emissions intensity of electricity supply has decreased in all states and territories over the past five years (Table 8.1). While the emissions intensity of Australia's electricity supply has fallen by around 8 per cent over the past five years and is around 13 per cent lower than 2005 levels, it will need to continue to fall for Australia to meet its emissions reductions targets under the Paris Agreement (assuming electricity demand does not fall significantly from current levels).

Electricity systems have become more reliable in some states and worsened in others (Table 8.1). Customers in Victoria, Queensland, WA and the NT have generally experienced less time without power over the past five years, whereas customers in NSW, SA, Tasmania and the ACT have suffered longer outages. The level of outages nationwide is essentially unchanged.

8.2 Where we should be

Australia's energy sector needs a stable policy framework to encourage investment that will decarbonise the sector in coming decades, while maintaining reliability and affordability.

330. T. Wood et al. (2018b).

Table 8.1: State Scorecard for energy

	Average residential retail electricity price		Emissions intensity of grid-supplied electricity		Unplanned outages	
	c/kWh (2017–18)	Change in past 5 years (c/kWh)	t CO2e/MWh (2016–17)	Change in past 5 years (t CO2e/MWh)	Average annual minutes per customer over the past 5 years	Change from previous 5 years
NSW	31.7	1.9	0.92	-0.07	213	58
VIC	34.0	1.9	1.16	-0.18	139	-23
QLD	33.0	5.1	0.92	-0.02	357	-61
WA	33.1	2.6	0.75	-0.09	227	-115
SA	40.9	5.2	0.61	-0.11	369	165
TAS	29.3	-4.7	0.22	-0.02	312	18
ACT	26.0	-0.8	0.92	-0.07	44	10
NT	28.5	-0.7	0.72	-0.06	324	-153
AUS			0.9	-0.08	236	2

Note: See Appendix A for notes and sources.

The Australian Competition and Consumer Commission (ACCC) considers that electricity prices for households are likely to fall 20-to-25 per cent in real terms from recent highs over the next three years due to both expected market trends and its proposed policy reforms.³³¹ Of the ACCC's estimated reductions, around 10-to-15 per cent appear to be based on expected market trends, while a further 6-to-16 per cent could be achieved with further policy reform (outcomes vary across different states and territories due to the different mix of the ACCC policy recommendations).³³²

Decarbonising the electricity sector is crucial if Australia is to meet its current and future emissions reduction obligations. Australia has committed under the Paris Agreement to reduce economy-wide emissions by 26-to-28 per cent from 2005 levels by 2030. Australia and other nations will need to increase their commitments to meet the Agreement's overall objective of limiting global warming to less than 2 degrees Celsius. It is likely to be cheaper for Australia to reduce emissions in electricity than many other sectors, such as agriculture. Decarbonising electricity will also reduce emissions in the transport sector, as internal combustion engines in vehicles are replaced by electric power or hydrogen (which may be produced by electrolysis).

Clear, stable policy and ongoing investment is required to ensure sufficient generation to meet peak demand, and to ensure that the high-voltage transmission network operates securely as patterns of generation and consumption change. Low-voltage distribution networks will probably only require smaller investments given substantial investment over recent years. But future investment needs careful supervision to ensure it is both cost-effective and sufficient to maintain reliable supply.

331. ACCC (2018a, table A); outcomes vary by state.

332. Grattan analysis based on ACCC (ibid., pp. 366–368); the relative contribution of market trends and policy changes varies across different states, and so the sum of the ranges does not equal the total range of outcomes.

8.3 How to get there

8.3.1 Take action on reliability and emissions

Until August 2018, state and territory governments (other than WA and the NT) were negotiating the National Energy Guarantee (NEG) with the Commonwealth Government through the COAG Energy Council. However, the Commonwealth Government withdrew its support for that policy and the process stalled.

In October 2018 the COAG Energy Council agreed to continue work on the reliability element of the NEG.³³³ The states and territories should maintain this support and implement this policy with the Commonwealth Government, and so support the reliability of the National Electricity Market.

The Commonwealth Government is not willing to implement the emissions reduction component of the NEG. This leaves the electricity sector with no credible policy to reduce greenhouse gas emissions.

If this policy vacuum remains, the states and territories should work together to implement a nationwide emissions reduction scheme through state-based legislation, independently of the Commonwealth Government. While a national policy led by the Commonwealth Government would be ideal, a state-based policy is far superior to no policy at all. States have led in this area in the past, such as through detailed design of a state-based emissions trading scheme in 2006 and 2007, and the establishment of the Garnaut Climate Change Review in 2007 before the formal participation of the Commonwealth Government.

Ideally this policy should involve an explicit carbon price. This is the lowest-cost way to reduce emissions, and would allow an efficient sharing of emissions reduction efforts between the electricity sector

333. COAG Energy Council (2018).

and other emitting sectors.³³⁴ However, the politics of pricing carbon have proven challenging. ‘Next best’ policies, such as an emissions intensity scheme, a clean energy target, or a retailer emissions obligation (similar to the proposed design of the NEG emissions obligation), would be much better than the present policy vacuum.

8.3.2 Lift the gas exploration and production bans

Victoria and Tasmania have both imposed moratoria on gas exploration and production until 2020. Victoria’s moratorium applies to all types of onshore exploration and production and so is more likely to affect gas supply than Tasmania’s, which applies only to hydraulic fracturing (‘fracking’). Tasmania has few ‘unconventional’ gas resources that require fracking.

These bans should be lifted because they will increase prices. Victoria is likely to produce less gas than it consumes from 2022, having historically exported significant volumes of gas to other states.³³⁵ If Victorian production is not enough to meet local demand then the supply restrictions will affect local gas prices, even when those prices are linked to export prices. If Victoria needs to buy gas from interstate, interstate producers will charge the export ‘netback’ price, less the cost of transport to the export terminals in Queensland, plus the cost of transport to the point of consumption in Victoria. This price will be higher than the similarly adjusted netback price for a Victorian producer. The ACCC estimates that increased production in Victoria or other southern states is likely to save domestic gas consumers \$2-to-\$4 per gigajoule, due to avoided transport costs and increased gas market competition.³³⁶

Given that wholesale prices are currently in the order of \$8-to-\$11 per gigajoule,³³⁷ increased Victorian production would offer significant savings on the total delivered cost of gas. Further, any excess local production would allow additional gas exports, increasing national gas sales revenue and royalties.

High gas prices affect gas users directly, but also affect electricity users indirectly. Gas prices are more important to the electricity market than the relatively low share of gas generation would suggest. Coal generators will often bid into the market by ‘shadowing’ the price of competing gas generators, and so higher gas prices reduce competitive constraints on coal generators.³³⁸

Governments should manage the environmental and other effects of gas exploration and production. For example, gas production in urban areas is not appropriate, and concerns about water quality, noise and land access require consideration, even in rural areas. But blanket bans or moratoria are blunt instruments to address these concerns.

Victoria and Tasmania should move towards case-by-case approval of gas activities, with safeguards that target specific risks. NSW recently lifted its moratorium and moved in this direction. Following a report by the Chief Scientist,³³⁹ NSW introduced an outcomes-focused regulatory regime with targeted regulation, such as bans on the use of particular chemicals in fracking and on activities in urban areas.³⁴⁰

The Victorian Government is conducting a geotechnical study to assess potential onshore gas reserves. If it identifies material reserves, the moratorium should be lifted as soon as possible.

334. T. Wood et al. (2015a).

335. AEMO (2018, figure 1).

336. ACCC (2018b, p. 20).

337. Ibid. (p. 12).

338. T. Wood et al. (2018b).

339. O’Kane (2014).

340. NSW Government (2014).

8.3.3 Write-down electricity network assets to reduce prices

The cost of building and maintaining electricity networks is the largest single component of household electricity bills, and a significant component of commercial and industrial bills. Networks comprised 43 per cent of the average household's bill in 2016-17.³⁴¹

Networks in the eastern states are now regulated by the Australian Energy Regulator, rather than by jurisdictional regulators. But state and territory governments still affect their costs in several ways. For example, states and territories regulate network reliability by imposing penalties on networks when customers suffer outages and, in some cases, by prescribing elements of network design. A higher level of reliability increases costs – sometimes by a lot. For example, the three NSW distribution networks spent more than \$1.5 billion between 2005-06 and 2008-09 to meet new reliability standards.³⁴²

States should transfer the power to set reliability standards to a technical body such as the AER, the Australian Energy Market Commission's Reliability Panel, or the Energy Security Board, as recommended by the ACCC.³⁴³ This would be better than leaving the power with politicians, who have demonstrated excessive sensitivity to media stories about 'blackouts'.

Past over-investment by state and territory-owned networks has led to excessive prices. In turn this means customers do not make full use of the existing network, despite the very low marginal cost of doing so (other than at peak times). Demand is curtailed due to high price, and consumers have artificially strong incentives to install solar panels, batteries or other forms of distributed generation to reduce their network charges.

341. ACCC (2018a, p. 5).

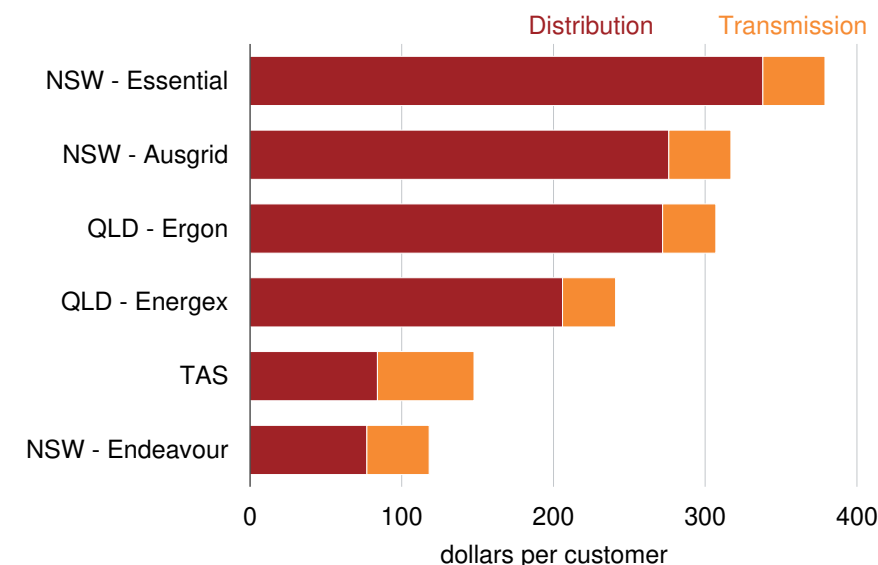
342. T. Wood et al. (2018a, figure 4.3).

343. Recommendation 16 in ACCC (2018a).

Instead, the cost of over-investment should be borne by the state governments that caused it, rather than electricity customers.³⁴⁴ The NSW, Queensland and Tasmanian governments should write down the value of networks they still own, and the NSW Government should provide rebates to customers of networks it has recently (partially) privatised. Write-downs and rebates of up to \$20 billion would offset the effects of historic over-expenditure and save a typical customer between \$100 and \$400 per year (Figure 8.1).

Figure 8.1: Consumers in NSW, Queensland and Tasmania pay a lot more because of past over-investment in the grid

Price impact of excessive investment in the grid, \$ per retail (household and business) customer per year



Source: T. Wood et al. (2018a, figure 5.1).

344. T. Wood et al. (2018a); and ACCC (2018a).

Taxpayers will ultimately bear this cost, but it is likely to be a better outcome than continuing to under-utilise the existing network due to artificially high network charges.

8.3.4 Move small customers to cost-reflective tariffs

Most households and small businesses pay simple electricity tariffs that do not vary by the time of day or season. But the underlying cost of producing electricity varies significantly over time. This mismatch results in inefficient consumption patterns and higher overall costs of supply.

Tariffs would reflect costs better if they varied with time. But this requires the ability to record electricity consumption in precise time periods using a so-called 'smart meter'. Victoria has rolled these meters out to all customers, but other jurisdictions have not. Victoria can lead the way in adopting more cost-reflective tariffs.

However, the Victorian Government has specified that customers must opt-in to these tariffs,³⁴⁵ limiting their uptake.³⁴⁶ Instead, it should move customers onto cost-reflective network tariffs, perhaps with the ability to opt-out (retailers could still offer their customers a simpler and less cost-reflective tariff). This move should be staged to give retailers time to inform their customers how it will operate and give governments time to assess and address any impacts on distribution. Other state governments should also move customers onto cost-reflective network tariffs (with or without the ability to opt-out) where smart meters are installed (which includes all new meter installations).

345. Victorian Government (2013).

346. ACCC (2018a, p. 176).

8.3.5 Retail competition requires reform, but not price caps

Retail margins in the electricity sector are higher than would be expected in a market with many competitors.³⁴⁷ Large advertised discounts attract customers to deals that are not as good as they seem, and there is often no clear relationship between the 'headline' discount a customer is offered and the price they ultimately pay.³⁴⁸ In addition, high rates of customer switching can perversely increase costs (Figure 8.2), and therefore prices.

Figure 8.2: Higher rates of customer switching increases costs



Note: Cost of competition is customer acquisition and retention cost as estimated by the ACCC.

Source: ACCC (2018a, figure 10.6).

347. ACCC (2018a); Thwaites et al. (2017); and T. Wood et al. (2017).

348. ACCC (2018a, p. 261); and ESC (Victoria) (2018, p. 8).

The experience in Victoria, which has had retail competition longer than other states, demonstrates that competition does not naturally lead to good outcomes for consumers, unless it is accompanied by well-designed, targeted regulation.

Given these concerns, the Victorian and federal governments are progressing reforms to retail competition.³⁴⁹ These reforms respond to the ‘confusopoly’ in electricity retailing, where vigorous competition confuses and disempowers consumers rather than benefiting them through more choice and lower prices. These governments are considering reforms that include:

- requiring retailers to provide information in ways that help consumers compare offers and get on the best deal;
- limiting the value of conditional discounts (such as pay-on-time discounts), to reduce the confusion they cause and the effects they can have on lower-income households;
- ensuring that vulnerable and concession customers are on lower-priced deals; and
- using price caps to reduce the price of ‘standing offers’ that apply to customers who have not actively chosen a retail deal.

Governments in NSW, Queensland, SA and the ACT have agreed, as part of the COAG Energy Council, to continue work on a reform package with many of these elements.³⁵⁰ These governments should support retail reform, because it is likely to reduce prices. But governments should resist the temptation to use price caps as a quick fix. If a price cap is set too low it could fall below the true cost of supplying electricity, forcing some electricity companies out of business.

349. Morrison and Frydenberg (2018); Morrison et al. (2018a); Victorian Government (2018c); and Victorian Government (2018d).

350. COAG Energy Council (2018).

This would reduce competition in both the retail market and, because many retailers also operate as generators, in the wholesale market. Any reduction in retail margins might be offset by increased margins in a more concentrated wholesale market.

WA, Tasmania and the NT have not introduced retail competition. These jurisdictions should continue to move in this direction, but should also learn the lessons from experiences elsewhere. These include ensuring that the privatisation process does not create dominant players with substantial market power, and preventing retailers from making confusing offers.

8.3.6 Subsidies for rooftop solar are wasteful and should be removed

Since 2012 state governments have generally reduced or eliminated subsidies for rooftop solar systems. Before then, excessive subsidies spurred rapid uptake of rooftop solar, imposing additional costs of around \$14 billion on consumers without solar.³⁵¹

The Victorian Government has recently returned to the bad old days by announcing a substantial new subsidy program. It will pay for half of the upfront cost of eligible solar systems, and allow households to pay for the rest with an interest-free loan. The scheme is intended to support 650,000 system installations over 10 years, at a cost of \$1.24 billion.³⁵² This program sits alongside a \$60 million subsidy for solar hot water³⁵³ and a \$40 million subsidy for home batteries³⁵⁴ as part of the Solar Homes program.

Subsidising solar panels will reduce electricity costs for the benefiting households – but at significant cost to taxpayers at large. Melbourne

351. T. Wood et al. (2015b).

352. D'Ambrosio (2018).

353. Andrews (2018a).

354. Andrews (2018b).

households can generally pay off a new solar installation in less than six years without the new subsidy.³⁵⁵ Given the big financial benefit to households that install solar, it is not clear why they require, or deserve, assistance from taxpayers. This is particularly true given the Victorian subsidy comes on top of existing subsidies available through the national Small-scale Renewable Energy Scheme.

The scale of the Victorian scheme could have unintended consequences. 650,000 installations would roughly triple the current level of installations in the state, from 350,000³⁵⁶ to around 1 million. In 2016 Victoria had around 1.8 million separate or semi-detached dwellings³⁵⁷ so, even allowing for growth in the number of dwellings over the next decade, the scheme implies that around 50 per cent of such dwellings will have rooftop solar. Local clustering of solar systems can cause difficulties for the electricity network, principally over-voltage and high loads on transformers on sunny days.³⁵⁸ System stability problems can also emerge at times of low demand and high production from rooftop solar plant. Before the announcement of the Solar Homes policy, the Australian Energy Market Operator foreshadowed the need to spend money to manage these issues in Victoria, due largely to increasing levels of rooftop solar generation.³⁵⁹ These problems will emerge earlier in Victoria as a result of this policy, and the remedies are not likely to be cheap.

The Victorian Government should abandon the Solar Homes program. It is unlikely to be an effective use of public money, and is likely to impose costs on electricity networks as they manage greater volumes of rooftop solar generation.

355. Solar Choice (2018); and Choice (2018).

356. Clean Energy Regulator (2018).

357. ABS (2017b).

358. AEMO and ENA (2018, p. 14).

359. AEMO (2018, p. 21).

8.3.7 Continue to privatise

Many states and territories have privatised key energy assets, but some continue to lag. Queensland, WA, Tasmania and the NT have particularly high levels of public ownership of electricity assets.

Under appropriate regulatory regimes, private entities can efficiently operate and invest in electricity assets, while avoiding the conflicts of interest and pressure to maintain inefficiently high staff levels that can occur under public ownership. For example, publicly owned networks in NSW, Queensland and Tasmania increased costs and prices much faster than privately owned networks in Victoria and SA.³⁶⁰ In addition, privatisation can release capital for governments to invest in other public services where privatisation is often not in the public interest, such as roads, schools and hospitals.

Privatisation in the energy sector should be implemented carefully to ensure that appropriate regulations are in place and to support competition as far as practicable. Generation and retail assets should be split into parcels small enough to ensure workable competition after privatisation. By contrast, direct competition is not likely to be feasible for networks, and so some regulation of prices or revenues is necessary. Such regulation is typically applied to both publicly and privately owned networks, and so privatisation would not necessitate material changes to the arrangements already in place.

8.3.8 National approaches are crucial, but the states and territories can still make important changes

The energy sector is primarily governed by state and territory legislation. For jurisdictions that participate in the National Electricity Market (all except WA and the NT), much legislation is harmonised through the COAG Energy Council. This means many elements

360. T. Wood et al. (2018a, pp. 23–25).

of energy policy are not the responsibility of individual states and territories. This is appropriate, because the benefits of coordination and harmonisation are significant.

However, states and territories individually manage important areas of policy, leaving scope for these governments to improve price, emissions and reliability outcomes in their respective jurisdictions.

In addition to the actions that individual states and territories should take (outlined above), collectively they should recommit to pursuing nationally consistent energy policy wherever possible. Such a commitment should be pursued through a renewed and strengthened Australian Energy Market Agreement that includes scrutiny of unilateral state actions, as recommended by the Chief Scientist's independent review of the energy market.³⁶¹

361. Recommendation 7.3 in Finkel et al. (2017).

9 Taxes

9.1 Where we are

All taxes drag on economic growth, but some are worse than others. State governments rely too much on taxes that reduce growth more (Table 9.1). Making state taxes more efficient would boost economic growth.

NSW and Victoria rely relatively more on taxes with high economic costs. And rapid increases in property prices over the past five years have inflated their stamp duties, so these inefficient taxes are a growing share of their tax base.

While other state taxes such as payroll tax are theoretically less costly, they are currently levied on narrow bases with most businesses exempted. For example, at least 75 per cent of businesses in each state are not liable for payroll taxes.³⁶² Many states must therefore impose higher tax rates to raise revenues, raising the economic costs of these taxes.

While state governments in NSW, SA, the ACT and the NT have conducted comprehensive state tax reviews in the past decade,³⁶³ few states have embarked on major tax reforms. Policy reforms have improved the efficiency of the tax base in Victoria and ACT a little over the past five years. Victoria replaced inefficient insurance taxes with the Fire Services Levy – in effect a broad-based property tax. NSW deferred plans to introduce a similar levy in 2017.

Table 9.1: State Scorecard for taxation

	Share of state taxes collected from tax bases with low economic costs		Share of state taxes collected from tax bases with high economic costs		Average welfare loss per dollar of tax raised	
	%	Change in past 5 years (%)	%	Change in past 5 years (%)	(cents)	Change in past 5 years (cents)
NSW	15.8	0.5	33.7	9.3	29.7	3.9
VIC	16.7	5.4	33.2	2.6	28.6	0.9
QLD	13.3	-1.7	29.4	6.0	28.4	2.9
WA	17.8	4.6	21.6	-2.3	25.8	-0.9
SA	22.1	0.4	23.1	1.7	25.0	1.2
TAS	14.6	-1.8	26.5	5.2	27.2	2.9
ACT	38.0	7.4	20.4	-2.2	21.9	-1.8
NT	0.3	0.3	20.5	-8.1	25.8	-2.5
AUS	16.5	1.9	30.7	5.1	28.3	2.2

Note: See Appendix A for notes and sources.

362. Ralston (2018, p. 9). IPART (2008) estimated that around over 90 per cent of NSW businesses were not subject to payroll tax in 2008.

363. See: IPART (2008), ACT Government (2012b), SA Government (2015b) and NT Department of Treasury and Finance (2017). The Tasmanian Government launched a tax reform process in 2010, which was subsequently abandoned Tasmanian Government (2010).

The ACT started a long-term program to gradually reduce stamp duties and increase property taxes. And SA has abolished transfers on commercial property as of 1 July 2018.³⁶⁴

Other jurisdictions have benefited from growing economies. Over the past five years payroll tax collections in the NT significantly increased, despite a constant threshold and tax rate, reducing the territory's reliance on inefficient taxes like stamp duty.

9.2 Where we should be

There is a big prize for state tax reform. Shifting from stamp duties to a broad-based property tax (at \$5 to \$7 for every \$1,000 of unimproved property value) could make Australians up to \$17 billion a year better off, while also making housing more affordable.³⁶⁵ The gains would be even larger if this broad-based property tax were expanded to fund the replacement of other inefficient taxes such as taxes on insurance and stamp duties on motor vehicle sales.

State governments should also broaden land taxes to include owner-occupied housing, and switch to a progressive land tax assessed on the value of each property owned, rather than the combined value of an owner's total landholdings. Such a reform would raise \$7 billion nationally, make housing modestly cheaper and encourage more institutional investors into the private rental market, thereby improving security of tenure for renters (Chapter 5).³⁶⁶ The additional taxes might either pay for escalating costs (particularly in hospitals, as outlined in Chapter 10) or help fund the abolition of more economically costly taxes discussed in this chapter. Alternatively, state governments could encourage institutional investors by abolishing land taxes outright and instead increase the rate of the broad-based

property tax by around \$2 for every \$1,000 of unimproved property value. This alternative reform would not raise additional revenue.

