

# Shifting the Dial improving Australia's productivity performance<sup>1</sup>

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## Abstract

Non-market sector reform is much overlooked. The sector is the fastest growing part of the economy, the most controlled by governments, and critical to everybody's quality of life. Reforms to healthcare – principally a shift to an integrated care model – would promote patient well-being and could offer benefits of around \$145 billion in constant dollars over the next 20 years. Universities play an increasing role in skills acquisition, but need incentives and new structures to give primacy to teaching quality. Australian cities need Hilmer-like competition reform in planning and zoning, and entirely new approaches to funding roads.

**Keywords** productivity, healthcare reform, road reform, cities, zoning, teaching

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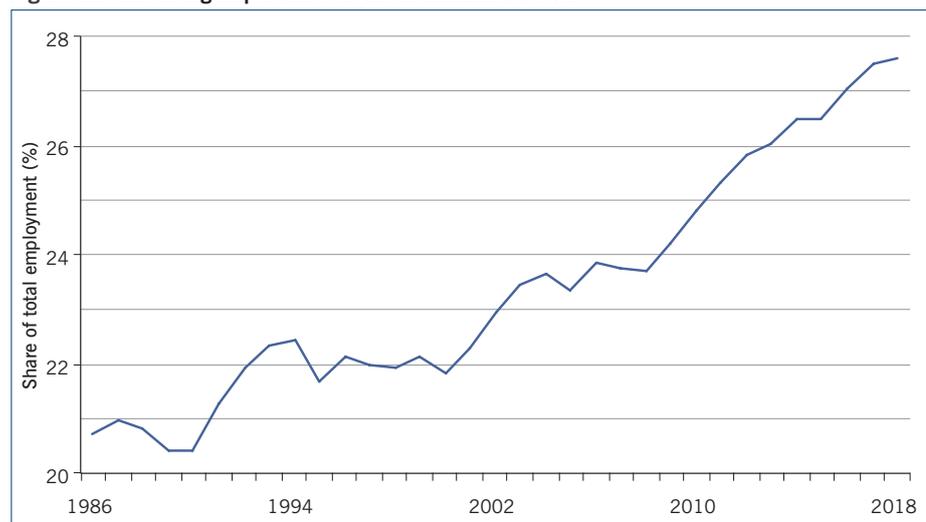
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The various concepts of productivity are perplexing abstractions for the public. Yet ultimately a country's prosperity relies on sustained productivity growth, as is best visible in those countries where the productivity 'machine' has failed, and poverty and disadvantage remain people's typical lot.

Growth in productivity and prosperity is not automatic. For the 50 years from 1890, Australian labour productivity growth moved glacially by around half a per cent per year. In the 'golden productivity era' from 1940 to the later 1990s, growth rates were on average around 2%. For the past two decades, labour productivity growth has again stagnated at around 1% per year. Multifactor productivity – a measure that combines labour and capital productivity into a single metric – has also languished in the last decade. Sustained weak productivity growth will continue to place downward pressure on wage growth and the living standards of Australians.

This story is not an Antipodean idiosyncrasy. Policymakers around the world have shared a collective anxiety

Figure 1: The rising importance of the non market sector\*



\* The non market sector is defined as the combination of public administration, defence, healthcare and education. Source: Australian Bureau of Statistics, 2018

about the enduring slowdown in productivity. The labour productivity growth rate in OECD countries fell from about 3.7% annually in the decade 1950–60 to only 0.9% per annum in 2008–18. The ‘paradoxical’ coincidence of slow growth alongside the major information technology advances in this period has given rise to a vigorous debate about the real impacts of these technologies compared to past innovations, and led to prognostications – pessimistic and optimistic – about the impacts of digital disruption.

Regardless of the effects of new technologies, from a policy perspective the key question is always ‘can we do better?’

It was against the backdrop of sustained lacklustre productivity performance that the Australian government asked the Australian Productivity Commission to undertake five-yearly reviews assessing Australia’s productivity performance and recommending reform priorities. The first of these reviews, titled *Shifting the Dial: 5 year productivity review*, was released in October 2017.

