

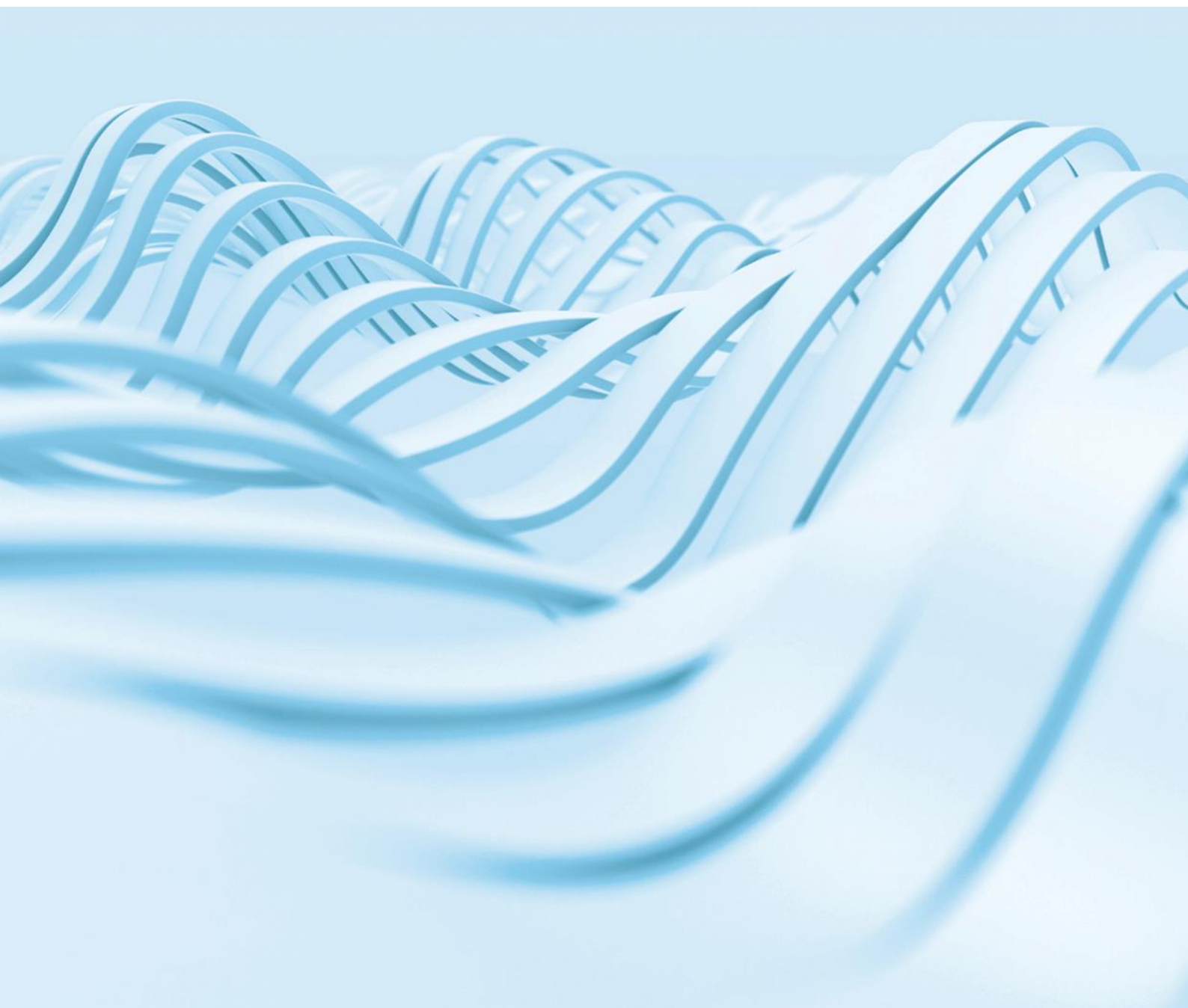


Australian Government
Productivity Commission

Report no. 100 – 7 February 2023

5-year Productivity Inquiry: Advancing Prosperity

Inquiry report – *volume 1*



The Productivity Commission acknowledges the Traditional Owners of Country throughout Australia and their continuing connection to land, waters and community. We pay our respects to their Cultures, Country and Elders past and present.

The Productivity Commission

The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long term interest of the Australian community.

The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Further information on the Productivity Commission can be obtained from the Commission's website (www.pc.gov.au).

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7 February 2023

The Hon Dr Jim Chalmers MP
Treasurer
Parliament House
CANBERRA ACT 2600

Dear Treasurer

In accordance with section 11 of the *Productivity Commission Act 1998*, we have pleasure in submitting to you **Advancing Prosperity**, the Commission's final report for the 5-year Productivity Inquiry.

Yours sincerely,

Handwritten signature of Michael Brennan.

Michael Brennan
Chair

Handwritten signature of Alex Robson.

Alex Robson
Deputy Chair

Handwritten signature of Lisa Gropp.

Lisa Gropp
Commissioner

Handwritten signature of Stephen King.

Stephen King
Commissioner

Terms of reference

I, Josh Frydenberg, Treasurer, pursuant to parts 2 and 3 of the *Productivity Commission Act 1998*, hereby request that the Productivity Commission undertake an inquiry into the Australia's productivity performance and provide recommendations on productivity-enhancing reform. This inquiry is the second of a regular series, undertaken at five-yearly intervals, to provide an overarching analysis of where Australia stands in terms of its productivity performance. The first report, *Shifting the Dial* was completed in 2017.

Background

Australia's economy has performed strongly in recent decades enjoying robust growth in incomes and living standards following 28 years of consecutive economic growth interrupted by the COVID-19 pandemic. Australia's economic recovery from the pandemic has been world leading however to ensure Australians continue to enjoy higher living standards, we need to continue to focus on the task of lifting productivity.

Productivity growth is vital for Australia's future, particularly as the Australian and global economies emerge and begin to recover from the economic impacts of COVID-19. The 2021 Intergenerational Report makes it clear that future growth in income and living standards will be driven from productivity growth as the participation effects of young migration are offset by an ageing population. Global and domestic productivity growth in recent decades however has slowed. Changes brought about by the COVID-19 pandemic and the global and domestic policy responses will also provide a unique historical context for this Review.

Given the scale and nature of the economic shock caused by the COVID-19 pandemic, it is expected to have an enduring impact on Australia's productivity challenge. The acceleration in the uptake of technology by business and individuals has stimulated growth in remote work, online commerce, businesses' digital presence and innovative delivery of public services like health and education. The pandemic has affected business models in some key sectors and underscored the need for labour mobility across the economy.

In this environment, Australia needs policy settings that foster a flexible and dynamic economy, that is able to adapt in the face of economic challenges and opportunities. Policy settings should encourage the economy to adapt to the growing importance of digital technologies, including through developing a skilled labour force. They must also be forward looking and support an environment that promotes economic dynamism, entrepreneurship and appropriate risk-taking, and innovation and technological adoption.

Against this background, the Review can play a critical role in making high-value and implementable recommendations to support Australia's productivity growth. Lifting Australia's productivity growth will involve a combination of economy-wide and structural reforms, in addition to targeted policies in particular sectors to push Australian industries closer to the global frontier.

Scope of the inquiry

The Commission is to review Australia's productivity performance and recommend an actionable roadmap to assist governments to make productivity-enhancing reforms. Each recommendation should qualitatively and

quantitatively estimate the benefit of making the reform and identify an owner for the action and a timeframe in which it might occur.

Without limiting related matters on which the Commission may report, its report to the Government should:

1. Analyse Australia's productivity performance in both the market and non-market sectors, including an assessment of the settings for productive investment in human and physical capital and how they can be improved to lift productivity.
2. Identify forces shaping Australia's productivity challenge as a result of the COVID-19 pandemic and policy response.
3. Consider the opportunities created for improvements in productivity as a result of Australia's COVID-19 experience, especially through changes in Australia's labour markets, delivery of services (including retail, health and education) and digital adoption.
4. Identify priority sectors for reform (including but not limited to data and digital innovation and workforce skills) and benchmark Australian priority sectors against international comparators to quantify the required improvement.
5. Examine the factors that may have affected productivity growth, including domestic and global factors and an assessment of the impact of major policy changes, if relevant.
6. Prioritise and quantify the benefit of potential policy changes to improve Australian economic performance and the wellbeing of Australians by supporting greater productivity growth to set out a roadmap for reform.
7. Revisit key recommendations and themes from the previous five yearly review in light of the above, where relevant.

The Commission should have regard to other current or recent reviews commissioned by Australian governments relating to Australia's productivity performance and include comparisons of Australia's productivity performance with other comparable countries. The Commission should support analysis with modelling where possible and qualitative analysis where data is not available, and this is appropriate.

Process

The Commission should consult widely and undertake appropriate public consultation processes, inviting public submissions. The Commission should actively engage with Commonwealth, and state and territory governments. The final report should be provided to the Government within 12 months of receipt of these terms of reference.

The Hon Josh Frydenberg MP
Treasurer

[Received 7 February 2022]

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The Commission's report is divided into 9 volumes: an overview document (volume 1) that presents our policy agenda, and inquiry content volumes (volumes 2–9) that explain in greater detail the reforms that make up the policy agenda, including a modelling appendix. The full report is available from www.pc.gov.au.

Foreword

There has been a vast improvement in average human well-being over the last 200 years: measured in longer lives, diseases cured, improved mobility, safer jobs, instant communications and countless improvements to comfort, leisure and convenience.

Will our living standards continue to improve at the same rate they did in the past?

We measure and aggregate those improvements into a single number — the rise in GDP per hour worked across the economy. It is an imperfect measure but has enormous value if we interpret it carefully. One important message is that the average rate of productivity growth in Australia has slowed in the last 20 years, as it has in much of the developed world.

But it is also important to move beyond thinking about productivity growth in terms of a single number — an economy-wide percentage growth rate. In fact, there has always been great variability in productivity performance across the economy. Some sectors have seen huge technological transformation and innovation, with bursts of rapid productivity growth — with products becoming radically cheaper and better, and a steady flow of new offerings. Other sectors, not so much.

Globally, agriculture, manufacturing, mining, energy, transport and communications have seen this sort of transformation. Other sectors, including many service industries, have not.

It turns out that this variation really matters.

When productivity growth in different sectors consistently diverges, then (perhaps counter-intuitively) the sectors with high productivity growth tend to shrink as a share of the economy while low productivity sectors grow. It is as though we collectively spend more effort (resources) on what is hard but necessary, and less on that which is getting easier. But if maintained, this pattern can lead to an ever-growing share of low productivity sectors — an ever-growing drag on overall future productivity growth. This is known as ‘cost disease’.

This has a big implication: productivity policy has to focus on the areas that have proven *hardest*, not those areas where past progress has been most readily achieved. As US economist Ben Jones put it:

GDP and future progress depend less and less on the sectors we have found relatively easy to advance ... and increasingly on the sectors that continue to be hard, which make up a growing share of the economy.¹

In many ways, that is the key theme of this report — how we might adjust productivity policy to focus more on the hard areas.

Productivity improvement in services is hard. Services tend to be labour intensive, many are delivered in person, often bespoke and hence not amenable to mass production. They can be hard to automate. But they have grown to make up 80% of the economy and 90% of the workforce. Future productivity growth in Australia relies crucially on getting better productivity across the services sector. In Australia, services sector productivity has lagged that of the goods sector. Government services, in particular, have seen very low productivity growth. Our performance relative to other economies is typically weaker in services than in goods.

¹ Jones, B.G. 2022, ‘Where innovation happens, and where it does not’ in Andrews et al. (eds.), *The Role of Innovation and Entrepreneurship in Economic Growth*, NBER.

Having **highly skilled and adaptive workers** will be critical to address this challenge. A skilled and flexible workforce is a broad enabler — it militates in favour of *balanced* growth across all sectors of the economy, including in the hard areas. If we get policy right — in education, skilled migration and labour market regulation — this could be Australia's most significant and enduring source of comparative advantage.

Education is a critical area of focus. First, because it represents perhaps the greatest and most enduring general-purpose technology known to humankind — the ability to transfer knowledge in a concentrated form; and to build in people a general capability for future learning. As human strength and speed, and routine tasks in general, have been replaced by technology, the focus of jobs shifts towards higher order skills. A highly skilled workforce is necessary to use technology, and to add more value in the distinctly human areas that technology cannot replace.

Second, education is one of those government services that has itself seen very low productivity growth. We have achieved huge gains in economy-wide productivity by adding additional years of education. There is some scope for this to continue but, overwhelmingly, future gains will have to come from higher *quality* education from the resources (including years of student time) we put into it. That means productivity.

We also need to re-think the emphasis of **innovation policy**. Existing policy instruments reflect traditional channels of innovation — tax incentives for research and development, patent protections for new inventions, commercialisation of new ideas. These remain important but are only a small part of the innovation story. They (again) provide a continued path for those sectors where innovation and advance have been most readily achieved in the past. The bigger story is where innovation has not happened, or has happened differently.

Some 98% of Australian businesses do not produce new-to-the-world innovations. They are adopters, adapters, incremental improvers. For productivity, they are the main game. Supporting them to take up new technology or adopt a business innovation could have profound and broad productivity benefits. But facilitating the flow of ideas is hard. There are fewer existing policy levers that have broad application. The role for government has to be thought through. The combination of many small things, on multiple fronts, is likely to be the optimal policy mix.

The adoption of **digital technology**, artificial intelligence and data use by business is a key example. These are vital enablers of productivity — perhaps even more so in services industries where they can augment human input and, in some cases, generate scale. Government actions in improving data availability, promoting regtech, and facilitating secure use of technology all create an environment for increased uptake by business.

Stepping back, the most effective diffuser of ideas is a **dynamic economy**, in which knowledge spreads through competition, labour mobility, and trade and investment links. Some indicators suggest the Australian economy has become less dynamic in the last two decades. But the solutions are complex. Broad policy enablers like tax and land use regulation play an important role in fostering business entry, competition and investment. In many areas (such as insolvency law or access to finance) progress is already being made. In other areas it is important for policy makers to tread carefully to avoid unintended harms.

The **non-market economy** — mainly government services — is different in many respects. Prices, competition and entry and exit are less salient (if at all).

Innovation can be more limited in the non-market economy. Moreover, it has proven hard to spread those innovations that do arise — sometimes because of regulations, sometimes funding models, and often culture. In many cases, the innovation eco-system is lacking, and needs to be developed from the ground up. The creation of the Australian Education Research Organisation is a standout example of new 'infrastructure' to support innovation and the use of evidence across the school system.

If we are to focus attention on the hard areas, then there are none harder than the non-market economy. Productivity growth in this sector could look different — perhaps it will manifest more in better *quality* services than in *cheaper* ones. But in the absence of productivity growth, the ‘cost disease’ will worsen and spread. Government services will expand as a share of the economy, requiring ever faster productivity growth elsewhere to ‘fund’ it.

The productivity challenge comes into stark relief in respect of **climate policy**. Decarbonising the economy in the next three decades will be a huge transformation. The difference between doing it efficiently and doing it poorly will be a major determinant of the living standards of all Australians. It is a productivity challenge — how to harness investment, innovation and shape incentives to reduce cost (albeit a cost we do not currently count in GDP or business profits).

Reflecting these priorities, this report, complemented by its other volumes, is organised around five key reform pillars:

1. **Building an adaptable workforce** to supply the skilled workers for Australia’s future economy, through education reform, skilled migration and modern, fit-for-purpose labour market regulations.
2. **Harnessing data, digital technology and diffusion** to capture the dividend of new ideas, focused particularly on the adoption of ideas by the 98% of businesses who are not cutting-edge innovators.
3. **Creating a more dynamic economy** through fostering competition, efficiency and contestability in markets, through a range of levers — from competition policy and sector specific regulation to broad enablers of business entry and investment.
4. **Lifting productivity in the non-market sector** to deliver high quality services at the lowest cost, by changing incentives and culture.
5. **Securing net-zero at least cost** to limit the productivity impact caused by climate change, including by fostering efficient adaptation to a changing climate.

Across these areas, there are 29 reform directives and 71 specific recommendations. Some are significant policy changes with a potentially large individual impact. Others are a collection of smaller changes that collectively contribute to the goal of supporting productivity growth, particularly in hard-to-reach areas. Some recommendations deal with a single decision, while others set out a direction for ongoing change, requiring multiple steps.

This work builds on the *Shifting the Dial* report from 2017. That report refocused the reform conversation, highlighting the importance of cities, data policy, the working of the Federation and health policy. The themes from *Shifting the Dial*, and the recommendations from that report are, if anything, increasingly relevant following COVID-19 disruptions, and Australia’s data and digital progression.

As the second 5-yearly review into productivity, this report is a product of its policy and macro-economic context. These include the lasting impacts of the COVID pandemic, a very different macro-economy to five years ago, new fiscal pressures and a clearer policy commitment to decarbonising the economy.

One additional piece of context is the changing global order. A combination of war, inflation, strategic tension, new concerns about supply chain resilience and an escalation of production subsidies and local content rules by large economies like the United States create a different — and fast-changing — backdrop for Australian policy. It is a challenge for productivity, which was aided by increased global trade and investment flows in the decades following the Second World War.

Australia can navigate these challenges, but should do so with a clear-eyed view of our distinct economic structure and comparative advantages. Openness could look different, but it will be just as important.

A final point concerns uncertainty. We can never predict future rates of productivity growth nor its precise sources: we cannot know what technological changes or innovations will transform which industries. Policy is not about accurate prediction, so much as positioning. There are big technological opportunities out there now — which can make a greater contribution in many parts of our economy. More discoveries will come, and we need to be fast and efficient adopters (and adapters) of them.

No policy exists that can mechanically lift productivity by a specified amount. We cannot dictate future growth. But we can stack the odds in our favour.

A user's guide to the productivity inquiry report

A cohesive suite of policy reforms to reinvigorate Australia's productivity growth is presented.

The report is split into two parts: an *overview document* (volume 1) that presents our policy agenda, and *inquiry content volumes* (volumes 2–9) that explain in greater detail the reforms that make up the policy agenda. These inquiry content volumes include background research and analysis, and a modelling appendix, which outlines the results from an economy-wide model that was used to contextualise and better understand the distributional consequences of parts of the policy agenda.

Overview volume

Volume 1, Advancing Prosperity contains:

1. A narrative overview that provides the economic context for this inquiry, outlines the barriers to future productivity growth, sets out a policy agenda to overcome these barriers, and paints a picture about what the future could look like following reform implementation.
2. A roadmap that indicates to government which reform directives should be most highly prioritised. The roadmap also contains one-page summaries of the details necessary for implementation of the highest priority reform directives.
3. The set of recommendations from across the report, aggregated into reform directives that are organised by broad policy theme. There are 29 reform directives made up of 71 separate recommendations.

Inquiry content volumes

Volume 2, Keys to growth — discusses productivity as the key to Australia's ongoing growth and prosperity, highlighting particular **headwinds and challenges** facing Australia's productivity growth.

Volume 3, A competitive, dynamic and sustainable future — recognises that much of the productivity improvement will be determined by decisions of businesses and so the **institutional, regulatory and tax environments** in which businesses operate need to be conducive to productivity-enhancing changes. Governments can influence this environment through changes to policy settings for competition, trade and investment activity.

Volume 4, Australia's data and digital dividend — examines opportunities for Australia to get more value out of its **data** holdings by enhancing its secure use in developing innovative new products and services, and improving the productivity of service delivery. Enabling Australia's communities —

A user's guide to the productivity inquiry report

particularly in regional and remote areas — to benefit from **digital** tools and approaches, and supporting businesses to be **cyber safe**, will be key to ongoing digital progression.

Volume 5, Innovation for the 98% — details the underappreciated importance of the diffusion of innovative approaches and ideas throughout the economy. Options to encourage more **diffusion of innovations** are canvassed, including greater use of collaboration and networks to catalyse diffusion and foster spillovers in the private sector, and new funding and procurement models for diffusion in publicly funded and delivered services.

Volume 6, Managing the climate transition — provides a path for Australia to respond to its **climate change challenges** at least cost for the economy and productivity. Reform of the safeguard mechanism for Australia's largest greenhouse gas emitters is discussed as a way of helping Australia to transition towards a less costly and potentially more equitable response to climate change. Options for an efficient climate adaptation strategy are also outlined, focussed on information provision, and policy settings that support adaptation decisions and development pathways.

Volume 7, A more productive labour market — examines the settings in Australia's **labour markets** that will be necessary to support renewed productivity growth. We detail reform options in skilled migration, occupational licensing and workplace relations, including in relation to platform-based work.

Volume 8, From learning to growth — recognises the importance that quality **education and training** systems have for the skills and adaptability of our workforce. Innovation and its diffusion in schools is considered, in the context of making best practice in teaching, use of technology and school operation widespread. Improving the quality of tertiary education (both universities and vocational education and training) and options to support increased completion rates are considered.

Volume 9, Whole-of-economy modelling — describes the results of an **economy-wide model** used in the inquiry to contextualise how the benefits of a stylised representation of certain reforms would accrue and better understand some of the distributional impacts of these reforms. In particular, results were estimated for aggregate measures such as incomes, prices, wages and GDP; the differential impacts across various groups (delineated by age, gender and education); and measures of consumer wellbeing and income inequality.

Where the results from the model were helpful in contextualisation, they have been discussed in the relevant supporting volume with an appendix to the volume summarising the key results.

1. An agenda to lift Australia's productivity

1.1 Australia faces a productivity predicament

Productivity growth is the key to long-term prosperity.

It is the process by which people get more from less: more and better products to meet human needs produced with fewer hours of work and fewer resources. In many cases this growth occurs with lighter environmental impact.

Historically, productivity growth has given Australians higher living standards and more leisure time — compared with Federation, the average Australian employee now works 14 fewer hours per week, while real wages have increased more than six-fold.

But Australia, along with most other advanced economies, is facing a productivity predicament: a seemingly entrenched slowdown in the rate of productivity growth.²

Over the decade to 2020, average annual labour productivity growth in Australia was the slowest in 60 years, falling to just 1.1% compared with 1.8% over the 60 years to 2019-20 (figure 1.1).

This seemingly small difference — just 0.7 percentage points — has an outsized effect on the long-term future prosperity of Australians. It means that the economic pie, and accordingly the welfare of Australians, will be smaller than it might otherwise be. For example, the time it takes for economic output per person to double increases by 25 years — approximately the length of a generation — from about 39 to 64 years. So Australians would have to work relatively more hours to afford fewer goods and services than would otherwise be the case; it means the rate at which higher quality goods and services and wholly new products are introduced will be slower, and their prices higher than otherwise.

The Australian Government has officially acknowledged this productivity slowdown, reducing the productivity assumption underlying its annual economic forecasts from 1.5% to 1.2%. This seemingly trivial downgrade implies that, on average, the income of Australians in 40 years are projected to be almost 20% lower than they would otherwise be. And compared with the average over the past 60 years (1.8%), 1.2% productivity growth implies that the increase in projected future incomes will be close to 40% lower and the working week almost 5% longer (see volume 2).³ And the cumulative sum of year after year of slower productivity growth — the consumption and leisure opportunities lost forever — is significantly larger.