States could also raise additional revenue in an equitable way at low economic cost by introducing explicit 'betterment taxes' to capture some of the windfall gains from re-zoning of land, as the ACT already does with its lease variation charge regime.

State payroll taxes should be broadened by abolishing carve-outs for small businesses, and payroll tax rates should be reduced so existing state payroll tax collections don't increase. The current thresholds lead to workers disproportionately working for businesses exempt from payroll tax, distorting labour away from its highest-value use, and lowering wages for all workers.

9.3 How to get there

9.3.1 Increasing the efficiency of taxation

Figure 9.1 on the next page shows the estimated loss of economic activity from each dollar increase in a range of taxes.

Taxes on transactions, such as stamp duties, are particularly inefficient. In contrast, taxes on land do not distort decisions about land use, provided they apply in a way that the landowner can't avoid.³⁶⁷

Inefficient taxes such as stamp duties on property accounted for 31 per cent of states' own-source tax revenue in 2016, up from 26 per cent in 2011.³⁶⁸ The share of revenue collected from these sources has risen over time in all states except WA, ACT and the NT, as property prices have risen, especially in Melbourne and Sydney. The share of stamp

364. Revenue SA (2018).

365. Daley et al. (2018, p. 122).

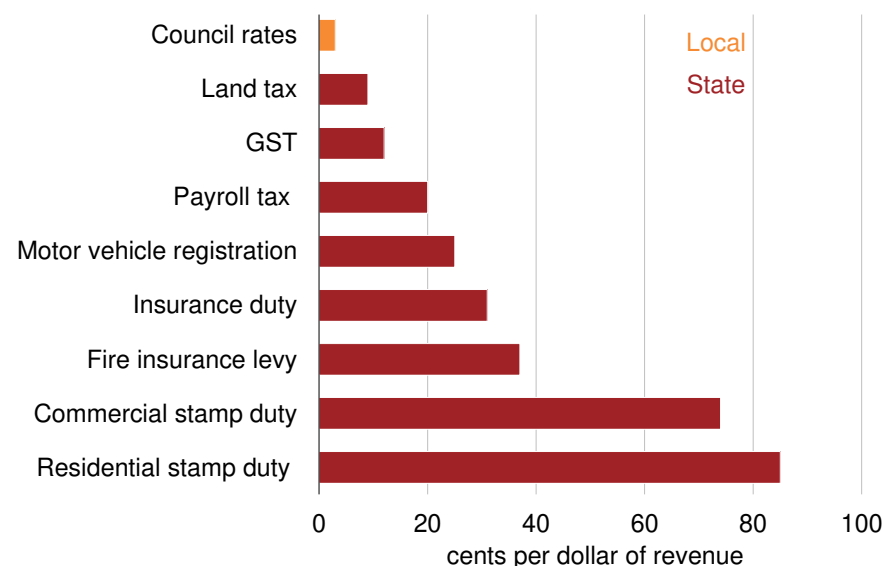
366. Ibid. (p. 125).

367. Henry et al. (2010b, p. 247).

368. Taxes with high economic costs are: stamp duties on property and motor vehicles, and insurance company contributions to state fire and emergency services (Figure 9.1).

Figure 9.1: The states rely heavily on economically destructive taxes

Loss of economic activity for each \$ increase in tax

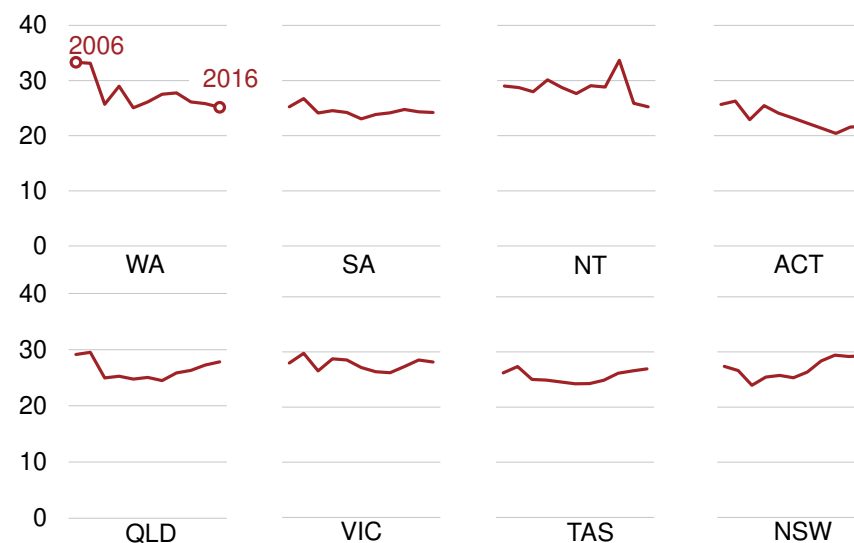


Notes: All estimates are from KPMG Econtech (2011) other than on council rates, which come from the KPMG modelling for Treasury. These estimates are broadly consistent with Treasury estimates which evaluated a smaller range of taxes (Cao et al. (2015)). This more recent work suggests that the economic burden of broad-based land taxes may be even lower, with a loss of economic activity of negative 10 cents for each \$ increase in tax, since the revenue from foreign owners of land would exceed the economic costs imposed on Australian residents.

Sources: KPMG Econtech (2010), KPMG Econtech (2011) and Cao et al. (2015).

Figure 9.2: The ACT has Australia's most efficient tax system; NSW the least

Average excess burden of taxation, cents per dollar of tax revenue collected, 2006–07 to 2016–17



Notes: The calculation of average excess burden of taxation excludes gambling tax. This is because estimates of the welfare loss from per dollar of gambling tax are likely over-estimates, since they fail to include the benefits from reducing the negative impacts of gambling. Some other excises, levies, and transactional taxes have also been excluded. An average of 90 per cent of taxation revenue is accounted for in the calculation of average excess burden of taxation, and at least 80 per cent in all time periods across all states.

Sources: KPMG Econtech (2010), KPMG Econtech (2011), ABS (2018d) and ABS (2017c).

duties in NSW state tax revenues has increased from 23 per cent to 28 per cent over the past decade.

In contrast, states collect just 14 per cent of tax revenues from economically efficient taxes such as recurrent taxes on land and property, despite rising property values over the past decade.

The average economic cost of state taxes has increased in Tasmania and especially NSW over the past decade (Figure 9.2 on the preceding page).

The ACT has Australia's most efficient tax base – each dollar of revenue raised costs the economy just 22 cents. NSW has the least efficient tax base – each dollar of revenue raised costs the economy 30 cents.

9.3.2 Stamp duties should be replaced with a broad-based property tax

Stamp duties are inefficient taxes; sometimes they discourage people from moving to better jobs (see Section 4.3.1 on page 46). The economic drag of stamp duties has increased over the past two decades. Average rates of stamp duty have risen substantially in all states, from around 2-to-3 per cent on the median-priced house in each capital city in 1995 to around 4 per cent in 2015, because thresholds have not kept pace with rising house prices³⁶⁹ (Figure 9.3). They now cost the median home-buyer more than \$43,000 in Sydney and more than \$45,000 in Melbourne.³⁷⁰

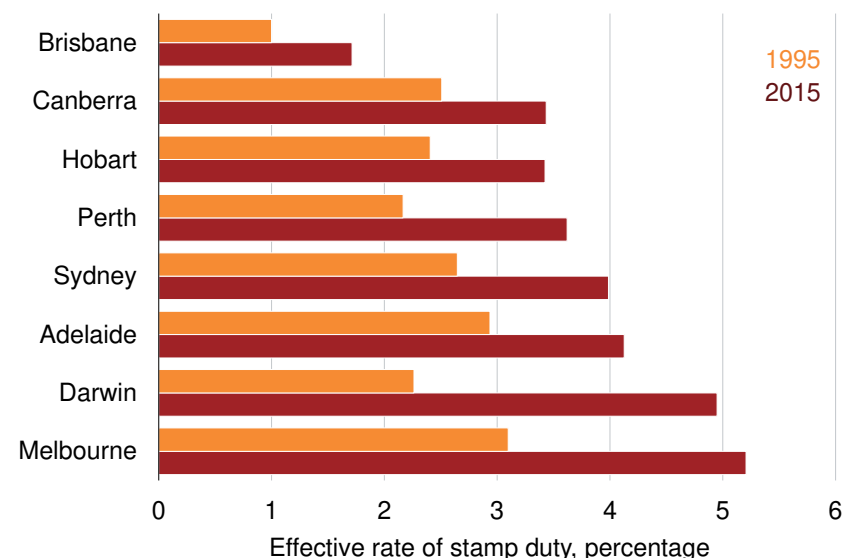
Stamp duties are also unfair. One family could pay more tax than another with similar income and assets, simply because it moves house

more often. Stamp duties especially penalise young people, who tend to be more mobile.

The effects of stamp duty are material: one study found that a 10 per cent increase in stamp duty can reduce housing turnover by 3 per cent immediately, and 6 per cent in the long run.³⁷¹ Rising stamp duties are

Figure 9.3: Effective rates of stamp duty have risen sharply in all states and territories in the past two decades

Stamp duty payable on median-priced house in each capital city (per cent)



Notes: Median prices are for a detached house. Darwin median price is for 2000. Assumes that the purchaser is not eligible for a concessional rate of stamp duty.

Source: Daley et al. (2018, figure 7.2).

369. Daley et al. (2018, figure 7.2). Stamp duty thresholds are not indexed for rising property prices in any state: NSW Treasury (2018a).

370. Figures based on median house prices as of December 2017: Grattan analysis of NSW Treasury (ibid.) and CoreLogic (2018a).

371. Davidoff and Leigh (2013); Hilber and Lyytikäinen (2017) find a difference in mobility in the UK of 37 per cent between homeowners just above and just below a stamp duty threshold.

probably a material cause of housing turnover nationwide falling from 8 per cent a year in the early-2000s to below 5 per cent today.³⁷²

In contrast, land taxes do not distort decisions about land use, provided they apply in a way that the landowner can't avoid.³⁷³ For example, a constant-rate land tax applied to the unimproved value of all land prevents landowners from reducing their liability by changing the way they use their land. The tax on a vacant block of land would not increase even if the block were developed.

Stamp duty revenues are also much more volatile than other taxes (Figure 9.4). They depend on both property prices and turnover. Any slowing of property sales as the market cools – a very real risk with house prices falling in most capital cities³⁷⁴ – could punch a big hole in state budgets. Broad-based property taxes deliver more stable revenues because they are not affected by turnover.³⁷⁵

Property taxes are likely to be a more sustainable revenue base than stamp duties. Unlike capital, property is immobile – it cannot be moved offshore to avoid higher taxes. The risks of multinational tax avoidance, the increasing mobility of capital, and the increasing value of residential property relative to incomes, should make property taxes a priority in any tax reform.

9.3.3 Stamp duties should be replaced by a tax based on council rates rather than state land taxes

Rather than copying existing state land taxes – which exclude more than half of all land by value, especially owner-occupied housing –

372. Leal et al. (2017, graph 1). Moving is not as hard for renters. Renters do not get the benefits of subsidies to home-ownership, but neither do they experience the 'lock in' effect of stamp duties.

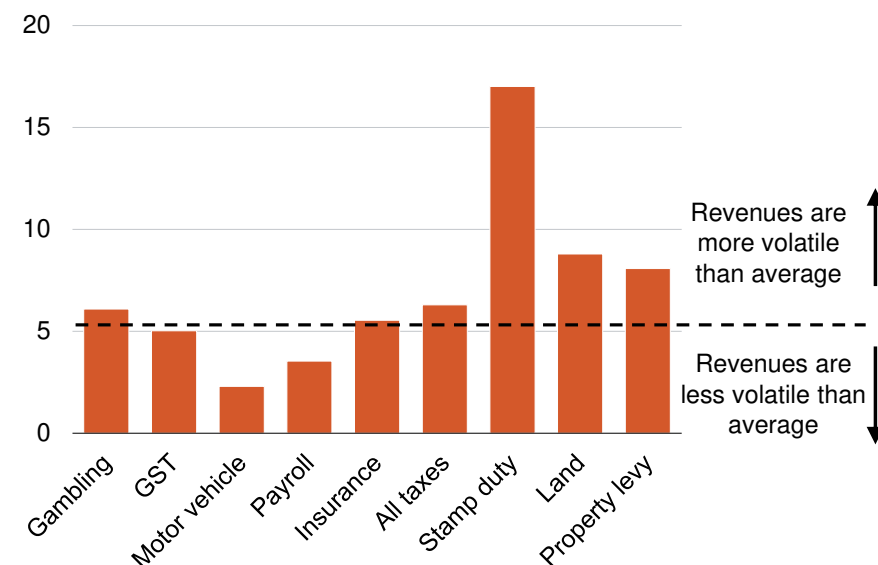
373. Henry et al. (2010b, p. 247).

374. CoreLogic (2018b).

375. Daley et al. (2015b, pp. 6–7).

Figure 9.4: Taxes on property transactions are especially volatile revenue sources for state governments

Standard deviation between annual revenue growth and long-run average growth in Australia, 2000–01 to 2015–16



Note: 'Property levy' shows the revenues that would have been raised with a broad-based property levy of 0.5 per cent applied to unimproved land values had it been in place since 2000–01.

Sources: Daley et al. (2015b, figure 4), updated to 2015–16 using ABS (2017c).

state governments should fund the abolition of stamp duties through a property levy imposed via the council rates base.

Existing state land taxes generate much less revenue than would a broader-based land tax. States raised \$7.2 billion from land taxes in 2015–16.³⁷⁶ Exempting the family home from land tax excludes about 75 per cent of the value of residential land; it means state governments forgo about \$7 billion in revenue.³⁷⁷

State land taxes are also levied on a progressive scale, so that people with larger land holdings pay a higher rate per dollar value of land owned. Progressive land taxes levied on total landholdings and generous tax-free thresholds discourage larger landholdings and largely explain the absence of institutional investors from Australia's rental housing market.³⁷⁸

In contrast, municipal rates are applied to all properties within a council area, with very few exemptions. There are no exemptions for owner-occupied housing or agricultural land, and constant rates apply from the first dollar of property value. Most state governments already use the council rates base for state-wide property-based levies to fund fire and emergency services. These levies provide a template for reform.

An annual flat-rate tax of between \$5 and \$7 for every \$1,000 of unimproved land value would be sufficient to fund the abolition of stamp duties on property in all states (Figure 9.5). While local governments in some states levy rates on capital-improved property values, rather than unimproved land values,³⁷⁹ the economic costs of taxing capital

376. ABS (2017c).

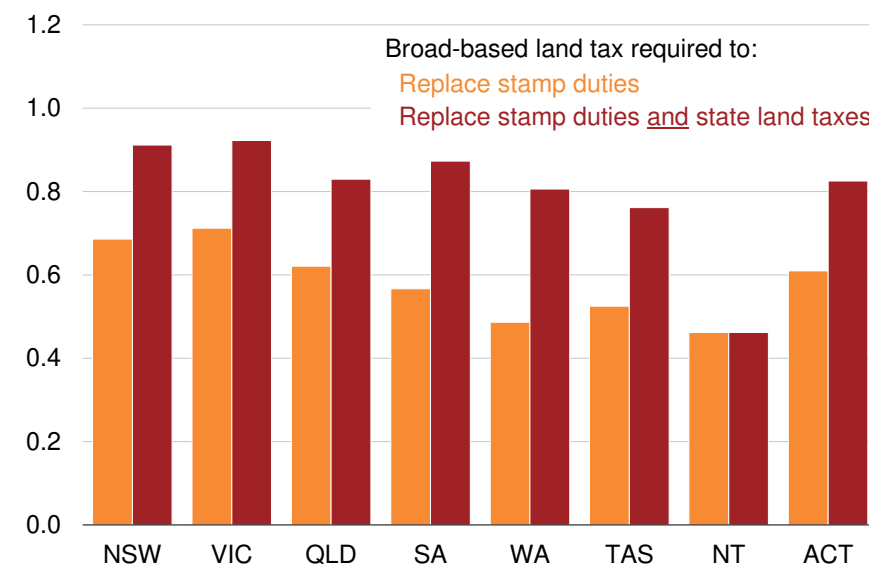
377. Daley et al. (2018, p. 100). Even though owner-occupied housing accounts for 75 per cent of all residential land, imposing land tax on it would raise only \$7 billion because it would be taxed at comparatively low rates under the highly progressive rates of land tax currently in force.

378. Ibid. (pp. 76–77).

379. Some councils in Victoria, SA and Tasmania use capital improved land values as the base for levying council rates. See: Daley et al. (2015b, p. 17).

Figure 9.5: A broad-based flat-rate land tax could fund the abolition of stamp duties

Property levy rate to fund the abolition of stamp duties and existing state land taxes, 2015–16



Notes: Flat-rate land tax applied to the unimproved land equivalent of the council rates property base (i.e. including owner-occupied housing and agricultural land). There is no land tax in the NT. Excludes any revenue boost from the 2nd round economic impacts of the tax, or changes in the distribution of GST revenues.

Source: Coates (2017).

improved property values, rather than unimproved land values, tend to be relatively small.³⁸⁰

9.3.4 A gradual transition is the best way to manage the politics of reform

Proposals to switch from stamp duty to land tax have stalled because the politics are hard. Recent purchasers would be reluctant to pay an annual property tax so soon after paying stamp duty. A property tax would pose difficulties for people who are asset-rich but income-poor, especially retirees who have limited incomes but own their own home. And property taxes cause more angst among voters than stamp duties because they are more visible: quarterly property tax bills are a far stronger reminder of the tax than stamp duties paid in full upon purchase.

A gradual transition to a broad-based property tax, such as that adopted in the ACT,³⁸¹ is best.³⁸² It would provide a stable revenue stream while delaying the full impost on those who recently paid stamp duty. To ensure asset-rich but income-poor households can stay in their homes, governments should allow them to defer paying the levy until they sell their property.³⁸³ But exempting or providing concessions to asset-rich but cash-poor landowners would be unfair to younger taxpayers.

380. Ibid. (p. 14).

381. The ACT is six years into a 20-year plan to replace stamp duties with broad-based property taxes. Annual general property rates on a family home on land worth \$500,000 increased from roughly \$2,200 a year in 2012 to \$3,000 four years later, while the stamp duty on a home worth \$500,000 fell by more than five times that amount: from \$18,050 to \$13,460. Daley and Coates (2016).

382. Coates (2017).

383. Deferral arrangements are already available for seniors and those suffering financial hardship paying council rates in several states and the ACT. Daley et al. (2015b, p. 21).

Of course reforms to replace stamp duty with a broad-based property tax will require political will. No jurisdictions other than the ACT have been willing to make the change to date. However smaller, incremental reforms could be made now, while also being a step in the right direction. For example, states could begin indexing thresholds for stamp duty to property values to ensure that any further rises in property prices don't lead to higher stamp duties. Similarly, NSW and SA should abolish indexation of land tax thresholds, allowing land taxes to rise in line with increases in land values.³⁸⁴ These more modest reforms could have a material impact over time.

9.3.5 State land taxes should be extended to owner-occupied housing and apply on a per-property basis

State governments should broaden land taxes to include owner-occupied housing, and switch to a progressive land tax assessed on the value of each property owned, rather than the combined value of an owner's total landholdings. Alternatively, state governments could abolish land taxes and instead increase the rate of the broad-based property tax by around \$2 for every \$1,000 of unimproved property value.

Extending land tax to owner-occupied housing would modestly (but immediately) reduce housing prices, while also boosting state budgets. As noted in Section 9.3.3 on page 87, the principal place of residence is exempt from land tax in all states, which makes owning a home more attractive and further inflates house prices. Even though owner-occupied housing accounts for 75 per cent of all residential land, imposing land tax on it would only raise around \$7 billion nationally because it would be taxed at comparatively low rates under the

384. In NSW land tax thresholds are indexed annually by the increase in the average unimproved value of NSW land over the previous three years. In SA all land tax thresholds are indexed annually in line with average site value increases as determined by the SA Valuer General.

generous tax-free thresholds and highly progressive rates of land tax currently in force.³⁸⁵ The additional taxes might either pay for escalating costs (particularly in hospitals) or the abolition of more economically costly taxes such as taxes on insurance.³⁸⁶ Extending land tax to owner-occupied housing would be expected to reduce land values by between 3 and 6 per cent, and housing prices by roughly 3 per cent.³⁸⁷

State government land taxes also disadvantage institutional investors, compared to 'mum and dad' landlords who own only one or two properties.³⁸⁸ In paying progressive land taxes across their entire holdings, institutional investors can lose roughly one quarter of their rental returns to land tax.³⁸⁹

A lack of institutional investors may disadvantage renters. Unlike mum-and-dad investors, institutional landlords should be able to use economies of scale to reduce costs and improve the quality of service provided to tenants.³⁹⁰ Institutional investors are also probably more willing to offer long-term leases to tenants, since they are less likely to face cash-flow problems, and they can pool tenant risk. Consequently, institutional investors would be less likely to be put off by stronger tenancy laws that provide renters with more secure tenure.

The simplest way to reform state land taxes to encourage institutional investors into the rental market would be to shift to a progressive land tax assessed on the value of each property owned, rather than

on the combined value of an owner's total landholdings.³⁹¹ A new revenue-neutral progressive land tax regime could be designed to most closely match the tax liabilities paid by existing landowners in each state, thereby minimising the windfall gains and losses from any reform.³⁹² Such a land tax regime would provide incentives to assemble a portfolio of multiple strata-title rental properties, but would still discourage investment in the build-to-rent sector since the entire building would be assessed as a single site and taxed at the top marginal land tax rate.³⁹³

Alternatively, state governments could abolish land taxes and instead increase the rate of the broad-based property tax by around \$2 for every \$1,000 of unimproved property value – about one tenth of the rate of land tax that applies to large landholders. Such a reform would remove the land tax hurdles to institutions investing in either strata-title or built-to-rent housing, since both investments would be taxed at the same low rate as smaller investors. This alternative reform would not raise any additional revenue: some property investors would pay less land tax than they do now, while owner-occupiers would pay some land tax.

9.3.6 Property taxes should also replace inefficient taxes on insurance and stamp duties on motor vehicle sales

Taxes on insurance and insurance-based fire and emergency services levies should also be replaced by a broad-based property levy.

385. Land taxes are levied on a progressive scale: people who own more land pay a higher rate of land tax per dollar value of land owned. In addition, no tax is levied on people with total landholdings less than a threshold. These tax-free thresholds range from \$25,000 in Tasmania to \$600,000 in Queensland.NSW Treasury (2018a) See also: Daley et al. (2018, p. 100).

386. Daley et al. (2015b).

387. Daley et al. (2018, p. 100).

388. Ibid. (p. 76).

389. See Daley et al. (Ibid., p. 76) for a more detailed explanation.

390. PwC (2017); Freebairn (2016); and Henry et al. (2010a).

391. Recent Commonwealth and state tax reviews have also considered levying land tax with higher tax rates for land with a higher value, Henry et al. (2010b, p. 265) and SA Government (2015b, p. 41), but the problems with progressive rates probably outweigh the benefits (Daley et al. (2015b, p. 18)).