**Improving non-market productivity is key**

The review took an explicitly different approach to productivity and prosperity than the usual examinations of this topic. While undoubtedly there remain benefits from further traditional forms of microeconomic reform, many of the most desperately required policy changes (floating the exchange rate, liberalising capital markets, and competition policy)

have already been made. There remains an important repertoire of policy actions, and the required changes have been comprehensively mapped out (not least the commission’s recommended changes to Australia’s workplace relations system). The review identifies again the usual suspects, but the imperative for orthodox reforms is ‘to do’ rather than to understand ‘what to do’.

Achieving better outcomes for Australians now requires a focus on the non-market sector (mainly education and healthcare), on the quality of cities, and on the effectiveness of government itself. The non-market sector is the most rapidly growing part of the economy (accounting for some 30% of total employment in 2018). Moreover, Australian governments provide the sector’s main funding, coordination and service suppliers. Above all, these areas of the economy matter to all people. Everyone wants an effective healthcare system, good schools and universities, and cities that function well. In all of these systems, their putative goal is to serve the needs of people. Yet, unlike most of the market sector, they are not structured to do so.

One driver for reform of market sector industries is the visibility of underperformance. There are well-understood (albeit imperfect) measures of their productivity through standard national accounts data. However, no such broad indicators are available for non-market industries. This is because the prices and quantities revealed by market

transactions are absent for non-market services. For instance, measuring activities per se – such as an unplanned avoidable re-admission to a hospital – is not an output that should be given much weight in productivity given that it is a low-quality outcome.

Most statistical agencies have struggled with the estimation of productivity in these areas. The Australian Bureau of Statistics is currently developing measures of healthcare productivity, primarily through constructing disease-based output measures, and further work will be undertaken for education and social services (Luo, 2018; Australian Productivity Commission, 2017b). Improved aggregate measures of productivity for non-market services will be useful for many reasons. They will provide a better understanding of the drivers of economic growth; reveal any systemic underperformance in non-market industries (especially if benchmarked against other countries that have also refined their measures); create a framework for assessing the quality of outputs; and require the construction of micro-performance metrics, as these are the necessary building blocks for any aggregate measures.

As useful as aggregate productivity measures will ultimately be, often more granular information is needed to discover reform options and to evaluate outcomes (such as data on the use of low-value treatments). Fortunately, there is enough evidence to identify high-priority areas for reforms to non-market services. Nevertheless, *how* to achieve better outcomes – especially in a federation where multiple governments are collectively at work – is not well established. This was the focus of the Productivity Commission’s analysis.

The commission identified three major areas where governments can act:

- more integrated healthcare that places the patient at the centre of the system, and that manages, and prevents the onset of, chronic ill health;
- an education system that supports better teaching in both schools and universities; and
- cities that ease the costs of moving around and locate infrastructure and services where people most value them.