² Average productivity growth among OECD economies since 2005 was roughly one percentage point per annum below the historical average (see figure 2.3 in volume 2).

³ To make this concrete, a downgrade in productivity growth from 1.5% to 1.2% per annum would, over 40 years, reduce the income per capita increase by about \$11,000 (by 20%). Over the same 40 year timeframe, a downgrade of productivity growth from 1.8% to 1.2% would reduce the income per capita increase by \$23,000 (by 40%).

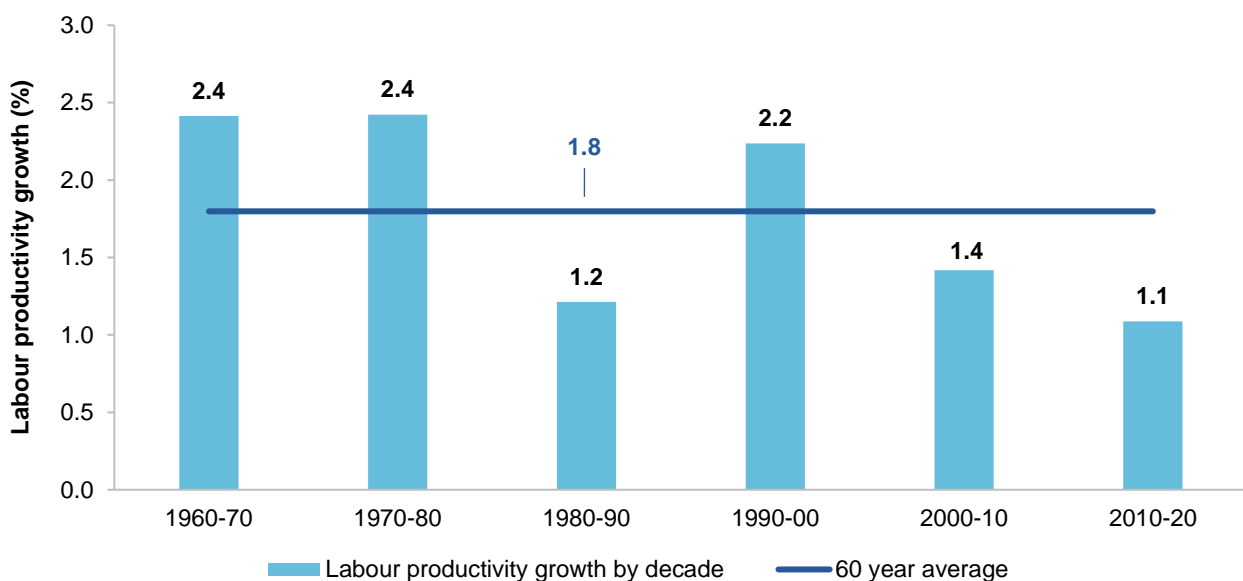
Simply put, entrenched, slow productivity growth leads to a much smaller productivity dividend in the long run (box 1.1). Not only does it take longer to achieve a given level of prosperity, but the cost — in terms of consumption forgone — of swapping out of work and into leisure is also much higher. The often touted ‘4-day week’ is that much harder to achieve.

For society more broadly, there would be comparatively fewer resources available to face emerging challenges, be they decarbonisation or changes in the global order. In other words, those same policy settings that enable productivity growth also help to build a more agile and resilient economy — one better able to resist and adapt to the vagaries of an uncertain world while maintaining the prosperity of Australians.

An effective policy response requires, on the one hand, an understanding by governments of the challenges to growth, and a broad package of initiatives, often coordinated between different levels of government, and covering almost all of their portfolios — there is no single ‘productivity lever’ that government can pull to guarantee growth. And on the other, an understanding that at any point in time, there are emergent opportunities including from new technology. Growth comes from seizing those opportunities as they emerge.

Figure 1.1 – Labour productivity growth is at its slowest in 60 years^a

Average labour productivity by 10 and 60 year periods



a. Labour productivity calculated as GDP per hour worked. GDP data sourced from the ABS between 1959-60 and 2021-22. Hours worked data from Penn World Tables for between 1959-60 and 1973-74 and from the ABS between 1974-75 and 2021-22.

Box 1.1 – The productivity dividend: more consumption and less work

Productivity describes the quantity of products that can be generated (output) from the resources (inputs) used in the production process. Productivity growth occurs when there is a reduction in the amount of inputs required to produce a given level of output. This tends to lower the prices of outputs where productivity growth is strongest. However, often productivity shows up as an improvement in the quality or range of goods and services for given inputs — like better health treatments.

Hence, the growth in living standards experienced over the last 200 years can be seen as manifesting in three main ways: cheaper goods and services; higher quality goods and services; and, entirely new goods and services. In each of these three ways, productivity growth has increased the typical worker's

Box 1.1 – The productivity dividend: more consumption and less work

purchasing power — a smaller number of hours of work is required to achieve any particular level of living standards.

The decreased hours of work and increased income that result from productivity growth can be thought of as a 'productivity dividend'. One way to illustrate these benefits of productivity growth is to think about the trade-off that it implies for the average worker between hours spent working on the one hand, and consumption possibilities, on the other. Productivity growth leads to higher real wages and lower real prices, which means that the average worker can choose to:

- work the same number of hours and consume more (the whole dividend is used to increase consumption)
- work less and consume the same amount (the whole dividend is used to reduce work)
- some combination of the above including working less and consuming more (the dividend is divided between less work and more consumption).

In practice, Australians have collectively, implicitly, chosen the third option, with most of the gains being in the form of greater consumption with some reduction in aggregate working hours (volume 2).

1.2 There are headwinds to faster productivity growth

Headwinds to faster productivity growth



The **services sector** — where productivity gains are harder to find — is large and growing



A **changing climate** and **heightened global tensions** shape Australia's productivity predicament



The slowing rate of overall productivity growth is an important context for this report.

But there is another element to the story. The reality of productivity is never reflected in a single, economy-wide growth rate. At any one time, some sectors of the economy experience rapid innovation and technological advance — and hence rapid productivity growth — while others do not.

The erratic path of productivity growth has been propelled by waves of technological and other innovation — often concentrated on specific sectors. Occasionally, general purpose technologies emerge with productivity implications across the whole economy.

When productivity growth across different sectors diverges consistently over a long period, then the sectors achieving profound progress tend to get smaller as their output costs come down. So the low productivity sectors tend to grow as a share of the economy — known as 'cost disease' — a tendency that risks creating an ever-growing drag on overall productivity growth.

A key message of this report, and one of the key determinants of future growth in the Australian economy, will be how we address the need for productivity growth with the increasing dominance of services — by far the largest part of the economy, but where productivity growth has historically proven harder to generate.

The services sector is large and growing

The services sector is large and growing



Non-market services could increasingly weigh on growth



Productivity gains may be hard won, even in market services



A services economy requires a highly skilled workforce

On average over the past 35 years, growth in labour productivity has been higher in the goods sector than in most parts of the services sector. But over this period, the goods sector has been steadily shrinking, while the services sector has been growing (figure 1.2).

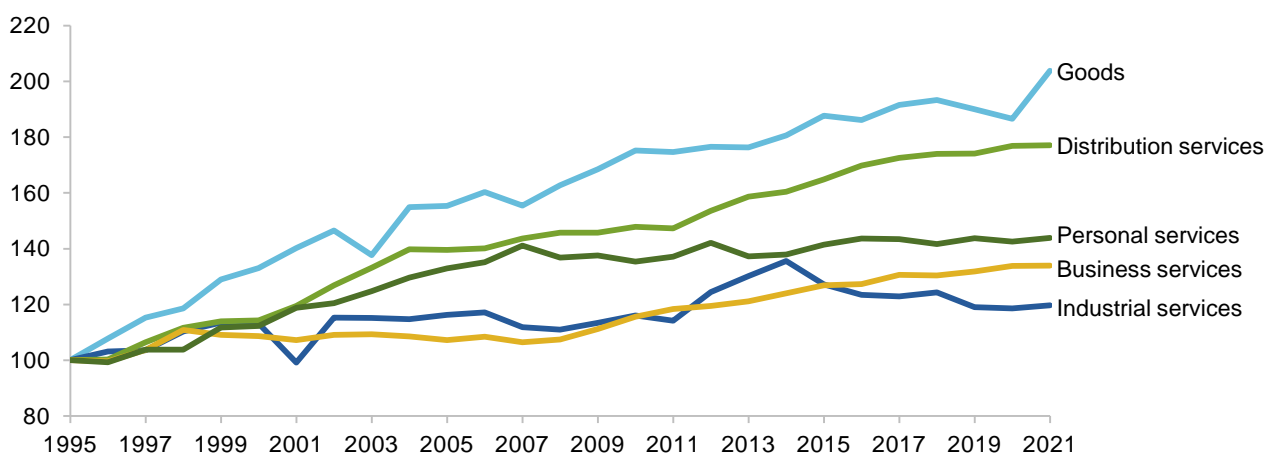
Australia's services sector now employs almost 9 out of 10 people in the labour force and accounts for about 80% of economic output. Both figures have grown significantly over the past 70 years — from about 50% in 1950.

The expansion in services is neither a peculiar quirk of Australian economic development, nor an accident. It is the result of, amongst other things, cost disease and (perhaps counter-intuitively) growing prosperity, as well as an aging population — traits common to all prosperous economies (box 1.2).

But while an expanding and slow productivity growth services sector increases the headwinds to future productivity growth, this shift is not something the government should attempt to 'undo' — such a move would conflict with revealed community preferences and hence be costly and counterproductive.

Rather governments should seek to understand what might be hindering productivity growth in the services sector and, where there is strong evidence for cost-effective intervention, act.

Figure 1.2 – Labour productivity growth in Australia by subsector^{a,b}
Index (1995 = 100) between 1994-95 and 2020-21



a. Industries at the Australian and New Zealand Standard Industrial Classification (ANZSIC) 1 digit level were aggregated into sectors by weighting the growth in labour productivity by the hours share of that industry (in the previous year). **b.** See volume 2, chapter 2, footnote 17 for definition of services aggregation.

Two key characteristics of Australia's structural shift to services and that present downside risks to aggregate productivity growth are:

- the 'non-market' (defined below) services sector — because it is expanding disproportionately quickly in relation to its rate of productivity growth. It already accounts for over 25% of Australia's economic activity and employment but where measured productivity growth is particularly slow — effectively zero since the turn of the century
- the generally poor relative performance of Australia's services — unlike in the goods sector, Australia's performance in the market service sector is below the average compared with our global peers (see volume 2).

Box 1.2 – Why have services become so dominant?

The expansion in size of the relatively slow productivity growth services sector is the global historical norm. There are five main explanations for the increased share of the services sector in output and employment:

1. **Baumol's 'cost disease'** — If certain sectors have comparatively slow labour productivity growth and consumers are somewhat unresponsive (inelastic) to relative price increases, then the share of this sector in both output and the labour force will tend to increase. This occurs because wages in all industries, including the slow productivity growth sector, tend to grow at a similar pace to prevent an exodus of workers from one sector to another. To fund higher wages, businesses raise their prices and, because consumers are not very responsive to these higher prices, the overall share of the low productivity sector increases in both output and employment.
2. **Income effects** — As incomes grow, consumers tend to spend a larger share of their income on services, causing both the output and employment share of services to rise. Consumption of holidays, house-cleaning, afterschool care, gyms and home delivered food has grown faster than that of TVs, clothing and sports equipment.
3. **Services as an input and inter-industry outsourcing** — Services provided by other businesses are accounting for an increasing share of business costs, even within the goods industry itself. In manufacturing over the past 26 years, expenditure on services provided by businesses in other industries went from 15% of non-capital costs to 21%.^a Reasons for this include: (i) slower productivity growth in the services sector combined with production methods that are unable to substitute away from services, and (ii) outsourcing of functions that were previously done inhouse.
4. **Industrialisation in Asia** — Rapid industrialisation in Asia with a focus on manufacturing exports has caused significant outsourcing of manufacturing roles from the advanced economies to developing Asian economies.
5. **Demographics** — Increasing life expectancy combined with falling fertility rates in advanced economies has meant that their populations have been ageing at a pace that is still a few decades away from its peak. This has increased the demand for several non-market services including health care and aged care.

a. Calculated as the factor share of income divided by 1 minus the capital share (which gives the factor share of non-capital income and is the same as the share of non-capital costs).

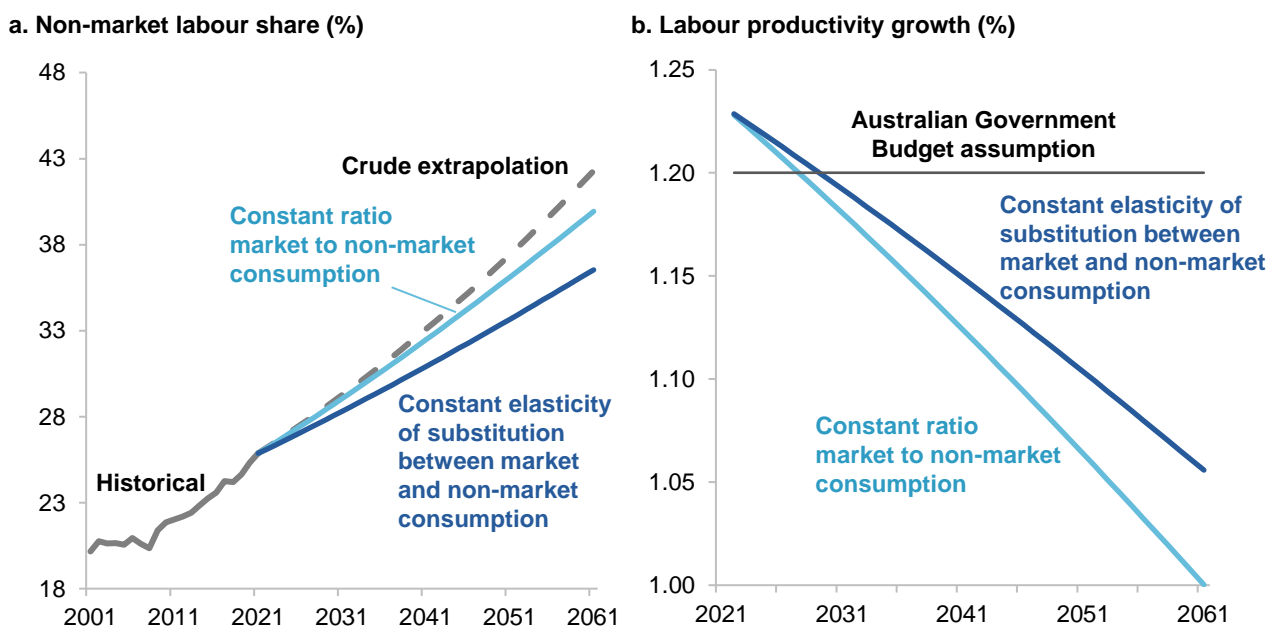
Non-market services could increasingly weigh on growth

Non-market services are those that are typically provided free of charge, or at prices that are well below cost. This is the case because usually the government is the key funder (and often the provider) and regulator of these services. Non-market services include schools, hospitals, childcare and defence services.

Often by design, a degree of competition and cost reflective pricing are absent or less salient than in the market sector. This can affect the channels and processes by which innovation and productivity growth can occur and be transmitted.

The potential effect of low productivity growth in the non-market sector is stark. An extrapolation of past trends out to 2060-61 illustrates the scale of the challenge. If productivity growth in the non-market sector continued at its historic level, then (under the simplest assumptions) in 40 years that sector would account for more than 40% of employment (figure 1.3).⁴ Under more nuanced assumptions, the non-market sector would still increase materially as a share of the labour force.⁵

Figure 1.3 – Projected growth of the non-market share and aggregate labour productivity^a



a. Productivity Commission modelling (see volume 2 appendix).

This result matters. It means that if productivity growth in an expanding non-market sector remains in line with its measured historical average of zero, it would represent an increasingly large drag on overall economy-wide productivity growth.

This implies that growth in the market sector must *accelerate* well above the rate of overall productivity growth experienced in the Australian economy in the 2010s simply to maintain the overall economy-wide average growth rate over that period (which was 1.1%). Indeed, *even if* market sector productivity grows at the higher rates of growth observed in that sector during the 1990s, it is unlikely Australia would reach 1.2% average labour productivity growth (figure 1.3). As such, improving productivity in the non-market sector is a high priority if Australia is to even maintain historical rates of economic growth.

⁴ 2060-61 is the projection period for the most recent Australian Government Intergenerational Report.

⁵ Three scenarios were considered: (i) consumers and governments purchase a constant real ratio of non-market to market goods (that is, governments and consumers treat market and non-market goods as perfect complements; (ii) consumers and governments try to maintain a constant share of total expenditure on non-market goods irrespective of price; (iii) consumers and governments will adjust their consumption of non-market services to price by a fixed proportion (constant elasticity of substitution). In all scenarios, market and non-market sector labour productivity is fixed (equal to their 2-decade growth averages — these numbers are arbitrary for the purposes of this projection).

It is important to note that the non-market sector does suffer from measurement issues, and in particular, it is likely that quality improvements in, for example, health care and education, are under counted (see volume 2). But even accounting for these quality improvements, it is likely that non-market productivity growth as a whole lags the market sector. Indeed, experimental ABS estimates for labour and multifactor productivity in schools, hospitals and higher education have yielded similarly (to the National Accounts) low and slow estimates for the rate of productivity growth. In addition, non-market services that are government funded and require additional tax revenue to fund their expansion, place an increasing burden on the economy.

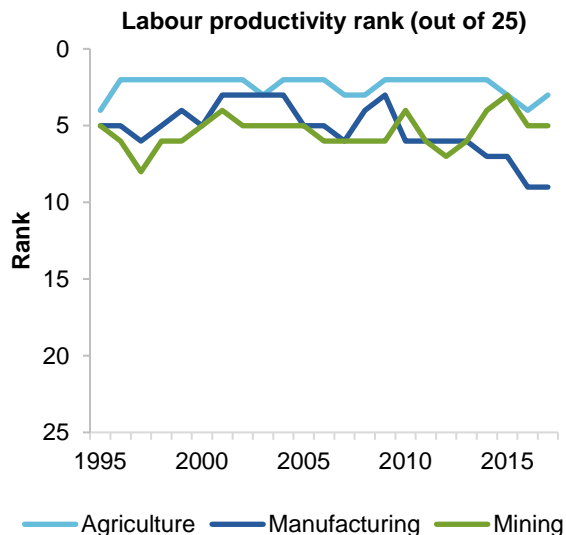
Productivity gains in services could be harder won

The goods sector will continue to be an important driver of productivity growth in the future, led by Australia's mining and agricultural sectors, which are some of the most productive in the world (figure 1.4). In these industries, physical capital often replaced labour in the production process (new machinery on the production line) and scientific advances significantly expanded physical output (fertiliser or new crop types in agriculture).

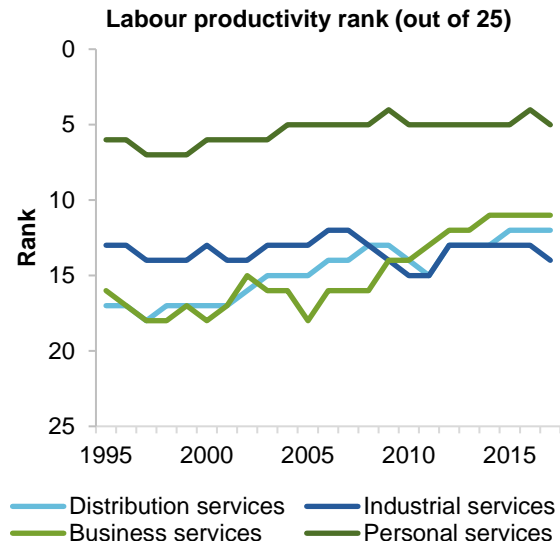
To some extent these forces operate in service industries too. Technology can replace people for some tasks (such as the use of Artificial Intelligence (AI) in banking and formerly ATMs), reducing the overall cost of a service. Digital communications can provide scale (say in university education) allowing for expansion of services at low marginal cost.

Figure 1.4 – Australian mining and agriculture have very high productivity^{a,b}

a. Goods sub-sectors



b. Services sub-sectors



a. Distribution services are transport and postal, IT and telecommunications and retail and whole trade; industrial services are construction and utilities; personal services are food and accommodation and arts and recreation; and professional services are professional, scientific and technical services, real estate, finance and administration and support services. **b.** See notes c and d in figure 2.7 of volume 2.

And indeed, although we think of them as distinct, the service sector is closely linked to the goods sector. In many cases, service sector productivity growth will occur because of new and improved *physical* products (goods) that are used to deliver a service. Many goods are valuable because of their capacity to deliver higher quality or lower cost services — modern coffee machines can allow access to a wider variety of barista services, for example. In addition, many goods are differentiated based on their attached wraparound

services, rather than solely the physical characteristics of the good itself — think of Apple hardware, that is largely generic but aesthetically pleasing, and its bundled proprietary software.⁶

But in many cases, productivity gains in services — particularly non-market services — take the form of quality improvements and greater variety of novel products more so than real cost reductions. Recent history has borne this out:

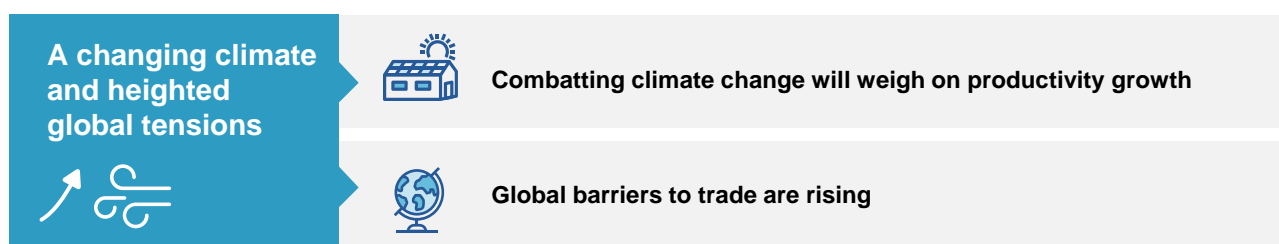
- The productivity improvements of expanding health, education and public administration non-market services are typically realised as improved quality (e.g. a modern doctor is better able to improve patient health outcomes in a single hour than they could in the 1980s).
- Many digital services deliver benefits by improving the quality of the user experience rather than just reducing the inputs required to provide the service (e.g. in the case of Amazon or Netflix, much of the value-add comes through the increased convenience of the online experience).
- The benefits associated with new technologies such as AI, to the extent that they augment as much as replace human labour, could predominately come through better quality service provision rather than reducing the capital and labour cost of the service (though some cost reductions should be possible).

Even where services are integrated with physical products, it is often the service element that proves hard to transform. In health, for instance, considerable innovation has occurred through medical technology — pharmaceuticals, imaging equipment and pathology — with flow-on benefits to service quality; but innovation in the configuration of the service itself — through digital or communications technology — has been slower to emerge.