392. Including owner-occupiers that would now be subject to land tax.

393. Freebairn (2017, p. 16).

Most states charge a flat rate of stamp duty on insurance of between 9 and 11 per cent of the gross premium.³⁹⁴ Several states also impose taxes on life, health and third-party motor vehicle insurance policies.³⁹⁵ State governments currently raise around \$5 billion nationally from these taxes.³⁹⁶

Taxes on insurance deter people and businesses from purchasing an adequate level of insurance, leaving them exposed to risks such as the risk of flood or fire damage to their own home or businesses assets, or motor vehicle theft.³⁹⁷ Low-income earners are also the most likely to not purchase insurance, or under-insure themselves.³⁹⁸ The burden of these taxes falls on those who prudently take out insurance, while the uninsured who do not contribute often receive public assistance.³⁹⁹ Several inquiries have recommended abolishing state taxes on insurance.⁴⁰⁰

An annual flat-rate tax of around \$2 for every \$1,000 of unimproved land value would be sufficient to fund the abolition of taxes on insurance and stamp duties on motor vehicles.⁴⁰¹ Replacing taxes on insurance and motor vehicle registrations with a broad-based property tax in all states could make Australians up to \$1.5 billion a year better off.⁴⁰²

NSW and Tasmania are the only states that still fund fire services via a tax on insurance premiums, raising \$900 million a year from

these levies.⁴⁰³ State levies on fire and motor vehicle insurance are commonly considered the second most costly state tax after stamp duty on property.⁴⁰⁴ Replacing existing taxes on insurance with a broad-based property levy – as other states have already done – would leave residents of NSW and Tasmania around \$430 million a year better off than they are currently.⁴⁰⁵

9.3.7 States should introduce 'betterment taxes' to capture some of the windfall gains from re-zoning of land

State governments should introduce betterment taxes to capture some of the windfall gains landowners receive from re-zoning, such as permission to build higher-density housing. The ACT's lease variation charge provides a template for reform.⁴⁰⁶

Re-zoning of land generates large unearned windfall gains for landowners.⁴⁰⁷ Taxing these windfall gains would be a particularly efficient form of taxation.⁴⁰⁸ A broad-based land tax, like that recommended in this chapter, would capture only a relatively small

394. ACT Revenue Office (2018).

395. WA does not levy duty on life insurance. NSW Treasury (2018a, p. 22).

396. ABS (2018d).

397. Henry et al. (2010a, p. 469).

398. Freebairn (2017, p. 10).

399. IPART (2008, p. 95); and SA Government (2015b, p. 22).

400. For example, see: IPART (2008), Henry et al. (2010a, p. 469) and ACT Government (2012b, p. 9).

401. Grattan analysis of ABS (2017d) and ABS (2018d).

402. Grattan analysis of KPMG Econtech (2010), ABS (2018d) and KPMG Econtech (2011).

403. In 2017 the NSW Government deferred previously-announced plans to introduce a property-based Fire and Emergency Services Levy. Berejiklian and Perrottet (2017).

404. KPMG Econtech (2011, p. 35) estimated that each dollar raised through fire insurance levies had an economic cost of 59 cents. Taxes on fire insurance have a larger economic cost because most fire insurance is claimed by households that are less likely to take out insurance if premiums are higher. See also IPART (2008).

405. Grattan analysis of KPMG Econtech (2010), ABS (2018d) and KPMG Econtech (2011).

406. Daley et al. (2018, p. 121). The ACT's lease variation charge (LVC) aims to capture 75 per cent of the increase in value from a change in a lease. The ACT's unique leasehold land titling system enabled the implementation of this type of quasi-betterment tax. Other Australian jurisdictions should introduce an explicit betterment tax to achieve the same effect as the LVC.

407. For examples, see Kendall and Tulip (2018, p. 24).

408. 'Windfall gains' attaching to planning approvals are monopoly rents arising from land-use planning rules (Spiller et al. (2017)).

share of these windfall gains. Therefore specific betterment taxes that capture most of the value of re-zoning land is warranted.

State governments and instrumentalities such as water authorities currently impose developer charges, which charge some of the costs linked to changes in land use permitted by re-zoning. But such charges are supposed to be a fee for service, and therefore are not supposed to be linked to the increase in land value from re-zoning.⁴⁰⁹ Given the value created by individual zoning decisions, this creates significant opportunities for corruption. Where such charges are levied, they should be in line with the Productivity Commission's general principles on infrastructure costs.⁴¹⁰

Sometimes states impose value capture taxes for land that benefits particularly from infrastructure projects such as new railway stations.⁴¹¹ But it is difficult in practice to design taxes that efficiently and fairly capture the benefits of transport projects. Broad-based property taxes, like those recommended in Section 9.3.2 on page 86, are a far simpler way to capture some of the land value uplift generated from these projects.⁴¹²

9.3.8 Payroll taxes should be broadened by abolishing small business exemptions

State payroll taxes should be broadened by abolishing minimum thresholds that exempt smaller firms from paying the tax, and lowering the rate of payroll tax.

Payroll tax is the largest state tax, contributing \$23 billion to state budgets in 2016–17.⁴¹³ In principle, payroll tax is one of the more

efficient taxes available to the states if applied broadly to all labour costs. Although payroll taxes are levied on employers and often labelled as a “tax on jobs”, they are ultimately paid for by employees through lower wages.⁴¹⁴

Generous tax-free thresholds and exemptions have weakened states' payroll tax bases, and increased the economic costs of the tax. Minimum thresholds vary from \$650,000 in Victoria to \$2 million in the ACT.⁴¹⁵ These thresholds exempt most businesses from payroll tax. For example, around 90 per cent of NSW businesses are exempt from payroll tax.⁴¹⁶ States levy payroll tax on just over half of the theoretical payroll tax base.⁴¹⁷

Businesses will pass some the burden of payroll tax onto workers, via lower wages,⁴¹⁸ so some workers are likely to leave businesses that remit payroll tax and seek higher wages in businesses that do not. The influx of workers trying to get jobs in payroll-tax exempt firms means that such businesses will not have to pay as much to attract workers. This means that workers in firms exempt from payroll tax also receive lower incomes than they would have otherwise. This implies a decline in average labour productivity, reducing national income. And all workers, not just those in businesses remitting payroll tax, bear some of the tax burden through lower wages.⁴¹⁹

414. Henry et al. (2010b, pp. 293–294); and IPART (2008, p. 97).

415. NSW Treasury (2018a, p. 14).

416. Henry et al. (2010b, p. 299).

417. A comparison by NSW Treasury (2018a, p. 298) of current payroll tax revenues with the amount that would be collected at current rates from its theoretical base – represented by the national accounts measure of compensation of employees – suggested that around 43 per cent of employee compensation was exempt from payroll tax in 2008.

418. The question of who actually *pays* payroll taxes in Australia remains unresolved. Some Australian studies suggest that consumers pay the tax in the form of higher prices, whereas international evidence suggests workers ultimately pay the tax in the form of lower wages. See ACT Government (2012b, p. 81).

419. Henry et al. (2010b, p. 295).

409. Terrill and Emslie (2017, p. 11).

410. Daley et al. (2018, p. 119).

411. Terrill and Emslie (2017, p. 3).

412. Ibid. (pp. 34–40).

413. ABS (2018d).

Payroll tax thresholds increase firms' administrative costs. And payroll tax thresholds raise costs for firms that operate across state borders. For example, where an employee works in more than one state, there are complex rules for determining which state receives the payroll tax.⁴²⁰

Some argue that threshold exemptions are a barrier to business growth, because the compliance and payroll tax costs provide an incentive to remain small.⁴²¹ However one recent Treasury study suggests that the payroll tax exemption threshold does not appear to act as a disincentive to business expansion.⁴²²

420. Ibid. (p. 298).

421. Ibid. (p. 298).

422. Ralston (2018).

10 Budgets

10.1 Where we are

State budgets are generally in good short-term health. NSW, Victoria, Queensland and Tasmania all posted modest operating surpluses in 2017–18. WA, SA and the ACT all ran modest deficits (Table 10.1).

The NT deficit was more substantial – 2 per cent of Gross State Product (GSP) – and its budget position has substantially deteriorated over the past five years. It attributes this to a decline in its share of the GST pool – which accounts for almost half its revenue – and the impact of falling house prices on stamp duty revenues.⁴²³ WA is the only other jurisdiction where the budget position materially went backwards over the five years.

Governments have used operating surpluses to reduce net debt, which fell as a share of GSP in most states. Some states also used the proceeds from the sale or long-term lease of government assets to pay down debt. NSW netted by far the most from its privatisations, which included two major ports, a desalination plant, electricity generation, and electricity poles and wires.⁴²⁴ NSW largely used the proceeds to retire debt – it is now debt free – and for new infrastructure spending. But there are concerns that some of the asset sales were structured to maximise sale price by reducing future competition, so the sales may result in higher costs to consumers over time (Chapter 2).

In WA, net debt increased substantially over the five years to 2017–18. This followed several years of deficits after the end of the mining boom

Table 10.1: State Scorecard for budgets

	Net operating balance as a share of GSP		Net debt as a share of GSP		Interest and depreciation as a share of GSP	
	%	Change in past 5 years (ppt)	%	Change in past 5 years (ppt)	%	Change in past 5 years (ppt)
NSW	0.7	0.4	−1.6	−4.1	1.4	−0.1
VIC	0.5	−0.1	4.6	−1.1	1.3	−0.2
QLD	0.4	0.3	−0.1	−0.9	1.7	−0.4
WA	−0.5	−0.8	9.0	7.1	1.0	0.2
SA	−0.4	0.7	5.1	−0.4	1.7	0.2
TAS	0.3	1.2	−2.1	−2.6	1.9	−0.1
ACT	−0.4	0.7	3.4	3.1	2.2	0.1
NT	−2.0	−1.9	7.6	−0.9	2.8	0.5
AUS	0.3	0.1	2.2	−0.8	1.4	−0.1

Note: See Appendix A for notes and sources.

423. The NT's GST relativity declined substantially between 2017–18 and 2018–19.

The Commonwealth Government delivered a top-up payment of \$260 million to help address the unanticipated revenue shortfall. Morrison et al. (2018b).

424. Montoya and Ismay (2017). The 2018–19 result also includes the proceeds from the Snowy Hydro sale.

in 2014. Government revenues took a hit from falling mining royalties and declines in revenue from payroll taxes and land transfer duties as the economy slowed. This was exacerbated by the fall in WA's share of GST revenues as the Commonwealth Grants Commission process redistributed record state mining royalties which had already been spent by the state government.⁴²⁵ The WA Government is forecasting a return to surplus in 2020–21 as the result of significant expenditure restraint.⁴²⁶

Unfunded superannuation liabilities are not reflected in the net debt figures but are sizeable in some states. In Tasmania, ACT and the NT unfunded liabilities as a percentage of GSP are substantially higher than the average across all states.⁴²⁷ Interest payments associated with high unfunded liabilities can put pressure on the net operating balance and constrain future borrowing.

The states also have significant capital spending that does not immediately affect net operating balances. The depreciation on this capital spending (and the interest on any borrowings required to fund it) affects net operating balances in future budget years. Interest and depreciation as a share of GSP (including superannuation interest expenses) has been unchanged in most states since 2012–13. Falling interest rates and lower levels of debt have largely offset the effects of stronger capital spending.

10.2 Where we should be

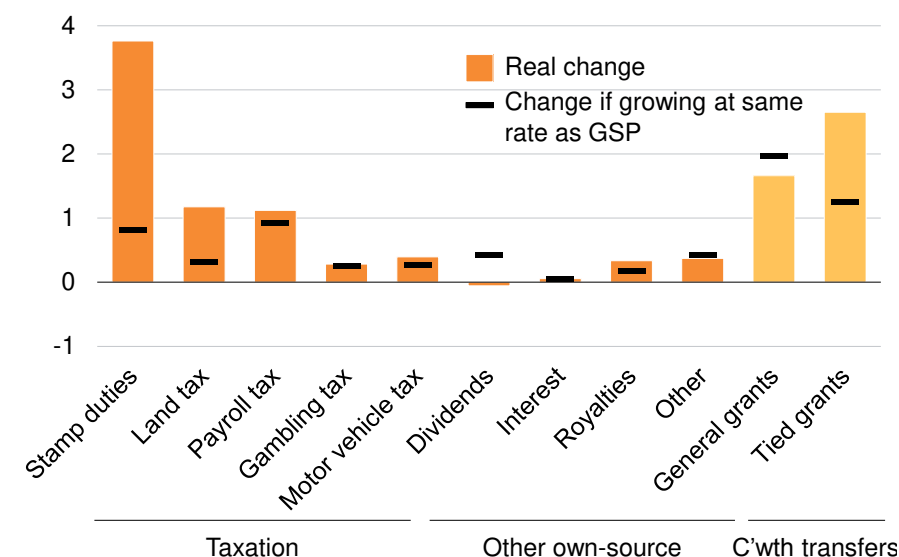
Many state budgets should be in a stronger position given substantial revenue windfalls.

In NSW and Victoria in particular, revenues from land conveyance (stamp) duties and land taxes grew strongly because of the property

boom. In its 2018–19 Budget, the NSW Government estimated that it would collect four times more in additional land conveyance tax and three times more additional land tax than if these collections had simply grown in line with the NSW economy since 2012–13 (Figure 10.1). In Victoria, too, revenues from these taxes substantially outpaced GSP.⁴²⁸

Figure 10.1: Growth in NSW stamp duty revenues outpaced the broader economy

Real change in revenue by source, NSW Government, 2012–13 to 2017–18, billions



Note: 'Other' category includes all revenue which doesn't fall into any of the other categories, as well as non-Commonwealth grants.

Source: Grattan analysis of 2013–14 to 2018–19 NSW budget papers, ABS National Accounts and CPI.

425. Productivity Commission (2018d).

426. Barnes (2018, p. 5).

427. Eslake (2018, pp. 80–81).

428. In Victoria, estimated revenues from land taxes were \$2.7 billion higher and land conveyance duties \$4.5 billion higher in 2017–18 than if these had simply grown at GSP since 2015–16: D. Wood (2018).

The property boom also boosted stamp duty and land tax collections in other states. And all states indirectly benefit from the significant boost in tax collections in Victoria and NSW over time as the Commonwealth Grants Commission processes redistribute some of these revenues. Revenues as a share of the economy have increased in all states and territories since 2012–13.

Higher revenues have partly been used to pay down debt, but in many states have also been used to increase spending. Spending as a share of the economy increased in all states and territories except NSW and Queensland in the five years to 2017–18.

There is a risk that some governments – particularly those with higher levels of debt – will not be able to prudently maintain spending at existing levels should revenues take a hit. State budgets are particularly vulnerable to lower property prices and turnover. Recent budget challenges for the WA and Commonwealth Governments highlight the dangers of locking in permanent spending against temporarily high revenues.⁴²⁹ State government budgets also face substantial longer-term structural challenges. Health spending continues to be biggest contributor to spending growth for state governments. Health spending across the states in 2016–17 was more than \$10 billion higher than if it had simply grown in line with the broader economy over the decade (Figure 10.2). Most of the growth was from providing more and better health treatments, including using new technologies.⁴³⁰

This strong non-demographic growth in health spending is forecast to continue. And the ageing of the population will also increase spending as the large baby boomer cohort reaches the age brackets when health spending per person is much higher.⁴³¹

429. Smales (2016).

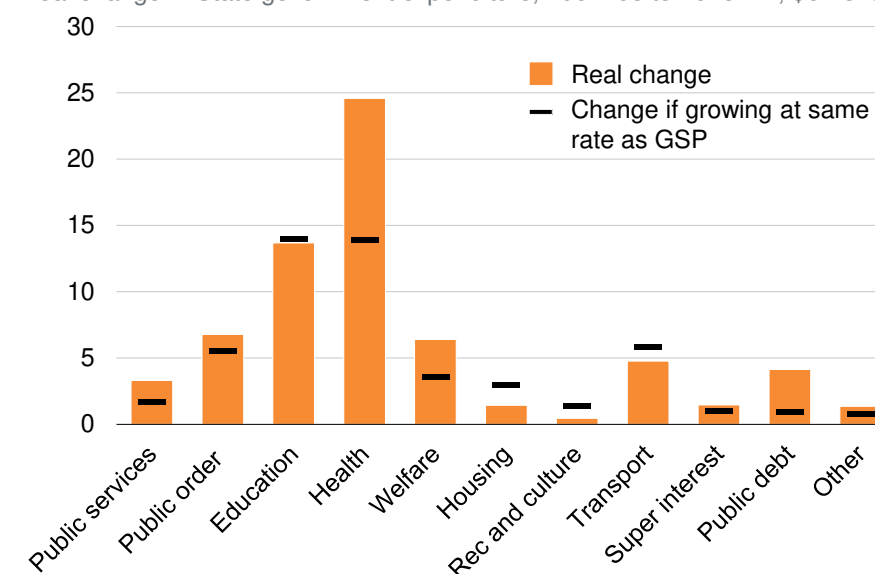
430. Productivity Commission (2013); and Daley et al. (2014).

431. Daley et al. (2014).

State government spending on schools is also likely to rise faster than GDP in years to come. School funding reforms – the so-called Gonski 2.0 funding arrangements – are still being negotiated between the Commonwealth and the states, but will require NSW, Victoria and Queensland to partially match big increases in federal funding for government schools – although they may choose to offset this by reducing funding above the standard to independent schools (Section 6.3.4 on page 66). In addition, the number of school-age children is increasingly rapidly due to the large numbers of young migrants over the past decade.⁴³²

Figure 10.2: Health was the biggest area of spending growth for state governments

Real change in State government expenditure, 2007–08 to 2016–17, \$billions



Source: ABS Government Finance Statistics, General government data.

432. Daley et al. (2018, p. 34).

Infrastructure spending is another likely source of spending pressure in some states. NSW and Victoria now have a significant pipeline of capital projects over the forward estimates and beyond.⁴³³ And a spate of large announcements in the lead-up to the 2018 Victorian election,⁴³⁴ highlights the significant public pressure to increase spending on infrastructure to cope with increasing population and concerns about congestion – even though other policy responses may be cheaper and more effective (Chapter 4).

If interest rates rise – as they are likely to in the medium-term⁴³⁵ – the cost of servicing debt will further compound spending pressures in states with higher debt levels.

The states can't rely on more money from the Commonwealth Government to address these budget challenges. The Commonwealth Government has been running deficits for the past decade and net debt sits at 18.6 per cent of GDP.⁴³⁶ While the Commonwealth budget position is forecast to improve in the short-term, it too faces longer-term structural budget challenges.⁴³⁷

NSW appears to have done better than other states in recognising some of the long-term challenges. It is the only state to publish an Intergenerational Report, which provides long-term projections of the state's economic and fiscal position, see Section 10.3.3 on page 99. It has also introduced a sovereign wealth fund – the NSW Generations

433. In Victoria, capital spending is forecast to average \$10.1 billion a year between 2018–19 and 2021–22, compared to \$4.9 billion a year in the decade to 2014–15: Victorian Department of Treasury and Finance (2018, p. 5). In NSW, infrastructure spending is forecast to average \$21.8 billion a year between 2018–19 and 2021–22, compared to an average of \$16.5 billion the previous four years: NSW Budget 2018–19, Infrastructure Statement, NSW Government (2018d, pp. 1–3).

434. Johnston et al. (2018).

435. Edwards (2018).

436. Treasury (2018, p. 13).

437. Hockey (2015); and Coates and D. Wood (2018).

Fund – with \$3 billion of its balance sheet reserves. The fund is quarantined so the capital contribution can be used only for debt retirement, although 50 per cent of the return on investment has been earmarked for community projects.⁴³⁸

10.3 How to get there

This report makes a range of recommendations that would put state government budgets on a more sustainable long-term footing. Addressing structural challenges will require reforms on both the revenue and the spending side.

Replacing stamp duties with a broad-based property levy, and broadening the base and lowering the rate of payroll tax, would improve the efficiency of the tax mix and reduce the economic drag from state taxes (Section 9.3.1 on page 84). It would also help state budgets, because land taxes are a less volatile revenue base than stamp duties and tend to grow faster than the economy.⁴³⁹

Spending pressures could be reduced by improving the efficiency of public hospitals (Section 7.3.2 on page 70), more rigorous assessment of infrastructure spending (Section 4.3.6 on page 48), and less wasteful spending on ineffective regional development programs (Section 3.3.1 on page 35).

Strong budget frameworks and institutions – including legislated fiscal targets, parliamentary budget offices and long-term budget reporting – would also promote fiscal prudence and long-term budget sustainability.

438. NSW Treasury (2018b, pp. 1–2).

439. Daley et al. (2015b); and Coates (2017).

10.3.1 Set clear fiscal targets and enshrine them in legislation

Fiscal rules or targets are a useful device for helping governments commit to prudent fiscal policies.⁴⁴⁰

All states and territories have some fiscal targets, but they differ in ambition and clarity (Table 10.2 on page 100). For some, it is difficult to assess whether the target has been met – for example, maintaining general government debt as a percentage of gross state product at a *sustainable level* over the medium term (Victoria). For others, the time period for achieving the target is unclear – for example, balance the budget in the *medium-term* (ACT).

In most states, the budget papers explicitly report on whether the targets have been achieved. But in Victoria, while it is still possible to deduce performance against the targets from the budget papers, the reporting is not as clear as in other states and territories.

All states should review their fiscal targets to ensure they are simple, easy to monitor (*i.e.* it is clear whether the target has been met) and aligned with long-term fiscal sustainability.⁴⁴¹

NSW is currently the only state to set out its targets in legislation. The NSW *Fiscal Responsibility Act* sets out its three fiscal objectives and cannot be changed without Parliamentary approval.⁴⁴² Outlining fiscal targets in legislation promotes certainty and accountability – a government can't quietly change a target if it falls short. Other states should legislate their fiscal targets.

440. Pre-commitment can help overcome decision-making bias towards looser fiscal policy, including the political imperatives of election campaigns and short-termism. IMF (2009).

441. Lledo et al. (2018).

442. The Act includes a requirement for a review of the objectives within five years of commencement of the Act. This review is underway.

10.3.2 Establish a parliamentary budget office to give parliamentarians independent policy costings

Independent fiscal institutions – such as parliamentary budget offices – are also useful for promoting sound fiscal policy and sustainable public finances. The number of OECD countries with an independent fiscal body at the national level has tripled since 2008.⁴⁴³

NSW and Victoria are the only states with a parliamentary budget office (PBO). In Victoria, the PBO provides policy costings and advisory services to all members of parliament. In NSW, the PBO's operations are limited to pre-election periods. Its task is to cost the election policies of all the parties.

The Commonwealth PBO provides policy costing and advisory services to federal MPs, as well as independent and non-partisan analysis of the budget cycle and fiscal policy.

The three PBOs have all made a positive contribution to informing the policy debate. Costing election policies and providing a summary of the budget impacts of announced policies improves public awareness of fiscal responsibility and promotes fiscal discipline.⁴⁴⁴

The Commonwealth PBO will prepare and publish such pre-election costings upon request. The Victorian and Commonwealth PBOs both provide a comprehensive summary of the budget impacts of the policies of the major parties after the election.⁴⁴⁵

The broader role of the Victorian and the Commonwealth PBOs in providing confidential costings for parliamentarians outside of the election period has improved the policy-making process. Most notably,

443. Trapp et al. (2016).

444. In NSW, the PBO published pre-election budget impact statements for each leader on the day of the election. NSW Parliament (2018).