**Better healthcare to reduce chronic illness and lift participation rates**

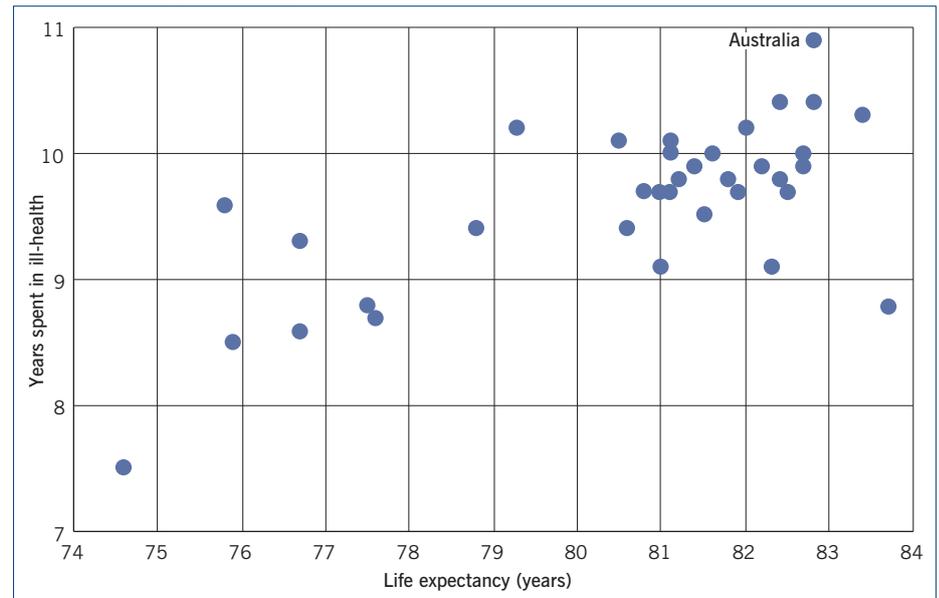
By global standards, Australians have high life expectancy, healthcare is accessible, and the costs of the system are reasonable. However, among OECD countries Australians also have a high share of their lifespan spent in ill health, at around 13% and amounting to an average 10.9 years (the latter the highest in the OECD). In contrast, New Zealanders have the ninth highest share of their lifespan spent in ill health.

Australia has high rates of chronic disease, placing major pressure on healthcare costs, and, even more problematically, creating misery among millions. As medical and public health advances have lowered the rate of death from causes such as infectious disease and trauma, the focus of Australia's healthcare system has shifted to managing chronic and complex conditions (such as diabetes, lung cancer, cardiovascular disease and mental illness). 1.2 million Australians have diabetes, 600,000 chronic obstructive pulmonary disease, and an extraordinary 4 million people have a mental or behavioural problem. Such diseases are over-represented among low-income and indigenous Australians.

Many of these conditions can be prevented: tobacco use and high body mass are the top two contributors to the burden of disease. Images of lean athletic Australians are at odds with the actual morphology of the average person, with Australia being towards the top of the global obesity ladder. Where chronic illness exists, there is considerable scope to manage it better. Care pathways, especially between general practitioners and hospitals, are often poorly coordinated. Clinicians, patients and researchers are constrained by inadequate information flows and haphazard data collection: for example, only around one in five GPs are notified when a patient is treated in a hospital emergency department. (The figure in New Zealand is more than 50%.) Regulatory and jurisdictional obstacles prevent effective linkages between hospitals and GPs that would enable better management of chronic conditions and reduce hospitalisations.

Many medical interventions funded by taxpayers are undertaken despite little

**Figure 2: Many years are spent in ill health\***



\* Years spent in ill health is defined as life expectancy less health-adjusted life years. Source: World Health Organization, 2017

evidence that the intervention is beneficial (arthroscopic knee surgery is a case in point). There are striking inexplicable variations in clinicians' use of medical procedures across different health districts – hardly science at work.

The system is medically rather than patient-centred, with the patient as a person often an inconvenient guest within the system. Patient health literacy is low.

**The solution: integrated, patient-centred care**

The key to better outcomes are reforms aimed at achieving what is now commonly referred to as 'integrated, patient-centred healthcare', delivering customised services to people across the entire health system.

There are already examples in Australia and other countries where the gains of integrated care have been demonstrated. For example, the Western Sydney Diabetes Initiative reduced patient costs by \$4,000 and hospitalisations by 45%. Scaling these up is not easy, not least because of fractured funding systems and clinical cultures. Changing the latter requires a new mindset from all parties in the system, but already the leading colleges of clinicians are onside. It requires better patient health literacy so that people can be partners in their healthcare (for example, through improved medication compliance and through a greater capacity to change the lifestyle factors that heighten the risks of chronic illness). The information and data systems need to enter the digital age, and data

records should be used systematically for better healthcare and be available to patients.

New measures of performance that centre on the patient – patient-reported outcome and experience measures (PROMs and PREMs) – need to be developed and used. Where feasible, patient choice should be given more weight. If there is a single representation of the change needed in the system, it is captured by the title of a 2015 book by Eric Topol, a US clinician: *The Patient Will See You Now*.