From a practical perspective, the need to focus on quality is in part, out of necessity. Many services need to be delivered face-to-face and/or are customised, and so there is less scope to automate them or achieve significant economies of scale.

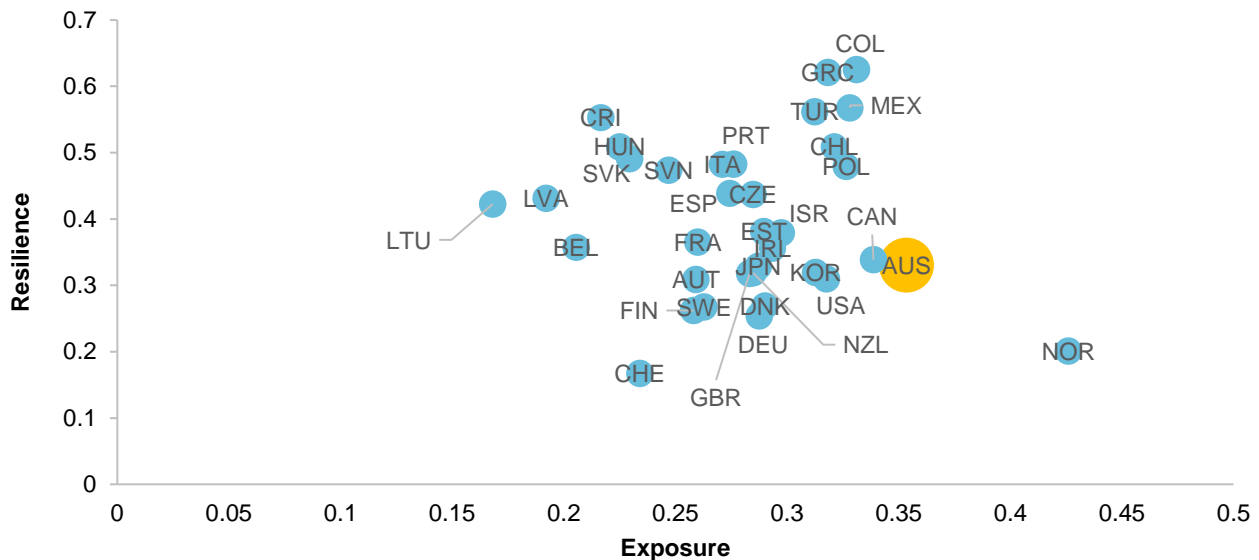
To the extent that future productivity is driven more by improvements in quality and novelty (more so than reductions in cost) than it has been for goods historically, we may need to think differently about how to enable productivity growth going forward.

A changing climate and heightened global tensions



Climate change and the need to decarbonise our economy will shape Australia's productivity performance and weigh on its growth in the short term. By some measures, the threat faced by Australia from climate change may be larger than for other major economies (figure 1.5). The changing climate will directly affect productivity growth in a range of industries, including agriculture, fisheries, and tourism, and be a drag on the productivity of industries that rely on physical labour in heat-exposed environments.

⁶ Standard National Accounting methodologies mismeasure or do not count some of the benefits associated with quality improvements and the introduction of new products, it is difficult to empirically estimate and assign the contribution of those benefits to goods and services respectively.

Figure 1.5 – Australia's comparative preparedness for a low-carbon transition**Economic exposure and resilience to transitional risk in Australia and OECD countries^a**

a. OECD country abbreviations are: Australia (AUS), Austria (AUT), Belgium (BEL), Canada (CAN), Chile (CHL), Colombia (COL), Czech Republic (CZE), Denmark (DNK), Estonia (EST), Finland (FIN), France (FRA), Germany (DEU), Greece (GRC), Hungary (HUN), Iceland (ISL), Ireland (IRL), Israel (ISR), Italy (ITA), Japan (JPN), Korea (KOR), Latvia (LVA), Lithuania (LTU), Luxembourg (LUX), Mexico (MEX), Netherlands (NLD), New Zealand (NZL), Norway (NOR), Poland (POL), Portugal (PRT), Slovak Republic (SVK), Slovenia (SVN), Spain (ESP), Sweden (SWE), Switzerland (CHE), Turkey (TUR), United Kingdom (GBR) and United States (USA).

Achieving net zero emissions in coming decades will have important implications for *measured* productivity. It requires new capital investment and rapid innovation, in part to replace (rather than add to) existing capital and production processes. Because the cost of carbon emissions has not been reflected in GDP or business profits, abatement efforts could, in many instances, increase the cost of production and could put downward pressure on measured productivity, at least in the short term.

Moreover, productivity measurements can provide misleading indicators of the longer run value of investments in physical and intangible capital if the costs come now and the benefits later. (The mining investment boom was characterised by this — huge investments upfront with productivity improvements that emerged over time.)

Thus, decarbonising the economy could reduce measured productivity growth in ways that reflect the shortcomings of GDP as a measure of wellbeing (environmental impacts, such as through increased carbon emissions, are often poorly measured or not measured at all in economic statistics — see volume 2, chapter 1). But this is not the whole story. Decarbonising will impose real costs over many years, if not pursued via the most efficient path.

The technologies required to get to that goal are not fully developed, and the relative costs of different abatement options are constantly evolving. Governments and businesses cannot simply choose from a stable menu of low-cost options.

The challenge for policy makers is to create broad-based incentives to identify and implement the lowest cost abatement options, with flexibility to adapt to changing technological circumstances. In the absence of a single, explicit carbon price, this means taking a portfolio investment approach based on transparent assumptions about the implicit costs and benefits of existing and future abatement measures (per tonne of CO₂ abated). The higher the cost effectiveness of abatement strategies, the more successful will be Australia's efforts for any given budget.

Meeting the challenge of climate change will require coordination across all levels of Australia's governments, policy settings that encourage wise investments in least-cost abatement and adaptation and multilateral oversight of the abatement contributions of other countries.

Global barriers to trade are rising

The period following the Second World War provided large tailwinds to global productivity growth for many subsequent decades, through the diffusion of new technologies and the expansion of trade, underpinned by a global rules-based order. This has had benefits for small economies like Australia, particularly as we reduced our own barriers to trade, notably in manufactured goods.

Recent global trends — including heightened strategic concerns in our region, war in Europe, COVID-related supply chain disruptions and high global inflation — have stalled the momentum of multilateral trade and investment liberalisation and prompted some reappraisal of supply risks. There has been a shift in policy among key trading partners, including the United States, with a much greater emphasis on supporting domestic production in key sectors (such as semiconductors and green technology) through subsidies and local content rules.

These developments are a challenge to global prosperity. They re-shape the supply chain strategies of local businesses and create policy dilemmas for governments around the world, including Australia. Nonetheless, we are arguably well positioned to navigate them. Policy transparency and a clear sense of our comparative advantages will be key to managing this evolving global order.

More generally, there are strong arguments against Australia joining a global 'arms race' of industry subsidies. This is particularly so when other large economies are subsidising sectors that are not necessarily in Australia's traditional areas of comparative advantage (as a resources exporter and aspiring high productivity services economy).

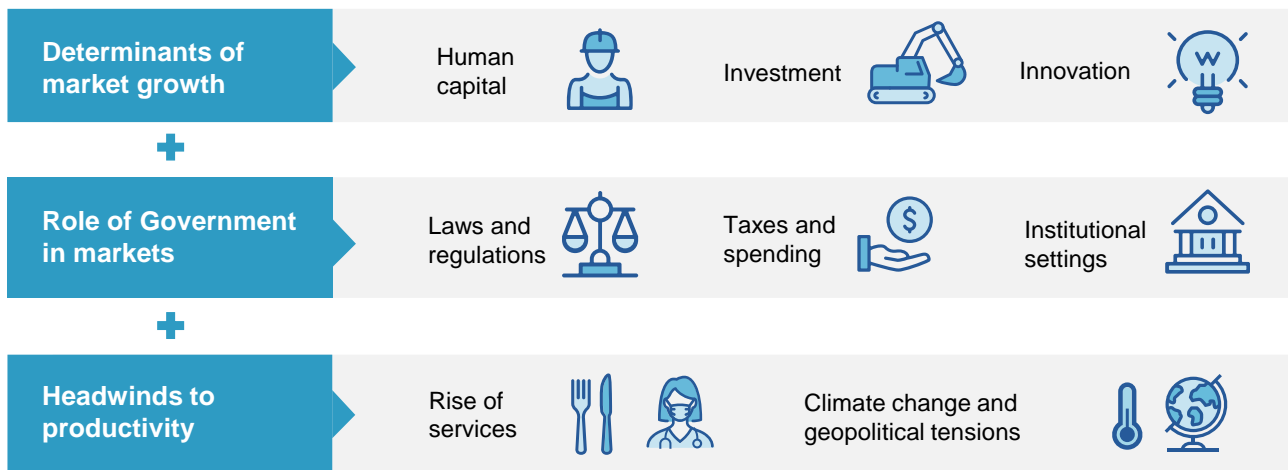
Australia has a big opportunity from finding ways to open more to the world, even in this changing global context, particularly given our proximity and links to large, rising income economies in southeast Asia and India. The movement of goods, capital and people will continue to be important pathways for sharing knowledge and innovation in the global economy.

This reflects future sources of productivity growth, but also our history. Australia's policy experience with a 'fortress Australia' mindset (including high tariff walls, and restrictive immigration policies) led to Australia's economic performance falling well below peer countries in the decades leading up to the 1980s.⁷

⁷ Australia's average GDP per capita growth between 1970 and 1980 was about 1.3% compared with 2.7% in the G7 (based on an unweighted average of growth rates across the G7 countries).

1.3 A policy agenda for a more productive Australia

Factors influencing the Commission's choice of focus area



Australia's challenge is to raise the long-term rate of productivity growth. Therefore, the focus must be on the long-term fundamental enablers of productivity, and the role of government in reinforcing these.

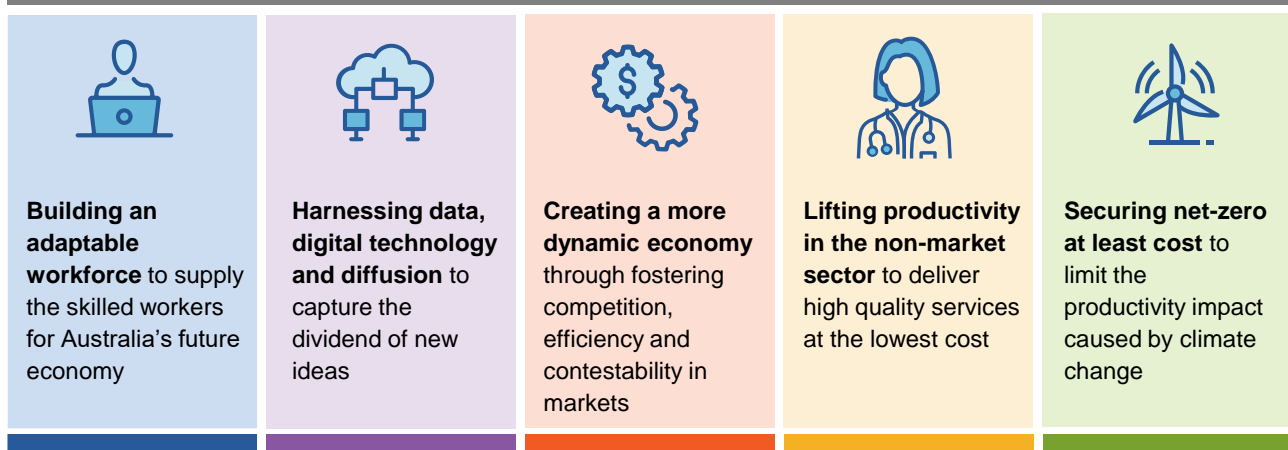
Whether in the services sector (market or non-market), the resources sector, manufacturing, or agriculture, productivity increases come from:

- workers developing better skills
- businesses or government investing in more technology and equipment
- new ideas being developed, and the spread of good ideas to more businesses or more areas of government: management insights, technical knowledge, new technologies — for example, better solar cell technology allows us to harness solar resources more effectively.

The policy agenda presented here is based on applying these enablers to Australia's current economic and policy context — the productivity predicament.

The reform package

The policy agenda for a more productive Australia



Responding to Australia's productivity growth challenges involves action on many fronts. The need to foster productivity in some hard-to-reach areas (services and the non-market economy) requires some broad-based enablers as well as some new thinking.

The reform agenda centres on five key themes:

1. **Building an adaptable workforce** to supply the skilled workers for Australia's future economy.

A highly skilled and adaptive workforce could be one of Australia's most important competitive advantages. It is an enabler of balanced growth and is particularly salient in those parts of the services sector that are traditionally labour intensive. Skilled labour can work with, and adapt to, technology; but also add greater value in performing the tasks that only people can do.

2. **Harnessing data, digital technology and diffusion** to capture the dividend of new ideas.

Policy should broaden beyond traditional channels for the generation of new ideas (including public and private research and development) and focus on the 98% of businesses that do not introduce new to the world innovation. The diffusion of ideas, their adoption and adaptation by the broad mass of Australian businesses is the main game in productivity policy. The uptake of digital technology is a key example of this, being supported by government data policy, infrastructure provision, use of regulatory technology (regtech) and cyber regulation.

3. **Creating a more dynamic economy** through fostering competition, efficiency and contestability in markets.

A dynamic economy is arguably the most effective diffusion machine, spreading new ideas through competition, trade, investment and labour mobility. Multiple policy areas can help foster business entry, expansion of efficient businesses and create incentives for productive investment. Some of these policy levers are general enablers like tax or land use regulation; others deal with barriers to competition that are specific to a particular sector.

4. **Lifting productivity in the non-market sector** to deliver high quality services at the lowest cost.

Innovation can be hard to achieve in parts of the non-market sector, as can the diffusion and spread of good practice. In some cases, building the right innovation 'infrastructure' is a key part of driving a greater culture of productivity growth in government. Even identifying modest ways to economise on labour in the delivery of some core services will be an important direction for reform.

5. **Securing net-zero at least cost** to limit the productivity impact caused by climate change.

Decarbonising the economy will require a large economic transformation over the next three decades as Australia pursues its 2050 Net Zero Emissions Target. Having the broad-based policy frameworks to reduce emissions and adapt to climate change at the lowest possible cost is a high priority for productivity growth.

These five enablers bring together 71 recommendations, resulting in a wide-reaching agenda for reform. Some recommendations are about bringing a hitherto underappreciated issue to greater prominence. Others are about changing the emphasis of existing policy approaches.

Our recommendations are geared towards the productivity challenges outlined in section 1.2, as well as the emergent opportunities for productivity growth.

Building a skilled and adaptable workforce



Improve quality in the education and training system to build human capital and increase the productivity of workers



Recalibrate skilled migration to fill skill gaps, improve matching and bring new ideas to the workforce



Get the gig economy right for both workers and consumers



Streamline workplace relations and occupational licensing to enable flexibility in the labour market

Only a few generations ago, significant parts of the workforce were largely trained on the job to do relatively routine tasks, with fewer requirements for formal education, for example in manufacturing and agriculture. Those sectors effectively took workers with low average formal education and provided them with relatively high paying jobs, largely because their labour input was augmented by capital (and land) and scientific advances that could generate greater output from the labour provided.

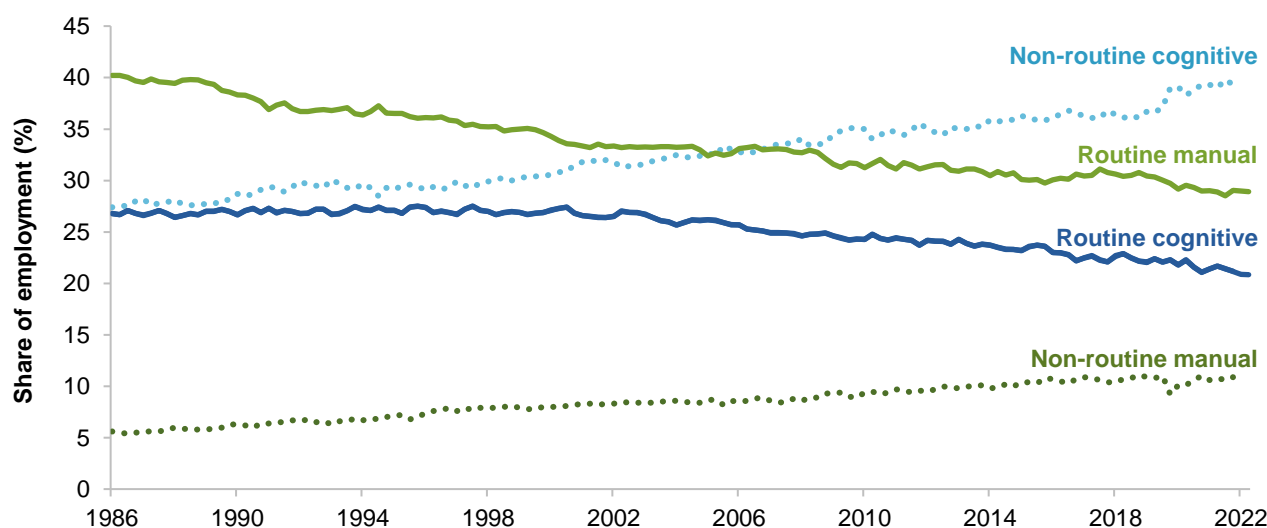
Many parts of the modern services sector have less of that flavour. These industries tend to be labour intensive overall, and high paying services jobs tend to have non-routine tasks and require high formal qualifications (figure 1.6). Where labour input dominates, there tends to be a premium on the skill of that labour — higher skilled workers tend to be more productive and higher paid.

Today, an estimated nine out of ten new jobs will require post-secondary qualifications of some kind.

Where technology is introduced, skill requirements tend to rise. Technology can substitute for labour but also complement it. The addition of technology can replace individual tasks (more often than entire jobs), freeing up workers to focus their efforts where they are most valuable.

As routine tasks continue to be automated, it is likely that newly created jobs will increasingly rely on distinctly human attributes like interpersonal skills, synthesis, judgement and critical thinking. Innovation — generating new, economically useful ideas — is particularly hard to automate.

These attributes are generally learned in the context of a particular application and are built on a foundation of strong literacy and numeracy, a knowledge-rich school curriculum and considerable tacit learning on the job. Services involve a degree of co-production between the producer and the consumer: inter-personal skills and empathy can be a key part of the overall value.

Figure 1.6 – Non-routine roles are on the rise^a

a. Based on a mapping from ABS labour force to Australian and New Zealand Standard Classification of Occupations job classifications. Non-routine, cognitive: Managers, Professionals; Non-routine, manual: Community and Personal Service Workers; Routine, cognitive: Clerical and Administrative Workers, Sales Workers; Routine, manual: Technicians and Trades Workers, Machine Operators and Drivers, Labourers.

These trends imply a premium on adaptability. As jobs evolve, workers must too.

Australia's education and labour market settings have served us well until now, but meeting the needs of the modern economy means catching up to these realities.

In a world requiring broad capabilities and adaptability, some policy settings still focus on narrowly defined occupations. Vocational training, industrial awards and occupational licensing have traditionally been premised on an ability to define the precise roles and competencies of occupations. Skilled migration has relied on occupation-based lists to define the economy's needs.

But a productivity lens sees the role of human capital differently. Skills that combine technical mastery with broad capabilities and adaptability are critical, as is the flexibility to apply those skills in ever-evolving ways. Education policy, migration settings and labour market regulation should be designed with that focus.

Improving the education and training system

Education plays a key role in boosting productivity through the quality of 'human capital' (the collective skills of the workforce) applied to the production of goods and services. Arguably, education is the most profound general-purpose technology ever developed — the ability to transfer knowledge from one individual to another in an accelerated way, simultaneously building the capability for further learning.

The four parts of the education 'system' — schools, higher education, vocational training and lifelong learning — work together to help deliver the skills and capabilities needed for a modern economy. Targeted reforms can ensure that each element works better, and that the system itself can work more coherently.

Two historical trends stand out.

First, over recent decades, Australian human capital has been bolstered mainly through the *quantity* of inputs — increasing the number of years of schooling, the share of the population enrolled in post-secondary education and increasing per student funding.

However, there are only so many years of formal education Australians are able and willing to do, and only so many resources (teachers and capital) that can be devoted to education. There is some remaining quantity dividend (in universities and in lifelong learning) but for the most part, delivering on Australia's future skills needs will require a tighter focus on increasing the *quality* of education for each dollar spent.

Second, while many parts of the economy have been dramatically transformed by technology and new business models, the basic structure of education delivery is remarkably similar to what it was many decades ago, whether in schools or in higher education. The disruption caused by COVID-19 has prompted a greater focus on the potential use of technology, not only to improve instruction and formative assessment, but to alter the way schools and tertiary education providers deliver their services.

Improving access to, and quality of, higher education

A range of targeted reforms to tertiary education could position providers to deliver a higher quality, more innovative and responsive service to students. Funding reform is a key part of this.

Despite large increases in student numbers in the last decade, further increases would still yield benefits. Reforming university funding arrangements would facilitate expanded access for Australians to tertiary qualifications. It would also facilitate more competition and address the unintended consequences that result from university efforts to manage the course mix — a response to the poor incentives embedded in the current funding model.

Through differing funding arrangements across the sector, governments have made various attempts to influence student choice of course and career. For the most part, these efforts are ineffective. Nor are they always desirable — students generally make reasonable choices and government skill lists are an imperfect guide to the needs of the future economy. Moreover, student choices are typically unresponsive to price changes at current levels — meaning that the existing approach to subsidies is neither effective nor efficient.

Governments should establish an effective and fiscally sustainable demand-driven system for providing Commonwealth supported places for domestic undergraduate students. This would better support students with reasonable prospects for success at university, with productivity benefits for the economy and higher lifetime wages.

Complementing this, governments could, through a new university funding model, better target investment while facilitating wider access to higher education. Under this model, total funding per student should be based on a measure of the efficient cost of delivery and the student contribution to this should increase with their future average expected earnings. A higher average student contribution — largely financed by income-contingent loans (so that higher prices do not deter study) — would be necessary to expand access while containing fiscal costs, and would be fairer, given the size of the private returns to education (reform directive 3).

In addition, there should be a proactive policy emphasis on enhancing the quality of education services provided. For a range of reasons, universities may not have adequate incentives to focus on quality teaching. While higher education providers in Australia perform well on many dimensions of quality (students are largely satisfied and have good employment outcomes), there are large variations across providers and a significant minority of higher education students rate their experience poorly.

Lifting the quality of tertiary education requires changing the incentives that individual teachers and their institutions face, which are shaped by government funding and regulation. This requires a multi-pronged approach.

The Australian government should require universities (and appropriate parts of the Vocational Education and Training (VET) sector) to, at no additional charge to students, share all lectures online. This would

improve the transparency of teaching quality and provide an incentive to invest in, and improve, teaching performance (reform directive 4).

A stronger external teaching quality assurance role for the regulator, and better published quality indicators would also support improved teaching performance, as would the Australian Education Research Organisation collecting and generating evidence on best practice. Funding research and rewarding innovation in teaching could be achieved through a modest Australian Research Council grant and building on successful approaches already implemented by Australian universities.