445. Office (2018); and PBO (2018).

the process helps the opposition and smaller parties, which don't have the resources of government, to develop and test policy ideas.⁴⁴⁶

Ideally, each state would establish an independent fiscal body to provide policy costings both outside of and during election periods. However, the costs of such a permanent body may be prohibitive for smaller jurisdictions. The ACT Government reached this conclusion in 2009 when it reviewed the merit of establishing a parliamentary budget office.⁴⁴⁷

Lower-cost options, such as the NSW temporary PBO for election campaigns or the ACT approach that allows the ACT Treasury to cost political party commitments for elections at the request of parties,⁴⁴⁸ offer some of the benefits of a permanent PBO.

10.3.3 State governments should work with the Commonwealth to establish a national Intergenerational Report, or periodically produce their own long-term budget projections

The Commonwealth Government produces an Intergenerational Report (IGR) every five years, to assess the long-term sustainability of Commonwealth Government policies.

The report provides insights into the long-term (40-year) fiscal implications of an ageing population and highlights the effects of changes in population size, age profile, participation rates and productivity growth on Australia's future standard of living and public finances.⁴⁴⁹

A major weakness of the IGR is that it looks only at Commonwealth Government finances.⁴⁵⁰ Given the strong inter-dependencies between Commonwealth and State government budget positions, particularly over the longer-term, the IGR gives at best a partial picture of Australia's fiscal sustainability, and at worst a misleading one. For example, the 2015 IGR projections assumed that Commonwealth hospital spending would grow in line with inflation and population growth from 2017–18 (*i.e.* real per person spending would be unchanged for four decades).⁴⁵¹ This was in line with the policy introduced in the 2014 budget (but since amended).⁴⁵² The effect was to make the long-term Commonwealth budget position look more benign. But given the likely trajectory of health spending (Section 10.2 on page 95), the Commonwealth policy implied a rapid increase in state government spending on health and deteriorating state government budget balances – which was not visible in the IGR.

Ideally, state governments would work with the federal government to produce long-term fiscal projections across both levels of government. This would make the IGR a more meaningful assessment of the nation's fiscal sustainability.

But in the absence of such Commonwealth-state cooperation, state governments should periodically publish their own long-term budget projections. NSW already produces its own intergenerational report every five years. The Victorian Public Accounts and Estimates Committee recently highlighted the benefits of intergenerational reporting for state governments and recommended an inquiry into such reporting for Victoria.⁴⁵³

446. ANAO (2014).

447. Rattenbury et al. (2009).

448. The *Electorate Commitment Costing Act 2012* (ACT). See details at: ACT Treasury (2016).

449. Hockey (2015).

450. Wells (2015).

451. Hockey (2015, pp. 62–63).

452. Treasury (2014, p. 11).

453. Pearson et al. (2018, p. 62).

Table 10.2: Fiscal principles or targets by state

State	Expense growth	Budget balance	Debt levels	Super liabilities	Other
NSW	Annual expense growth below long-term average revenue growth		Eliminate unfunded superannuation liability by 2030	Maintain AA credit rating	
VIC		A net operating surplus consistent with maintaining general government net debt at a sustainable level over the medium term	General government debt as a percentage of GSP to be maintained at a sustainable level over the medium term	Fully fund the superannuation liability by 2035	
QLD	Run net operating surpluses so that new general government-sector investment is primarily funded from recurrent revenues		Target a reduction in the general government debt-to-revenue ratio		General government sector own-source revenue at or below 8.5% of GSP. Overall growth in full-time equivalent public servants doesn't exceed growth in population
WA	Maintain disciplined general government expense management through: public sector wage outcomes in line with government wage policy; key service delivery agency recurrent expenditure in line with budgeted expense limits	Progress towards a net operating surplus for the general government sector. Progress towards a cash surplus for the public sector	Reduce the proportion of total public sector net debt held by the general government sector		
SA	Operating expenditure growth limited to trend growth in household incomes	Achieve a net operating surplus every year Maintain net debt-to-revenue ratio at a sustainable level		The defined benefit unfunded superannuation liability will be funded by 2034	
TAS		Annual growth in general government sector operating expenses will be lower than long-term average growth in revenue	Combined average servicing cost of general government debt and defined benefit superannuation liabilities less than 6 per cent of general government cash receipts		

Table 10.2: Fiscal principles or targets by state (continued)

State	Expense growth	Budget balance	Debt levels	Super liabilities	Other
NT	Improve the operating position over budget cycle by ensuring growth in general government operating expenses is declining in real terms (short-term)	<p>Achieve a general government sector net operating surplus that ensures new capital investment is funded through revenues rather than borrowings (medium-term)</p> <p>Maintain general government sector infrastructure spending to at least twice the level of depreciation on average until 2020 (short-term)</p> <p>When the economy returns to historical trends, maintain general government sector infrastructure spending consistent with depreciation expense (medium-term)</p> <p>Achieve an improving fiscal balance at the non-financial public sector over the budget cycle (short-term)</p>	Return non-financial public sector debt as a percentage of revenue to the long term average of 40 per cent		
ACT		Balance the budget over the medium-term			

11 Institutional reform

11.1 Where we are

Donations and lobbying are vital components of a healthy democracy. But without adequate checks and balances, there's a risk that mixing money and access with politics can translate into undue influence and poor policy. To protect the public interest, states should ensure wealthy or well-connected groups can't use these tools to promote their own agendas at the expense of the public interest.⁴⁵⁴

Strong institutions are a necessary safeguard to protect political processes. Measures to increase transparency and accountability in policy making are key, as is making sure all political actors operate on a level playing field.

States and territories have made good headway on these fronts over the past five years (Table 11.1), despite policy inertia at the federal level.

Transparency measures

Progress towards transparency on lobbying in the states and territories is promising. NSW, Queensland and the ACT now publish ministerial diaries, so voters can see who their elected representatives are meeting with, and when. All jurisdictions except the NT have a lobbyists register, and Queensland and SA require lobbyists to publish details on which ministers and shadow ministers they have contacted.

Transparency of political donations is better in most states and territories than at the federal level. NSW, Victoria, Queensland and the ACT require donations of \$1,000 or more to be publicly declared. Only

Table 11.1: State Scorecard for institutional reform

	Transparency measures		Accountability		Limits on campaign finance	
	Score (A: best, E: worst)	Change in past 5 years	Score (A: best, E: worst)	Change in past 5 years	Expenditure caps or donations caps?	Change from previous 5 years
NSW	A	↑	A	↑	Both	—
VIC	B	↑	B	↑	Donations caps	↑
QLD	A	↑	A	↑	Neither	↓
WA	C	—	C	—	Neither	—
SA	B	↑	C	↑	Expenditure caps	↑
TAS	E	—	C	↑	Expenditure caps	—
ACT	A	↑	D	↑	Expenditure caps	—
NT	E	—	C	↑	Neither	—

Notes: The ACT strengthened expenditure caps on parties, but weakened caps on third party political campaigners and removed donations caps, resulting in neutral change. Tasmania has expenditure caps in place for Legislative Council elections only. See Appendix A for details.

Sources: Grattan analysis of state electoral acts, ministerial codes of conduct, and other sources. See Appendix A for a full list.

454. See D. Wood et al. (2018b) for a discussion.

Tasmania has the same threshold as the Commonwealth (\$13,800).⁴⁵⁵ Most states and territories require political parties to aggregate small donations from the same donor, and declare them once the sum is more than the disclosure threshold.⁴⁵⁶

Some states also make their donations data public very quickly. During election campaigns, donations must be declared within seven days in Queensland,⁴⁵⁷ SA⁴⁵⁸ and the ACT,⁴⁵⁹ and within 21 days in NSW⁴⁶⁰ and Victoria.⁴⁶¹

Queensland and SA have recently introduced an online disclosure system, which creates easily searchable and relatively clean datasets. Victoria will use a similar online system under the state's new political donations laws.⁴⁶²

Some states and territories need to do more: Tasmania follows the Commonwealth political donations regime, and scores poorly on transparency as a result.⁴⁶³

455. At the time of writing, the disclosure threshold in Victoria was also \$13,800. But new legislation will lower the threshold to \$1,000, effective from 25 November 2018. Unless stated otherwise, this chapter assesses Victoria's institutional framework based on the new legislation.

456. This is not required in Tasmania or the NT.

457. Excluding weekends. Disclosures are made every six months during non-election periods.

458. Disclosures are made every six months during non-election periods.

459. Disclosures are made every three months during non-election periods.

460. And every six months otherwise.

461. During an election or otherwise.

462. ABC Fact Check (2018a).

463. Tasmania is reviewing its Electoral Act 2004. The review is considering state-based disclosure rules and the level of regulation of third parties, as well as other minor amendments. Department of Justice Tasmania (2018). Reform of the Tasmanian donations regime is overdue: a parliamentary inquiry in 2015 found serious gaps in the state's disclosure laws, but the inquiry's chair says none of the recommendations were enacted. The lack of transparency on donations attracted significant attention during the 2018 state election campaign, when

WA and the NT have low thresholds for disclosure (\$2,500 and \$1,500 respectively), but disclosures are made public only once a year.⁴⁶⁴

Accountability measures

The states and territories have set clear standards for the ethical behaviour of ministers and members of parliament. All have a ministerial code of conduct. And all have a code of conduct for parliamentarians,⁴⁶⁵ or are close to adopting one.⁴⁶⁶

But not all codes are created equal. There is independent oversight of the ministerial codes of conduct only in NSW and Queensland.⁴⁶⁷

The WA and NT codes have been criticised for lacking teeth.⁴⁶⁸ And in all states and territories, the Premier or the Parliament ultimately determine sanctions for misconduct. Like codes between pirates, state and territory codes of conduct are 'more like guidelines than actual rules'.

gambling industry leaders took a high-profile role. Voters went to polls without knowing who donated how much to whom, and they won't find out until next year. Burgess (2018) and D. Wood et al. (Appendix A 2018b).

464. NT Electoral Commission (2016); and WAEC (2018).

465. Parliamentary codes of conduct may not cover members in the Legislative Council, *e.g.* in WA. NSW has a separate code of conduct for members of the Upper House.

466. The House of Assembly in Tasmania passed a motion earlier this year to adopt a code of conduct for all MPs. The code is expected to be in force by the end of the year. ABC (2018).

467. And independent oversight is only partial in both states. The integrity commissioner in Queensland conducts random checks to assess compliance with the code, but ultimately refers misconduct to the Premier. Queensland Department of the Premier and Cabinet (2016). The ICAC in NSW can investigate serious breaches of the NSW ministerial code, which may constitute corrupt conduct under certain circumstances O'Farrell (2011). But the NSW Premier holds ultimate responsibility for enforcing the code and determining sanctions.

468. *e.g.* Hondros (2018) and Parish (2017).

All states and the ACT ban ministers from taking lobbying roles within 12 months of leaving office. The NT does not. Most states and territories have a lobbyists register that covers lobbyists who work on behalf of third-party clients (but not in-house lobbyists who are employed directly as government relations advisors).⁴⁶⁹

State and territory electoral commissions are responsible for independently enforcing rules about political donations disclosures. Some clearly take a proactive role. For example, the NT Electoral Commission (NTEC) once referred a matter of serious non-compliance to police, who investigated the case as a potential breach of the law.⁴⁷⁰

People or organisations that do the wrong thing face serious sanctions in some states. For instance, the Electoral Act in NSW contains provisions for custodial sentences and substantial fines for breaches of the rules.⁴⁷¹ Parties that fail to disclose may have their public funding cut. The amounts withheld can be large: the NSW Electoral Commission withheld \$4.4 million for a particularly egregious case of non-compliance in 2016.⁴⁷² And a person caught intentionally circumventing the law in NSW is liable to ten years in prison.⁴⁷³ Similar provisions are in Victoria's new legislation on political donations.

469. Victoria has a register of in-house lobbyists who used to be ministers, or who used to hold important policymaking positions: Victorian Public Sector Commissioner (2018).

470. Wild (2015). A Senate inquiry into this and similar issues of non-compliance suggested that the NTEC and state electoral commissions seemed to be 'much more proactive' than the Australian Electoral Commission in pursuing these issues. Senate Finance and Public Administration Committees (2016, p. 25).

471. *Electoral Act 2018* (NSW). ABC Fact Check (2018b).

472. Robertson and Nicholls (2016). \$3.8 million was returned to the party once the issue was rectified.

473. The maximum fine for an individual who breaks the rules is \$44,000. *Electoral Funding Act 2018* (NSW), No 20.

But enforcement is weaker in other states and territories. The maximum penalty for breaking the rules is just \$7,500 (or six months jail) in the ACT,⁴⁷⁴ \$10,000 in SA,⁴⁷⁵ and \$15,000 in WA.⁴⁷⁶

Except for the ACT,⁴⁷⁷ all states and territories have an anti-corruption or integrity commission. Many of the commissions have investigative powers: for instance, ICAC in NSW has significant powers to conduct investigations into serious and systemic corruption by parliamentarians.⁴⁷⁸ Others take a more advisory role. The main functions of Queensland's Integrity Commissioner (QIC) include providing confidential ethics advice, setting ethical standards, and raising public awareness of ethics and integrity matters.⁴⁷⁹

Other checks on special interests

Caps on political expenditure during election campaigns are a vital check on the influence of money in politics.⁴⁸⁰ Many states have implemented this important reform: NSW, SA, Tasmania,⁴⁸¹ and

474. If the offender is a corporation the penalty is higher. Cantwell (2018, p. 30).

475. *Electoral Act 1985* (SA) s 130ZZE.

476. *Electoral Act 1907* s 175U.

477. Legislation for an anti-corruption commission is under review in the ACT. Hayne (2018).

478. ICAC (2018). Anti-corruption commissions can also conduct investigations into corruption among elected officials in other states, for instance in Victoria (IBAC) and in SA (ICAC).

479. <https://www.integrity.qld.gov.au/>. The QIC also regulates lobbyist activity and maintains the lobbyists register.

480. Expenditure caps reduce the reliance of major parties on individual donors. If parties were obliged to spend less, each donor would become individually less important (because they could be replaced by other donors). Caps also level the playing field for political actors, by ensuring small groups won't be pushed out of the political fray by loud and well-resourced groups. See D. Wood et al. (2018b) for a discussion.

481. Tasmania has expenditure caps in place for candidates running in Legislative Council elections only. Political parties are not allowed to incur expenditure in relation to these elections. Muller (2017).

the ACT have expenditure caps.⁴⁸² Unfortunately, others have gone backwards – for instance, the Queensland Government repealed expenditure caps in 2014.⁴⁸³

Some states also cap the amount donors can give to parties.⁴⁸⁴ In NSW, donations from individual entities are capped at \$6,300 per party per year.⁴⁸⁵ In Victoria the cap is \$4,000 for the term of government.⁴⁸⁶ Caps on donations provide a check on special interests' influence, but come with additional risks.⁴⁸⁷

11.2 Where we should be

All states and territories should match best practice across the nation.

To improve transparency, jurisdictions that don't publish ministerial diaries should do so. As in Queensland and SA, lobbyists should publish their contacts with ministers or shadow ministers. And the public should get more visibility of in-house lobbyists, as is the case in Victoria.

The disclosure threshold for donations should be no higher than \$5,000 in all states and territories, and donations should be disclosed in a

timely fashion in all jurisdictions (preferably within seven days during election campaigns, but at least within 21 days).

States and territories should release donations disclosures via an online portal that validates the data and releases it in an accessible format, as in SA and Queensland.⁴⁸⁸

Codes of conduct should be independently administered in each state and territory. Meaningful sanctions should apply (reliably) when ministers or MPs do the wrong thing.

The electoral commission in each state and territory should be required to withhold public funding from parties that fail to disclose political donations correctly. Individuals who wilfully breach the disclosure rules should face meaningful sanctions (large fines or jail).

All states and territories should cap political expenditure during election periods. Third-party campaigners should be included in the caps, but care should be taken to ensure they are not unduly burdened by the limits on spending (as some have argued is the case in NSW),⁴⁸⁹ There are also potential issues when the legislation allows third-party campaigners to run joint campaigns without it affecting their caps (as is the case in the ACT).⁴⁹⁰

11.3 How to get there

It's up to political parties to implement institutional reform. This can make it tricky to get important legislative change through parliament. Sometimes reforms that are in the public interest go directly against a

482. Victoria's new political donations laws require an independent expert panel to review the new scheme within at least 12 months of the 2022 election and make a recommendation about whether the Act should be amended to provide for a cap on political expenditure.

483. *Electoral Reform Amendment Act 2014* (Qld).

484. The ACT had a cap on donations of \$10,000 per financial year, but repealed it in 2015. *Elections ACT* (2016).

485. NSW Electoral Commission (2017).

486. Under the new legislation. ABC Fact Check (2018b).

487. We don't recommend implementing donations caps, because expenditure caps achieve the same purpose with fewer risks (see D. Wood et al. (2018b, p. 66)). But we do track whether a state has donations caps, because caps provide a check on the influence of political donations, and (despite their costs) they are a popular tool for doing so.

488. This will soon be the case in Victoria. ABC Fact Check (2018a).

489. Recent changes to NSW expenditure caps are being challenged in the High Court by third-party campaigners who say the new rules unduly burden the implied freedom of political communication in the Constitution. Whitbourn (2018).

490. *Elections ACT* (2016).

party's interest. Reform is often politically polarising; some changes help one party but hinder others.

Despite the challenges, success stories from the states and territories show that acts of political leadership can foster significant progress.

Queensland has substantially increased transparency. In 2013, it became the first jurisdiction in Australia to publicly release ministerial diaries. The 2017 Queensland election was the first election in with 'real-time' disclosures of political donations. 'Transparency and accountability' in government has become a rallying cry of both the Queensland LNP and Queensland Labor, and this has encouraged healthy competition between the parties.

NSW implemented a suite of important electoral reforms after an independent review⁴⁹¹ in 2014 found significant holes in the state's political donations regime. The Government accepted in-principle 49 of the 50 recommendations in the report.⁴⁹² They have since tightened enforcement of the political donations regime, and shortened the time-frames for disclosing donations.

Sometimes bipartisanship *is* possible. A code of conduct for all MPs – largely written by independent MP Bob Such – passed the House of Assembly in SA with support from both major parties.⁴⁹³ Tasmania has a similar story.⁴⁹⁴

When bipartisanship is not possible, minor parties or crossbenchers might provide support.⁴⁹⁵ The Victorian Government's sweeping changes to the state's political donations regime looked doomed after

the Opposition withdrew support earlier this year.⁴⁹⁶ Minor parties ultimately carried the Bill over the line.⁴⁹⁷

Parties must have the appetite for what can be a bruising fight for change. Sometimes compromise will be necessary to get important legislation passed. But political leaders who get this right will reap the rewards. It's clear that the voters want their government – local, state, or federal – to put institutional reform high on the agenda.⁴⁹⁸

Our report *A crisis of trust* found that major parties are leaking votes to minor parties, who promise to 'clean up politics'. If the major parties can't convince voters they are taking this issue seriously, they may find that democratic electorates will rebuild governments without them.

491. The NSW Government commissioned the review. Schott et al. (2014).

492. NSW Government (2015).

493. MacLennan (2016).

494. ABC (2018).

495. Grattan Institute's 2018 report, *A crisis of trust*, found that minor parties – and their voters – have a strong desire for representative reform.

496. Willingham (2018).

497. Anderson (2018).

498. In 2017, leadership and the quality of government ranked as the second-most important problem facing Australia among survey respondents, after the economic issues. Markus (2017).

Appendix A: Metric details

A.1 Economic Development

Real GSI per capita (\$1,000)

Source: ABS (2017). 5220.0 – *Australian National Accounts: State Accounts, 2016–17, Table 1. Gross State Product, Chain volume measures and current prices.*

Most recent data point: 2016–17.

Change metric: Real percentage point change per year over a five year period from 2011–12.

Note: Chain Volume Measure.

Employment rate for 25–64 year-olds (%)

Source: ABS (2018). 6291.0.55.001 – *LM1 – Labour force status by Age, Greater Capital City and Rest of State (ASGS), Marital status and Sex, February 1978 onwards.*

Most recent data point: August 2018.

Change metric: Percentage point change over a five year period from August 2013.

Note: Employment rate is the percentage of all people aged 25–64 who are working. Younger people excluded because young people in education or training would be considered ‘not employed’.

Not in Education Employment or Training, 19–24 year-olds (%)

Source: ABS (2017). 2073.0 *Census of Population and Housing: TableBuilder Pro, Australia, 2016*

Most recent data point: August 2016.

Change metric: Percentage point change over a five year period from August 2011.

Note: The NEETAWQ rate is the percentage of Australian citizens aged 19 to 24 who are:

- not in employment: labour force status is *unemployed* or *not in the labour force*; and
- not in education or training: full-time/part-time student status is *not attending*; and
- without qualification: non-school qualification level is *not applicable*.

Overseas visitors and those who did not answer the question are ignored from the total. People who are *on leave* from employment are considered employed. Prior qualifications include *Certificate Level* to *Postgraduate Degree Level*.

A.2 Regional Development

Per capita incomes in regional areas (\$1,000)

Source: ABS (2018). 6524.0.55.002 *Estimates of Personal Income for Small Areas, 2011–16, Total income, 2010–11 to 2015–16, Table 1 Estimates of Personal Income, Total Income, 2011–16, Australia (a), State and Territory.*

Most recent data point: 2015–16.

Change metric: Real percentage point change per year over a five year period from 2010–11.

Note: Regional incomes should not be compared to the GSI figure above since they are a measure of income that does not include all government services and business savings.

Deviation in regional incomes from city average (%)

See “Per capita incomes in regional areas”.

Deviation in regional employment rate from city average (%)

See “Employment rate for 25–64 year-olds”.

A.3 Transport

Median distance to work in capital cities (kilometres)

Source: Grattan analysis of ABS (2017). *2073.0 Census of population and housing, 2016*, TableBuilder Pro and ABS (2012). *2073.0 Census of population and housing, 2011*, TableBuilder Pro.

Most recent data point: August 2016.

Change metric: Percentage change over a five-year period from August 2011.

Note: Commute distance is the bee-line distance between origin and destination, where the origin is the centroid of the SA2 where the worker usually resides, and the destination is the centroid of the destination zone that contains their place of work. The Australia-wide figure is the median across workers in all eight greater capital city regions.

Proportion of commutes by walking and cycling in capital city (%)

Source: Grattan analysis of ABS (2017). *2073.0 Census of population and housing, 2016*, TableBuilder Pro and ABS (2012). *2073.0 Census of population and housing, 2011*, TableBuilder Pro.

Most recent data point: August 2016.

Change metric: Percentage point change over a five-year period from August 2011.

Note: Active transport includes trips to work by bicycle or by walking only. The total number of commutes includes those who worked at home but excludes those who did not go to work on Census day and those who did not state how they got to work. The active transport measure does not include cycling commutes that were made in combination with another mode, but adding these trips makes little

difference to these metrics. The Australia-wide figure is the median across workers in all eight greater capital city regions. The decline in the share of commutes by active transport cannot be explained by Census-day weather. In most capital cities, the weather was just as or more conducive to people taking active transport in 2016 than 2011. The exception was Perth, which had 2.4mm more rain on Census day in 2016 than it had on Census day in 2011 (Bureau of Meteorology (2018)).

Number of post-completion reviews published in past 4 years

Source: Grattan analysis of BITRE (2018) and VicRoads (2018b).