Payment and funding system reforms are required to support these changes. A drawback of Australia's current health system is that there are a series of budget silos. Hospitals are managed by state and territory governments, and jointly funded by both levels of government; general practice is funded and regulated by the Australian government; and community healthcare centres are funded and managed by state and territory governments. Key decision-makers in our system have no direct financial incentive to be efficient in their use of other parts of the system.

GPs and specialists are generally paid on a fee-for-service basis for items on the government-determined Medicare Benefits Schedule. This means clinicians do not face strong financial incentives to avoid high-cost activities (such as tests, referrals to specialists and hospital admissions), use lower-cost delivery methods (such as employing nurse practitioners or

phone-based consultations), or encourage coordinated care of patients or disease management. Moreover, fee-for-service introduces considerable rigidity into the management of care, and limits the incentives for proactive preventative healthcare. The Royal Australian College of General Practitioners has highlighted that SNAP – smoking, nutrition, alcohol and physical activity – should be a prime target for preventative care. Yet, extraordinarily, many people in the highest-risk categories received no advice from their physician in the previous 12 months. For example, around 80% of obese patients received no advice on improved diet or increased physical activity.

## Countries with excellent academic student outcomes have pursued policies to attract high-quality teachers, including through financial incentives.

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Governments should redesign hospital funding to create incentives to avoid hospitalisations through investments in public health and in community and primary care. More flexible funding pools at the regional level, comprising shared contributions from Australian and state and territory governments, would give general practice and other health professions scope to adopt more innovative models of care. Current activity-based funding encourages hospitals to be technically efficient, but it penalises them if they prevent hospitalisations. The commission proposes an approach whereby local hospital networks (LHNs) in alliances with primary health networks (PHNs) could draw from the new funding pools to cooperatively make investments outside a hospital setting (such as commissioning the services of GPs) to reduce costly hospitalisations and improve patient outcomes. The goal is principally to improve integrated care, but this approach will also reduce hospital costs, with LHNs recouping some of these.

The commission proposes the implementation of a 'blended payments'

model for GPs, retaining fee-for-service as a major portion of GP revenue, combined with risk-adjusted capitation payments. This would strengthen incentives for GPs to provide services via multidisciplinary teams, including having a greater role in preventative health and management of chronic conditions.

Financial incentives for improving quality and safety should not be overlooked. The commission recommends that Australian governments should:

- more quickly respond to authoritative assessments identifying low-value interventions ('Do not do' lists), and de-fund interventions that fail cost-effectiveness tests;

collect and divulge data at the hospital and clinician level for episodes of care that lead to hospital-acquired complications and for interventions that have ambiguous clinical impacts; and

- provide patients with plain English explanations of treatments that often lack efficacy.

The gains from reform are large, a reflection of the fact that healthcare represents around 10% of total GDP and has far-reaching impacts on people's capacity to work and participate in the community. The labour force participation rate of someone aged 25–49 and in good health is nearly 90%, but is only half this for someone in poor health. With the gradual uptake of all of the elements of the above package of measures, the gains could be around \$145 billion in constant prices over 20 years. This does not include some of the benefits of improved life expectancy and reduced suffering. While not usually counted in standard national accounts, in the period from 1913 to 1950 more than 40% of the increase in Australian living standards reflected improvements in life

expectancy, and it was still around 25% between 1973 and 2009 (Haacker, 2010). The sweeping reforms proposed by the commission would add to this often uncounted dividend.

### Responding to student needs: education and workforce skills

Governments all recognise the critical role of the education system in developing skills and informed citizens, but the system has not been very responsive to those it is intended to serve.