Governments should hold off implementation of the proposed performance-based funding of universities — which would encourage gaming, can be unfair and lacks impact — and instead explore the option of financial rewards for providers that have made successful efforts to improve teaching quality (reform directive 5).

Supporting a responsive VET system

Notwithstanding the strong growth of higher education, VET remains the largest provider of formal post-school training, serving more than twice the number of university students. Given this, overcoming systemic flaws in VET design is important.

Recent skills reforms are wide ranging and are designed to fundamentally re-shape the VET sector so that it is better able to teach, recognise and develop adaptive skills. The measures, if successfully implemented, will overhaul competency-based training as well as change the existing qualification framework and update training package content and development. Governments should ensure that cross-sectoral skills are prioritised, as well as promptly updating training packages (reform directive 7).

A more ambitious and sophisticated system will also necessitate investment in VET workforce capability. VET teachers and trainers will need further professional development support as the system adopts assessment models that include proficiency and independent assessment.

Beyond this, governments should gradually expand access to income-contingent loans to more VET students starting at the Diploma level, in part, so that expanded access to higher education does not come at the expense of VET. More equal loan access would give students a choice between different parts of the tertiary education sector based on capabilities, interests and skill needs, rather than financial barriers and arbitrary differences in government funding and financing policy.

Creating a culture of lifelong learning

Lifelong learning is a key part of Australia's education system but is perhaps the least well understood. It is also the area of education where policy is least developed. Nonetheless, it is a vitally important element of skills formation through a worker's life.

At present, education funding is concentrated on school education and the initial acquisition of formal qualifications through universities and VET. This is generally appropriate, but raises the important policy question as to whether more funding support should apply to ongoing training and if so, how it should be targeted and designed.

There is some risk that businesses will under-invest in ongoing education and training because they cannot capture the full benefit if the worker changes jobs (by one estimate, today's school leavers could have 17 employers during their working life). This could be particularly true where the training in question provides general skills (such as management) to complement an employee's existing specialist professional training. More generally, there can be financial barriers to people seeking to learn over their lives.

There is a role for government in helping create a culture of lifelong learning as part of a joint effort with businesses and individuals. Many people already engage in lifelong learning, so it is important that any

government assistance generates additional investment in upskilling and reskilling, as opposed to subsidising learning that would have occurred anyway (reform directive 4).

Action by governments on many fronts is required: providing quality, consolidated information as to the training options on offer (reform directive 5) and encouraging universities to provide more 'nested' qualifications for those who complete part of a course (reform directive 6). In addition, governments should continue exploring targeted financial assistance through business- and individual-based tax breaks — evaluating channels like the Skills and Training Boost and incrementally expanding the use of deductible self-education expenses (reform directive 4).

There is a complex myriad of supports for lifelong learning. It is important to bring together existing measures into a more coherent strategy. A more unified approach, backed by co-operation between the Australian and State and Territory governments could bring focus to this policy effort, reducing overlaps and filling gaps in policy coverage to increase uptake.

Make best practice common practice in schools

School education provides the foundation from which further study builds. It also contributes to well-being and the ability to effectively navigate everyday life.

However, academic achievement among children is stagnating while resourcing (per student) has increased, suggesting that the productivity and effectiveness of schools has been declining in recent years.

One way to envisage the challenge for the school system is to compare it to the dramatic improvements achieved in respect of health and longevity over the past century and a half. That health transformation came about through scientific and technological advances, improved medical professionalism, and multiple public health interventions. What could the equivalent transformation look like in respect of education?

To achieve change will require more effective use of school resources, including freeing up teachers' time from low value tasks and administrative burdens to focus on quality teaching. The most likely drivers are increased use of effective educational technology; an improved evidence base that more directly informs day-to-day teaching practice; and innovation and disruption in models of schooling.

Digital technologies hold promise — to augment teacher-led instruction, provide formative assessment of student progress and replace some manual administrative processes (reform directive 1). Digital technologies can expand access to quality teaching and help address the difficulties associated with teaching out of field. The uptake of digital technology through COVID-19 shows that rapid (albeit temporary in this case) transformation of the school model is possible.

But not all technology is necessarily effective. There is a role for government to provide guidance to teachers, schools and systems about digital learning options with proven efficacy.

Governments can also help to enable best practice to be common practice across the education system. Diffusing best practice is challenging. Sharing teaching expertise through observation and feedback is part of addressing this. So too is the design and dissemination of high-quality, evidence-based teaching materials such as lesson plans for use in the classroom. This approach would rely less heavily on individual teachers to work out how to best translate the national curriculum into lessons — a task that teachers are not always able to do effectively given the many demands on their time (reform directive 1).

Finally, we should be open to a degree of innovation in models of schooling. This could include different governance structures, or different delivery options such as online lessons (at home and in the classroom), variations in school hours, and use of technologies to personalise students' learning environment. As a first step, governments can ensure there are no unnecessary barriers — legislative, regulatory, administrative or otherwise

— that prevent schools from experimenting in ways that better enable students to learn. New trials should also incorporate evaluation and diffusion of school-based innovations that are proven effective (reform directive 2).

Recalibrating skilled migration

Australia is an attractive location for skilled migrants. As a safe, high-income economy with a multicultural community and a track record of absorbing population growth (well above the OECD average), we have an ability to use skilled migration as a policy tool. Immigration is, among other things, a key economic asset, which should be used to good effect.

Using the skilled migration program to boost productivity requires a shift of emphasis. It requires that we see skilled migration not just in terms of filling specific occupational gaps, but also (and more so) the role migrants play as an essential source of new ideas and information. Through experience with frontier technologies and different management approaches developed and practised overseas, skilled migration is a key driver of the effective diffusion of knowledge and new technologies across the Australian economy (reform directive 8).

Currently, migration program settings that are meant to meet the needs of the labour market are heavily reliant on skilled occupation lists to restrict the scope of both permanent and temporary skilled migration. In many instances, skill lists fail to effectively track labour market shortages.

To improve the productivity dividend from skilled migration, the Australian government should move away from relying solely on skilled occupation lists for both temporary and permanent skilled migration. Instead, the Australian government should introduce wage thresholds for employer-sponsored skilled migration (including age-contingent wage thresholds for sponsored *permanent* migration), removing list-based restrictions above those thresholds.

Settings for independent permanent migration should also be amended to place more emphasis on ongoing employment and income (as opposed to qualifications alone) as well as age.

Moreover, a better-designed temporary skilled migration visa that could meet the needs of migrants and employers alike could reduce reliance on permanent migration (which typically entails greater fiscal risks related to the older average age of permanent migrants). In particular, the duration of temporary migration could be increased, offering a viable alternative for workers at different stages of their work-life.

A range of other steps should also be taken to improve the composition of the migrant intake. The Australian Government should abolish visas with a poor rationale and questionable benefits, such as the Business Innovation & Investment permanent visa program (which does not achieve its policy aim and has poor fiscal outcomes).

Finally, the Australian Government should eliminate unnecessary barriers that impede the immediate employment of newly arrived migrants by streamlining the processes that recognise qualifications from abroad.

Getting the gig economy right

The gig, or platform, economy has been a prominent source of disruption in multiple markets.

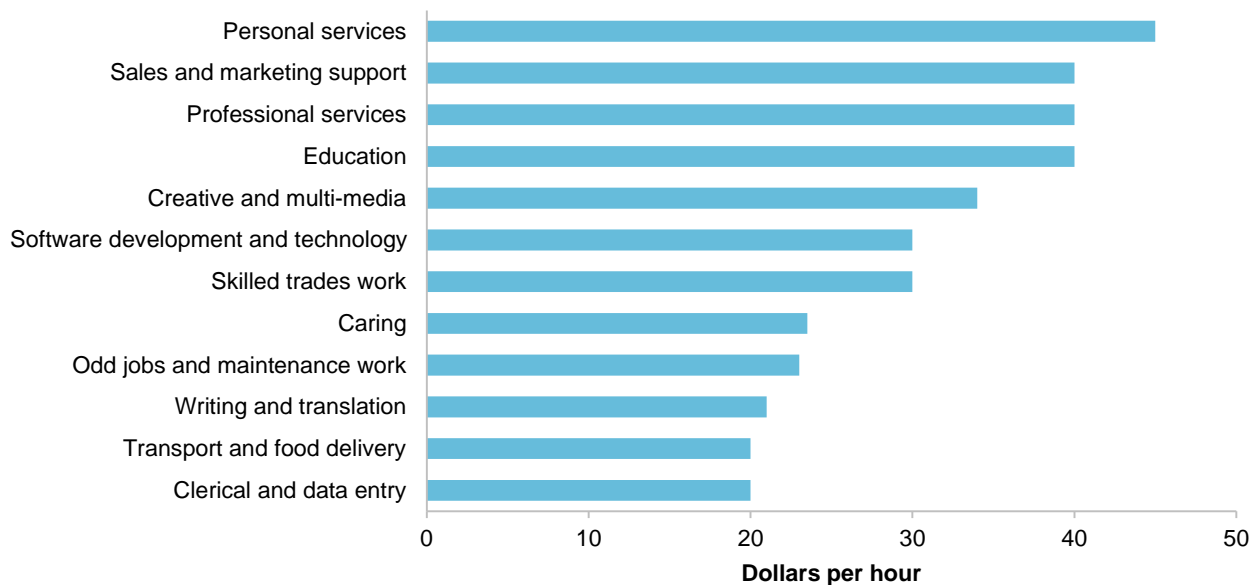
Like all disruptions, it has brought benefits and prompted some concerns. As noted in section 1.2, innovation in the services sector often involves fundamental changes to business models and the way consumers experience a service. As a result, it can test regulatory frameworks; regulators have to show similar adaptability to that required of the workforce as a whole.

Platform work can contribute to productivity through improving matching efficiency in service markets and spurring technological innovation by platforms and their competitors. It allows for better quality services and convenience for consumers and has introduced competition to otherwise stagnant markets.

While the most prominent examples of platform work are ridesharing and food delivery, platform work exists in other industries, with different work arrangements and work characteristics, including aged and disability care, professional and trade services, specific tasks and odd jobs. Conditions and pay also vary greatly across industries (figure 1.7).

Figure 1.7 – Platform workers' earning rates vary by type of work^a

Median earnings per hour in 2019



a. Estimates from the National Survey are approximate only as it is unclear whether respondents reported gross or net earnings after cost, some respondents may work for platforms in different categories of work, data is categorised by the type of main platform, and the sample size is low.

The concern about platform work is that as contractors, platform workers have limited access to certain employment rights and entitlements.

But simply imposing employee status in all cases would effectively erode many of the productivity benefits and flexibility for workers that arise from platform work as currently arranged.⁸

Calibrated government intervention could address some of the regulatory gaps created by platform work, while maintaining its productivity benefits. For example, given that the provision of insurance can be insufficient under current arrangements — either where platforms or individuals fund their own workers insurance — a more comprehensive solution could come in the form of a mandated baseline level of insurance, an industry-wide insurance scheme, or extension of workers compensation. Governments should evaluate this possibility for classes of platform work where there are material risks to worker safety, where there are many platform workers and hours worked, and where workers are low paid.

Similarly, where access by platform workers to dispute resolution services is particularly poor compared with employees, governments should encourage platforms to improve their own internal resolution processes. This should be backed by an independent dispute resolution body within the Fair Work Commission, to provide conciliation and arbitration services, with such services to be funded by platforms (reform directive 12).

⁸ Contractors generally cannot access employment entitlements, such as legislatively guaranteed minimum pay and conditions, access to workers compensation or unfair dismissal laws and the ability of platform workers to access dispute resolution processes, insurance arrangements and workplace health and safety oversight and advice can be difficult.

Streamlining workplace relations and occupational licensing

Reforms to skilled migration, schools and tertiary education are essential for building an adaptable and productive workforce. But maximising the benefits of those reforms requires policy settings that better facilitate the free movement of people across jobs, businesses and occupational roles. This includes the ability of businesses and workers to adapt existing jobs to improve work practices and productivity.

The workplace relations system must continue to enshrine minimum standards of fairness and ensure that opportunities to improve productivity are not eroded by conflict, missing incentives or red tape. Part of how this is to be achieved is by placing a high emphasis on co-operation between parties.

There are three broad areas where greater ongoing incremental reform can create opportunities for business-based productivity improvement: the award structure, the ability to make a formal enterprise agreement, and the content of those agreements (figure 1.8).

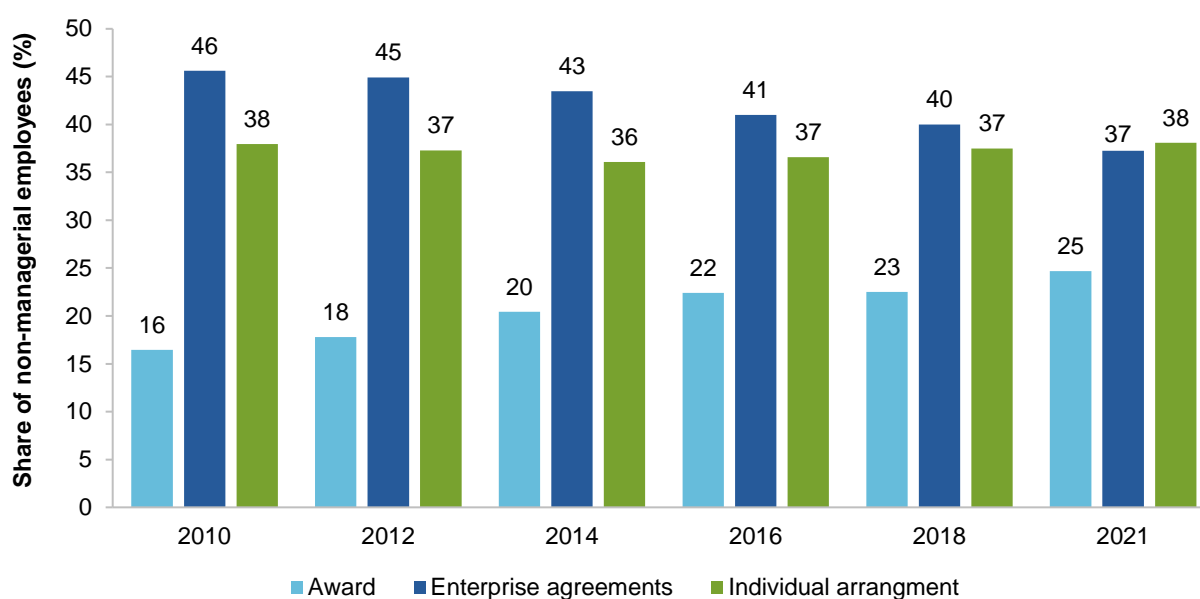
In general, the move to enterprise level bargaining over the last 30 years has been a significant source of business-based (and economy-wide) productivity. However, the share of workers covered by enterprise agreements has fallen in recent years, and a large proportion of agreements are simply rolled over, so the scope for them to improve productivity depends on whether existing clauses leave room for future flexibility. The reduction in enterprise bargaining warrants a policy response.

That response starts with a strong renewed focus on the award system itself. First, many businesses and workers will likely always remain in the award system. For low paid workers, strong award compliance is of critical importance: simpler awards and the continued encouragement of award regtech solutions are key. For award-reliant workplaces to access flexibility, they need simpler awards and easier processes to amend them.

Second, the structure of awards forms the baseline for enterprise agreements via the Better Off Overall Test. Simpler, more adaptive awards can indirectly smooth the path for mutually beneficial enterprise bargaining.

Figure 1.8 – Awards have grown in importance for non-managerial employees

2010–2021



To these ends, the Australian government should amend the Fair Work Act to improve award-making processes, and further simplify and adapt awards where feasible (reform directive 11). A positive recent development in the award system was the inclusion of loaded rates in the Hospitality Award — effectively providing options to award-reliant businesses to pursue a specified alternative pay structure. More use could be made of such optional approaches, overseen by the Fair Work Commission, and enshrining consultation requirements.

In addition, the Government should remove barriers to effective agreement-making in the enterprise bargaining system by modest changes to the Better Off Overall Test. The Fair Work Commission could have expanded ability to approve an agreement where there is overall employee support and overall benefits, subject to a range of public and private interest tests.

Enterprise bargaining could be better leveraged to improve productivity through limitations on certain types of clauses that hinder productivity improvement. For example, some enterprise agreements contain restrictive consultation clauses that require majority employee consent to implement changes in work practices. Such clauses can block the adoption of more efficient production processes, especially where they may be labour saving. The Commission's proposed solution is to give the 'model' consultation clause prescribed in the *Fair Work Regulations 2009* legal effect over more stringent terms in agreements. This would both promote productivity enhancing changes without stifling mutually beneficial consultation between managers and their employees. The Government should also remove barriers to effective agreement-making in the enterprise bargaining system by modest changes to the Better Off Overall Test. The Fair Work Commission could have expanded ability to approve an agreement where there is overall employee support and overall benefits, subject to a range of public and private interest tests.

Simplifying and harmonizing occupational licensing

Australian governments have implemented a significant reform of occupational licensing through the automatic mutual recognition of several licences across (most) state borders (reform directive 9). There is scope to expand this principle to also enable the targeted recognition of overseas licences.

A further (and harder) reform is to tackle where licences and professional registration are truly necessary, and the scope of practice that should be covered.

Licensing plays an important role in signalling quality and ensuring minimum standards of safety. But excessive and rigid requirements reduce the flexibility with which workers can move between sectors and jobs, and can inhibit competition, which tends to increase prices compared with a market with a voluntary, or no, regulatory licensing regime.

When designed well, the higher price imposed by licensing regimes is justified by the lower risk to consumers. However, if the objectives of licensing regimes are already achieved by other means such as safety legislation, or if the extent of the restriction is not matched by improved outcomes (or worse, actually impedes the provision of safer or higher quality work), then licensing reform — such as expanding scope of practice for other providers — could improve productivity without compromising service quality and safety.

Building on automatic mutual recognition, governments should continue to develop digital licensing platforms to facilitate more information sharing and help pave the way for further integration of licensing across jurisdictions.

There is also substantial potential productivity benefit in the hard grind of ongoing review of licensing policy, to test whether licensing is necessary (over and above other available forms of safety regulation and consumer protection) and whether requirements remain fit for purpose (reform directive 10).

Expanding scope of practice to increase healthy competition

The scope of practice covered by a licence determines the types of services that are regulated, and hence, is a key determinant of how accessible and affordable these services are. A perennial pair of problems in this

context is that (i) some suitably skilled practitioners are not licensed to provide certain services, and (ii) some licensed practitioners are not operating on the boundary of their licence.

For example, in the health sector, nurse practitioners (NPs) can perform many tasks that only general practitioners (GPs) — who are in relatively short supply — are licensed to provide, such as diagnosis and prescribing services. This means that GPs undertake many tasks well below the upper boundary of their capabilities while NPs have skill sets that are not fully utilised. This can result in patients facing needlessly long wait times and higher than necessary prices, and taxpayers footing unnecessarily high medical bills. A similar situation exists for pharmacists with respect to their ability to perform some straightforward tasks that would otherwise be performed by a GP.

In health services, States and Territory Governments should trial expanded evidence-based scope of practice for pharmacists and other non-medical health practitioners, such as those undertaken in New South Wales and Queensland with regard to the prescription scope of pharmacist's providing vaccinations and low-risk medications. The Australian Government should ensure that the novel arrangements that are the subject of these trials are given sufficient funding through Medicare or the Pharmaceutical Benefits Scheme (PBS) (reform directive 10).

More generally, Australian governments should work with their regulators to re-examine boundary issues relating to occupational licenses, particularly where independent reviews have already highlighted potential gains (reform directive 10). In continuing to develop their digital licensing platforms, governments should prioritise choices in technology and design that enable data collection that can inform effective licensing policy and future information sharing between jurisdictions.

Faster recognition of migrant qualifications

Suitably licensed skilled migrants represent a potentially fast and efficient way to augment domestic labour supply, increasing productivity via diffusion and skill sharing, and improving access to technical services for Australian businesses and consumers.

At present, the system that regulates mutual recognition of migrants' qualifications acquired overseas, including occupational licences, is not well integrated with the requirements for skilled migrant entry. Before skilled migrants can work in Australia, they need to obtain a second set of approvals via an often opaque, difficult-to-navigate and time-consuming process. The upshot is long delays before migrants can begin work or suitably skilled migrants being unable to work in the field and occupation in which they were trained, to the detriment of Australia's economy.

Where there is sufficient alignment or equivalence of different licensing regimes between Australia and international jurisdictions then mutual recognition should be pursued by the Australian Government. Such an arrangement would do away with the secondary approval process for suitably qualified migrants, while preserving the benefits of licensing in promoting safety and quality of service (reform directive 9).

The Australian Governments and regulators should pursue further international mutual recognition of occupational licences by improving (and potentially formalising) links between Australian licensing bodies and those in similar countries.

Where there is not sufficient alignment or equivalence of different licensing regimes between Australia and international jurisdictions and mutual recognition is yet to be implemented, then requirements for migration should be aligned with the requirements of regulatory licensing bodies.

Harnessing data, digital technology and diffusion



Focus on **innovation for the 98 per cent** to drive productivity gains through the adoption of new ideas



Address barriers to the adoption of technology to **bank the data and digital dividend**

Productivity growth relies on innovation and new technology. Across the world, considerable policy attention and public funding has focused on how to generate new breakthrough ideas. But this leaves out an important element of the innovation story. Fewer than 2% of Australian businesses actually engage in 'new-to-the-world' innovation. This is not a criticism — just a reality.

The critical and forgotten element in innovation strategy is how to stimulate the adoption of new ideas by the remaining 98% of businesses. There is a major dividend in diffusion — the spread and adaptation of the ideas of others for use in everyday business applications. Arguably for productivity growth, it is the main game.

The diffusion of digital technologies is a stark example. The adoption of these technologies across the economy has already been transformative. In just a couple of decades, smartphones have become ubiquitous, social media has changed the way we communicate and consume, and the volume of data we can draw on to inform our decisions has increased exponentially. The productivity benefits of digitisation and technology enabling us to collect, transmit and analyse data faster and at lower cost, are potentially vast.

Innovation for the 98%

Innovation policy needs to refocus to place more emphasis on the 98% of businesses who are not world-leading innovators and are unlikely ever to be (figure 1.9). For these businesses, innovation is about the adoption and adaptation of existing, but more effective and efficient technologies and ways of doing business, rather than formal research and development (R&D). Policy support focusing on lowering the cost of R&D or the commercialisation of patentable intellectual property tends to miss the way most businesses around Australia innovate on the ground.