Most recent data point: October 2018.

Note: This metric identifies project reviews that were published in the past 4 years, regardless of when the project was completed. Metrics were determined through email correspondence with relevant state departments and agencies, and through a desktop review of information available on the websites of the relevant departments and agencies. As such, a post-completion review that was published but is no longer available online may not have been captured. The one review identified for the ACT is the ACT/Sutton Federal Highway duplication, of which around one-half of the project was in NSW. Given that the extent of a post-completion review's depth and quality can vary, this exercise involves judgement. For all states other than Victoria, projects counted towards this metric are all from BITRE (2018). One of the projects included in BITRE (ibid.) – Victoria's Goulburn Valley Highway project – was excluded from our metrics, on grounds that the published evaluation was not provided and the published summary of the evaluation was very limited. But even among other case studies included in BITRE (ibid.), the depth and quality of the review varies significantly. For Victoria, six of the seven reviews were very brief (1–2 page) evaluations of relatively small projects published by VicRoads. Strictly speaking, these evaluations are not post-completion evaluations as defined by BITRE (which determine the accuracy or quality of the

original cost-benefit analysis), nor do they all set out the quantifiable objectives of the project and whether those objectives were met. Nevertheless, given the smaller scale of most of these projects, these less detailed reviews may be appropriate.

A.4 Housing

Housing per 100 people aged 20 or over

Source: ABS (2018). *2016 Census – Counting Persons, Place of Usual Residence (MB)*; ABS (2018). *2016 Census – Counting Dwellings, Place of Enumeration (MB)*; ABS (2018). *2011 Census – Counting Persons, Place of Usual Residence (MB)*; ABS (2018). *2011 Census – Counting Dwellings, Place of Enumeration (MB)*.

Most recent data point: Census 2016

Change metric: Percentage point change over a five year period from August 2011.

Note: The housing stock is calculated as the sum of occupied and unoccupied private dwellings.

Share of bottom 40% of income-earners in rental stress

Source: ABS (2017) 41300, Table 22, *Housing Occupancy and Costs, Australia, 2015–16*.

Most recent data point: 2015–16

Change metric: Percentage point change over a four year period from 2011.

Note: The bottom 40% of income-earners is determined from equivalised household disposable incomes excluding Rent Assistance. The 1st and 2nd percentile are excluded as these households may be under-reporters who exhibit high wealth and expenditure characteristics. Rental stress is defined as spending more than 30% of total income on rents.

State homelessness rate per 10,000 people

Source: ABS (2018). *2016 Census of Population and Housing: Estimating homelessness*.

Most recent data point: Census 2016

Change metric: Percentage point change over a five year period from August 2011.

Note: The ABS definition of homelessness includes: persons living in improvised dwellings, tents, or sleeping out; persons in supported accommodation for the homeless; persons staying temporarily with other households; persons living in boarding houses; persons in other temporary lodgings; and persons living in 'severely' crowded dwellings.

A.5 School education

Progress, Year 3–5 NAPLAN (months)

Source: Australian Curriculum Assessment and Reporting Authority (ACARA) (2017). *School-level NAPLAN data, 2010–2016*.

Most recent data point: 2016.

Note: Months of learning, compared to national average, average of reading and numeracy, 2010–12 to 2014–16 cohorts, adjusted for socio-economic background.

Students in top two NAPLAN bands, Year 9 (%)

Source: Australian Curriculum Assessment and Reporting Authority (ACARA) (2017). *NAPLAN National Report for 2017*; Australian Curriculum Assessment and Reporting Authority (ACARA) (2017). *NAPLAN National Report for 2012*

Most recent data point: 2017.

Change metric: Percentage point change over a five year period since 2012.

Note: Average of reading and numeracy.

Students at or below NAPLAN national minimum standard, Year 9 (%)

See “Student in top two NAPLAN bands, Year 9 (%)”.

Government funding to state schools as percentage of target (%)

Source: Grattan Institute New Compact Funding Model, as discussed in Goss, P., Sonnemann, J., Griffiths, K., and Chivers, C., 2016, *Circuit breaker: a new compact for school funding*, Grattan Institute.

Most recent data point: 2017.

Change metric: Percentage point change over a three year period since 2014.

Note: Target determined using 2014 Student Resourcing Standard formula.

A.6 Health

Avoidable mortality rate, capital city areas (per 100,000)

Source: ABS (2018). *Causes of Death Data: Customised Report*

Most recent data point: 2016.

Change metric: Reduction in five years (%).

Note: Avoidable mortality rate is age-sex standardised.

Avoidable mortality rate, regional areas (per 100,000)

See “Avoidable mortality rate in capital city areas”.

Average cost per weighted patient treated (\$1,000)

Source: Steering Committee for the Review of Government Service Provision (2013) *Report on government services 2013*, Ausinfo, Table 10A.52; Steering Committee for the Review of Government Service Provision (2018) *Report on government services 2018*, Ausinfo, Table 12A.56.

Most recent data point: 2015–16.

Change metric: Change in the past five years (%).

Median waiting time (days)

Source: AIHW (2017). *Admitted patient care 2015–16: Australian hospital statistics*. Cat no. HSE 185, Canberra.

Most recent data point: 2016–17.

Change metric: Change in the past five years (%).

A.7 Energy

Average residential retail electricity price (cents/kWh)

Source: ACCC (2018). *Restoring Electricity Affordability and Australia's Competitive Advantage*, for NSW, VIC, QLD, SA and TAS; AEMC (2017). *2017 Residential Electricity Price Trends*, for WA, NT and ACT. The change in electricity prices since 2012–13 is calculated for each state based on capital city indices using ABS (2018). *6401.0 – Consumer Price Index, June 2018, Table 9. CPI: Group, Sub-group and Expenditure class, index numbers by capital city*.

Most recent data point: 2017–18.

Change metric: Real change since 2012–13.

Note: Includes GST. Expressed in real 2017–18 dollars.

Emissions intensity of grid-purchased electricity (tonnes of CO₂e/MWh)

Source: Australian Government (2018). *National Greenhouse Accounts Factors*.

Most recent data point: 2016–17.

Change metric: Change since 2011–12.

Note: Based on full fuel cycle emissions.

Unplanned outages (average annual minutes per customer over the last five years)

Source: Grattan analysis based on information in distribution network regulatory information notices published by the Australian Energy Regulator (AER) and network performance reports published by the Western Australian Economic Regulation Authority (ERA).

Most recent data point: The period 2012–13 to 2016–17 inclusive for networks in all jurisdictions except Victoria; 2013–2017 calendar years inclusive for Victoria.

Change metric: Change from the prior five year period (2007–08 to 2011–12 inclusive for networks in all jurisdictions except Victoria; 2008 to 2013 calendar years inclusive for Victoria).

Note: Calculations use metric DQS0101 in AER economic benchmarking regulatory information notices, and non-normalised unplanned distribution outages in ERA performance reports.

A.8 Taxes

Share of state taxes collected from tax bases with high economic costs (%)

Source: KPMG (2011). *Economic Analysis of the Impacts of Using GST to Reform Taxes*; KPMG (2010). *CGE Analysis of the Current Australian Tax System*; ABS (2018). *5506.0 – Taxation Revenue, Australia, 2016–17*.

Most recent data point: Taxation Revenue 2016–17

Change metric: Percentage point change over a five year period from 2011–12.

Note: Taxes with high economic cost are defined as those taxes with an average excess burden per dollar of taxation greater than or equal to 30 cents. As the more recent source, KPMG (2011) analysis of average excess burdens is used for all taxes except for ‘Stamp duties excluding motor vehicles and real property’, where the analysis is from KPMG

(2010). Data source changed for Tasmania following consultation with the Tasmanian government.

A.9 Budgets

Net operating balance as a share of GSP

Source: ABS (2017). *5220.0 – Australian National Accounts: State Accounts, 2016–17, Table 1. Gross State Product, Chain volume measures and current prices*; NSW Government (2018). *Budget Statement 2018–19, Budget Paper No. 1*; Victorian Government (2018). *Victorian Budget 18/19, Statement of Finances*; Victorian Government (2014). *Victorian Budget 2014–15, Budget Paper No.2*; Queensland Government (2018). *Queensland Budget 2018–19, Budget Paper No.2*; Government of Western Australia (2018). *State Budget 2018–19, Budget Paper No.3*; Government of Western Australia (2014). *2014–15 Budget, Budget Paper No.3*; Government of South Australia (2017). *Mid-year Budget Review*; Tasmanian Government (2018). *The Budget 2018–19, Budget Paper No 1*; Tasmanian Government (2013). *The Budget 2013–14, Budget Paper No 1*; NT Government (2018). *Budget Strategy and Outlook 2018–19, Budget Paper No. 2*; NT Government (2013). *Budget Strategy and Outlook 2013–14, Budget Paper No. 2*; ACT Government (2018). *Budget 2018–19, Budget Paper 3*; ACT Government (2013). *Budget 2013–14, Budget Paper 3*

Most recent data point: FY2018.

Change metric: Percentage point change over a five year period from FY2013.

Note: GSP historical values only go up to FY2017. GSP in FY2018 for each state is calculated by growing FY2017 GSP by the 5 year compound annual growth rate.

Net debt as a share of GSP

See ‘Net operating balance as a share of GSP’

Interest and depreciation as a share of revenue

See 'Net operating balance as a share of GSP'

A.10 Institutional Reform

We have created an institutional 'score card' for each of the states and territories, which measures whether they have policies that promote transparency and accountability on donations, lobbying, and other tools of special interest influence.

Like grades on a school report, we have marked the states and territories with A as best, and F as worst. We looked at five policies that improve transparency and five policies that improve accountability (listed below) to determine the final scores.

Transparency:

- The donations disclosure threshold is \$5,000 or lower.
- Donations data is released within a month during election periods, and at most every six months otherwise.
- Donations from the same donor under the threshold must be aggregated and disclosed when they reach the threshold.
- Ministers are required to publish their diaries.
- Lobbyists are required to register on a publicly available record.

Accountability:

- The state or territory has codes of conduct for ministers and all members of parliament.
- Independent oversight of the ministerial code of conduct (*e.g.* by an integrity commission).

- There is a ban on former ministers taking up a lobbying role for at least 12 months after leaving office (a 'revolving door ban').
- Penalties for non-disclosure of donations are salient (*e.g.* max penalty is at least \$25,000, or non-compliant parties may have their public funding cut).
- The state or territory has an anti-corruption or integrity commission.

Table A.1 and Table A.2 on the next page show how the states and territories score against these criteria. States and territories that have implemented all five measures receive an A, and those that have none of them would receive an F (the lowest score received by any state or territory was an E).

In a third metric, we list whether a state has expenditure caps or donations caps (Table 11.1 on page 102).

Change metrics

We categorise positive change (↑ in Table 11.1) as any improvement to any of the items listed above, without any weakening of other measures. Negative change (↓ in Table 11.1) is the inverse. Neutral or no change (– in Table 11.1) is where no change occurred, or conflicting changes occurred (*e.g.* lowering the donations disclosure threshold but lengthening the due dates for disclosures to be made public).

Table A.1: Policies to increase transparency in the states and territories

State	Donations disclosure threshold \$5,000 or lower	Aggregation under the threshold	Timely disclosure of donations	Ministers publish diaries	Lobbyists register	Score
NSW	✓	✓	✓	✓	✓	A
VIC	✓	✓	✓	✗	✓	B
QLD	✓	✓	✓	✓	✓	A
SA	✓	✓	✓	✗	✓	B
WA	✓	✓	✗	✗	✓	C
TAS	✗	✗	✗	✗	✓	E
NT	✓	✗	✗	✗	✗	E
ACT	✓	✓	✓	✓	✓	A

Sources: State and territory Electoral Acts, Lobbying codes of conduct, and DPC websites.

Table A.2: Policies to increase accountability in the states and territories

State	Code of conduct for ministers and all MPs	Ministerial code independently administered	Revolving door ban	Salient sanctions for circumventing donations disclosure rules	Independent anti-corruption or integrity commission	Score
NSW	✓	✓	✓	✓	✓	A
VIC	✓	✗	✓	✓	✓	B
QLD	✓	✓	✓	✓	✓	A
SA	✓	✗	✓	✗	✓	C
WA	✓	✗	✓	✗	✓	C
TAS	✓	✗	✓	✗	✓	C
NT	✓	✗	✗	✓	✓	C
ACT	✓	✗	✓	✗	✗	D

Notes: Some parliamentary codes of conduct do not include members of the Upper House, e.g. in WA. NSW has a separate code of conduct for the Legislative Council.

Sources: State and territory Electoral Acts, ministerial and MP codes of conduct, news sources, lobbying codes of conduct, anti-corruption or integrity commission websites and DPC websites.

Bibliography

- AAA (2018). *Road congestion in Australia – 2018*. Australian Automobile Association. <https://www.aaa.asn.au/wp-content/uploads/2018/10/AAA-Congestion-Report-2018-FINAL.pdf>.
- ABC (2018). "Code of conduct to be introduced for Tasmanian MPs after full support from Parliament". *ABC Online*. <https://www.abc.net.au/news/2018-08-23/code-of-conduct-for-mps-set-to-be-adopted/10153716>.
- ABC Fact Check (2018a). "Fact check: Is Victoria set to legislate the strictest political donation laws in the country?" *ABC Online*. <https://www.abc.net.au/news/2017-10-17/fact-check-victorias-political-donations-laws/9042818>.
- (2018b). "Fact check: Does Tasmania have the weakest political donation laws in the nation?" *ABC Online*. <https://www.abc.net.au/news/2018-02-12/fact-check-does-tasmania-have-weakest-political-donation-laws/9407872>.
- ABS (2006). *Census of Population and Housing, 2006*. Canberra. http://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2011/quickstat/0.
- (2011). *Census of Population and Housing, 2011*. Canberra. <http://www.abs.gov.au/websitedbs/censushome.nsf/home/historicaldata2011?opendocument&navpos=280>.
- (2014). *Australian Historical Population Statistics, 2014*. Cat.3105.0.65.001. Australian Bureau of Statistics. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3105.0.65.001>.
- (2015). *Government Finance Statistics, Australia, 2016-17*. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5512.0Main+Features12016-17?OpenDocument>.
- (2016). *Census of Population and Housing, 2016*. Canberra. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/ViewContent?readform&view=productsbyCatalogue&Action=Expand&Num=2.1>.
- (2017a). *Patient Experiences in Australia: Summary of Findings, 2016-17*. English. 4839.0. Cat. 4839.0. Canberra. <http://www.abs.gov.au/ausstats/abs@.nsf/cat/4839.0.55.001>.
- (2017b). *2016 Census QuickStats: Victoria*. http://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/2?opendocument.
- (2017c). *Taxation Revenue, Australia, 2015-16*. Cat. 5506.0. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/5506.02015-16?OpenDocument>.
- (2017d). *Australian System of National Accounts, 2016-17*. Cat. 5204.0. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/5204.02016-17?OpenDocument>.
- (2018a). *Australian National Accounts: National Income, Expenditure and Product, June 2018*. Cat. 5206.0. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/5206.0Jun%202018?OpenDocument>.
- (2018b). *Labour Force, Australia, Detailed, Quarterly, May 2018*. Cat. 6291.0.55.003. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6291.0.55.003May%202018?OpenDocument>.
- (2018c). *Innovation in Australian business 2016-17*. Cat 8158.0. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/8158.0>.
- (2018d). *Taxation Revenue, Australia, 2016-17*. Cat. 5506.0. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/5506.02016-17?OpenDocument>.
- (2018e). *Engineering Construction Activity, Australia, Jun 2018*. Cat. 8762.0. <http://www.abs.gov.au/AUSSTATS/ab@.nsf/DetailsPage/8762.0Jun%202018?OpenDocument>.
- (2018f). *Causes of Death Data: Customised Report*. Canberra.

- ACCC (2018a). *Restoring electricity affordability and Australia's competitive advantage*. <https://www.accc.gov.au/publications/restoring-electricity-affordability-australias-competitive-advantage>.
- (2018b). *Gas inquiry 2017-2020: interim report*.
- ACT Auditor-General (2017). *Performance Information in ACT Public Schools*. ACT Audit Office. https://www.audit.act.gov.au/__data/assets/pdf_file/0017/1180007/Report-No-4-of-2017-Performance-information-in-ACT-public-schools.pdf.
- ACT Government (2012a). *Transport for Canberra: transport for a sustainable city 2012-2031*. ACT Government. https://www.transport.act.gov.au/__data/assets/pdf_file/0017/1237013/TransportForCanberra_Policy.pdf.
- (2012b). *ACT Taxation Review*. <http://www.treasury.act.gov.au/documents/ACT%20Taxation%20Review/ACT%20Taxation%20Review%20May%202012.pdf>.
- ACT Revenue Office (2018). *Tax Reform*. <https://www.revenue.act.gov.au/tax-reform>.
- ACT Treasury (2016). *ACT Election Commitment Costings 2016*. ACT Treasury. <https://apps.treasury.act.gov.au/electioncostings>.
- AEMO (2018). *Victorian Gas Planning Report Update*. <https://www.aemo.com.au/Gas/National-planning-and-forecasting/Victorian-Gas-Planning-Report>.
- AEMO and ENA (2018). *Open Energy Networks: consultation paper*. <https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/DER-program>.
- AIHW (2017a). *Housing Assistance in Australia 2017*. <https://www.aihw.gov.au/reports/housing-assistance/housing-assistance-in-australia-2017/contents/social-housing-dwellings>.
- (2017b). *Health expenditure Australia 2015-6*. Cat no. HWE 68, Canberra.
- (2017c). *Admitted patient care 2015–16: Australian hospital statistics*. Cat no. HSE 185, Canberra.
- (2018a). *National Healthcare Agreement: PI 16–Potentially avoidable deaths, 2018 (Meteor - Metadata Online registry)*. Canberra. <http://meteor.aihw.gov.au/content/index.phtml/itemId/658503>.
- (2018b). *Web update: Medicare Benefits Schedule GP and specialist attendances and expenditure in 2016–17*. <https://www.myhealthycommunities.gov.au/our-reports/gp-and-specialists-attendances-and-expenditure/june-2018>.
- (2018c). *A discussion of public dental waiting times information in Australia: 2013–14 to 2016–17*. AIHW Cat. No. DEN 230, Canberra.
- (2018d). *Web update: Participation in national cancer screening programs in 2015–2016*. <https://www.myhealthycommunities.gov.au/our-reports/cancer-screening/april-2018/web-update>.
- (2018e). *Analysis of cancer outcomes and screening behaviour for national cancer screening programs in Australia*. AIHW Cat. No. CAN 115, Canberra.
- Allison, S. and Bastiampillai, T. (2015). "Mental health services reach the tipping point in Australian acute hospitals". *The Medical Journal of Australia* 203.11, pp. 432–434.
- Allison et al. (2017). Allison, S., Bastiampillai, T., Licinio, J., Fuller, D. A., Bidargaddi, N. and Sharfstein, S. S. "When should governments increase the supply of psychiatric beds?" *Molecular Psychiatry* 23, p. 796. DOI: 10.1038/mp.2017.139. <http://dx.doi.org/10.1038/mp.2017.139>.
- ANAO (2014). *The Administration of the Parliamentary Budget Office*. 36. Australian National Audit Office. <https://www.anao.gov.au/work/performance-audit/administration-parliamentary-budget-office>.

- Anderson, S. (2018). "Victoria's got strict new laws on political donations but what does it mean?" *ABC Online*. <http://www.abc.net.au/news/2018-07-28/victorias-strict-rules-on-political-donations-explained/9997838>.
- Andrews, D. (2018a). *Cutting Victorian electricity bills with solar hot water*. <https://www.premier.vic.gov.au/cutting-victorian-electricity-bills-with-solar-hot-water/>.
- (2018b). *Cheap electricity with solar batteries for 10,000 homes*. <https://www.premier.vic.gov.au/cheaper-electricity-with-solar-batteries-for-10000-homes/>.
- Arnott et al. (2005). Arnott, R., Rave, T. and Schoeb, R. *Alleviating urban traffic congestion*. MIT Press.
- Australian Workforce and Productivity Agency (2013). *Food and Beverage Workforce Study*. <https://docs.education.gov.au/system/files/doc/other/food-and-beverage-workforce-study-2013.pdf>.
- Banks, G. (2003). *The good, the bad and the ugly: economic perspectives on regulation in Australia*. <https://www.pc.gov.au/news-media/speeches/cs20031002/cs20031002.pdf>.
- Banks, G. (2012). *Productivity policies: the 'to do' list**. <http://www.pc.gov.au/news-media/speeches/productivity-policies/productivity-policies.pdf>.
- Barnes, M. (2018). *WA State 2018-19 Budget Paper No. 3*. WA Government. <https://www.ourstatebudget.wa.gov.au/2018-19/budget-papers/bp3/2018-19-wa-state-budget-bp3.pdf>.
- Bathersby, D. and Herald, W. (2018). "Fed-up commuters christen our rail link the 'misery line'". *The Courier Mail*. <https://www.couriermail.com.au/questnews/southeast/fedup-commuters-christen-our-rail-link-the-misery-line/news-story/0c17be9c6bacb29ad2acf8a03e7d5b77?login=1>.
- Berejiklian, G. and Perrottet, D. (2017). *Fire and Emergency Services Levy to be reviewed to Ensure Fairness*. <https://www.treasury.nsw.gov.au/sites/default/files/2017-05/30052017%20-%20Media%20Release%20-%20Berejiklian%20and%20Perrottet%20-%20Fire%20and%20Emergency%20Services%20Levy%20to%20be%20reviewed%20to%20ensure%20fairness.pdf>.
- Biddle et al. (2009). Biddle, N., Davis, E., Myers, J. and Soorinarain Dodhy, R. *Exploring Measures of Low Social Capital*. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/1351.0.55.024March%202009?OpenDocument>.
- BITRE (2016). *Lengthy commutes in Australia*. Commonwealth of Australia, Bureau of Infrastructure, Transport and Regional Economics. https://bitre.gov.au/publications/2016/rr_144.aspx.
- (2017a). *Growth in the Australian Road System*. Commonwealth of Australia, Bureau of Infrastructure, Transport and Regional Economics. https://bitre.gov.au/publications/2017/is_092.aspx.
- (2017b). *Yearbook 2017: Australian Infrastructure Statistics*. Commonwealth of Australia, Bureau of Infrastructure, Transport and Regional Economics. https://bitre.gov.au/publications/2017/yearbook_2017.aspx.
- (2018). *Ex-post economic evaluation of national road investment projects: Volume 1 Synthesis report*. Commonwealth of Australia, Bureau of Infrastructure, Transport and Regional Economics. https://bitre.gov.au/publications/2018/rr_145.aspx.
- Bracks, S. and McNamara, P. (2018). *Victoria's Future State: Why decentralisation should be our priority*. Balance Victoria. <https://balancevictoria.com.au/wp-content/uploads/2018/08/Victorias-Future-State-Discussion-Paper.pdf>.
- Brett, J. (2011). *Fair Share - Country and City Australia*. Quarterly Essay, 42.