In the school system, outcomes have been falling. An Australian 15-year-old in 2015 had a mathematical aptitude equivalent to that of a 14-year-old in 2000, notwithstanding more school funding, developments in pedagogy, and over 40 reviews of teacher education that have attempted to overcome persistent concern about school quality. Globally, the share of Australians with the poorest maths skills has been rising. There is evidence that new teachers have lower inherent proficiency than their predecessors. Teaching out of field has become endemic in some areas. For example, in information technology, about 30% of year 7 to year 10 teachers have weak training in the subject. This affects students and demoralises teachers, increasing teacher attrition rates. Countries with excellent academic student outcomes have pursued policies to attract high-quality teachers, including through financial incentives. There are moves afoot to change these problems, but their effectiveness is uncertain.

After experimental, but ill-managed, restructuring, the vocational education and training (VET) system has lost the confidence of employers and students alike. The VET sector is being repaired, but it will be some time before it can function properly. The priority now is that it reattain its capacity for high-quality vocational training. Governments should also recognise that a good system is not just about reaching a given competency level, and, over the longer term, seek to differentiate students by their level of proficiency above the minimum required standard. This enables better matching of workers' skills to employers' needs and creates strong incentives for students to be excellent and not just competent in their fields.

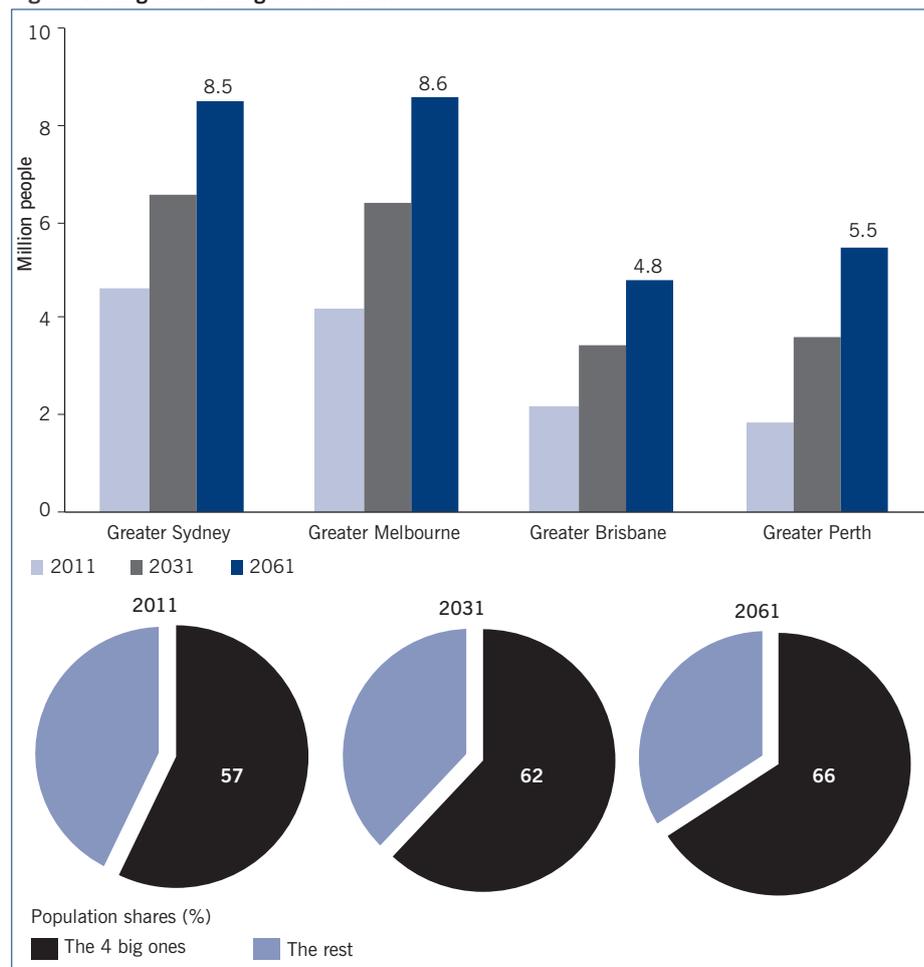
The Australian university sector has increased its vocational function, in part substituting for that of the VET sector, and has rapidly expanded its role in overall skill development. In 2011 the share of the population aged 15 years and over with a bachelor's degree or higher was 19%, and given present trends it could readily rise to over 40%. In 1971 the comparable figure was 2%.