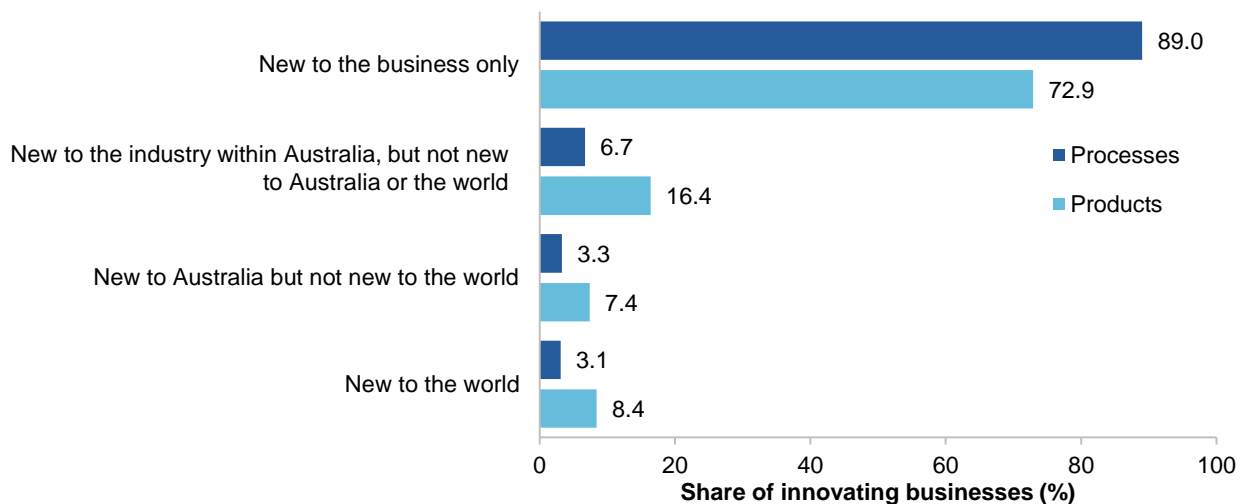
Most businesses are not operating at the technological frontier. Supporting the diffusion of existing good ideas and effective business models will help to narrow the gap between them and the best performers, increasing economy-wide productivity.

The challenge is that the role for government is less clear. Government has a number of established policy tools that address traditional channels for high-end innovation: formal research and development is supported by tax incentives and public funding; linkage programs and commercialisation incentives operate to bring intellectual property (IP) developed in universities to the private sector.

The levers to enable diffusion (the innovation of the 98%) are a multitude of other policy settings, which are not always primarily focused on innovation per se. The general dynamism of the economy (discussed in a later section) affects the ease with which ideas are diffused and innovations adopted.

But it is important that policy makers also identify and focus on key channels by which knowledge is transferred. For example, improving the skilled migration program and reducing barriers to foreign direct investment and trade in services would have substantial benefits for diffusion.

Figure 1.9 – Most Australian business innovations are only new to the business^a
Product and process innovation, 2 years ending June 2021



a. Process innovations include new or improved methods for producing goods and services; organisational forms; and marketing methods.

As discussed in the previous section, skilled migrants provide a direct channel of diffusion, bringing knowledge about frontier technologies and practices developed overseas into domestic businesses. Similarly, linkages overseas via trade and foreign direct investment (FDI) give Australian businesses access to information and ideas about innovation from the global frontier, while also bringing expertise and good management practices. Minimising trade barriers and FDI fees is important to maintain this channel for diffusion.

In some cases, the need for better diffusion should prompt government to think differently about its traditional role. Multiple government agencies collect data from businesses, which — if well curated and presented — could help businesses benchmark their performance against like businesses (reform directive 16). The use of tailored information with easy-to-understand benchmarking results and qualitative case studies, could be highly beneficial in spurring the adoption of technology and adapting innovations occurring elsewhere in the economy.

Some Australian Government agencies such as the Australian Tax Office and the Australian Bureau of Statistics have made progress in this area, but these efforts could be broadened and extended.

Governments can also better leverage the university sector. Existing research and training linkages tend to focus on identified sectors (often those where innovation already occurs). A better approach would be to make them more industry-agnostic, to encourage diffusion in some less traditionally innovative sectors (reform directive 16).

A concerted effort to reduce the barriers for academics to consult with private industry, via simplified and well understood processes, could also aid the flow of knowledge, particularly in those sectors where larger scale joint research or commercialisation of IP is less relevant.

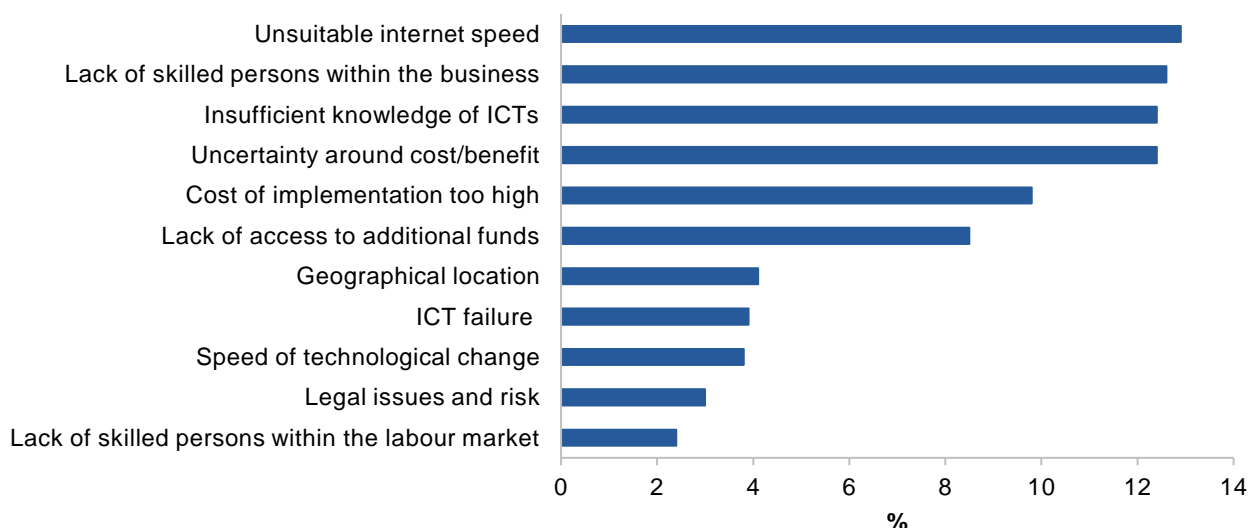
The business community, via industry associations and business networks, is one of the most important channels for diffusing information about innovations. Governments could increase their partnerships with intermediaries like industry associations and other advisory or network bodies to create programs that facilitate the flow of information (such as capability development initiatives and extension services). Government could also directly increase the transmission to businesses of information about innovation by requiring open access to government funded research.

Banking the data and digital dividend

Technology changes rapidly and new productivity-enhancing applications are continuously emerging. Technologies such as AI, the internet of things (IoT), robotic automation and big data analytics are underutilised in Australia and could deliver large productivity gains. Addressing barriers to the adoption of these technologies, promoting efficient and safe use of data and creating an environment that encourages digitisation is vital to ensuring future productivity growth.

As always, the role for government must be carefully calibrated. Businesses will make their own decisions as to the value of investing in new technology. Not every investment works out for every business. But government plays a large role in driving adoption through its own activities (such as regtech), infrastructure provision, boosting skills and — perhaps most transformative of all — promoting large scale data availability, which is the feedstock for much of the digital economy (figure 1.10).

Figure 1.10 – Internet speed and lack of skills are the biggest barriers to adoption
Share of businesses citing each factor as limiting their use of ICTs, 2019-20^a



a. This chart uses weighted estimates as published in ABS (*Characteristics of Australian Business*, 2019-20 financial year, Cat. no. 8167.0).

To maximise the economic and social benefits of digital technologies and data, Australian governments should reform their approach to digital infrastructure investment, expand the safe sharing of government-held and funded data, and ensure rules and regulations for the ethical and secure use of digital technology and data are fit-for-purpose.

Better and more cost-effective provision of digital infrastructure will be important in raising productivity for Australians living and working in the regions (i.e. outside major cities). Beyond the potential economic gains, improving digital connectivity in these areas will significantly improve wellbeing by enabling higher-quality delivery of everyday services such as telehealth, online education, online banking and remote work. To this end, ensuring that the types of investment governments are currently making in regional digital infrastructure represents the most efficient approach, will be important (reform directive 13).

The current arrangements for government digital infrastructure funding are highly disaggregated across a patchwork of different programs. But there is little transparency about how investment decisions are made, making them hard to assess. Subject to sufficient market testing and maturation of the market, governments

should consider competitive tendering as a more efficient way to deliver digital services to regional and remote areas.

Data holdings — public and private — in Australia have been underutilised due to unclear obligations about who has rights over the data, and hence is empowered to share and use it, as well as concerns about the safe transfer of data, and privacy. Initiatives like Australia's Consumer Data Right (CDR), first rolled out in July 2020, provide an example of how to successfully overcome these issues. The CDR empowers consumers in the banking and energy sectors to safely share data collected by a business about them across different product and service providers. In the absence of the CDR, that data would almost certainly be closed to other businesses, effectively stymying competition and innovation by prospective service providers.

Expanding this type of consumer led, 'safe, but open' approach to data sharing across the economy, including to government run and regulated service providers (e.g. health, education, aged care and childcare) could similarly encourage innovation that lowers the cost, while improving the quality, of service delivery for consumers. And increasing the depth and breadth of data holdings available for analysis would underpin better system-level policy decisions (reform directive 15).

Governments also have a role to play in setting the rules relating to the ethical and secure use of technology and data to foster consumer trust and confidence and ensuring these issues do not become a barrier to adoption. But government intervention such as regulatory requirements should be targeted to high-risk areas so as to avoid unduly inhibiting productivity-enhancing investment and innovation.

The government has already started to regulate critical infrastructure sectors at high risk of cyber-attack;⁹ however, these measures will need to be reviewed and evaluated to ensure that the added regulatory burden does not create a barrier to investment. And streamlining cyber incident reporting via a single interface would reduce the administrative cost on businesses associated with the current plethora of reporting requirements to multiple regulators (reform directive 14).

Government can also help guide the ethical use of data and digital technologies, such as AI, facial recognition and automated processes, while avoiding stifling innovation and giving businesses and consumers confidence to invest in and use the technology.

Economic dynamism describes the process by which businesses are created, grow and often fail; by which workers move from one job or one industry to another; and by which capital is deployed to new uses through investment and through businesses trying out new business models.

On some measures — business entry and exit rates, investment and labour mobility — the Australian economy appears less dynamic than in the past. The cause of this is unclear and there is unlikely to be a single solution.

Overall, the general competition law in Australia is well designed and effective. Periodic improvements can be made, but need to achieve a delicate balance. The potential for unintended outcomes abound. For example, more restrictive merger laws designed to reduce market concentration could also prevent less productive businesses from exiting the market. Similarly, large businesses (which implies high concentration) are often the source of new competition when they move into markets — potentially supporting productivity growth.

⁹ *Security Legislation Amendment (Critical Infrastructure) Act 2021 (Cth)* & *Security Legislation Amendment (Critical Infrastructure Protection) Act 2022 (Cth)*

Creating a more dynamic economy



Freeing up trade and increase foreign investment to increase competition, improve access to capital and enhance the flow of ideas from abroad



Driving productivity through tax reform to improve labour supply, savings and investment decisions, improve ease of entry, and improve risk management



Improving risk management and insurance to increase the coherence of Australia's 'risk protection system'



Lowering costs with regtech to achieve better outcomes from, and lower the compliance burden of, regulation



Finding a better approach to location and mobility to allow land to go towards its highest value use

There are many areas of economic policy that, in principle, could improve the dynamism of the economy, including some already discussed. The Commission has selected some key areas for particular focus, which could spark competition and new business models:

- continued openness to global investment and trade, including trade in services
- ongoing reform of taxation
- a new, holistic focus on risk protection and insurance
- improving regulation through technology
- more efficient approaches to location and mobility.

Freeing up trade and increasing foreign investment

In Australia, new competition and market entry often comes from the rest of the world — either through a foreign entrant investing in the Australian market, or through trade. These are important channels for the diffusion of frontier innovation. Hence, productivity growth can be advanced by being generally open to import competition, having low barriers to foreign direct investment, and by advocating for rules-based systems of global trade.

There are potentially large opportunities in global services trade, particularly in the wake of COVID-19 and the expanded uptake of remote working. Trade in services can be an export opportunity for Australia (as it has been in tertiary education) but it can also open up parts of the economy previously regarded as closed to foreign competition. This should be a focus of future bilateral and multilateral trade negotiations and also has implications for a range of regulatory settings, including skilled migration, recognition of overseas qualifications (discussed earlier) and domestic licensing requirements.

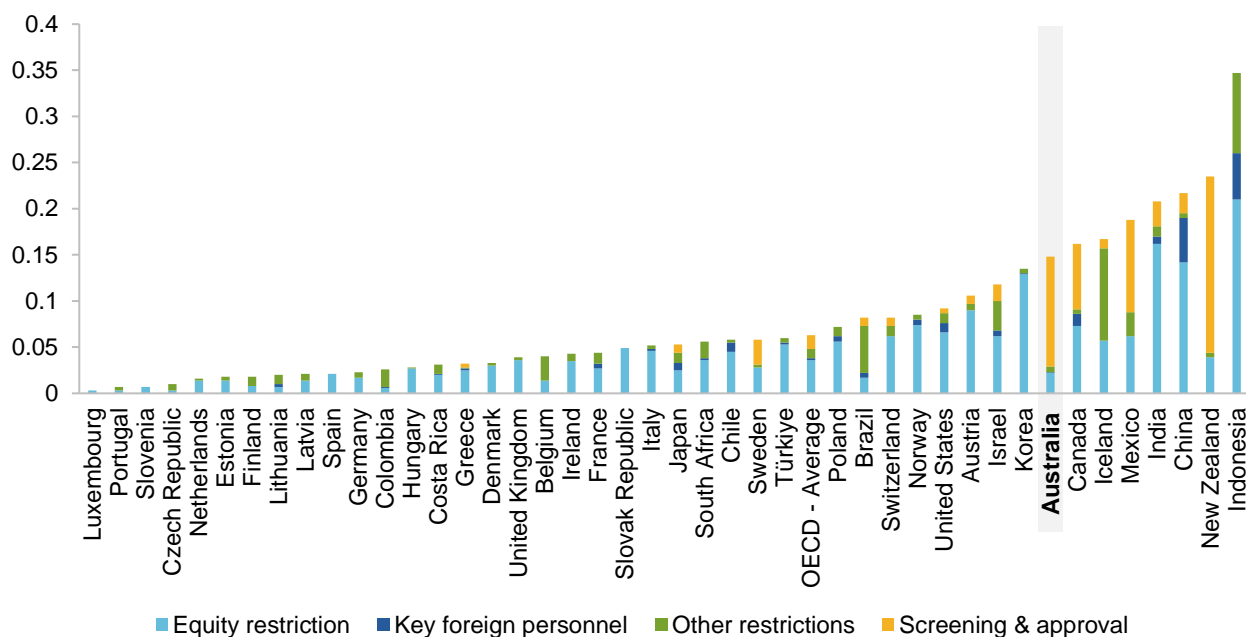
Australia could also achieve greater openness through increased acceptance of international product standards, and a gradual reduction in the use of anti-dumping and countervailing measures (reform directive 21).

More generally, tariffs on goods imported into Australia now collect so little revenue that the cost to businesses from complying with the various administrative requirements is much larger (free trade agreements reduce many tariffs to zero but only if the importing business files the correct forms). Indeed, for every \$1 in revenue raised by tariffs, the Commission has estimated \$0.60 to \$1.50 is lost in economic activity. Accordingly, the Australian Government should unilaterally reduce Australia's remaining statutory import tariff levels to zero.

Australia has traditionally been open to foreign investment, as evidenced by relatively high FDI as a share of the economy compared with global peers. However, official FDI screening and approval processes are seen as more restrictive than in other OECD countries (figure 1.11).

Figure 1.11 – Australia’s FDI processes were already relatively restrictive in 2020^a
OECD FDI restrictiveness index

Index 1 = Maximum restrictiveness



a. Australia implemented changes to its screening regime from 1 January 2022.

Australia’s FDI fees are well in excess of cost recovery, which risks deterring FDI flows. Application fees for proposed foreign investment should aim to recover costs and not be used as a method of general revenue raising. Application fees for proposed FDI into agricultural land assets should be brought closer into line with other forms of investment.

The COVID-19 pandemic and strategic tensions have focused increased attention on supply chain resilience. This partly reflects business decisions to source inputs domestically or have more redundancy in supply chains (a move from ‘just in time’ to ‘just in case’). This comes at some cost, but often reflects an efficient response to new (or newly understood) risks. Overwhelmingly, supply chain risk management lies with individual businesses.

In cases where there are calls for proactive policies to stockpile or support domestic production of strategic items to deal with national supply chain risks, a targeted and evidence-based response is required. The Office of Supply Chain Resilience (OSCR) can play a key role in ensuring that rigorous appraisal, a degree of transparency and a focus on opportunity cost underpin Australia’s response to supply chain issues. The OSCR should provide cost estimates and develop of a rigorous methodology for considering the broader incidence of any government support for stockpiling or domestic production as a solution to perceived supply chain risks (reform directive 21).

Driving productivity growth through tax reform

Australia's taxation settings have a key influence on productivity. By taxing some activities at higher rates than others, the system can skew incentives and economic activity away from more productive activities.

Governments will inevitably consider changes to taxation from time to time, including options to address the ageing population, changing consumption patterns and the need for fiscal repair. When doing so, it will be important to ensure that decisions are consistent with the broad aim of boosting productivity growth. Aspects of the tax system that warrant particular attention are those that influence:

- **skilled labour supply decisions** — particularly via income and payroll taxes, which can affect labour market participation, hours worked, incentives for further human capital investment and incentives to migrate to Australia. These can be compounded by aspects of the transfer system, which can lead to high effective marginal tax rates. Other payments, such as childcare subsidies, can alleviate adverse incentives over some income ranges
- **saving and investment decisions** — which can be distorted due to the varying tax treatment of different savings options, gaps between the corporate tax rate and marginal personal income tax rates, and differential tax rates for large and small companies. Corporate investments can also attract different tax treatments according to statutory depreciation allowances and whether the investment is financed by debt or equity
- **ease of asset transfers and efficient capital allocation** — which can be significantly impacted by transaction taxes like stamp duty. These taxes can hamper worker mobility and housing choice and be a barrier to transactions that transfer assets to higher value uses
- **ease of entry and competition** — consolidation rules and the non-neutrality of taxation of corporate debt and equity could contribute to incumbency bias, particularly if new businesses are more likely to initially be financed through equity
- **risk management** — which can be hampered at the margin by state insurance taxes. The asymmetric treatment of profits and losses could also work to diminish businesses' risk appetite (though this is not easily corrected).

In general terms, both tax rates and tax neutrality issues will be highly relevant to productivity. The marginal excess burden (a measure of the economic distortion or efficiency loss caused by taxation) from a tax tends to rise exponentially with the tax rate. Working towards greater neutrality of tax between businesses, savings vehicles and labour vs. capital income should have positive impacts for tax efficiency and productivity.

The benefits of even small improvements in the efficiency of the tax and transfer system could be substantial given Australian governments collect almost \$600 billion in tax revenue (in 2020-21). Just a 0.1 percentage point fall in the average excess burden of taxation would amount to a saving of about \$600 million in lost economic activity.

In addition, tax neutrality between corporate debt and equity has received increasing attention. Notwithstanding Australia's dividend imputation system, there is the potential for investment to be discouraged when businesses finance it through equity (and thus need to make more than the normal return). While a number of reforms have been canvassed to deal with this, one advantage of the Allowance for Corporate Equity proposal is that it effectively taxes marginal investments (those making a normal rate of return) at or near zero, thereby potentially encouraging new investment (Volume 3).

As governments (Australian and State and Territory) alter the tax system over the next decade, they should look to systematically transition the system to be more supportive of productivity growth across the five domains outlined above (reform directive 20).

Improving risk management and insurance

A new and under-appreciated policy theme is Australia's heavily regulated and extensive system of public and private risk protection.

This 'system' (though it is rarely recognised as such) consists of private insurance, mandatory contributory schemes (workers compensation and compulsory third-party insurance) and the publicly funded social safety net (which combines risk management, redistribution and in-kind services).

These elements have developed by increment and without holistic design.

This ad hoc 'system' of risk protection and insurance lacks coherence and arguably has become a potential barrier to innovation and productivity growth on a range of fronts:

- gaps in risk protection can reduce risk appetite (such as diminishing willingness to change career or start a business), which could reduce the dynamism of the economy
- the tax and transfer system can create adverse work incentives, affecting labour supply
- regulatory restrictions on private insurance can discourage new approaches to prevention, and more efficient service design, thereby limiting innovation and more productive outcomes
- publicly funded programs do not always give sufficient weight to insurance principles like maximising long-term outcomes and cost containment.

Unlike the retirement savings system, which has a recognised architecture, the risk protection system in Australia is not well understood. A generational review and reform process that holistically assesses the complex inter-linkages across Australia's risk protection system could yield significant productivity gains across many of the themes highlighted in this report (a more dynamic economy, more productive non-market services and improved human capital).

Such a review, and ongoing reform process, should focus on:

- **the impact on individual entrepreneurship** — Australia and New Zealand are outliers in following a 'social assistance' approach to income replacement in the event of job loss (primarily via Jobseeker). Other OECD countries have contributory unemployment insurance schemes, providing materially higher near term 'replacement rates' — cushioning the blow of job loss. It is possible (though hard to assess) that this could diminish risk appetite for Australian households, with a cost to economic dynamism. Australia is unlikely to embrace a contributory scheme, but options could be explored involving income contingent loans and/or modest expansion of income protection products through group life insurance obtained via superannuation.
- **barriers to innovation and new service models** — Private insurers are heavily restricted in the services they can offer. Health insurers cannot fund out of hospital services for which a Medicare Benefit could be paid. Life insurers cannot fund health interventions. But both are exposed to the cost of ill health (through hospital benefits and income protection policies respectively). The burden of disease is shifting to chronic conditions, which require management and prevention (hospitalisation being a costly last resort).
 - Regulation and incentives stand in the way of health and life insurers delivering innovative solutions, while the Medicare-funded, fee for service primary health system locks in a time- and labour-intensive service model for managing chronic disease.¹⁰

¹⁰ The PC's case study, *Innovations in Care for Chronic Health Conditions*, highlighted that most innovative, low-cost initiatives were succeeding on the ground despite, rather than as a result of, existing funding models. Innovators were felt to be swimming against the tide.

- Health insurers face the added complexity of a model of risk equalisation that prevents them from fully realising the savings from their preventative efforts with members (part of the cost saving effectively being redistributed to the broader pool of health insurers).
- **poor incentives for mitigation and early intervention** — Publicly funded programs do not always embed an ‘insurance mindset’ (e.g. a strong discipline on reducing long-term costs and getting better outcomes through early intervention)¹¹. Some options have been tried — actuarial assessments of long-term cost, the New Zealand investment approach, or social impact bonds in Australian states.
 - In mental health, the overlap between life insurance and workers compensation can create confusion and inefficiency. In some cases, it has meant early intervention options are lost while claims are processed (possibly contested) through one scheme or the other.
 - In general insurance, there have long been calls for greater investment in upfront mitigation rather than disaster relief after the event. The Government's Disaster Ready Fund is a good example of a renewed emphasis on prevention.