- Brown, A. J. (2016). *Ideas for Australia: To really reform the federation, you must build strong bipartisan support*.
<https://theconversation.com/ideas-for-australia-to-really-reform-the-federation-you-must-build-strong-bipartisan-support-56081>.
- Bureau of Meteorology (2018). *Climate Data Online*.
<http://www.bom.gov.au/climate/data/>.
- Burgess, G. (2018). "Tasmanian election: Liberals dispute claims of \$5 million campaign spend". *ABC News*.
[http://www.abc.net.au/news/2018-03-05/tasmanian-liberals-reject-%5C\\$5-million-campaign-spend-claim/9510156](http://www.abc.net.au/news/2018-03-05/tasmanian-liberals-reject-%5C$5-million-campaign-spend-claim/9510156).
- Campbell, S. and Withers, H. (2017). *Australian productivity trends and the effect of structural change*.
https://static.treasury.gov.au/uploads/sites/1/2017/08/p2017-t213722-Roundup_Productivity_trends_and_structural_change.pdf.
- Cantwell, D. (2018). *Election funding, expenditure and financial disclosure 2017/18*. ACT Electoral Commission. https://www.elections.act.gov.au/_data/assets/pdf_file/0015/1206420/Election-funding-expenditure-and-financial-disclosure-handbook-2017-2018.pdf.
- Cao et al. (2015). Cao, L., Hosking, A., Kouparitsas, M., Mullaly, D., Rimmer, X., Shi, W., Stark, W. and Wende, S. *Understanding the economy-wide efficiency and incidence of major Australian taxes*.
<http://www.treasury.gov.au/PublicationsAndMedia/Publications/2015/working-paper-2015-01>.
- Capic et al. (2017). Capic, T., Hutchinson, D., Fuller-Tyszkiewicz, M., Richardson, B., Hartley-Clark, L., Khor, S., Olsson, C. and Cummins, R. *Australian Unity Wellbeing Index; Survey 34: Summary Report*. <https://www.australianunity.com.au/%7B~%7D/media/corporate/documents/annual%20reports/wellbeing%20index/wellbeing%20index%202017.pdf?la=en%7B%5C&%7Dhash=F97746A4>.
- Carey, A. (2018). "Matthew Guy promises tax review to push regional growth". *The Age*.
<https://www.theage.com.au/politics/victoria/matthew-guy-promises-tax-review-to-push-regional-growth-20181009-p508nd.html>.
- Cheshire, P. and Sheppard, S. (2002). "The Welfare Economics of Land Use Planning". *Journal of Urban Economics* 52.2, pp. 242–269.
https://www.researchgate.net/publication/222705437_The_Welfare_Economics_of_Land_Use_Planning.
- Choice (2018). *The cost of getting sun smart*.
<https://www.choice.com.au/home-improvement/energy-saving/solar/articles/solar-panel-payback-times>.
- Clean Energy Regulator (2018). *Postcode data for small-scale installations*.
<http://www.cleanenergyregulator.gov.au/RET/Forms-and-resources/Postcode-data-for-small-scale-installations>.
- COAG (2013). *Seamless National Economy: Final report on performance*.
 ——— (2018). *Performance Dashboard*.
<https://www.coag.gov.au/performance-reporting>.
- COAG Energy Council (2018). *20th meeting communique*.
<http://www.coagenergycouncil.gov.au/publications/20th-energy-council-ministerial-meeting-communique>.
- Coates, B. (2017). "State property tax reform: balancing economic principle and political realism". *Federal Relations and Tax Reform Workshop*. Adelaide. <https://grattan.edu.au/wp-content/uploads/2017/10/SA-Federalism-and-Tax-Future-Directions-for-Property-Tax-Reform-for-web-28-August-2017.pdf>.
- Coates, B. and Wiltshire, T. (2018). "The Conventional Wisdom Is Wrong: Building More Housing Does Help Low-Income Earners". *Inside Story*. <http://insidestory.org.au/the-conventional-wisdom-is-wrong-building-more-housing-does-help-low-income-earners/>.
- Coates, B. and Wood, D. (2018). "Built on good fortune, relying on luck". *Inside Story*. <https://insidestory.org.au/budget-2018-built-on-good-fortune-relying-on-luck/>.

- Commonwealth Grants Commission (2015). *Report on GST Revenue Sharing Relativities - 2015 Review*.
<https://www.cgc.gov.au/sites/g/files/net5366/f/documents/2015%20Review%20Report/Report/R2015%20Report%20-%20Volume%201%20-%20Main%20Report.pdf>.
- CoreLogic (2018a). *CoreLogic Hedonic Home Value Index, December 2017 Results*. https://www.corelogic.com.au/sites/default/files/2018-01/2018-01-02--CL_HedonicHomeValueIndexResults.pdf.
- (2018b). *Australia's Housing Correction Marks Its Twelve Month Anniversary With Values Down 2.7% Since Peaking In September Last Year*. <https://www.corelogic.com.au/sites/default/files/2018-10/CoreLogic%20home%20value%20index%20Oct%201%20FINAL.pdf>.
- CSIRO (2016). *State of the Climate*.
<https://www.csiro.au/en/Showcase/state-of-the-climate>.
- Daley, J. (2016a). 'Retrospective' claims on super changes are a furphy. <https://theconversation.com/retrospective-claims-on-super-changes-are-a-furphy-59004>.
- (2016b). *The policy agenda: what the government should do now*. <https://theconversation.com/the-policy-agenda-what-the-government-should-do-now-61518>.
- (2016c). "Productivity and geography". *Productivity Commission Conference, Canberra*.
<https://grattan.edu.au/wp-content/uploads/2017/01/Productivity-and-geography-Productivity-Commission-Dec-2016.pdf>.
- Daley, J. and Lancy, A. (2011). *Investing in regions: Making a difference*. Report No. 2011-4. Grattan Institute. <https://grattan.edu.au/report/investing-in-regions-making-a-difference/>.
- Daley et al. (2012). Daley, J., McGannon, C. and Ginnivan, L. *Game-changers: Economic reform priorities for Australia*. Grattan Institute.
<https://grattan.edu.au/report/game-changers-economic-reform-priorities-for-australia/>.
- Daley et al. (2013a). Daley, J., McGannon, C. and Savage, J. *Budget Pressures on Australian Governments*. Report No. 2013-04. Grattan Institute. <http://grattan.edu.au/report/budget-pressures-on-australian-governments/>.
- Daley et al. (2013b). Daley, J., Reichl, J. and Ginnivan, L. *Australian government spending on innovation*. https://grattan.edu.au/wp-content/uploads/2014/05/901_daley_alliance_21.pdf.
- Daley et al. (2013c). Daley, J., McGannon, C., Savage, J. and Hunter, A. *Balancing budgets: Tough choices we need*. Report No. 2013-13. Grattan Institute. <https://grattan.edu.au/report/balancing-budgets-tough-choices-we-need/>.
- Daley et al. (2014). Daley, J., Wood, D., Weidmann, B. and Harrison, C. *The wealth of generations*.
<http://grattan.edu.au/report/the-wealth-of-generations/>.
- Daley, J. and Wood, D. (2015). *Fiscal Challenges for Australia*. Working Paper No. 2015-4. Grattan Institute.
<https://grattan.edu.au/report/fiscal-challenges-for-australia/>.
- Daley et al. (2015a). Daley, J., Coates, B., Wood, D. and Parsonage, H. *Super tax targeting*. Report No. 2015-11. Grattan Institute.
<https://grattan.edu.au/report/super-tax-targeting/>.
- Daley et al. (2015b). Daley, J., Coates, B., Wood, D., Button, J., Parsonage, H., Banerjee, P. and Joiner, R. *Property taxes*. Report No. 2015-5. Grattan Institute.
<https://grattan.edu.au/report/property-taxes/>.
- Daley, J. and Coates, B. (2016). "Following the ACT land tax approach boosts growth and state budgets". *Australian Financial Review*.
<http://www.afr.com/opinion/columnists/following-the-act-land-taxapproach-boosts-growth-and-state-budgets-20161018-gs4om9..>
- Daley et al. (2017). Daley, J., Wood, D. and Chivers, C. *Regional patterns of Australia's economy and population*. Report No. 2017-8. Grattan Institute. <https://grattan.edu.au/report/regional-patterns-of-australias-economy-and-population/>.

- Daley et al. (2018). Daley, J., Coates, B. and Wiltshire, T. *Housing affordability: re-imagining the Australian dream*. 2018-04. Grattan Institute. <https://grattan.edu.au/report/housing-affordability-re-imagining-the-australian-dream/>.
- D'Ambrosio, L. (2018). *Cutting power bills with solar panels for 650,000 households*. <https://www.premier.vic.gov.au/cutting-power-bills-with-solar-panels-for-650000-homes/>.
- Davidoff, I. and Leigh, A. (2013). "How do stamp duties affect the housing market?" *Economic Record* 89.286, pp. 396–410. <http://www.andrewleigh.org/pdf/StampDuty.pdf>.
- Deloitte Access Economics (2016). *Investment Monitor*.
- Department of Education and Training (2018a). *What is the Schooling Resource Standard and how does it work?* https://docs.education.gov.au/system/files/doc/other/2._-_what_is_the_schooling_resource_standard_and_how_does_it_work_.pdf.
- (2018b). *Why the AEDC is Important*. <https://www.aedc.gov.au/about-the-aedc/why-the-aedc-is-important>.
- Department of Health (2017). *Fifth National Mental Health and Suicide Prevention Plan*. Canberra.
- Department of Justice Tasmania (2018). *Electoral Act Review*. Tasmanian Government. <https://www.justice.tas.gov.au/community-consultation/closed-community-consultations2/electoral-act-review>.
- Department of the Prime Minister and Cabinet (2017). *Remote Housing Review: A review of the National Partnership Agreement on Remote Indigenous Housing and the Remote Housing Atrategy (2008-2018)*. Ed. by C. of Australia. <https://www.pmc.gov.au/sites/default/files/publications/review-of-remote-housing.pdf>.
- Dodgson, M. and Gann, D. (2010). *Innovation: a very short introduction*. Oxford University Press.
- Duckett, S. (2013). *Access all areas: new solutions for GP shortages in rural Australia*. <https://grattan.edu.au/report/access-all-areas-new-solutions-for-gp-shortages-in-rural-australia/>.
- (2018). "Getting an initial specialists' appointment is the hidden waitlist". *The Conversation*. <https://theconversation.com/getting-an-initial-specialists-appointment-is-the-hidden-waitlist-99507>.
- Duckett et al. (2014). Duckett, S., Breadon, P., Weidmann, B. and Nicola, I. *Controlling costly care: a billion-dollar hospital opportunity*. Report No. 2014-2. Grattan Institute. <https://grattan.edu.au/report/controlling-costly-care-a-billion-dollar-hospital-opportunity/>.
- Duckett et al. (2016). Duckett, S., Griffiths, K. and Swerissen, H. *Perils of place: identifying hotspots of health inequality*. Report No. 2016-10. Grattan Institute. <https://grattan.edu.au/report/perils-of-place-identifying-hotspots-of-health-inequality/>.
- Duckett et al. (2018). Duckett, S., Jorm, C., Moran, G. and Parsonage, H. *Safer care saves money: How to improve patient care and save public money at the same time*. Report No. 2018-10. <https://grattan.edu.au/report/safer-care-saves-money/>.
- Education Endowment Foundation (2017). *Dialogic Teaching*. <https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/dialogic-teaching>.
- Edwards, J. (2018). "Rising interest rates the sting in the long tail of the global financial crisis". *Australian Financial Review*. <https://www.afr.com/opinion/rising-interest-rates-the-sting-in-the-long-tail-of-the-global-financial-crisis-20180913-h15d6w>.
- Elbert et al. (2014). Elbert, N. J., Os-Medendorp, H. van, Renselaar, W. van, Ekeland, A. G., Hakkaart-van Roijen, L., Raat, H., Nijsten, T. E. C. and Pasmans, S. G. M. A. "Effectiveness and Cost-Effectiveness of eHealth Interventions in Somatic Diseases: A Systematic Review of Systematic Reviews and Meta-Analyses". *Journal of Medical Internet Research* 16.4, e110. DOI: 10.2196/jmir.2790. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4019777/>.

- Elections ACT (2016). *New electoral campaign finance laws in the ACT*. Australian Capital Territory Electoral Commission.
https://www.elections.act.gov.au/funding_and_disclosure/new_electoral_campaign_finance_laws_in_the_act2.
- Ellis, L. (2017). *Where is the Growth Going to Come From?* Melbourne.
<https://www.rba.gov.au/speeches/2017/sp-ag-2017-11-15.html>.
- English, L. (2005). "Using public-private partnerships to achieve value for money in the delivery of healthcare in Australia". *International Journal of Public Policy* 1.1-2.
<http://www.inderscience.com/link.php?id=7795>.
- ESC (Victoria) (2018). *Developing a reference price methodology for Victoria's energy market*. March. Essential Services Commission (Victoria).
<https://www.esc.vic.gov.au/electricity-and-gas/electricity-and-gas-tariffs-benchmarks-inquiries-and-reviews/electricity-and-gas-retail-markets-review-implementation-2018/electricity-and-gas-retail-markets-review-implementation-2018-competitiveness#tabs-container1>.
- Eslake, S. (2013). *Australian Housing Policy: 50 years of failure. Address to the 122nd Annual Henry George Commemorative Dinner, The Royal Society of Victoria, Melbourne*.
<https://www.aph.gov.au/DocumentStore.ashx?id=99cfa3f6-858f-467d-91a9-31e384534a5e&subId=31798>.
- (2018). *Tasmania Report*. Report No. 2017-8. forthcoming. Tasmanian Chamber of Commerce and Industry.
- EY (2017). *EY FinTech Adoption Index 2017*.
[https://www.ey.com/Publication/vwLUAssets/ey-fintech-adoption-index-2017/%7B%5C\\$%7DFILE/ey-fintech-adoption-index-2017.pdf](https://www.ey.com/Publication/vwLUAssets/ey-fintech-adoption-index-2017/%7B%5C$%7DFILE/ey-fintech-adoption-index-2017.pdf).
- Finkel et al. (2017). Finkel, A., Moses, K., Munro, C., Effeneey, T. and O'Kane, M. *Independent review into the future security of the National Electricity Market: Blueprint for the future*.
<https://www.energy.gov.au/government-priorities/energy-markets/independent-review-future-security-national-electricity-market>.
- Ford, E. S. and Capewell, S. (2011). "Proportion of the Decline in Cardiovascular Mortality Disease due to Prevention Versus Treatment: Public Health Versus Clinical Care". *Annual Review of Public Health* 32.1, pp. 5–22. DOI: 10.1146/annurev-publhealth-031210-101211.
<https://www.annualreviews.org/doi/abs/10.1146/annurev-publhealth-031210-101211>.
- Freebairn, J. (2016). "Taxation of housing". *Australian Economic Review* 49.3, pp. 307–316.
- (2017). *Reform Options for State Property Taxes*. Canberra.
http://melbourneinstitute.unimelb.edu.au/__data/assets/pdf_file/0004/2505559/pb2017n02.pdf.
- Galligan, B. (2014). "Renewing federalism: what are the solutions to Vertical Fiscal Imbalance?" *The Conversation*.
<https://theconversation.com/renewing-federalism-what-are-the-solutions-to-vertical-fiscal-imbalance-31422>.
- Galloway, A. and Harris, R. (2018). "Call for action as Melbourne drivers' morning city-commute times blow out to 43 minutes". *The Herald Sun*. <https://www.heraldsun.com.au/news/victoria/call-for-action-as-melbourne-drivers-morning-citycommute-times-blow-out-to-43-minutes/news-story/4cd40da5f8abae29ee48fc271d405a56>.
- Gibbons, S. and Graham, D. (2018). *Urban capacity and economic output*. Report for the National Infrastructure Commission.
<https://www.nic.org.uk/wp-content/uploads/National-Infrastructure-Commission-urban-capacity-report-final-1.pdf>.
- Glaeser, E. L. (2008). *Cities, agglomeration and spatial equilibrium*. Oxford University Press.
- Glaeser et al. (2005). Glaeser, E. L., Gyourko, J. and Saks, R. "Why is Manhattan So Expensive? Regulation and the Rise in Housing Prices". *Journal of Law and Economics* 48.2, pp. 331–369.
<https://www.journals.uchicago.edu/doi/10.1086/429979>.

- Glaeser, E. L. and Gyourko, J. (2018). "The economic implications of housing supply". *Journal of Economic Perspectives* 32.1, pp. 3–30. <https://pubs.aeaweb.org/doi/pdf/10.1257/jep.32.1.3>.
- Gollier, C. (2013). *Pricing the Planet's Future: The Economics of Discounting in an Uncertain World*. Princeton University Press.
- Gonski et al. (2018). Gonski, D., Arcus, T., Boston, K., Gould, V., Johnson, W., O'Brien, L., Perry, L.-A. and Roberts, M. *Through Growth to Achievement: Report of the Review to Achieve Educational Excellence in Australian Schools*. https://docs.education.gov.au/system/files/doc/other/662684_tgta_accessible_final_0.pdf.
- Gorecki, S. and Kelly, J. (2012). "Treasury's Wellbeing Framework". *Economic Roundup* 3. <https://treasury.gov.au/publication/economic-roundup-issue-3-2012-2/economic-roundup-issue-3-2012/treasurys-wellbeing-framework/>.
- Goss, P. (2016a). "School funding circuit breaker with appeal to all". *The Australian*. <http://www.theaustralian.com.au/opinion/school-funding-circuit-breaker-with-appeal-to-all/news-story/e77c0cf5b772ebb12e92407d77f88d78>.
- (2016b). "School funding rose \$10 billion in the last 10 years. So where did the money go?" *Australian Financial Review*. <https://grattan.edu.au/news/school-funding-rose-10-billion-in-the-last-10-years-so-where-did-the-money-go/>.
- (2017). *Towards an adaptive education system in Australia*. Discussion Paper No. 2017-01. Grattan Institute. <https://grattan.edu.au/report/towards-an-adaptive-education-system-in-australia/>.
- (2018a). *Grattan submission to the Independent Review into Regional, Rural and Remote Education*. Grattan Institute. <https://grattan.edu.au/news/regional-and-rural-students-need-to-be-a-national-policy-priority/>.
- (2018b). "Five steps to fair school funding". *Sydney Morning Herald*. <https://www.smh.com.au/education/five-steps-to-fair-school-funding-20180829-p500g4.html>.
- Goss et al. (2015). Goss, P., Hunter, J., Romanes, D. and Parsonage, H. *Targeted Teaching: How Better Use of Data can Improve Student Learning*. Report No. 2015-06. Grattan Institute. <https://grattan.edu.au/report/targeted-teaching-how-better-use-of-data-can-improve-student-learning/>.
- Goss et al. (2016a). Goss, P., Sonnemann, J., Chisholm, C. and Nelson, L. *Widening gaps: what NAPLAN tells us about student progress*. <https://grattan.edu.au/wp-content/uploads/2016/03/937-Widening-gaps.pdf>.
- Goss, P. and Sonnemann, J. (2016a). *Widening gaps: what NAPLAN tells us about student progress*. Report No. 2016-3. Grattan Institute. <http://grattan.edu.au/report/widening-gaps/>.
- Goss et al. (2016b). Goss, P., Sonnemann, J., Griffiths, K. and Chivers, C. *Circuit breaker: a new compact on school funding*. Report No. 2016-16. Grattan Institute. <https://grattan.edu.au/report/circuit-breaker/>.
- Goss, P. and Sonnemann, J. (2016b). *Grattan submission to the PC Inquiry into the National Education Evidence Base*. Grattan Institute. <https://grattan.edu.au/news/submission-to-the-productivity-comission-inquiry-into-the-national-education-evidence-base/>.
- (2017a). *Engaging students: creating classrooms that improve learning*. Report No. 2017-01. Grattan Institute. <https://grattan.edu.au/report/engaging-students-creating-classrooms-that-improve-learning/>.
- (2017b). *Submission to the Senate Inquiry into the Australian Education Amendment Bill 2017*. Grattan Institute. <https://grattan.edu.au/news/submission-to-the-senate-inquiry-into-the-australian-education-amendment-bill-2017/>.
- Goss et al. (2018). Goss, P., Sonnemann, J. and Emslie, O. *Measuring student progress: A state-by-state report card*. Report No. 2018-14. Grattan Institute. <https://grattan.edu.au/report/engaging-students-creating-classrooms-that-improve-learning/>.

- Gray et al. (2014). Gray, E., Oss-Emer, M. and Sheng, Y. *Australian Agricultural Productivity growth*. Department of Agriculture. https://www.oecd.org/tad/events/Mr.%20Merrilees_Agricultural%20productivity%20growth%20reforms%20opportunities.pdf.
- Grigg, A. (2018). "I owe my fortune to drought, says one of Australia's biggest farmers". *Australian Financial Review*. <https://www.afr.com/business/agriculture/i-owe-my-fortune-to-drought-says-one-of-australias-biggest-farmers-20180922-h15qfp>.
- Gyourko, J. and Molloy, R. (2015). "Regulation and Housing Supply". *Handbook of Regional and Urban Economics*. Ed. by N. Holland. Vol. 5, pp. 1289–1337. DOI: <https://doi.org/10.1016/B978-0-444-59531-7.00019-3>.
- Harper et al. (2015). Harper, I., Anderson, P., McCluskey, S. and Michael, O. *Competition Policy Review - Final Report*. http://competitionpolicyreview.gov.au/files/2015/03/Competition-policy-review-report_online.pdf.
- Hart, O. (2003). "Incomplete Contracts and Public Ownership: Remarks, and an application to Public-Private Partnerships". *The Economic Journal* 113.
- Hart et al. (1997). Hart, O., Shleiffer, A. and Vishny, R. "The Proper Scope of Government: Theory and an Application to Prisons". *The Quarterly Journal of Economics* 112.4, pp. 1126–1161.
- Hawe, P. (2009). "The social determinants of health: how can a radical agenda be mainstreamed?" *Canadian Journal of Public Health* 100.4, pp. 291–293.
- Hayne, J. (2018). "ACT Government wants integrity commission to investigate police". *ABC Online*. <http://www.abc.net.au/news/2018-07-26/canberra-icac-investigate-police-officers/10040038>.
- Helliwell, J. F. (2003). "How's life? Combining individual and national variables to explain subjective well-being". *Economic modelling* 20.2, pp. 331–360.
- Henry et al. (2010a). Henry, K., Harmer, J., Piggott, J., Ridout, H. and Smith, G. *Australia's future tax system – Report to the Treasury. Part 2: Detailed analysis*. Treasury. https://taxreview.treasury.gov.au/content/FinalReport.aspx?doc=html/Publications/Papers/Final_Report_Part_2/index.htm.
- Henry et al. (2010b). _____. *Australia's future tax system – Report to the Treasurer*. http://taxreview.treasury.gov.au/content/Content.aspx?doc=html/pubs_reports.htm.
- Hilber, C. and Vermeulen, W. (2015). "The Impact of Supply Constraints on House Prices in England". *The Economic Journal* 126 (591), pp. 358–405. DOI: 10.1111/eoj.12213.
- Hilber, C. and Lyytikäinen, T. (2017). "Transfer taxes and household mobility: Distortion on the housing or labor market?" *Journal of Urban Economics*.
- HILDA (2016). *Survey of Household Income and Labour Dynamics Australia*. <https://www.melbourneinstitute.com/hilda/>.
- Hockey, J. (2015). *2015 Intergenerational Report*. Australian Government. <http://www.treasury.gov.au/PublicationsAndMedia/Publications/2015/2015-Intergenerational-Report>.
- Holden, R. and Zhang, J. (2018). *The Economic Impact of Improving Regional, Rural & Remote Education in Australia: Closing the Human Capital Gap*. Gonski Institute for Education, University of New South Wales. https://education.arts.unsw.edu.au/media/EDUCFile/Gonski_Institute_Report__Cost_of_Education_Gap.pdf.
- Hondros, N. (2018). "All present and correct? WA ministers bag \$30,000". *WA Today*. <https://www.watoday.com.au/politics/western-australia/all-present-and-correct-wa-ministers-bag-30-000-in-gifts-20180517-p4zfzk.html>.
- Hsieh, C.-T. and Moretti, E. (2017). *Housing Constraints and Spatial Misallocation*. National Bureau of Economic Research.