This rapid increase has been accompanied by several major developments (Australian Productivity Commission, 2017c).

- Student attrition rates are higher, and progress in completing qualifications low. In 2014, more than 26% of students had not completed their degree programme within nine years of commencing.
- Full-time job outcomes have fallen, as have the wages of graduates compared with those with other qualifications. Students have become a major cash cow for universities, accentuated by the huge increase in the importance of revenues from foreign student fees. Students are cross-subsidising the research function of universities (Norton and Cherastidtham, 2015). That might be justified if there was a complementarity between research and teaching, but the empirical evidence of any such relationship is scanty.
- The debt associated with the Higher Education Loan Program (HELP) has spiralled. The value of outstanding HELP debt has tripled over the ten years to 2016, and now sits at around \$50 billion. Projections suggest that without new policies, this growing mountain of debt will reach \$200 billion by 2025.

These developments raise questions about the desirable role of Australian universities, and, in particular, the low status given to teaching. Teaching-focused positions have a poor reputation, with many academics viewing them as a low-pay, low-progression and low-value career pathway (Bennett, Roberts and Ananthram, 2017). Staff surveys indicate that while over 80% of academics think that effectiveness as a teacher should be highly rewarded in promotions, less than 30% think it actually is rewarded. University rankings – used as

Figure 3: Big cities will grow the most



Source: Infrastructure Australia, 2015

a promotional tool to attract students – most often refer to a university's research excellence, notwithstanding that this is largely irrelevant to students. Students themselves are not satisfied. Some 38% of university students said their education had not adequately developed their ability to solve complex problems.

It will be difficult to address the deeply entrenched cultural biases against university teaching, but several steps would help. First, universities should have some 'skin in the game', being rewarded for obtaining excellent student outcomes (Oslington, 2015; Sharrock, 2015). This would more closely align the interests of universities and their staff with those of the people paying the bills – students and taxpayers. The Australian government is already moving in this direction, and changes in the application of consumer law in a demand-led system mean that students have a legal capacity for redress (potentially including a right to repeat at no cost) if a university provides a defective service, just as for other service providers.

Second, the requirement that universities undertake both research and teaching is anachronistic, and should be removed, subject to strict regulatory supervision of the quality of the new institutions.

Third, new technologies offer scope for the digital disruption of the current university sector. In the internet age, the cost of the diffusion of information is zero, as evidenced by the explosion of massive open online courses. Traditional universities are themselves embracing online access, but a bolder move would be to develop a system that differentiates between how people acquire skills and the certification of their quality. For instance, in the United States, Udacity's nanodegree in self-driving cars draws on instructors from industry leaders such as Mercedes-Benz and Nvidia. Students pay a few hundred dollars per month for as long as it takes to finish the course, with rebates if they complete it within a year. The Achilles heel of a new model is that there is no highly respected certification

framework that signals the quality of any new credentials. This acts as a barrier to entry to new low-cost suppliers and limits self-learning. The Australian government should develop that framework.

### Better functioning towns and cities

The overwhelming majority of Australians live and work in cities, increasingly concentrated in the three major sprawling metropolises clinging to the eastern coast – Melbourne, Sydney and Brisbane. About 80% of Australia's GDP is produced in cities, and 40% in our two largest, Sydney and Melbourne. In 2015, Melbourne grew by more people every five days than Hobart added in a whole year. On current

penalties imposed on those who choose to move (for either work or lifestyle reasons) and provide a more stable revenue source;

- improvements in public infrastructure provision and use. The commission particularly focuses on roads, where poorly conceived projects and waste are all too frequent, and technological change will make fuel excise an ever-diminishing source of revenue for funding roads as fuel efficiency and vehicle electrification rates rise;
- planning and land use policies, including the application of competition principles to land use regulation.

willingness to pay should inform where roads go. Road funds cannot realistically be adopted in one step. The lesson from major new government initiatives – the implementation of the National Disability Insurance Scheme and changes to the VET system – is that rushing is often the precursor to disappointing outcomes. The first step in road user charging should therefore be road pricing pilots in Australia's major capitals. Transurban has already undertaken a road pricing experiment in Melbourne. The value of more efficient use of the road network alone is estimated to be equivalent to approximately 0.7% of GDP in the long run, or a permanent increase to annual GDP of approximately \$20 billion. There would be additional allocative efficiency benefits from the closer matching of services to the preferences of road users, and fewer inefficiencies associated with poor project design and delivery.