The review could bring into play insurance concepts that tend to be misunderstood or de-emphasised in many policy settings, like moral hazard, adverse selection, risk management and the respective roles of pooled vs self-insurance options.

In the near term, some smaller steps could be taken to improve aspects of the system and unlock productivity gains (outlined in reform directive 17).

Using regtech to improve technology diffusion and lower regulatory costs

Regulation underpins important social, environmental and safety outcomes, but comes with a compliance burden on businesses and individuals and can sometimes be a barrier to investment and other economic activity.

It is important that policy makers continue to focus on sound regulatory principles, including rigorous and transparent appraisal of new proposals and a strong focus on regulator capability and culture. Technology is also opening up new opportunities to improve regulation and ease compliance costs through the use of regulatory technology (regtech).

Regtech is the innovative use of technology to better achieve regulatory objectives. Regtech can lower the administrative and compliance burden for businesses and government and improve the quality of regulation design and implementation.

Governments can support regtech adoption by presenting new regulations in forms amenable to regtech solutions; for example, by making legislation machine-readable (the New South Wales Government's *Community Gaming Regulation 2020* is a recent example).

Moreover, governments can also work with software providers to find ways to encourage industry to design regtech compliant solutions (reform directive 24). One example where this has happened is the Fair Work Commission's efforts to develop an application programming interface that enables software providers to directly access data on wages and entitlements from its Modern Awards Pay Database.

¹¹ The PC's inquiry into the veterans support system, *A Better Way to Support Veterans*, showed that it was complex, unresponsive and too inflexible to achieve genuine long-term outcomes for clients. Similar characteristics could be observed in the disability sector prior to the National Disability Insurance Scheme.

A better approach to location and mobility

The transformative effect of communications technology is evident in the dramatic rise of remote work since the beginning of the COVID-19 pandemic. It is probable that levels of remote work will be permanently higher than 2019 levels, with businesses experimenting with variations on hybrid (or fully remote) models for a segment of the workforce.

This could prompt some job switching as employees seek employers better matched to their preferences (and vice versa). While businesses and individuals will make their own assessments about the relative productivity of working centrally or at home (at least some of the time) there is no strong policy case for government to try and influence those decisions on economic grounds.

But the increase in remote work, along with the rise of e-commerce, telehealth and remote learning are softening the nexus between economic activity and location. Planning and zoning systems that have entrenched clear distinctions between residential, retail and office uses — and between industrial and other commercial uses — should be made more flexible. Online retail is blurring the distinction between the shop and the warehouse, just as remote work blurs the distinction between the home and the office.

Planning systems based on detailed rules about what economic activity can occur where, should be reformed to free up locational decisions. This would support competition and new investment (reform directive 18).

Planning and zoning reform to improve access and lower costs

While some progress has been made to improve planning and zoning across all jurisdictions, further improvements should be prioritised.

Reforms to planning and zoning laws in Victoria in 2013 and 2018 are a good example of successful reform that is broadly enabling to business: There are now a small number of commercial and industrial zone categories; the zones are standardised and have a broad range of allowable uses; and many commercial uses are as-of-right. The Queensland planning system also has a flexible model to bringing applications into the assessment stream (rather than requiring costly and time-consuming rezoning processes).

These approaches can reduce business set-up costs and increase the availability of suitable sites for particular activities (such as small-scale supermarkets and large format retailers).

In addition, planning and zoning reform should pursue administrative efficiencies, including by aligning plans at different levels of government; and addressing simpler applications outside of the assessment process. Key reform areas relevant to competition include:

- **moving to fewer zones with broadly-stated allowable and as-of-right uses.** There should be a small number of commercial and industrial zones — with a wide range of allowable uses — which would provide flexibility, certainty, and competition, and limit the need for significant spot rezonings that would otherwise delay and/or make more costly business establishment. Prohibited uses should be kept to a minimum, with most uses 'as-of-right'
- **standardising permissible land uses within zone types.** Zone definitions should be as consistent as possible across municipalities and embedded in state government instruments to provide clarity and certainty as to allowable land uses
- **creating defined and efficient processes for rezoning applications.** To the extent that rezoning or planning scheme amendments are required to progress a development proposal, states should ensure there is a transparent process for applicants to pursue, with expected timeframes, criteria and appeal rights (reform directive 18).

Governments can also ease other restrictions on the location of specific businesses.

Regulations on location and ownership of Australia's pharmacies have reduced competition in local markets — there are now fewer pharmacies per head of population than when the regulations were introduced — and have facilitated the establishment of local monopolies — four pharmacy operators control 73% of the market share (through franchising and the like). Australian governments should follow the lead of the United Kingdom and the United States where pharmacy colocation — for example, pharmacies located in supermarkets — is allowed.

Other sectors where the Government has a large regulatory footprint should similarly and subsequently be examined to remove those impediments to competitive pressures that are not clearly supporting a broader social or environmental policy objective (reform directive 19).

Using efficient pricing to fund transport infrastructure and ease congestion

As location becomes more contestable, there is a strong case to 'price' mobility more accurately.

Reforming the pricing of road use and mass transit would bring potentially significant productivity benefits. The motor car, freeway and electric train were the large-scale technological innovations in 20th century mobility — solutions based in manufacturing and engineering. Digitally-enabled pricing and service design are the technological opportunities of today.

Digital solutions and improved data availability have made it possible to move beyond average prices like the fuel excise, or simple fare structures based on paper tickets or first-generation card technology. It is becoming possible to set prices closer to social marginal cost, opening up incentives for new mobility solutions to emerge.

Road congestion in Australian cities imposed costs of about \$24 billion in 2018-19. While road users are subject to an array of charges, few are well targeted at relieving congestion (i.e. rationing demand for scarce transport infrastructure).

Investment in and planning for new roads, and maintenance of existing ones is slower when compared with other modes of transport, and with disruptive technologies such as electric vehicles growing in popularity — resulting in a decline in the relevance of fuel-based charges — there is a greater need (as well as an opportunity) to get road-pricing right.

To achieve more efficient road user pricing, Australia governments could move towards a pricing framework that better reflects the costs imposed on the road system by users, recognising too that electrification of the vehicle fleet will undermine the revenue collected through fuel excise taxes. This would take time and many small steps.

Eventually, the pricing framework would ideally have two components: a charge based on distance travelled and a higher congestion price for certain locations and times. This would lead to more efficient use of existing infrastructure (including for maintaining and repairing existing roads), and demand-based forecasts based on prices that reflect efficient use would also help guide efficient levels of investment in new infrastructure.




Public transport fare setting in most jurisdictions similarly suffers from policy inertia. Most jurisdictions use simple and ad hoc approaches to setting fares and subsidies that do not systematically address equity or efficiency goals. A large downside risk associated with the current pricing model is that public transport services raise very little revenue from fares and rely on substantial public subsidy. Those subsidies must be raised through the tax system (which comes with an efficiency cost) and their overall impact is not always progressive, as many high income commuters are subsidised. Service quality is one of the biggest drivers of value, and hence usage, for customers, but it can suffer when public subsidies are primarily geared toward lower fares.

Independent fare regulators can help overcome these issues. A superior approach to pricing developed by the Independent Pricing and Regulatory Tribunal has been operational in New South Wales for some years,

while Infrastructure Victoria has undertaken considerable research on pricing reforms, though this is not yet reflected in policy.

State and territory governments should adopt better practice public transport pricing, including by drawing on the existing experience and policy work undertaken in their own, or other jurisdictions. This could include implementing in Victoria, Infrastructure Victoria's reform directives on pricing, and more widespread adoption of the NSW pricing approach developed by the Independent Pricing and Regulatory Tribunal. States and territories without independent bodies to make jurisdiction-specific recommendations could also improve fare setting through other channels, such as publishing pricing strategies and rationales for decisions, and annually increasing fares in line with inflation in public transport costs (reform directive 18).

Lifting productivity in the non-market sector

	Overcome barriers in order to increase innovation and diffusion in government-funded services
	Embrace technology and remove overly restrictive regulation to speed up productivity in labour-intensive non-market services
	Improve Australia's healthcare system to improve well-being, engagement and labour market outcomes

The 'non-market' moniker is something of a misnomer. It is not the case that non-market services are never delivered in a market. Rather as discussed above, the key point is that they are typically provided free of charge, or at prices that are well below cost.

Some non-market services are funded and directly delivered by government entities. Others are part-funded by government but delivered by private businesses or not-for-profits under a broad range of funding models and regulatory settings.

The rapidly expanding non-market sector, where productivity growth is slow — which will increasingly weigh on Australia's overall productivity growth rate — presents a challenge for Governments. They need to encourage innovation and diffusion of new and better ways of doing things in the services they provide or subsidise, with the aim of producing better quality and more accessible services at lower costs. This task will not be straightforward.

The systems within which non-market services are delivered are often highly complex. This complexity, and the heterogeneity across the non-market sector, means productivity policy in the non-market sector is context-dependent, painstaking, and incremental.

The complexity of incentives has meant that while some past attempts to inject competition and market disciplines into government services have been effective, other attempts have failed. Market design is critical, but hard. Seemingly small weaknesses in the incentive structure can have large adverse and distorting effects on outcomes.

In principle, productivity in the non-market sector comes from the same basic drivers that exist in other parts of the economy: using labour more efficiently and complementing it with technology and innovating models of service delivery.

What differs is that the outcome being sought is public value, or a social purpose, rather than measurable increases in output.

And the structure of service delivery systems makes the path to productivity growth different. Diffusion channels like business entry and exit are less prevalent, price competition is muted, and there is less ability to expand market share through innovation. Many labour-intensive government services are hard to automate. The respective roles of workers with different qualification levels can be highly contested.

Where there is a separation between the party paying for the service (government or an insurer) and the service recipient, incentives for cost containment and quality improvement can be lessened.

Quality can be very hard to measure. This often results in government stepping in to regulate aspects of the services they fund, sometimes to mandate inputs as a proxy for service quality.

None of these issues is easily solved. Reform can focus in three main areas.

The first is to keep refining and adjusting funding models that encourage the delivery of more effective (hence higher productivity) services — addressing parallel issues such as scope of practice constraints will also be necessary.

The second is to actively create and support an eco-system of best practice innovation and diffusion in respect of key non-market services — such as the more effective management of chronic disease reducing hospital visits.

The third is to seek out opportunities for labour-saving technology in the most traditionally labour-intensive service sub-sectors, backed by more outcomes-based quality regulation — such as use of clinician supported online mental healthcare services.

A particular area of focus in this report, where governments and the community could benefit from the application of this three-tiered approach, is in the health and care sectors. Every year, significant amounts of taxpayer funds are used to subsidise medical procedures where the evidence base shows there is limited efficacy for improving patient outcomes, while the diffusion of demonstrated innovations in providing better care is too slow.

More flexibility in allocating government funding

Productivity in the non-market sector can be supported through more flexible approaches, or blended, funding models.

A common problem with existing models is that they tend to encourage quantity solutions — or activity — rather than quality. For example, fee for service models can reward inputs rather than outcomes. Capitation models can create incentives to reduce service levels. Quality and outcomes are hard to measure and hence reward. Australia has the added complication of Commonwealth-State overlap, where different funding models interact poorly or undermine system coherence (such as social housing and Commonwealth Rent Assistance) (reform directive 23).

Because there is no such thing as a perfect funding model, the status quo tends to persist. Conscious effort is required to adapt or reform entrenched funding or service delivery models.

Health is an example of where funding models have rewarded activity — through explicit activity-based funding in the acute hospital system and fee for service funding in the primary care system. This can create barriers to productivity growth because it locks in a particular amount of labour input (e.g. funding a 30 minute one-on-one consultation).

In some cases, the solution will be more blended models, combining elements of fee for service with capitation (per person) amounts. This has promise in primary care for the treatment of chronic conditions and could allow for some flexibility about labour input (the total and the split between different occupational groups) and the use of technology.

In other cases, the use of flexible funding pools to substitute for a portion of activity-based funding can unlock innovation and alternative service models.

Often in the non-market sector, productivity growth (similar outcomes for less input) is advanced by finding and funding lower cost settings to provide a service, such as community-based health as a substitute for acute care, or a range of alternatives to prison incarceration as a means to achieve community safety.

The rise of impact investing, 'payment by results', and social impact bonds are providing alternatives to traditional funding and delivery methods. These can sharpen incentives to produce higher quality outcomes, encourage co-ordination between different service elements (notoriously hard in government) and by creating a growing knowledge base about 'what works'. But specifying the outcomes, and the baseline against which to reward them, is complex.

There are some areas where governments can move toward 'client-centred' funding approaches in human services, so long as incentives and safeguards for cost containment and quality are strong. Under such models, clients are given control of funds to purchase services from providers of their choice, promoting innovation and diffusion, and ensuring that clients get the services that best meet their specific requirements. Providers compete to attract clients, promoting the development and uptake of new innovations (reform directive 23).

In other cases, the direction of reform is to move towards more relational contracting. In many instances, increasing the minimum length of contracts to 5–7 years for community organisations delivering health and human services would enable greater development of expertise and provide the certainty and stability needed to invest in innovation. And better use of alliance contracting or collaborative contracting for major public infrastructure projects would mean contractors with greater technical expertise and knowledge would be involved earlier in the planning and scoping stages of a project, increasing the opportunity for innovative approaches to project delivery (reform directive 22).

These approaches reflect inherent uncertainty: it is hard to specify all relevant future contingencies in an up-front funding contract. A shared approach is a more efficient way to deal with unexpected events.

The Closing the Gap Agreement explicitly prioritises service delivery through the Aboriginal community-controlled sector, which also requires a shift in thinking away from transactional contracting for specified services and towards long-term investment, a strong sense of partnership and a centring of Aboriginal and Torres Strait Islander people in service design and delivery.

Institutions to support best practice

A key issue in the non-market sector is that the 'system' for innovation and diffusion of ideas is often patchy and incomplete. One key element is the availability and evaluation of an up-to-date evidence base.

Governments already fund many organisations to evaluate publicly-funded services and promote diffusion of best practice — including the Australian Commission on Safety and Quality in Health Care, the Australian Education Research Organisation, CSIRO and the Australian National Audit Office. But in many cases their functions and roles are too limited. Governments should expand or strengthen the roles of these existing diffusion bodies with the aim of disseminating best practice, including the elimination of practices no longer underpinned by adequate evidence (reform directive 23).

Governments can also improve benchmarking of government service delivery, both between jurisdictions and between service providers. There are currently a number of benchmarking initiatives, including the Productivity Commission's Report on Government Services, MySchool, MyHospitals, the Australian Atlas of Healthcare Variations and a number of state and territory government initiatives.

The continued growth and availability of data will create new possibilities for benchmarking, to provide richer information about how far service providers are from the best performers in their sector (reform directive 24).

Addressing productivity in labour-intensive non-market services

In many parts of the 'care sector', cost and quality improvements have come from replacing, or augmenting, labour with physical capital (e.g. hospital clerks replaced by computers) or building the human capital of the workforce (e.g. improvements in the quality of medical care in the past century as doctors have accumulated more clinical knowledge).

Some parts of the non-market sector, including disability and aged care, are highly labour intensive, involving personalised services. It can be difficult to achieve big gains in labour productivity in these parts of the economy. Nonetheless, it is important to explore and maximise the scope for the use of technology where possible.

Emerging technologies show some promise for both improving the quality of services provided, and reducing their costs. Machines may be able to automatically perform manual tasks — like lifting or cleaning patients — currently performed by carers. Likewise, using diagnostic algorithms to quickly triage clients that will require more care could mean staff can be allocated to where their need is highest (i.e. operating in line with their scope of practice).

Even now there are proven technologies that could reduce the amount of labour required to perform certain service tasks (some even relatively high skilled). The WA primary Health Alliance commissioned Practitioner Online Referral Treatment Service (PORTS) has provided several years of psychological assessment, treatment, and consultation services across the state to adults referred by their GPs at a fraction of the cost of the standard MBS-rebated therapy.

There are some potential barriers to the adoption of labour-saving technology.

There are the general barriers to government and private sector diffusion (above) and second, there are barriers governments have erected specifically — and seemingly without fully understanding the potentially large impact of unintended outcomes — in these occupations. These include innovation-inhibiting restrictions, such as minimum staff-to-client ratios that discourage consideration (let alone adoption) of labour-saving technology in the care workforce, and poorly designed activity-based funding models, which reward *outputs* rather than *outcomes* in hospitals (finding 5.11, volume 5).

These types of interventions may often exist for good reason. In government-funded human services, clients, including those who are particularly vulnerable, need assistance choosing a service or service provider where information about the quality of those providers is difficult to find. And generally, consumers have fewer incentives to properly hold providers to account as they do not face the full cost of their service. However, the benefits of regulating for quality assurance need to be balanced against the costs from dampening incentives to consider and adopt productivity-enhancing innovation.

Shifting where possible towards outcomes-based quality regulations would give service providers more flexibility to meet their obligations in the most effective and efficient way possible.

Health reform should focus on broad strategies executed across the country

In *Shifting the Dial*, the Commission homed in on the healthcare system as a key component of the policy agenda.

This reflects both the need for productivity growth within the health sector, as a large and growing share of the economy and workforce, and the impact that good health outcomes can have on productivity, participation and broader life outcomes.

In that report, the Commission noted the rigidities of existing healthcare service models: the lack of integration between parts of the system, inadequate use of data, and poor diffusion of best practice. It used

the example of the ‘waiting room’ to symbolise the lack of innovation and patient focus in the system, noting that waiting times in doctors’ offices are likely to impose costs on Australians of approximately one billion dollars annually.

While there are the systemic problems that limit the quality and efficiency of the healthcare system, the overarching goal should be changes to encourage patient-centred and integrated care. There are three concrete reform strategies that reflect the broad problems above and the policy responses most likely to alleviate them:

Funding arrangements that align with high value care

Scaling up long-term co-operative funding mechanisms that align the incentives of primary and hospital providers would help avoid costly hospital admissions and support integrated care. As noted above, innovative funding pools have helped spur innovation in health care delivery. Capitation (or blended) models and other mechanisms supported by the Independent Hospital and Aged Care Pricing Authority hold promise in removing some barriers to innovation and productivity growth (reform directive 23).

There may also be scope to expand the role of private health insurance and potentially life insurance can also unlock new reimbursement models to target preventative approaches.

Encouraging innovation, experiments and diffusion of evidence-based healthcare and administration, while eliminating waste

For example, annual reviews of selected items on the Medicare Benefits Schedule, and updating the schedule so that only treatments that reflect medical best practice are funded would represent a concrete step towards a more evidence based, efficient and patient centred system (reform directive 23). Clinical variation can reflect differences in practitioners, rather than differences in patients, and can contribute to substantial waste in the system.

The adoption of new technologies and data sharing arrangements that improve coordination in the system

As an illustration, the Mental Health inquiry, released in 2020, and the Innovations in Care for Chronic Health Conditions study, released in 2021, showed the benefits to patients from service models based even on relatively simple digital channels, data analytics and data linkages. Transforming My Health Record into a comprehensive system for sharing and using health data across all parts of the health system could significantly improve service quality for patients (reform directive 15).

These three areas for policy focus have long been aired (and indeed were canvassed in *Shifting the Dial* — the predecessor 5 yearly productivity inquiry) and are best prosecuted through a system-wide co-operative reform across all jurisdictions. The Australian Government’s Primary Health Care 10 Year Plan and parts of the National Health Reform Agreement (signed by all Australian governments) reflect a degree of momentum.

Securing net-zero at least cost



Chart the least-cost path to net zero to minimise the drag on productivity from our mitigation efforts



Adapt to the changing climate by helping individuals, households and businesses make informed adaptation decisions



Improve the reliability of electricity markets to best respond to intermittence challenges associated with increasing uptake of renewables

Climate change looms large over Australia's productivity growth.

To minimise the economic costs of decarbonisation and meet Australia's commitment to a 2050 Net Zero Emissions Target it will be important to pursue least-cost mitigation and adaptation policies across all levels of government to the greatest extent possible.

Charting the least-cost path to net zero

Investment in renewable generation is projected to rapidly decarbonise our electricity system over the next decade, which will in turn drive the decarbonisation of transport and some parts of heavy industry and heavy transport. Remaining 'harder-to-abate' sectors, such as broadacre beef production in agriculture, might be offset through the uptake of carbon sequestration measures like reforestation or carbon capture and storage. Ongoing technological development and shifting consumer preferences (e.g. in the form of artificial meat products, where demand is rapidly increasing) could also reduce demand for, and emissions from, these sectors.

While technological developments are mainly driven by international policy settings, domestic policy settings (including trade and foreign investment policies) are important in driving the application of these technologies by individuals, households and businesses in Australia. Domestic policy settings that produce enduring and consistent abatement incentives will be crucial.

To date, Australian governments have sometimes relied on mitigation measures that impose economic costs much higher than would be delivered by an explicit economy-wide carbon price. Apart from this, Australia's mitigation measures may expose Australian exporters to additional costs in the form of carbon border tariffs (i.e. where trading partners do not recognise mitigation measures other than explicit carbon prices).

Future abatement policy should apply as broadly as possible to encourage efficient, technology-neutral, least-cost abatement, including by providing a more certain capital investment environment for Australia's carbon emitters.

The foundational elements of such a mechanism already exist. Recalibrating several existing schemes, while removing those that are unnecessarily costly, would create a sustainable climate policy architecture for Australia — that is, one that provides greater certainty, clarity, and enduring support for efficient abatement decisions over the decades ahead.

To this end, the Safeguard Mechanism (SM) can be the basis for an economy-wide mechanism for achieving national abatement targets (reform directive 26).

At present, the SM seeks to limit greenhouse gas emissions by targeting Australia's largest industrial emitters. It does this by assigning emissions budgets (baselines) to facilities that produce more than 100 000 tonnes of CO₂ equivalent (CO₂-e) emissions. Emissions exceeding these budgets must be offset through the purchase of Australian Carbon Credit Units (ACCUs) created through various emissions reduction activities elsewhere in the economy.

For the SM to become an effective broad abatement mechanism, a package of changes will be required to strengthen its integrity and expand its scope.

- Baselines will need to be reset in terms of absolute emissions, not emissions intensity (emissions per unit of output). The existing emissions intensity targets allow overall emissions to increase in line with production, which could jeopardise Australia's emissions targets. Absolute emissions baselines avoid this outcome.
- With absolute emissions baselines in place, emissions reductions below these absolute emissions baselines should be tradeable with other facilities covered by the SM. This would increase the pool of

commercially viable abatement opportunities and allows the transfer of economy-wide abatement burdens to the least-cost abatement options within the SM, reducing economy-wide abatement costs.