- Hughes, N. and Hatfield-Dodds, S. (2018). "Helping farmers in distress doesn't help them be the best: the drought relief dilemma". *The Conversation*. <https://theconversation.com/helping-farmers-in-distress-doesnt-help-them-be-the-best-the-drought-relief-dilemma-105281>.
- ICAC (2018). *Statutory powers*. ICAC. <https://www.icac.nsw.gov.au/investigations/investigation-process/statutory-powers>.
- IHPA (2018). *National Benchmarking Portal*. <https://www.ihpa.gov.au/what-we-do/data-collection/national-benchmarking-portal>.
- IMF (2009). *Fiscal Rules—Anchoring Expectations for Sustainable Public Finances*. IMF. <https://www.imf.org/external/np/pp/eng/2009/121609.pdf>.
- (2018). *IMF Fiscal Monitor October 2018*. <https://www.imf.org/en/Publications/FM/Issues/2018/10/04/fiscal-monitor-october-2018>.
- Institute of Educational Assessors (2018). *About the IEA*. Institute of Educational Assessors. https://research.acer.edu.au/cgi/viewcontent.cgi?article=1308&context=research_conference.
- International Labor Organisation (2018). *Employment in agriculture (% of total employment) (modeled ILO estimate)*, ILOSTAT database. Ed. by I. L. Organisation. <https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=AU>.
- IPART (2008). *Review of State Taxation*. https://www.ipart.nsw.gov.au/files/sharedassets/website/trimholdingbay/final_report_-_review_of_state_taxation_-_michael_seery_-_17_october_2008_-_pdf_website_document_version.pdf.
- Irvine, J. (2017). "A manifesto for Generation Rent". *Sydney Morning Herald*. <http://www.smh.com.au/money/a-manifesto-for-generation-rent-20170220-gugyts.html>.
- Jacks, T. (2018). "Melbourne's booming population takes its toll on city's trains". *The Age*. <https://www.theage.com.au/national/victoria/melbourne-s-booming-population-takes-its-toll-on-city-s-trains-20180330-p4z72b.html>.
- Jensen et al. (2012). Jensen, B., Hunter, A., Sonnemann, J. and Burns, T. *Catching up: learning from the best school systems in East Asia*. Grattan Institute. <https://grattan.edu.au/report/catching-up-learning-from-the-best-school-systems-in-east-asia/>.
- Jensen et al. (2014). Jensen, B., Hunter, J., Sonnemann, J. and Cooper, S. *Making time for great teaching*. Grattan Institute. <https://grattan.edu.au/report/making-time-for-great-teaching/>.
- Johnston et al. (2018). Johnston, M., Hore, M. and Dowling, J. "Major parties on track to promise more than \$90 billion in rail upgrades ahead of election". *The Herald Sun*. <https://www.heraldsun.com.au/news/victoria/state-election/major-parties-on-track-to-promise-more-than-90-billion-in-rail-upgrades-ahead-of-election/news-story/542bf58cfc34b58e2e5e5cb3fc887c3a>.
- Kahneman, D. (2003). "Maps of bounded rationality: psychology for behavioural economics". *American Economic Review* 93.5, pp. 1449–1475. <https://www.aeaweb.org/articles?id=10.1257/00028280322655392>.
- J.-F. Kelly et al. (2011). Kelly, J.-F., Weidmann, B. and Walsh, M. *The housing we'd choose*. Grattan Institute. <https://grattan.edu.au/report/the-housing-we-d-choose/>.
- J.-F. Kelly et al. (2012). Kelly, J.-F., Breadon, P., Mares, P., Ginnivan, L., Jackson, P., Gregson, J. and Viney, B. *Tomorrow's Suburbs: Building flexible neighbourhoods*.
- J.-F. Kelly et al. (2013a). Kelly, J.-F., Mares, P., Harrison, C., O'Toole, M., Oberklaid, M. and Hunter, J. *Productive cities: opportunity in a changing economy*. Report No. 2013-05. <https://grattan.edu.au/report/productive-cities-opportunity-in-a-changing-economy/>.

- J.-F. Kelly et al. (2013b). Kelly, J.-F., Harrison, C., Hunter, J. and Donegan, P. *Renovating Housing Policy*. Grattan Institute. <https://grattan.edu.au/report/renovating-housing-policy/>.
- Kelly, J.-F. and Donegan, P. (2015). *City Limits: Why Australia's cities are broken and how we can fix them*. Melbourne: Melbourne University Press.
- Kendall, R. and Tulip, P. (2018). *The Effect of Zoning on Housing Prices*. Research Discussion Paper. Reserve Bank of Australia. <https://www.rba.gov.au/publications/rdp/2018/2018-03/sections.html>.
- Khoury, A. (2018). "ACEM calls for new approach to mental health care in EDs". *ACEM*. <https://acem.org.au/News/Feb-2018/ACEM-mental-health-care-access-block.aspx>.
- Kindermann et al. (2018). Kindermann, F., Mayr, L. and Sachs, D. *Inheritance Taxation and Wealth Effects on the Labor Supply of Heirs*. http://www.dominiksachs.com/downloads/inheritance_tax.pdf.
- King, S. (2014). "A privatised monopoly is still a monopoly, and consumers pay the price". *The Conversation*. <https://theconversation.com/a-privatised-monopoly-is-still-a-monopoly-and-consumers-pay-the-price-28384>.
- Kirkwood, I. (2018). *ACCC confirms new inquiry into Port of Newcastle privatisation*. <https://www.theherald.com.au/story/5323367/a-container-terminal-for-newcastle/>.
- Knight, E. K. (2014). "Shifting Public Health Practice to Advance Health Equity: Recommendations From Experts and Community Leaders". *Journal of Public Health Management and Practice* 20.2, pp. 188–196. DOI: 10.1097/PHH.0b013e31829959fb. https://journals.lww.com/jphmp/Fulltext/2014/03000/Shifting_Public_Health_Practice_to_Advance_Health.5.aspx.
- Koziol, M. (2018). *Coalition MPs in push to nationalise Liddell coal-fired power station*. <https://www.smh.com.au/politics/federal/coalition-mps-in-push-to-nationalise-liddell-coal-fired-power-station-20180328-p4z6rm.html>.
- KPMG (2012). *A Discussion Paper on the Options to Improve the Supply of Quality Housing*. <https://www.hopet.org/publications/papers?download=13:social-housing-options-to-improve-the-supply-of-quality-housing>.
- KPMG Econtech (2010). *CGE Analysis of the Current Australian Tax System*. http://taxreview.treasury.gov.au/content/html/commissioned_work/downloads/kpmg_econtech_efficiency%20of%20taxes_final_report.pdf.
- (2011). *Economic Analysis of the Impacts of Using GST to Reform Taxes*. <http://www.cpaaustralia.com.au/%7B~%7D/media/corporate/allfiles/document/professional-resources/taxation/kpmg-econtech-final.pdf>.
- Langer, A. and Winston, C. (2008). *Toward a comprehensive assessment of road pricing accounting for land use*. Brookings-Wharton Papers on Urban Affairs. <https://www.brookings.edu/research/toward-a-comprehensive-assessment-of-road-pricing-accounting-for-land-use/>.
- Leal et al. (2017). Leal, H., Parsons, S., White, G. and Zurawski, A. "Housing Market Turnover". *Reserve Bank of Australia Bulletin*. <https://www.rba.gov.au/publications/bulletin/2017/mar/pdf/bu-0317-3-housing-market-turnover.pdf>.
- Lees, K. (2017). *Quantifying the impact of land use regulation: Evidence from New Zealand, Sense Partners, Report for Superu, Ministerial Social Sector Research Fund*. Superu. <http://www.superu.govt.nz/sites/default/files/Impact%20of%20land%20use%20report%20110717.pdf>.
- Lin et al. (2017). Lin, M.-h., Yuan, W.-l., Huang, T.-c., Zhang, H.-f., Mai, J.-t. and Wang, J.-f. "Clinical effectiveness of telemedicine for chronic heart failure: a systematic review and meta-analysis". *Journal of Investigative Medicine*, jim–2016–000199.

- Lledo et al. (2018). Lledo, V. D., Luc Eyraud, P. D. and Peralta-Alva, A. *How to Select Fiscal Rules: A Primer*. International Monetary Fund. <https://www.imf.org/en/Publications/Fiscal-Affairs-Department-How-To-Notes/Issues/2018/03/15/How-to-Select-Fiscal-Rules-A-Primer-45552>.
- Lopez, K. (2013). *What makes a NEET?* <http://oecdeducationtoday.blogspot.com/2013/05/what-makes-neet.html>.
- Lowe, P. (2018). "Productivity, Wages and Prosperity". *Address to Australian Industry Group, Melbourne*. <https://www.rba.gov.au/speeches/2018/sp-gov-2018-06-13.html>.
- MacLennan, L. (2016). "Code of conduct for politicians passes SA Parliament's House of Assembly". *ABC Online*. <http://www.abc.net.au/news/2016-02-23/politicians-code-conduct-passes-sa-parliament-house-assembly/7193270>.
- Maher, S. (2013). "Why we need state governments in Australia". *The Australian*. <https://www.theaustralian.com.au/opinion/why-we-need-state-governments-in-australia/news-story/38dc46f89096adc2eb740425f41c32f4?nk=af07508d997c83ba46737e69feb008ae-1539413613>.
- Markus, A. (2017). *Mapping Social Cohesion*. Scanlon Foundation. http://scanlonfoundation.org.au/wp-content/uploads/2014/05/ScanlonFoundation_MappingSocialCohesion_2017.pdf.
- Martin, C. (2017). "Rental insecurity: why fixed long-term leases aren't the answer". *The Conversation*. <https://theconversation.com/rental-insecurity-why-fixed-long-term-leases-arent-the-answer-73114>.
- Mccarthy, J. (2017). "Lake Macquarie MP Greg Piper says it's time to review funding program to mining-affected areas". *Newcastle Herald*. <https://www.theherald.com.au/story/4407983/audit-call-for-resources-for-regions/>.
- McCosker, R. (2018). "Backyard blitz in new blueprint for Brisbane". *Brisbane Times*. <https://www.brisbanetimes.com.au/national/queensland/backyard-blitz-in-new-blueprint-for-brisbane-20180608-p4zk8z.html>.
- McIntosh et al. (2018). McIntosh, K., Kenny, A., Masood, M. and Dickson-Swift, V. "Social Inclusion as a tool to improve rural health". *Australian Journal of Primary Health*.
- Mesman et al. (2015). Mesman, R., Westert, G. P., Berden, B. J. M. M. and Faber, M. J. "Why do high-volume hospitals achieve better outcomes? A systematic review about intermediate factors in volume–outcome relationships". *Health Policy* 119.8, pp. 1055–1067. DOI: <http://dx.doi.org/10.1016/j.healthpol.2015.04.005>. <http://www.sciencedirect.com/science/article/pii/S0168851015001001>.
- Minifie, J. (2016). "What the government should do now: economic growth". *The Conversation*. <https://theconversation.com/what-the-government-should-do-now-economic-growth-61517>.
- Minifie et al. (2013). Minifie, J., Cherastidtham, I., Mullerworth, D. and Savage, J. *The mining boom: impacts and prospects*. Report No. 2013-9. Grattan Institute. <https://grattan.edu.au/report/the-mining-boom-impacts-and-prospects/>.
- Minifie, J. and Wiltshire, T. (2016). *Peer-to-peer pressure: policy for the sharing economy*. Report No. 2016-7. Grattan Institute. <https://grattan.edu.au/report/peer-to-peer/>.
- Minifie et al. (2017a). Minifie, J., Chisholm, C. and Percival, L. *Stagnation nation? Australian investment in a low growth world*. Report No. 2017-02. <https://grattan.edu.au/report/stagnation-nation/>.
- Minifie et al. (2017b) _____. *Competition in Australia: Too little of a good thing?* Report No. 2017-12. <https://grattan.edu.au/report/competition-in-the-australian-economy/>.
- Montoya, D. and Ismay, L. (2017). *Privatisation in NSW: a timeline and key sources*. 2. <https://www.parliament.nsw.gov.au/researchpapers/Documents/Privatisation%20in%20NSW%20-%20a%20timeline%20and%20key%20sources.pdf>.
- Moretti, E. (2012). *The New Geography of Jobs*. Mariner Books.
- Morrison, S. and Frydenberg, J. (2018). *Driving power prices down*. <https://sjm.ministers.treasury.gov.au/media-release/089-2018/>.

- Morrison et al. (2018a). Morrison, S., Frydenberg, J. and Taylor, A. *A fair deal on energy*. <https://www.pm.gov.au/media/fair-deal-energy>.
- Morrison et al. (2018b). Morrison, S., Manison, N. and Scullion, N. *New funding to boost services in the NT*. <http://sjm.ministers.treasury.gov.au/media-release/040-2018/>.
- Muller, D. (2017). *Election funding and disclosure in Australian states and territories: a quick guide – Parliament of Australia*. Parliamentary Library Australia. https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1718/Quick_Guides/ElectionFundingStates.
- Musgrave, R. (1959). *The theory of public finance*. New York: McGraw-Hill.
- National Commission of Audit (2014). *Toward Responsible Government*. <http://www.ncoa.gov.au/>.
- National Health Performance Authority (2016). *Hospital Performance: Costs of acute admitted patients in public hospitals from 2011–12 to 2013–14*. Sydney.
- National Housing Supply Council (2012). *Housing Supply and Affordability - Key Indicators, 2012*. https://www.treasury.gov.au/%7B~%7D/media/Treasury/Publications%20and%20Media/Publications/2012/NHSC/Downloads/PDF/housing_supply_affordability_report.ashx.
- National Shelter et al. (2017). National Shelter, Choice and National Association of Tenant Organisations. *Unsettled: Life in Australia's private rental market*. <http://www.shelter.org.au/sites/natshelter/files/public/documents/The%20Australian%20Rental%20Market%20Report%20Final%20Web.pdf>.
- Norington, B. (2017). "NSW regional home buyers scheme a \$280m failure". *The Australian*. <http://www.theaustralian.com.au/national-affairs/state-politics/nsw-regional-home-buyers-scheme-a-280m-failure/news-story/120d7cbff370e0f93475619965e1ae37>.
- NSW Audit Office (2018). *Regional Assistance Programs*. <https://www.audit.nsw.gov.au/publications/latest-reports/regional-assistance-programs>.
- NSW Centre for Education Statistics and Evaluation (2017). *Insight Assessment Platform*. NSW Centre for Education Statistics and Evaluation. <https://www.cese.nsw.gov.au/publications-filter/improving-high-school-engagement-classroom-practices-and-achievement>.
- NSW Department of Planning and Environment (2017a). *Complying Development*. Sydney. <https://www.planningportal.nsw.gov.au/understanding-planning/assessment-systems/complying-development>.
- (2017b). *IHAPs to be introduced for all Sydney councils*. <http://www.planning.nsw.gov.au/News/2017/IHAPs-to-be-introduced-for-all-Sydney-councils>.
- (2018). *Sydney Planning Panels*. Ed. by NSW Government. <http://www.planning.nsw.gov.au/Assess-and-Regulate/Development-Assessment/Sydney-Planning-Panels>.
- NSW Electoral Commission (2017). *Donations Caps*. http://www.elections.nsw.gov.au/fd/political_donations/caps_on_political_donations.
- NSW Government (2013). *Sydney's cycling future: cycling for everyday transport*. <https://www.transport.nsw.gov.au/sites/default/files/media/documents/2017/sydneys-cycling-future-web.pdf>.
- (2014). "NSW Gas Plan: Protecting what's valuable, securing our future". <https://www.resourcesandgeoscience.nsw.gov.au/landholders-and-community/coal-seam-gas/codes-and-policies/nsw-gas-plan>.
- (2015). *Government response to final report of the Panel of Experts – Political Donations*. https://www.dpc.nsw.gov.au/assets/media-news/95/attachments/5333fdabf0/Government_response_to_Expert_Panels_final_report.pdf.
- (2017). *A fair go for first home buyers*. <https://www.nsw.gov.au/improving-nsw/projects-and-initiatives/first-home-buyers/>.
- (2018a). *Premier's Priorities*. <https://www.nsw.gov.au/improving-nsw/premiers-priorities/>.

- NSW Government (2018b). *More than \$1 billion in support to help farmers through worsening drought*. <https://www.nsw.gov.au/your-government/the-premier/media-releases-from-the-premier/more-than-1-billion-in-support-to-help-farmers-through-worsening-drought/>.
- (2018c). *Future transport strategy 2056*. https://future.transport.nsw.gov.au/sites/default/files/media/documents/2018/Future_Transport_2056_Strategy.pdf.
- (2018d). *NSW Budget 2018-19: Budget Paper No. 2 (Infrastructure Statement)*. NSW Department of Treasury and Finance. https://www.budget.nsw.gov.au/sites/default/files/budget-2018-06/Budget_Paper_2-Infrastructure%20Statement-Budget_201819.pdf.
- NSW Office of Finance & Services (2014). *Annual Report 2013-14*. https://www.finance.nsw.gov.au/sites/default/files/OFS_AR_Final_Electronic_Minister_1-1.pdf.
- NSW Parliament (2018). *2019 NSW Election*. NSW Parliament. <https://www.parliament.nsw.gov.au/pbo/Pages/2019-NSW-Election.aspx>.
- NSW Roads and Maritime Services (2018). *Cycling statistics*. <https://www.rms.nsw.gov.au/roads/bicycles/statistics/index.html>.
- NSW Treasury (2016). *Budget Paper No. 5 - Intergenerational Report*. NSW Government. https://www.treasury.nsw.gov.au/sites/default/files/2017-01/Budget_Paper_5_-_Intergenerational_Report_2016_-_full_report.pdf.
- (2018a). *Interstate Comparison of Taxes 2017-18*. NSW Government. <https://www.treasury.nsw.gov.au/sites/default/files/2018-04/TRP18-01%20Interstate%20Comparison%20of%20Taxes%202017-18.pdf>.
- (2018b). *NSW Budget 2018-19: Budget Paper No. 1*. NSW Department of Treasury and Finance. https://www.budget.nsw.gov.au/sites/default/files/budget-2018-06/Budget_Paper_1-Budget_Statement_UDPATED_2.pdf.
- NT Department of Housing and Community Development (2017). *Pathways out of homelessness*. https://dhcd.nt.gov.au/__data/assets/pdf_file/0007/434068/Pathways-out-of-Homelessness-Discussion-Paper.pdf.
- NT Department of Infrastructure, Planning and Logistics (2018). *Darwin Regional Transport Plan*. https://dipl.nt.gov.au/__data/assets/pdf_file/0011/297452/darwin-regional-transport-plan-2018-v7.pdf.
- NT Department of Treasury and Finance (2017). *Northern Territory Revenue Discussion Paper*. https://revenuepaper.nt.gov.au/__data/assets/pdf_file/0010/457750/Revenue-Discussion-Paper_full.pdf.
- NT Electoral Commission (2016). *Disclosure Handbook for Registered Political Parties*. https://ntec.nt.gov.au/__data/assets/pdf_file/0003/556068/Handbook_Disclosure_Political_Parties.pdf.
- Oates, W. (1972). *Fiscal federalism*. New York: Harcourt Brace Jovanovich.
- OECD (2005). *Oslo manual: guidelines for collecting and interpreting innovation data*.
- (2013). *The OECD Teaching and Learning International Survey (TALIS) - 2013 Results*. Organisation for Economic Co-operation and Development. <http://www.oecd.org/education/school/talis-2013-results.htm>.
- O'Farrell, B. (2011). *Code of Conduct For Ministers of the Crown*. Department of Premier and Cabinet. <https://arp.nsw.gov.au/m2011-09-code-conduct-ministers-crown>.
- Office, V. P. B. (2018). *Post-election Reports*. VIC Parliamentary Budget Office. https://www.pbo.vic.gov.au/Post-Election_Reports.
- O'Flaherty, B. (2005). *City economics*. Harvard University Press.
- O'Kane, M. (2014). *Final Report of the Independent Review of Coal Seam Gas Activities in NSW*. <http://www.chiefscientist.nsw.gov.au/reports/coal-seam-gas-review>.

- Olatunde et al. (2016). Olatunde, O., Windsor-Shellard, B. and Campbell, A. *Revised Definition of Avoidable Mortality*. London.
- Osborn et al. (2016). Osborn, R., Squires, D., Doty, M. M., Sarnak, D. O. and Schneider, E. C. "In new survey of eleven countries, US adults still struggle with access to and affordability of health care". *Health Affairs* 35.12, pp. 2327–2336. DOI: 10.1377/hlthaff.2016.1088. <http://content.healthaffairs.org/content/early/2016/11/14/hlthaff.2016.1088.abstract>.
- Osborn et al. (2017). Osborn, R., Doty, M. M., Moulds, D., Sarnak, D. O. and Shah, A. "Older Americans were sicker and faced more financial barriers to health care than counterparts in other countries". *Health Affairs* 36.12, pp. 2123–2132.
- O'Sullivan, M. (2018). "Passenger crowding on Sydney trains worsens as demand soars". *Sydney Morning Herald*. <https://www.smh.com.au/national/nsw/passenger-crowding-on-sydney-trains-worsens-as-demand-soars-20180523-p4zh2y.html>.
- Parish, K. (2017). *Ministerial Code of Conduct*. <http://gov-summit.cdu.edu.au/index.php/2017/02/11/ministerial-code-of-conduct/>.
- Pascoe, M. (2018). "The Infrastructure Boom Cometh". *Sydney Morning Herald*. <https://www.smh.com.au/business/the-economy/the-infrastructure-boom-cometh-20180205-p4yzey.html>.
- PBO (2018). *About the PBO*. Parliamentary Budget Office. https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Budget_Office/About_the_PBO.
- PC (2016). *National Education Evidence Base*. Productivity Commission. <http://www.pc.gov.au/inquiries/current/education-evidence#draft>.
- Pearson et al. (2018). Pearson, D., Morris, D., Dimopoulos, S., O'Brien, D., Patten, F., Pennicuik, S., Shing, H., Smith, T. and Ward, V. *Report on the 2018-19 Budget Estimates*. Public Accounts and Estimates Committee, Parliament of Victoria. https://www.parliament.vic.gov.au/images/stories/committees/paec/2018-19_Budget_Estimates/PAEC_58-15_Report_on_the_2018-19_Budget_Estimates.pdf.
- Potter, B. (2016). *ACCC's Rod Sims 'exasperated' as privatisations 'increase prices'*. <https://www.afr.com/news/economy/acccs-rod-sims-exasperated-as-privatisations-increase-prices-20160726-gqdyjv>.
- Potter, M. (2017). *Reforming Social Housing: financing and tenant autonomy*. <https://www.cis.org.au/app/uploads/2017/04/r25.pdf?>.
- Productivity Commission (2005a). *Review of National Competition Policy Reforms*. Canberra.
- (2005b). *Trends in Australian Agriculture*. Canberra. <https://www.pc.gov.au/research/completed/agriculture/agriculture.pdf>.
- (2009). *Government Drought Support*. <https://www.pc.gov.au/inquiries/completed/drought/report/drought-support.pdf>.
- (2011a). *Economic Structure and Performance of the Australian Retail Industry*. Canberra. <https://www.pc.gov.au/inquiries/completed/retail-industry/report/retailindustry.pdf>.
- (2011b). *Performance Benchmarking of Australian Business Regulation: Planning, Zoning and Development Assessments*. <http://www.pc.gov.au/inquiries/completed/regulation-benchmarking-planning/report/planning-volume1.pdf>.
- (2013). *An Ageing Australia: Preparing for the Future*. Productivity Commission. <http://www.pc.gov.au/research/commission/ageing-australia>.
- (2014). *Public infrastructure*. <http://www.pc.gov.au/projects/inquiry/infrastructure>.
- (2016). *Regulation of Australian Agriculture*. <https://www.pc.gov.au/inquiries/completed/agriculture/report/agriculture.pdf>.
- (2017a). *Shifting the Dial: 5 year Productivity Review*.