Zoning restrictions have fundamental effects on competition in Australian cities. Provisions that explicitly or implicitly favour particular operators or set proximity restrictions between businesses should be banned. There should be a Hilmer-like<sup>2</sup> national agreement to apply competition policy principles to land use policies, where the key goal is to meet the long-term interests of the community, as in other competition policy.

### Delivery of reforms

In some instances, governments at all levels can act autonomously to introduce the reforms to health, education and cities. Responsibility for the dysfunctional elements of higher education, for example, lies entirely with the Australian government.

However, without national agreement between all jurisdictions, many of the reforms proposed by the commission will languish. The Council of Australian Governments – the usual vehicle for cooperative policy initiatives – is currently a slow and capricious vehicle for reform. But it can be revived if state and territory governments' central role in, and understanding of, delivering services is recognised by the Australian government, and if the relationship between parties is less tainted by expectations that the

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trends, most growth is projected to occur in capital cities, so how cities operate is fundamental to both the quality of people's lives and national prosperity.

Cities are distinguished by their physical dimensions and high concentrations of people, which means that policies affecting the availability and use of space, organisation of activity and the pace and distribution of population growth particularly affect city liveability and productivity. While Australian cities currently score well on liveability, the pressures on their functioning are mounting. There is increasing traffic congestion, undue restrictions on housing supply and business investment from ad hoc and anticompetitive planning and zoning, some poor decisions about public infrastructure, and an unsustainable funding basis for roads. Stamp duties, while a bonanza in times of rising housing prices, are unfair and inefficient. The avoidable social cost of congestion alone was \$18.7 billion in 2015.

The commission's recommended reforms focus on:

- switching from stamp duties to taxes based on land value, which would avoid

The solutions to some of these issues are relatively straightforward, if sometimes politically fraught. A phased transition to land tax is already occurring in the Australian Capital Territory, proving its feasibility. And governments at least know how to avoid white elephants in infrastructure investments. Looking for cheaper substitutes to grand designs is an obvious one, such as limiting parking spaces on congested roads. More rigorous planning and detailed, hard-headed cost-benefit analysis should always precede project decisions, and the analyses should be used to determine investment priorities. Yet the Grattan Institute estimated that over the past 15 years, governments announced about 30% of transport infrastructure projects valued at over \$20 million before a funding commitment. Brisbane's Clem 7 Tunnel Freeway project exemplifies the waste. The initial net present cost was \$638 million, but its actual capital cost was 2.5 times higher and its actual patronage three times lower.

Road funding involves more elaborate considerations. Over the longer term, motorists will need to pay directly for their road use, and, as with other services, their

Australian government will pay for reforms. The fond, but fictitious, memory of national competition payments as a driver of reform in the 1990s ignores that such payments were ancillary rather than central drivers of change. Nowadays, the fiscal cupboard of the Australian government is bare, and, in any case, paying

parties to do things that are in their own self-interest is ill-justified. The commission has proposed some key items that should belong to a new reform agenda, but a good negotiated agreement should encourage state and territory governments to bring their own initiatives to a negotiating table.

- 1 This article draws from the Australian Productivity Commission's five-year productivity review (Australian Productivity Commission, 2017a), available at <https://www.pc.gov.au/inquiries/completed/productivity-review/report>.
- 2 Professor Fred Hilmer led a review of national competition policy, with its 1993 report being the blueprint for a wide-reaching microeconomic reform involving all Australian jurisdictions.

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