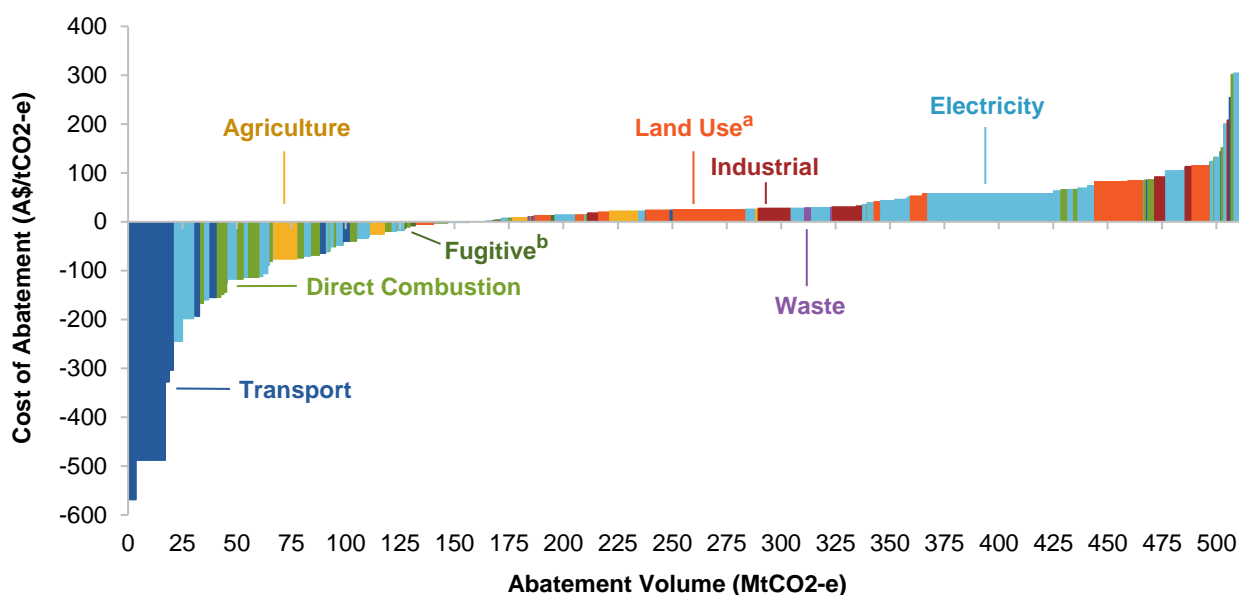
- Importantly, the SM currently only covers 27% of Australia's greenhouse gas emissions. It should be expanded (reform directive 26).

Under existing arrangements, the electricity sector — which accounts for more than 30% of Australia's CO₂-e emissions — is covered at a sectoral level but not at the facility level.

Apart from some large facilities such as airlines, the transport sector — which is responsible for almost 20% of emissions — is effectively exempt from any limits because most emissions come from hundreds of thousands of cars, trucks and buses that individually emit well below the threshold limit.

Expanding the SM to include the electricity sector at the facility level would increase the facility-level coverage of the SM to more than 55% of Australia's emissions. Incorporating the transport sector, by attributing vehicle emissions to liquid fuel wholesalers, would increase the coverage of the SM to about 70% of total Australian emissions. Extending the SM to facilities emitting more than 25 000 tonnes of CO₂-e would increase coverage by another 3% to about three quarters of total emissions, creating a near comprehensive, economy-wide abatement mechanism (figure 1.12).

Figure 1.12 – The Safeguard Mechanism should cover transport and electricity
Australia's projected marginal cost of abatement curve, 2030



a. 'Land use' includes land use change and forestry. b. Fugitive emissions are emissions associated with production of natural gas, oil and coal.

The degree to which the SM credibly and efficiently contributes to Australia's emissions reduction commitments will partly depend on the integrity of the offsets recognised by the scheme. Accordingly, Australian governments should take steps to ensure the integrity of ACCU offsets recognised by the Safeguard Mechanism by tightening standards to ensure the additionality, permanence, and transparency of ACCU generating projects (reform directive 27).

With an expanded SM in place, the public policy case for additional sectoral interventions becomes much weaker. Governments should ensure that any emissions abatement policies that are not genuinely complementary to the SM — that is, they neither efficiently address non-price barriers to abatement nor deliver

broader noncarbon abatement social benefits — are phased out (reform directive 28). For example, the ongoing need for additional policy support for renewable energy generation is likely not required, and similarly, the already questionable policy case for Australian Government tax concessions for electric vehicles — which have a high cost-per-tonne of abatement — would become even more so. Extant and prospective emissions policies should have their implicit carbon prices independently estimated and made public.

Adapting to the changing climate

Most adaptation-related decisions will be made by individuals, households, and businesses. Accordingly, adaptation policy to promote productivity should focus on three main tasks: helping individuals, households and businesses make informed adaptation decisions; avoiding policy settings that inadvertently and inefficiently distort private adaptation decisions; and avoiding policy decisions that lock in higher adaptation costs in the future (reform directive 25).

To these ends, governments should implement a mandatory climate risk disclosure system for residential and commercial property sales to help buyers understand the climate-related risks they face. Governments should avoid expansion of distortionary insurance sector interventions and set a medium-term time frame for the phase out of those that exist already. In addition, decisions about the location of new greenfield developments, and the reconstruction of population centres impacted by natural disasters should be subjected to rigorous cost-benefit analysis that draws on existing climate projections and considers the broad range of social, environmental, and economic costs and benefits of available options.

Improving the reliability of electricity markets

Intermittence associated with growing renewable energy uptake (which arises from variation in the availability of solar and wind generated electricity over the course of the day) poses reliability questions for Australia's electricity grid. Australian, State and Territory governments have recently announced plans to implement a capacity investment scheme to effectively pay suppliers of dispatchable electricity to make that supply available during periods of grid instability, helping to increase the likelihood that adequate supplies will be available when needed.

The implementation of the scheme would mark a move away from Australia's current approach to grid stability, which largely relies on movements in wholesale electricity prices to bring supply and demand into alignment.

To support productivity growth, the capacity investment scheme should be designed to respond to intermittence at least cost. Promoting a more technology-neutral approach, by allowing for both supply and demand side participation in the scheme, from both large entities and smaller entities (aggregated and coordinated through 'virtual power plant' platforms), would be an important step in this direction. The scheme should be reassessed in 5 years (via the inclusion of a sunset clause) to ensure the ongoing costs to businesses and households of maintaining the scheme are justified (reform directive 29).

1.4 The shared benefits of a productivity agenda

Across nations, there is a strong correlation between average incomes, life expectancy and life satisfaction, and reductions in absolute levels of poverty: not just because high incomes can fund better services and benefits; but also because they share a common proponent — a system that constantly promotes new ways to get more (and better) from less, to improve everyday life.

But what about the relative gains? Are the benefits evenly shared across the community?

These distributional questions cannot be dismissed. Past economic reforms — particularly where entire industries have been restructured — have often delivered benefits to many, but with losses concentrated in particular regions or demographic groups. This is more problematic when the losses hit those with already low incomes, wealth or educational qualifications.

Even at a smaller scale, economic change creates losses as well as gains. If consumers vote with their feet and a less productive business loses market share to a more productive one; or if it exits the industry altogether, individuals can suffer a loss of income and the jolt of forced transition, even though many consumers are better off. Governments play a key role supporting such adjustments and protecting people in need of help.

To this end, this report notes the role of government as an insurer against the risks people face throughout their lives through the provision of in-kind services like health and disability care, and transfer payments. Much of this insurance works well, but there are gaps and complex interactions with other privately-managed forms of insurance — with potentially adverse economic and social outcomes. Having government think more explicitly with an insurance mindset would be a significant, generational reform journey for Australia. This report makes some recommendations to start that reform process.

When overall risk protection is robust, policy makers can have more confidence about the disruptions that can come with policy change, or in a dynamic economy in general.

Potential distributional effects of proposed reform directions

A qualitative assessment, and the Commission's own modelling, suggests that the package of recommendations detailed here would increase opportunity and improve outcomes for some key disadvantaged groups.¹²

Many of the reform directions are directly focused on reducing barriers, improving incentives and spreading the benefits of productivity growth more broadly. Driving innovation and diffusion in the non-market sector is aimed at improving services — typically delivered to the general community or to particular groups in need of support. Even where there is scope for labour-saving technology in government-funded services, this is likely to be in the context of substantial growth in overall employment in areas like the caring sector. Some cost reduction would make services more affordable to government, while quality improvement is of benefit to service users.

Improving productivity in the school system is one of the most effective ways to boost equality of opportunity and improve economic and social mobility within and between generations. Thus, the proposed school reforms outlined in this report are likely to be progressive in their overall impact. The spread of technology in schools and evidence-based course materials to teachers can not only lift teaching quality, but make it less unequal. This has potential to lift outcomes among students at risk of falling behind, and those who suffer from variable teaching and school quality.

Tertiary education reforms primarily expand access to income contingent loans for a broader range of VET students, and additional university places under a reformed demand-driven system. Experience under the

¹² The Commission used a purpose-built model to illustrate the whole-of-economy effects of stylised representations for some proposed reforms. The model provides insights on:

- how productivity improvements can flow through the economy's structure, and what the changes are in underlying economic variables that are driving overall movements in aggregate outputs such as GDP, gross national income, prices, wages and use of labour measures relating to the impact of reforms on consumer wellbeing (in monetary terms, for example, equivalent variation) and inequality (for example, the Gini coefficient)
- the differential impacts of reforms across various groups in the economy, at both the individual level (by age, education and gender groups) and the business level (by industry).

demand driven funding arrangements in place between 2012 and 2018 suggests that these reforms would disproportionately benefit lower income students and other equity groups, whose share of the student population experienced a major expansion.

To make that package fiscally neutral, it is recommended that some students make a greater contribution to the cost of their study, through the income contingent loan system. This would effectively bring the student contribution more into line with the private benefits that flow to graduates over their working lives — paid at a time when their future income exceeds the repayment threshold.

Lifelong learning needs careful design. Those most likely to pursue it tend to have a strong learning foundation — including those who have completed higher qualifications. That does not negate the case for fostering a culture of lifelong learning. There are productivity gains and spillover benefits from encouraging up-skilling and re-skilling throughout working lives. But particular focus could be given to broadening the uptake of ongoing training, including to those disconnected from the workforce or at risk of being so.

The proposed migration reforms aim to focus the program more on higher income migrants, to maximise the spillover and productivity benefits. Moving away from the inefficiency of skilled occupation lists could mean that some domestic workers who earn more than the proposed income threshold could face more competition. Local workers below the threshold could face less competition. The impact on the wage distribution is likely small, but more likely to reduce it.

Workplace relations reforms seek to improve the scope for flexibility within the architecture of regulated protections. As Volume 2 notes, productivity growth is not about employees working longer hours, or having their pay reduced. In fact, past productivity growth has resulted in higher wages and fewer hours worked per capita. Low aggregate productivity growth makes the 4-day working week less feasible and therefore less likely. There could be significant gains to workers through better award compliance due to regtech solutions (and simpler rules).

A fit for purpose regulatory approach to platform work can deliver important protections in respect of safety, insurance and dispute resolution. At the same time, it can preserve the choice and flexibility that workers and consumers have gained from this innovation, benefiting a cross-section of the community.

Refocusing innovation policy on diffusion — the 98% — is an effort to more fully democratise innovation. The policy measures recommended here are a suite of small changes, all aimed at helping ideas to spread more efficiently across the economy. But the successful uptake of new ideas — including digital technology or the more sophisticated use of data — will inevitably be patchy. For example, Productivity Commission research into cloud computing suggests that some businesses will use technology to great effect, while others will fail to adopt, and still others will adopt but fail to achieve much benefit.

Governments can improve the process of efficient adoption by working with business networks and providing benchmarking data. But as long as there is nothing systematic about which businesses succeed with technology and which do not, the distributional effects should be seen as a necessary reality underpinning a dynamic economy. Ensuring there are no undue impediments to labour (and capital) mobility and that there is a robust safety net in place, are the best solutions.

High quality and efficiently provided regional and remote digital infrastructure helps overcome one source of systematic differential performance among businesses. It will also reduce geographic variation in the quality of delivery of telecommunications services for consumers.

Some recommendations involve changes to pricing, such as an evolutionary shift towards road user charging and ongoing reform of the pricing of public transport.

A key consideration is that road use is currently 'priced' via a general fuel excise charged per litre of fuel. The fact that electric vehicles pay no excise raises distributional issues.

The Commission's past work on public transport pricing highlights similar distributional complexities. Commuters on major city train networks traveling into the central business district tend to have above average incomes. They benefit from substantial public subsidies not enjoyed by those (including low-income households) with less public transport access. While a high public subsidies is inevitable in most public transport systems, there is considerable scope to design fares to achieve better efficiency and equity.

Perhaps the most challenging distributional issue concerns the climate transition. The distributional costs and benefits of both mitigation and adaptation span generations. Achieving the successful decarbonisation of the Australian economy will involve a structural change for affected industries and regions. The recommendations in this report focus on using the safeguard mechanism to foster a more orderly, lower cost and predictable transition. Focusing on achieving net-zero at least cost, by promoting higher productivity growth than otherwise, will also enhance the capacity to provide adjustment assistance, including to lessen inequitable distributional impacts.

Overall, while thoughtful, and often gradual, implementation is needed, there is no strong case on equity grounds against pro-productivity reforms of the type outlined in this report. Quite the contrary. A key message of this report is that we can broaden our thinking about productivity — both its effects (quality, novelty, things not measured by GDP) and where it can apply (services and the government sector).

The impact of productivity growth — properly and broadly understood — is progress in multiple domains, multiple facets of life and with benefits spreading across the community.

2. Roadmap

The Commission's policy agenda includes 71 recommendations that collectively would enable productivity growth across the Australian economy. These recommendations are packaged together into 29 reform directives. Generally, the reform directives capture what governments should do; the recommendations tell them how to do it. These reform directives are the enablers of productivity growth that fit under the five themes outlined in section 1.3.

To help direct government resources toward implementation, the Commission has developed a roadmap to reflect a possible prioritisation. The prioritised reform directives are laid out in section 2.2. The roadmap also contains a collection of implementation plans (section 2.3). These plans provide more detail on how governments would go about implementing the highest priority reform directives.

2.1 The prioritisation framework

Prioritisation of reform directives is not an exact science. To keep things simple, they are prioritised using two criteria.

The first criterion is **expected productivity impact**.

Reform directives were sorted into two broad groups according to their expected impact on productivity: higher impact and lower impact. In grouping reforms, factors considered included:

- the number of affected parties (e.g. people, employees and businesses)
- the costs and benefits for those parties
- whether the reform results in a one-off 'step-change' to productivity or has an on-going effect on productivity growth rates
- the extent of additionality from the reform (that is, the difference between what we would expect to happen with and without implementing the reform).

Where appropriate, prioritisation drew on modelling presented in volume 9. This was only feasible for a subset of reform directives. For others, partial assessment of costs and benefits were estimated and/or qualitative assessments were made drawing on information from inquiry participants and other Commission research.

Generally, reform directives that affect many parties, have relatively large additional effects, or result in an increase in the productivity growth rate were deemed higher impact. Reform directives that affected less parties (unless the effects were particularly concentrated on those parties), had little additionality, or resulted in a smaller step-change were deemed lower impact.

The second criterion is **complexity**.

Reform directives were sorted into two broad groups reflecting their expected complexity to implement: complex and simple. Again, a range of factors were used to assess reform directives, including:

- whether the reform requires coordination between government agencies (whether between or across levels of government)
- whether the reform requires more involved processes (like changes to legislation as opposed to regulatory changes)
- uncertainty — a reform whose outcomes we are less confident in, is more complex.¹³

Generally, reform directives that require greater coordination, require more involved processes, and have higher degrees of uncertainty are deemed complex. Reform directives that require limited coordination, require less involved processes (e.g. just regulatory change) and have more certain outcomes were deemed simple.

The goal of prioritisation is to help direct public resources toward the highest value measures first. Using the above criteria, the reforms were divided into three different priority levels:

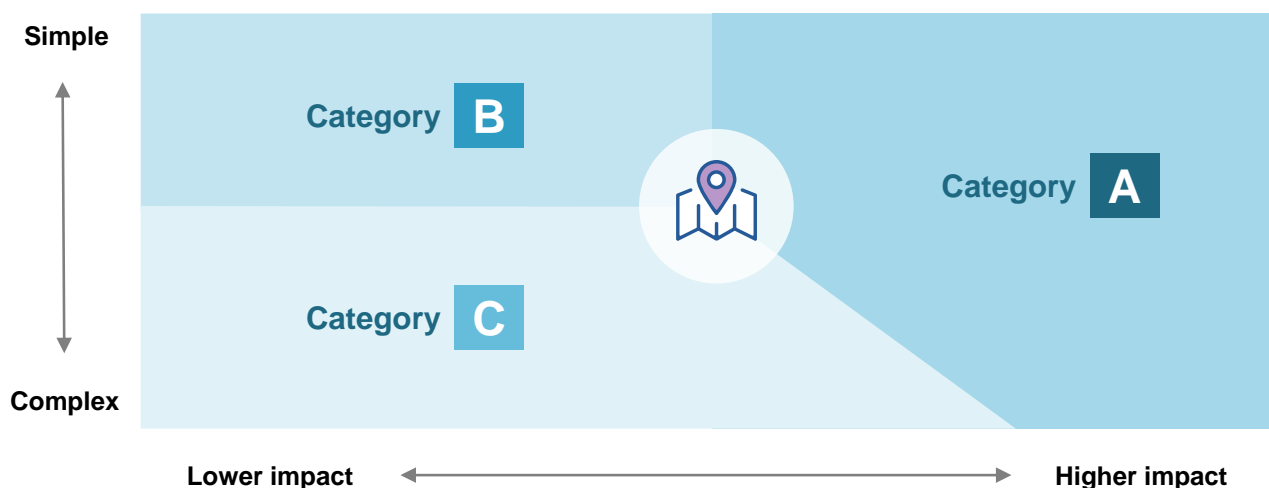
Category A: These reforms are higher impact and either simple or complex. While some of these recommendations are more complex than others, their higher impact means they should nonetheless all be top priorities in the pursuit of productivity growth. If government were to implement only one group of policies, this group should be their choice.

Category B: These reforms have a lower productivity impact but are simple. While individually lower impact than Category A recommendations, they would have a significant cumulative effect if implemented. And because they are simple, governments will face relatively few hurdles in their implementation.

Category C: These reforms are more complex to implement and their productivity impact could vary depending on the scale at which they are implemented. They include reform directives such as a more efficient tax system or long-term reform of Australia's insurance arrangements — both of which could involve small, short-term steps and/or more far-reaching, long-term change. This puts them in a distinct category.

Figure 2.1 provides a visual representation of the framework.

Figure 2.1 – Prioritisation framework



¹³ Uncertainty may reflect the state of existing evidence, the potential for unintended side-effects, or dependence on other things happening first (like technological change).

2.2 The prioritised reforms

Table 2.1 contains the prioritised reform directives. Reform directives are organised under the five key enablers of productivity growth in the policy agenda.

Timing the policy agenda

Prioritisation suggests that, given limited time and resources, governments should focus on implementing Category A reform directives, then B. But they should also consider initial steps towards implementation of Category C reforms.

In almost all cases Governments could make some progress implementing all of the reforms so that the potential productivity benefits could be realised as quickly as possible. Some reform directives, and their associated recommendations, would take longer than others to implement due to differing degrees of complexity.

Opportunities to coordinate implementation across governments

Reflecting the very broad nature of the reform directives in the outlined policy agenda, action by all Australian governments will be needed to position Australia for future productivity growth. Some of these reforms will require coordination across governments, others can be implemented unilaterally. Examples are provided below.

Australian Government reforms

The Australian Government can implement some reforms by itself. For example, elevating the Safeguard Mechanism to be Australia's primary emissions abatement mechanism would promote productivity and be progressively achieved with little delay. Charging the Office of Supply Chain Resilience to assess the economy-wide net benefits of all calls for assistance in supply chains, with transparent reporting of any interventions, could similarly be implemented promptly by the Australian Government for immediate benefits. The use of government-held data to help businesses benchmark their performance and provide insights that promote diffusion of best practice is an approach already adopted by some Australian Government agencies. It could be extended more broadly for the benefit of both the relevant businesses and the decision-making capacity of the states and territories in which they are located. Reforms to migration policy is entirely an Australian Government responsibility, though consultation with state and territory governments would be an important element.

State and territory government reforms

Other reforms are in policy areas where the states and territories have primary responsibility for program delivery or funding. These include: revision of planning regulations to ensure residential, commercial and industrial zoning is not unduly restrictive, various state taxes, public transport pricing, and trialing innovative approaches to schooling.

In these instances, jurisdictions should consider a staged approach to implementation that reflects their starting points for reforms and priorities within their jurisdiction. For example, some states have more developed planning and zoning reforms, have already commenced the shift away from stamp duty on the sale of dwellings, and have better processes for public transport pricing. All jurisdictions should share the lessons from their reforms.

Reforms for multiple levels of government

Actions by multiple levels of government will sometimes be needed for some reforms, or at least to yield all their benefits. In some instances, a nationally negotiated approach to implementation would lead to the most

beneficial outcome for some state- and territory-based reforms. For example, we have recommended that teaching resources be developed centrally to support schools in the implementation of the national curriculum.

Similarly, the Commission has recommended further progression in the sharing of government-held data. Some of this data is held by the Australian Government and expanding access to state and territory governments would improve the efficiency and delivery of their services.

The introduction of income-contingent loans for VET students would require action by the Australian Government as administration of income contingent loans is undertaken through the Australian Taxation Office. There would also necessarily be associated changes for each state and territory government to consider in existing VET funding and in enabling VET providers on the ground to cater for any expanded interest in VET courses that could be expected to come with the augmented availability of income contingent loans.




Coordinated action is already recognized as an essential aspect of healthcare reform, with widespread changes needed to bring together the funding of, and interfaces between, primary and hospital care. This is likely to shift the responsibilities of governments.



There are some recommended reforms for which implementation would need to be preceded by detailed negotiation between the Australian, state and territory governments. This is typically the case in areas where states and territories have a substantial role in implementation or where there is considerable variation in existing arrangements between states and territories. Healthcare reform also fits in this category.

There has already been considerable progress in mutual recognition of occupational licenses between states and territories. The Commission has recommended that this process continue to allow default recognition of occupational licenses from partner countries and coordination of these with skilled migration requirements. As was the case in achieving mutual recognition of licenses between states and territories, further negotiation and coordination between jurisdictions would be necessary to expand mutual recognition to occupational licensing in other countries. The Australian Government could play a facilitating role in such negotiations.

Reform to road user pricing and funding will require the phasing out of fuel excise (collected by the Australian Government) and the introduction of distance-based pricing and ultimately congestion charges. These reforms will need close coordination and mechanisms to diffuse the lessons of various road pricing trials and road funds between jurisdictions. This would best be implemented via an intergovernmental agreement to define roles, responsibilities, funding models and timing. Changes to heavy vehicle pricing could occur outside these processes.