- Productivity Commission (2017b). *Realising the Productive Potential of Land, Shifting the Dial: 5 year Productivity Review, Supporting Paper No. 10*. <https://www.pc.gov.au/inquiries/completed/productivity-review/report/productivity-review-supporting10.pdf>.
- (2017c). *Transitioning Regional Economies*. <https://www.pc.gov.au/inquiries/completed/transitioning-regions/report/transitioning-regions-report.pdf>.
- (2018a). *Report on Government Services 2018*. Melbourne. <https://www.pc.gov.au/research/ongoing/report-on-government-services/2018>.
- (2018b). *Introducing Competition and Informed User Choice into Human Services: Reforms to Human Services - Social Housing in Australia*. <https://www.pc.gov.au/inquiries/completed/human-services/reforms/report/02-human-services-reforms-housing.pdf>.
- (2018c). *Report on Government Services*. Canberra. <https://www.pc.gov.au/research/ongoing/report-on-government-services/2018/health/primary-and-community-health>.
- (2018d). *Horizontal Fiscal Equalisation*. Productivity Commission. <https://www.pc.gov.au/inquiries/completed/horizontal-fiscal-equalisation#report>.
- PwC (2017). *A fixed abode*. <https://www.pwc.com.au/publications/pdf/cities-afixedabode-2017.pdf>.
- Queensland Government (2014). *The Queensland Plan*. <https://www.queenslandplan.qld.gov.au/assets/images/qld-plan.pdf>.
- Queensland Audit Office (2016). *Royalties For Regions*. https://www.qao.qld.gov.au/sites/all/libraries/pdf.js/web/viewer.html?file=https%7B%5C%7D3A%7B%5C%7D2F%7B%5C%7D2Fwww.qao.qld.gov.au%7B%5C%7D2Fsites%7B%5C%7D2Fqao%7B%5C%7D2Ffiles%7B%5C%7D2Freports%7B%5C%7D2Frt_2015-16_royalties_for_the_regions.pdf.
- Queensland Department of the Premier and Cabinet (2016). *Ministerial Code of Conduct*. Queensland Department of the Premier and Cabinet. <https://www.premiers.qld.gov.au/publications/categories/policies-and-codes/handbooks/ministerial-handbook/appendices/appendix-1.aspx>.
- Queensland Department of Transport and Main Roads (2011). *Queensland cycling strategy 2011-2021*. Department of Transport and Main Roads, Queensland Government. <https://publications.qld.gov.au/dataset/queensland-cycle-strategy-2011-2021/resource/32ed4b2f-63ec-4507-80c7-32f12b1a711e>.
- (2017). *Queensland state of cycling report*. <https://cabinet.qld.gov.au/documents/2017/Jul/Cycling/Attachments/Report.pdf>.
- Queensland Government (2018). *Advance Queensland Initiative*. <https://firsthomeowners.initiatives.qld.gov.au/>.
- Ralston, B. (2018). *Does payroll tax affect firm behaviour?* <https://static.treasury.gov.au/uploads/sites/1/2018/04/p2018-t280988-1.pdf>.
- Rasmussen, B. (2016). *Changing business location: Economic geography of the West of Melbourne*. http://www.vises.org.au/documents/2016_%20Rasmussen_MEF_Changing_Business_Location.pdf.
- Rattenbury et al. (2009). Rattenbury, S., Bresnan, A., Burch, J. and Dunne, V. *The Merit of Appointing a Parliamentary Budget Officer*. Standing Committee on Administration and Procedure, ACT Legislative Assembly. https://www.parliament.act.gov.au/__data/assets/pdf_file/0008/375092/PBO_Report.pdf.
- Rawnsley, T. (2018). *Where has the jobs growth been in Melbourne*. https://www.sgsep.com.au/download_file/view_inline/1732.
- RBA (2018). *Statement on Monetary Policy - May 2018*. <https://www.rba.gov.au/publications/smp/2018/may/pdf/statement-on-monetary-policy-2018-05.pdf>.
- Regional Development Victoria (2018). *Regional Infrastructure Fund application guidelines*. <https://www.rdv.vic.gov.au/grants-and-programs/regional-infrastructure-fund/application-guidelines>.

- Reichert, A. and Jacobs, R. (2018). "The impact of waiting time on patient outcomes: Evidence from early intervention in psychosis services in England". *Health Economics*. DOI: doi:10.1002/hec.3800. <https://onlinelibrary.wiley.com/doi/abs/10.1002/hec.3800>.
- Revenue NSW (2017). *Skilled Regional Relocation Incentive*. <http://www.revenue.nsw.gov.au/grants/complete/rrg/srri>.
- Revenue SA (2018). *Stamp Duty on Transfer of Real Property (Land)*. <https://www.revenuesa.sa.gov.au/taxes-and-duties/stamp-duties/real-property-land#Qualifying>.
- Robertson, J. and Nicholls, S. (2016). "NSW Liberals down \$4 million over hundreds of thousands in donations cloud". *Sydney Morning Herald*. <https://www.smh.com.au/national/nsw/nsw-liberals-down-4-million-over-hundreds-of-thousands-in-donations-cloud-20160322-gnokw0.html>.
- Romer, P. (2015). *Urbanization Passes the Pritchett Test*. <https://paulromer.net/urbanization-passes-the-pritchett-test/>.
- Rooney, K. (2018). "Melburnians face the slowest commute in Australia". *The Herald Sun*. <https://www.heraldsun.com.au/news/victoria/melburnians-face-the-slowest-commute-in-australia/news-story/d1d6d4ee7fc66226d807db21d3bfce30>.
- SA Department of Human Services (2013). *Housing Strategy for South Australia 2013-18*. <https://s0.whitepages.com.au/b7b4c853-59fb-4a84-918a-c63fd11eb8bc/departement-of-human-services-south-australia-document.pdf>.
- SA Government (2015a). *Building a stronger South Australia: the integrated transport and land use plan*. <http://www.transportplan.sa.gov.au>.
- (2015b). *State Tax Review Discussion Paper*. <http://www.yoursay.sa.gov.au>.
- Saulwick, J. (2018). "Missing muddle: government gives ground on terrace housing plan". *Sydney Morning Herald*. <https://www.smh.com.au/national/nsw/terrace-housing-backflip-councils-density-code-20180517-p4zfjy.html>.
- SBS (2018). *Power privatisation hasn't worked: Andrews*. <https://www.sbs.com.au/news/power-privatisation-hasn-t-worked-andrews>.
- Schott et al. (2014). Schott, K., Watkins, J. and Tink, A. *Panel of Experts – Political Donations*. Department of Premier and Cabinet. <https://www.dpc.nsw.gov.au/updates/2014/05/27/panel-of-experts-political-donations/>.
- Senate (2015). *The operation, regulation and funding of private vocational education and training (VET) providers in Australia*. https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Education_and_Employment/vocational/Final_Report.
- Senate Finance and Public Administration Committees (2016). *Commonwealth legislative provisions relating to oversight of associated entities of political parties: final report*. https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Finance_and_Public_Administration/legislative_provisions/Final_Report.
- SGS Economics & Planning (2018). *Productivity or perish - the Australian challenge for the 21st century*. https://www.sgsep.com.au/download_file/view_inline/1685.
- Shoory, M. and Rosewall, T. (2017). *Houses and Apartments in Australia*. Reserve Bank of Australia. <https://www.rba.gov.au/publications/bulletin/2017/jun/pdf/bu-0617-1-houses-and-apartments-in-australia.pdf>.
- Sims, R. (2016). "Ports: What measure of regulation". *Ports Australia Conference*. Melbourne. <https://www.accc.gov.au/speech/ports-what-measure-of-regulation>.
- Smales, L. (2016). "Budget explainer: commodity prices and the federal budget". *The Conversation*. <https://theconversation.com/budget-explainer-commodity-prices-and-the-federal-budget-56588>.

- Smith, K. (2017). "Fixing federalism: forget the turf wars and focus on outcomes". *The Mandarin*. <https://www.themandarin.com.au/86527-fixing-federalism-forget-turf-wars-focus-outcomes/>.
- K. B. Smith et al. (2008). Smith, K. B., Humphreys, J. S. and Wilson, M. G. A. "Addressing the health disadvantage of rural populations: How does epidemiological evidence inform rural health policies and research?" English. *Australian Journal of Rural Health* 16.2, pp. 56–66.
- Solar Choice (2018). *Melbourne solar panels: compare system prices and installers*. <https://www.solarchoice.net.au/blog/melbourne-solar-panels-compare-system-prices-and-installers/>.
- Spiller et al. (2017). Spiller, M., Spencer, A. and Fensham, P. *Value capture through development licence fees*. https://www.sgsep.com.au/application/files/1614/8903/7077/Value_capture_through_development_licence_fees.pdf.
- Tasmanian Department of Health and Human Services (2015). *Tasmania's Affordable Housing Strategy 2015-2025*. https://www.dhhs.tas.gov.au/__data/assets/pdf_file/0011/201215/AHS_Strategy_Final.pdf.
- Tasmanian Department of Infrastructure, Energy and Resources (2010). *Tasmanian walking and cycling for active transport strategy*. Department of Infrastructure, Energy and Resources, Government of Tasmania. https://www.stategrowth.tas.gov.au/__data/assets/pdf_file/0004/88780/Tasmanian_walking_and_cycling_for_active_transport_strategy.PDF.
- Tasmanian Government (2010). *State Tax Review Discussion Paper*. https://stors.tas.gov.au/store/exlibris1/storage/STORS/2012/06/14/file_9/au-7-0098-00316_1.pdf.
- Teles, S. (2013). *Kludgeocracy in America*. <http://www.nationalaffairs.com/publications/detail/kludgeocracy-in-america>.
- Terrill et al. (2016a). Terrill, M., Emslie, O. and Coates, B. *Roads to riches: better transport investment*. <http://grattan.edu.au/wp-content/uploads/2016/04/869-Roads-to-Riches.pdf>.
- Terrill et al. (2016b). Terrill, M., Danks, L., Coates, B., Emslie, O., Parsonage, H. and Button, J. *Cost overruns in transport infrastructure*. Report No. 2016-13. Grattan Institute. <https://grattan.edu.au/report/cost-overruns-in-transport-infrastructure/>.
- Terrill et al. (2017). Terrill, M., Batrouney, H., Etherington, S. and Parsonage, H. *Stuck in traffic? Road congestion in Sydney and Melbourne*. Report No. 2017-10. Grattan Institute. <https://grattan.edu.au/report/stuck-in-traffic/>.
- Terrill, M. and Emslie, O. (2017). *What price value capture?* Report No. 2017-05. Grattan Institute. <https://grattan.edu.au/report/what-price-value-capture/>.
- Terrill et al. (2018). Terrill, M., Batrouney, H., Hourani, D. and Ha, J. *Remarkably adaptive: Australian cities in a time of growth*. Report No. 2018-13. Grattan Institute. <https://grattan.edu.au/report/remarkably-adaptive/>.
- Terrill, M. and Batrouney, H. (2018). *Unfreezing discount rates: transport infrastructure for tomorrow*. Grattan Institute. <https://grattan.edu.au/report/unfreezing-discount-rates-transport-infrastructure-for-tomorrow/>.
- Thwaites et al. (2017). Thwaites, J., Faulkner, P. and Mulder, T. *Independent review into the electricity and gas retail markets in Victoria*.
- Tingle, L. (2012). "Great Expectations: Government, entitlement and an angry nation". *Quarterly Essay* 46.
- TNTP (2015). *The Mirage - Confronting the Hard Truth About Our Quest for Teacher Development*. TNTP. <https://tntp.org/publications/view/the-mirage-confronting-the-truth-about-our-quest-for-teacher-development>.
- Transport and Infrastructure Council (2018). *Australian Transport Assessment and Planning Guidelines - T2 Cost Benefit Analysis*. https://atap.gov.au/tools-techniques/cost-benefit-analysis/files/t2_cost_benefit_analysis.pdf.

- Trapp et al. (2016). Trapp, L. von, Lienert, I. and Wehner, J. *Principles for independent fiscal institutions and case studies*. Organisation for Economic Co-operation and Development. <http://personal.lse.ac.uk/wehner/ifis.pdf>.
- Treasury (2014). *Budget 2014-15 Overview*. https://www.budget.gov.au/2014-15/content/overview/download/Budget_Overview.pdf.
- (2018). *Final Budget Outcome 2017-18*. https://www.budget.gov.au/2017-18/content/fbo/download/FBO_2017-18_Combined.pdf.
- Turner et al. (2014). Turner, M., Haughwout, A. and Klauuw, W. van der. "Land Use Regulation and Welfare". *Econometrica* 82.4, pp. 1341–1403. <https://onlinelibrary.wiley.com/doi/abs/10.3982/ECTA9823>.
- Twomey, A. and Withers, G. (2007). *Federalist Paper 1: Australia's Federal Future*. Council for the Australian Federation. <http://www.caf.gov.au/Documents/AustraliasFederalFuture.pdf>.
- VicRoads (2018a). *Road use & performance: Bicycle Speed and Volumes*. <https://www.vicroads.vic.gov.au/traffic-and-road-use/road-network-and-performance/road-use-and-performance>.
- (2018b). *Evaluating Investment Outcomes*. <https://www.vicroads.vic.gov.au/planning-and-projects/evaluating-investments>.
- Victorian Auditor General (2015). *Regional Growth Fund: Outcomes and Learnings*. <https://www.audit.vic.gov.au/report/regional-growth-fund-outcomes-and-learnings>.
- Victorian Curriculum and Assessment Authority (2018). *Insight Assessment Platform*. Victorian Curriculum and Assessment Authority. <https://www.vcaa.vic.edu.au/Pages/insightplatform/index.aspx>.
- Victorian Department of Education and Training (2018). *The Critical and Creative Thinking Assessment tool*. http://www.digipubs.vic.edu.au/21st-century/npdl_creativity/npdl-creativity-assessing_and_measuring.
- Victorian Department of Environment, Land, Water and Planning (2017). *Plan Melbourne – Metropolitan Planning Strategy, 2017-2050*. Victorian Department of Environment, Land, Water and Planning. <https://www.planmelbourne.vic.gov.au/the-plan>.
- Victorian Department of Treasury and Finance (2018). *Victorian Budget 2018-19: Budget Paper No. 2*. Victorian Department of Treasury and Finance. <https://www.dtf.vic.gov.au/2018-19-state-budget/2018-19-strategy-and-outlook>.
- Victorian Essential Services Commission (2014). *Review of Victorian Ports Regulation 2014*. <https://www.esc.vic.gov.au/project/transport/ports/2148-reviewof-victorian-ports-regulation-2014/>.
- Victorian Government (2013). *Advanced Metering Infrastructure (AMI tariffs) Order*.
- (2016). *Melbourne Metro Business Case*. <https://metrotunnel.vic.gov.au/library/business-case>.
- (2017). *Making renting fair*. <http://www.vic.gov.au/rentfair.html>.
- (2018a). *Community indicators Victoria*. <http://www.communityindicators.net.au/>.
- (2018b). "Economic Growth Zone". <https://lva.vic.gov.au/economic-growth-zone/>.
- (2018c). *Victorian Government interim response: bipartisan independent review of the electricity and gas retail markets in Victoria*. <https://www.energy.vic.gov.au/about-energy/policy-and-strategy>.
- (2018d). *Victorian Government final response to the independent review of the electricity and gas retail markets in Victoria*. <https://www.energy.vic.gov.au/about-energy/policy-and-strategy>.
- Victorian Public Sector Commissioner (2018). *Register of Lobbyists*. Victorian Public Sector Commissioner. <https://www.lobbyistsregister.vic.gov.au/lobbyistsregister/main/index.htm>.

- WA Department of Housing (2010). *Affordable Housing Strategy 2010-2020, Opening Doors to Affordable Housing*.
http://www.dhw.wa.gov.au/HousingDocuments/AHS_Report_final.pdf.
- WA Department of Transport (2017a). *Western Australian Bicycle Network Plan: 2017 update*. Department of Transport, WA Government.
https://www.transport.wa.gov.au/mediaFiles/active-transport/AT_CYC_P_WABN_Plan.pdf.
- (2017b). *Cycle count data*.
https://www.transport.wa.gov.au/mediaFiles/active-transport/AT_CYC_P_Cycle_count_data_2017.pdf.
- WAEAC (2018). *Funding and Disclosure in Western Australia*. Western Australian Electoral Commission. <https://www.elections.wa.gov.au/site/default/files/content/Documents%202018%20by-election/Funding%20and%20Disclosure%20in%20WA%20Guidelines.pdf>.
- Wakerman et al. (2006). Wakerman, J., Humphreys, J., Wells, R., Kuipers, P., Entwistle, P. and Jones, J. *A systematic review of primary health care delivery models in rural and remote Australia 1993-2006*. Canberra.
- Wakerman et al. (2008). Wakerman, J., Humphreys, J., Wells, R., Kuipers, P., Entwistle, P. and Jones, J. "Primary health care delivery models in rural and remote Australia - a systematic review". *BMC Health Services Research* 8, p. 276.
- Wells, G. (2015). "Time to rethink the Charter of Budget Honesty". *The Conversation*. <https://theconversation.com/time-to-rethink-the-charter-of-budget-honesty-37851>.
- Welsh, J. and Berry, H. (2009). *Social capital and mental health and well-being*.
https://melbourneinstitute.unimelb.edu.au/assets/documents/hilda-bibliography/hilda-conference-papers/2009/Welsh,-Jennifer_paper.pdf.
- Western Australia Auditor General (2014). *Royalties for Regions – are benefits being realised?*
<https://audit.wa.gov.au/reports-and-publications/reports/royalties-regions-benefits-realised/auditor-generals-overview/>.
- Whitbourn, M. (2018). "Unions file High Court challenge to NSW electoral funding laws". *Sydney Morning Herald*.
<https://www.smh.com.au/politics/nsw/unions-file-high-court-challenge-to-nsw-electoral-funding-laws-20180809-p4zwl9.html>.
- Wild, K. (2015). "Foundation 51: NT Electoral Commission refers CLP-associated entity to police for 'further consideration'". *ABC Online*. <http://www.abc.net.au/news/2015-04-15/ntec-refers-clp-associated-entity-foundation-51-to-police/6393854>.
- Williams, G. (2017). "We desperately need a genuine plan for federal reform". *Sydney Morning Herald*.
<https://www.smh.com.au/opinion/we-desperately-need-a-genuine-plan-for-federal-reform-20170519-gw8pfe.html>.
- Willingham, R. (2018). "Political donation laws overhaul in Victoria may not pass after Opposition reverses support". *ABC Online*.
<http://www.abc.net.au/news/2018-06-19/coalition-rejects-victorian-political-donation-laws-overhaul/9885544>.
- Wood, T. (2018). "Why politicians have to stop promising to cut electricity prices". *Australian Financial Review*.
<https://www.afr.com/opinion/columnists/why-politicians-have-to-stop-promising-to-cut-electricity-prices-20180701-h123a4?bts>.
- Wood, D. (2018). "Victorian budget: observation from outside the tent". *IPAA State Budget Briefing Breakfast*.
<https://grattan.edu.au/news/victorian-budget-observations-from-outside-the-tent/>.
- T. Wood et al. (2012). Wood, T., Hunter, A., O'Toole, M., Venkataraman, P. and Carter, L. *Putting the customer back in front: How to make electricity cheaper*. Report No. 2012-09. Grattan Institute.
<https://grattan.edu.au/report/putting-the-customer-back-in-front-how-to-make-electricity-prices-cheaper/>.
- T. Wood et al. (2015a). Wood, T., Blowers, D. and Moran, G. *Post Paris: Australia's climate policy options*. Working Paper No. 2015-13. Grattan Institute. <https://grattan.edu.au/report/post-paris-australias-climate-policy-options/>.

- T. Wood et al. (2015b). Wood, T., Blowers, D., Chisholm, C., Button, J. and Stone, J. *Sundown, sunrise: how Australia can finally get solar power right*. Report No. 2015-2. Grattan Institute. <https://grattan.edu.au/report/sundown-sunrise-how-australia-can-finally-get-solar-power-right/>.
- T. Wood et al. (2017). Wood, T., Blowers, D. and Moran, G. *Price shock: Is the retail electricity market failing consumers?* Report No. 2017-04. Grattan Institute. <https://grattan.edu.au/report/price-shock/>.
- D. Wood et al. (2018a). Wood, D., Daley, J. and Chivers, C. *A crisis of trust: The rise of protest politics in Australia*. Report No. 2018-05. Grattan Institute. <https://grattan.edu.au/report/a-crisis-of-trust/>.
- D. Wood et al. (2018b). Wood, D., Griffiths, K. and Chivers, C. *Who's in the room? Access and influence in Australian politics*. Report No. 2018-12. Grattan Institute. <https://grattan.edu.au/report/whos-in-the-room/>.
- T. Wood et al. (2018a). Wood, T., Blowers, D. and Griffiths, K. *Down to the wire: a sustainable electricity network for Australia*. Report No. 2018-06. Grattan Institute. <https://grattan.edu.au/report/down-to-the-wire/>.
- T. Wood et al. (2018b). Wood, T., Blowers, D. and Percival, L. *Mostly Working: Australia's wholesale electricity market*. Report No. 2018-08. Grattan Institute. <https://grattan.edu.au/report/mostly-working/>.
- World Bank (2018a). *New business density (new registrations per 1,000 people ages 15-64)*. <http://www.doingbusiness.org/data/exploretopics/entrepreneurship>.
- (2018b). *Ease of Doing Business Rankings*. <http://www.doingbusiness.org>.
- Wyatt, T. (2017). *Enhancing instructional leadership: Lessons from the NSW Literacy and Numeracy Action Plan*. ACER Research Conference. https://research.acer.edu.au/cgi/viewcontent.cgi?article=1308&context=research_conference.
- Zelmer, J. (2018). "Measuring Progress in Access to Health Services". *Healthcare Policy* 14.1, pp. 6–9. <https://www.longwoods.com/content/25554/healthcare-policy/measuring-progress-in-access-to-health-services>.