Table 2.1 – Prioritised reform directives

	Category A	Category B	Category C
Building an adaptable workforce 	<ul style="list-style-type: none"> • Improve workplace outcomes and ensure a fair sharing of the gains from productivity improvements (RD. 11) • Occupation licensing regimes that are fit-for-purpose (RD. 10) • Improve occupational licensing arrangements to reduce barriers faced by skilled migrants (RD. 9) • A better targeted skilled migration system (RD. 8) • Grow access to tertiary education (RD. 3) • Improve schools' capacity to lay the educational foundations for the future workforce (RD. 1) 	<ul style="list-style-type: none"> • Support a culture of lifelong learning for an agile workforce (RD. 4) • Increase tertiary education teaching quality to underpin a well-trained workforce (RD. 5) • Better and more flexible matching between students and work opportunities (RD. 6) • VET reform that supports an adaptive workforce (RD. 7) 	<ul style="list-style-type: none"> • Enable innovative schooling approaches for improved learning outcomes (RD. 2) • Regulation that works with new workforce models (RD. 12)
Harnessing data, digital technology and diffusion 	<ul style="list-style-type: none"> • Maximise the value of government-collected or funded data holdings (RD. 15) 	<ul style="list-style-type: none"> • Faster and more reliable internet access to underpin productivity growth in regional Australia (RD. 13) • Actively promote the diffusion of new knowledge and best practice across the business community (RD. 16) • Cyber security compliance arrangements to underpin a productive digital economy (RD. 14) 	
Creating a more dynamic economy 	<ul style="list-style-type: none"> • Create an investment environment that allows the right activities to occur in the right places (RD. 18) • Pursue economic resilience through open trade and foreign investment (RD. 21) 	<ul style="list-style-type: none"> • Address lack of competitive market incentives in highly regulated sectors (RD. 19) 	<ul style="list-style-type: none"> • Create a risk protection system that encourages entrepreneurship and a long-term view (RD. 17) • Transition tax system incentives to invigorate productivity growth (RD. 20)

	Category A	Category B	Category C
Lifting productivity in the non-market sector 	<ul style="list-style-type: none"> • Implement best practice resource allocation when funding public infrastructure (RD. 22) • Using health funding approaches to diffuse innovations (RD. 23) 		<ul style="list-style-type: none"> • Promote innovation and diffusion within government agencies and regulators (RD. 24)
Securing net zero and adapting to a changing climate at least cost 	<ul style="list-style-type: none"> • Create policy settings that enable and respect private adaptation decisions (RD. 25) • Elevate the Safeguard Mechanism to be Australia's primary emissions abatement mechanism (RD. 26) • Increase the integrity of carbon offsets (RD. 27) • Remove emission reduction measures that are not complementary to the Safeguard Mechanism (RD. 28) • Pursue a least-cost approach to securing electricity supply (RD. 29) 		

2.3 Implementation plans

Implementation plans for all Category A reform directives are shown below. The aim of these plans is to provide key information at-a-glance about the 'what', 'how' and 'who' of each reform directive. The 'why' of the reform directives are contained in the relevant volume along with additional details. The structure of each 1-pager includes:

- a statement of the nature of the reform directive
- the productivity profile of the reform directive — including the expected productivity impact (higher or lower) and when those impacts are likely to eventuate (short, medium or long term)
- actions that governments need to undertake to implement the recommendations under the reform directive (including which level, and in some cases which agency and/or level of government)
- a description of the level of complexity (higher or lower) involved in implementing the reform directive (such as the need to alter legislation or to engage in extensive consultation).

The reform directives and their associated recommendations are listed in table 2.2.

Table 2.2 – Mapping reform directives to recommendations

Reform directives		Recommendations	Implementation plan
Building an adaptable workforce			
1	Improve schools' capacity to lay the educational foundations for the future workforce (Volume 8)	8.1 – 8.2	✓
2	Enable innovative schooling approaches for improved learning outcomes (Volume 8)	8.3	
3	Grow access to tertiary education (Volume 8)	8.4 – 8.7	✓
4	Support a culture of lifelong learning for an agile workforce (Volume 8)	8.8	
5	Increase tertiary education teaching quality to underpin a well-trained workforce (Volume 8)	8.9 – 8.12	
6	Better and more flexible matching between students and work opportunities (Volume 8)	8.13 – 8.14	
7	VET reform that supports an adaptive workforce (Volume 8)	8.15 – 8.16	
8	A better targeted skilled migration system (Volume 7)	7.1 – 7.6	✓
9	Improve occupational licensing arrangements to reduce barriers faced by skilled migrants (Volume 7)	7.7 – 7.8	✓
10	Occupational licensing regimes that are fit-for-purpose (Volume 7)	7.9 – 7.12	✓
11	Improve workplace outcomes and ensure a fair sharing of the gains from productivity improvements (Volume 7)	7.13 – 7.17	✓
12	Regulation that works with new workforce models (Volume 7)	7.18 – 7.19	
Harnessing data, digital technology and diffusion			
13	Faster and more reliable internet access to underpin productivity growth in regional Australia (Volume 4)	4.1	
14	Cyber security compliance arrangements to underpin a productive digital economy (Volume 4)	4.5	
15	Maximise the value of government-collected or funded data holdings (Volume 4)	4.2 – 4.4	✓
16	Actively promote the diffusion of new knowledge and best practice across the business community (Volume 5)	5.1 – 5.5, 5.13	

Reform directives		Recommendations	Implementation plan
Creating a more dynamic economy			
17	Create a risk protection system that encourages entrepreneurship and a long-term view (Volume 3)	3.1	
18	Create an investment environment that allows the right activities to occur in the right places (Volume 3)	3.2, 3.5 – 3.6	✓
19	Address lack of competitive market incentives in highly regulated sectors (Volume 3)	3.3	
20	Transition tax system incentives to invigorate productivity growth (Volume 3)	3.4	
21	Pursue economic resilience through open trade and foreign investment (Volume 3)	3.7 – 3.10	✓
Lifting productivity in the non-market sector			
22	Implement best practice resource allocation when funding public infrastructure (Volume 5)	5.7 – 5.8	✓
23	Using health funding approaches to diffuse innovations (Volume 5)	5.6, 5.11	✓
24	Promote innovation and diffusion within government agencies and regulators (Volume 5)	5.9 – 5.10, 5.12	
Securing net zero and adapting to a changing climate at least cost			
25	Create policy settings that enable and respect private adaptation decisions (Volume 6)	6.1 – 6.4	✓
26	Elevate the Safeguard Mechanism to be Australia's primary emissions abatement mechanism (Volume 6)	6.5	✓
27	Increase the integrity of carbon offsets (Volume 6)	6.6	✓
28	Remove emission reduction measures that are not complementary to the Safeguard Mechanism (Volume 6)	6.7	✓
29	Pursue a least-cost approach to securing electricity supply (Volume 6)	6.8	✓

REFORM DIRECTIVE 1

Improve schools' capacity to lay the educational foundations for the future workforce



Australian, State and Territory Governments should work with schools to:

- extend, improve and embed the use of education technology
- facilitate greater classroom access for the Australian Education Research Organisation (AERO) to support more principal and teacher involvement in education research and ensure research is salient and readily applicable by practitioners
- support diffusion of evidence-based teaching practices to the classroom through greater observation and feedback mechanisms, and curriculum implementation support.

The expected productivity impact of this recommendation is high, and following implementation, **the benefits would likely be realised in the longer term**. Spreading best teaching practice and effective education technologies has implications for the productivity of both the school system (that is, getting more out of the resources currently being used), and the broader economy as students who benefit from such reforms could ultimately become more active and productive members of society. While some in-school productivity improvements could occur sooner, the more important benefit to student outcomes would only be realised in the longer term.

Specific actions

- Enable teaching practices to evolve with the changing classroom environment by prioritising the development and implementation of digital tools to support teaching and learning, while balancing flexibility for individual jurisdictions' needs – this could include developing an online assessment tool and giving AERO responsibility for researching and vetting effective digital technologies.
- Replace manual school administrative processes with technology-based or automated solutions – this could include evaluating technology-based solutions for administrative processes currently in place and developing mechanisms to diffuse these to other schools.
- Continuous commitment to ongoing professional development modules that support teachers in using data analytics to drive student improvement.
- Enable greater observation of, and feedback on, classroom teaching practices, by creating or strengthening the existing roles for highly accomplished and lead teachers (HALT) to share their in-depth knowledge and skills with their colleagues.
- Increase curriculum implementation support for teachers, by curating high-quality, evidence-based and government-endorsed curriculum resources (curriculum plans, whole-subject sequences, lesson plans and classroom tools), to be made available for teachers and school leaders from a single source.

This recommendation has higher complexity. Successful implementation of these recommendations will require both individual and coordinated action by Australian, state and territory governments and engagement at the individual school level to ensure local needs and objectives are taken into account.

REFORM DIRECTIVE 3

Grow access to tertiary education



The Australian Government should adopt an improved demand-driven model for providing Commonwealth supported places to domestic undergraduate university students, subject to measures that contain fiscal costs and ensure all students are adequately supported.

This recommendation is expected to have a **high impact on productivity**, and following implementation, the **benefits would be realised in the medium term**. Greater access to higher education will benefit students and productivity. The additional students enrolled as a result of this reform will experience considerable employment benefits, and this is particularly so in the context of an anticipated spike in school leavers and continuing growth in industry need for skilled workers. Compared with the current approach to public funding of universities, demand-driven funding would also improve incentives to offer quality education and remove a distorted incentive that prevents course offerings from aligning with skill needs.

Specific actions

- The Australian Government should consult on amendments to the *Higher Education Support Act 2003* (Cth) with a view to implementing a demand-driven model for funding domestic undergraduate places.
- Several complementary measures recommended in this report will be needed to support a sustainable and effective demand-driven funding model.
 - The costs of expanding access should be contained by increasing the proportion of total course costs that are paid by students (generally through income-contingent loans).
 - Total course funding, comprising the government and student contributions, will need to be based on the cost of delivery with estimates of this cost refined over time.
 - Mechanisms to encourage better quality and improved support for completion will need to be implemented as the number and diversity of students increases over time.
 - Income-contingent loan access should be gradually expanded to more vocational education and training (VET) courses, starting at the Diploma level, to put financing arrangements between the sectors on a more equal footing so that the expansion of higher education does not come at the expense of VET.
- Where placements are required for graduates to work in their field of study, such as nursing, Australian, State and Territory Governments should ensure an adequate number of placements are available and funded to meet skill needs.
- There could be phased implementation of a demand-driven system if it appears that universities would expand places rapidly before they can adjust resourcing to cater effectively to larger cohorts. This may not be necessary if demand for university places is reduced by strong labour market conditions, as has been the case recently.

This recommendation has lower complexity. The existing Universities Accord process could be leveraged to consult on the implementation of this recommendation. Implementing a new funding model would then require the Australian Government to amend the *Higher Education Support Act 2003* (Cth).

REFORM DIRECTIVE 8

A better targeted skilled migration system



The Australian Government should amend the design of temporary and permanent skilled migration visa programs to improve the composition of the migrant intake.

The **expected productivity impact of this recommendation is higher**, and following implementation, the **benefits will likely be realised in the medium term**. While skilled migration already provides a positive productivity dividend, the Commission's suite of reforms would improve productivity and wellbeing more generally, through better job matching and lifetime fiscal outcomes of migration.

Specific actions

The Australian Government should:

- abolish the Business Innovation & Investment visa program. Temporary migration should be facilitated for people with genuine plans to start a business in Australia, while pathways to permanent residency should involve the revised Skilled Independent, based on a points test that better accounts for income levels and age
- remove current list-based restrictions for employer-sponsored temporary and permanent skilled visas and set an income threshold well above the Temporary Skilled Migration Income Threshold (TSMIT) rate. The income threshold that applies to temporary migration should be lower than for permanent. The income threshold for the employer-sponsored permanent visa should increase with age, though at some older age, people would no longer be eligible for this visa
- for the Skilled Independent visa (subclass 189), remove current list-based restrictions. Additional points should be awarded for ongoing employment in Australia according to income level, with different income benchmarks for different age groups. The design of the points system should be updated regularly based on research, such that points are awarded for factors associated with fiscal and employment benefits.
- introduce a pilot of a special permanent visa subclass for occupations in human services sectors that are largely funded by government (such as aged and disability care), but only if these are facing likely enduring and significant labour shortages that are weakly responsive to wage increases. The visa subclass should be subject to the current TSMIT and require that the applicant remain employed in the relevant sector for 4 years. The pilot should be evaluated for its impacts and should be abandoned if labour shortages can be better met through wage increases and more sustainable alternative funding
- amend settings for temporary skilled migration to increase their duration to 6 years
- increase the duration of stay for Graduate visa holders with Bachelor and higher-level degrees, such that an extension to 5 years is guaranteed, subject to proof of ongoing employment above a set wage threshold. For international students, obtaining a qualification from an Australian tertiary education provider should be associated with an expectation of being able to test their skills in the Australian labour market, but not an expectation that their qualification alone will qualify them for permanent residency (which will increasingly depend on labour market outcomes, including income levels, and age)
- amend settings for employer sponsored temporary and permanent visas to better allow workers to switch employer sponsors including by permitting a short period of unemployment to look for a new sponsor.

This recommendation has higher complexity. The Australian Government would be primarily responsible for these reforms. Given the interactions between visas and the shift away from skill lists towards better recognition of income and age, the reforms are far-reaching. In addition to extensive consultation, implementation will require processes to manage system integrity risks, determination of age and income cut-off points in skilled visas, and further development of the points-based system, among other factors.

REFORM DIRECTIVE 9

Improve occupational licensing arrangements to reduce barriers faced by skilled migrants



The Australian Governments and regulators should pursue further international mutual recognition of occupational licences, including by improving links between Australian licensing bodies and those in countries with comparable standards and systems. The aim is not to allow *all* international qualifications or licences to be recognised by default, but to expand recognition of qualifications among trusted partner countries and to make existing processes more efficient.

The **expected productivity impact of this recommendation is higher**, and following implementation, the **benefits will likely be realised in the medium term**. The reform would allow highly-skilled migrants to have their qualifications recognised (and in some cases to be licensed) sooner. This would reduce the amount of time that skilled migrants spend in Australia unable to work in their chosen occupation, thereby improving the labour market matching of the migration system. In particular it would likely assist in filling shortages in health and trades, where a lack of access to services present various costs (such as health and safety risks). For the migrant, it will reduce the risks of underemployment and unemployment, and potentially improve career paths — all of which have positive implications for their lifetime fiscal impact.

Specific actions

- For licensing bodies that operate at the national level (such as in health):
 - facilitate a process of collaboration with regulators and/or other institutions (e.g. medical colleges) from selected countries, with the aim of establishing a default recognition
 - instigate changes to licensing administration in cases where the process for recognising international qualifications could be made more efficient (e.g. requiring the migrant to undertake further study to fill any knowledge gaps rather than to re-take their qualification).
- Take an occupation-by-occupation approach to deciding whether the skills assessment undertaken for migration purposes (generally by VETASSESS) is warranted given that migrants usually have proof of qualifications and the assessment is often undertaken by non-experts. In many cases, it would likely be possible to rely on the assessment of the regulator / licensing body for the purposes of migration.

This recommendation has higher complexity. These reforms will typically require focus on individual licenses and occupations. They will often involve multiple regulators and levels of government, as well as regulators and governments overseas. Public health and safety concerns should remain the primary objective with regard to licensing, and reforms should be evidence-based.

REFORM DIRECTIVE 10

Fit for purpose occupational licensing regimes



Australian governments should work with regulators to ensure occupational licensing policy is fit-for-purpose and guided by evidence. Licensing for safety purposes has become more stringent in recent years, but such decisions would be better informed by evidence about their impact on lowering risks and costs. There should be greater consideration of complementary and alternative forms of regulation. At the same time, well-known issues regarding scope of practice between licensed occupations remain unresolved.

The **expected productivity impact of this recommendation is higher**, and following implementation, the **benefits will likely be realised in the medium term**. Reforms will reduce barriers to competition without compromising safety and service quality — and in some areas improve quality, health and safety outcomes by increasing access to services. In some cases, there are already qualified professionals ready to take on new responsibilities. In other cases, reform would spur increased entry into the occupation over time.

Adopting better processes for data collection and licensing assessment would improve identification of inefficient licensing arrangements and better enable geographic mobility in the future. The introduction of digital licensing and general improvements in market information for consumers also gives governments an opportunity to improve data sharing and analytics and review the rationale for various licensing arrangements.

Specific actions

- Australian governments should work with the relevant regulators to re-examine boundary issues relating to occupational licenses, particularly where independent reviews have already highlighted potential gains.
- Australian governments should undertake trials for expanded scope of practice in health services. Where service funding is determined by a Commonwealth-State intergovernmental agreement, the Australian Government should allow the funding arrangement to encourage evidence-based trials (e.g. ensuring trials of novel arrangements in healthcare are appropriately funded through Medicare and/or PBS).
- In developing digital licensing platforms, Australian governments should prioritise choices in technology and design that enable data collection that can inform effective licensing policy and future information sharing between jurisdictions.
- Australian governments should conduct regular, independent reviews of occupational licensing systems in their jurisdictions to improve both efficiency and safety outcomes, efficient scope of practice as well as the optimal mix of licensing and other forms of safety regulation.

This recommendation has higher complexity. Licensing reform will require clarity on the roles and responsibilities between different levels of government and regulators, which will vary depending on the regulatory regime. However, reform efforts should not occur on an ad-hoc basis and would benefit from the support of a broader national reform agenda that can provide pooled resources and better incentives for substantial regulatory experimentation.

State governments vary in their progress towards creating digital licensing platforms and databases, which may lead to compatibility problems as integration across jurisdictions occurs. States and territories will need to prioritise technology neutral solutions, standardised systems, and accessible data sharing arrangements.

There is scope to build on recent trials of changes to scope of practice in healthcare. However, governments need to engage with regulators and industry bodies to ensure safe and proven changes to scope of practice can progress without undue delay, particularly given current shortages and the need for better access to health services.

REFORM DIRECTIVE 11

Improve workplace outcomes and ensure a fair sharing of the gains from productivity improvements



The Australian Government should amend the *Fair Work Act 2009* (Cth) to facilitate more efficient modern awards and enterprise bargaining systems to support productivity and to secure mutual benefits for employers, employees and consumers.

The **expected productivity impact of this recommendation is higher**, and following implementation, the **benefits will likely be realised in the medium term**. The workplace relations system has a fundamental role in driving productivity and wages. Making awards more efficient and flexible would help the workplaces that rely on them and provide benefits through their role as a floor on conditions in enterprise agreements. Processes for varying awards can be improved and awards themselves could be made easier to use and understand. Reducing the barriers to the uptake of bargaining and the enhancing the capacity for employers and employees to find flexible ways of working can encourage productivity and wage growth. Recent amendments to the Fair Work Act have sought to address some of the complexities of bargaining, and have introduced more scope for multi-enterprise agreements. A comprehensive review will be required to assess the effects of the amendments on productivity, prices, and competition.

Specific actions

- Amend section 134 of the *Fair Work Act 2009* (Cth) to clarify the modern award objective, focusing on the needs of the employed; the need to increase employment; the needs of employers; the need to achieve gender equality in the workforce; the needs of consumers; the need to ensure that modern awards are easy to understand; and the likely impact of any exercise of modern award powers on efficiency and productivity.
- Improve the Fair Work Commission's (FWC) ability to vary awards to better achieve the modern awards objective, removing some of the rigidities of the current system and targeting those awards with the greatest potential for improvement.
- In making variations to modern awards, the FWC should consider options that allow employers some choice about how they can meet award requirements, subject to meeting the modern awards objective and undertaking appropriate consultation with employees.
- Limit the ability for enterprise agreements to restrict productivity enhancing changes to technology or workplace practices that are best left to managerial prerogative. This includes amending the Fair Work Act so that the model consultation term would be the only legally enforceable consultation term in enterprise agreements. A mechanism that enables the FWC to specifically authorise an alternative enforceable term should be explored.
- Further loosen the relationship of enterprise agreements with awards by allowing the FWC to approve agreements that do not pass the Better Off Overall Test if a range of public and private interest tests are met. Any changes should have adequate protections in place to avoid undesirable outcomes as exemplified by the *Construction, Forestry, Mining and Energy Union v One Key Workforce Pty Ltd*.

This recommendation has higher complexity. Amendments to the Fair Work Act will require careful drafting and considerable consultation with union and employer groups, business, employees and the community as a whole. The FWC would be given considerable additional discretion under the proposed recommendations, and it will take some time for the development of case law.

REFORM DIRECTIVE 15

Maximise the value of government collected or funded data holdings



The Australian Government, in consultation with the private sector and State and Territory Governments, should improve access to data collected and held by providers of government-funded services by expanding data sharing between the public and private sectors and implementing a comprehensive health data sharing system. To avoid eroding trust in the system, there must be a focus on appropriate controls and safeguards.

The **expected productivity impact of this recommendation is high**, and **the benefits would likely be realised in the medium term**. Expanded access to data will make business and government analytics cheaper and better, with improved products and services for consumers, and more informed public policy and research. In particular, increased data sharing in the health system, by building on existing initiatives such as My Health Record and drawing on lessons from the successful implementation by the Australian Tax Office of Single Touch Payroll, can significantly improve service quality for patients. Wider use of the Digital Identity is likely to lead to more efficient and secure delivery of a range of services that require ID verification.

Specific actions

- Extend the *Data Availability and Transparency (DAT) Act 2022* (Cth) to allow government data to be shared with the private sector. Implementation should be staged, starting with accredited private organisations that use data for policy and research purposes to achieve social objectives, then accredited businesses for commercial use. Security and privacy safeguards should be maintained.
- Use My Health Record (MHR) as the foundation for a comprehensive system for sharing and using health data by implementing several changes:
 - Opting out of the system: the Australian Government should clarify that patients have the right to opt out of the system and if they have not opted out then practitioners should be required to upload relevant health records to MHR. The definition of ‘relevant’ records should be determined in consultation with patients and practitioners.
 - Health software compatibility and standards: The Australian Government should publish a register of software that is integrated with MHR and allows automatic upload of data by healthcare practitioners. Healthcare providers should be encouraged to use this software; for example, by extending the Practice Incentive Program eHealth Incentive beyond general practitioners. In the medium-term, conformance standards should be set, requiring all health software providers to be compatible with MHR by using consistent language and terminology, and a secure gateway so practitioners can connect with each other and upload and download relevant records.
 - De-identification to support system planning: develop a framework to use MHR data for health system-wide planning and policy development — requiring consultation with practitioners and the community on using data, while maintaining trust in MHR and benefiting the broader system.
- The Australian Government should expand access to the Digital Identity (and work towards adopting a single national digital identity) across State and Territory Government services requiring ID (e.g. applying for a drivers licence) and private sector services that require ID (e.g. opening a bank or utility account), with appropriate access controls and safeguards.

This recommendation has high complexity. Legislative changes to the DAT Act would require substantial stakeholder engagement and staged implementation to ensure that trust is maintained, and appropriate safeguards are in place. Improving MHR requires change across many healthcare practitioners and, in some parts of the system, software providers, and there would be challenges due to legacy systems and lack of digital fluency among some practitioners. The Digital Identity would also require careful implementation to ensure it could be used for broader applications in a controlled and secure environment.

REFORM DIRECTIVE 18**Create an investment environment that allows the right activities to occur in the right places**

State and territory governments could make better use of urban land by revising planning regulations to ensure residential, commercial and industrial zoning is not unduly restrictive, and by promoting more flexible and outcome-oriented planning approaches.

Funding models for road infrastructure can be reformed by moving away from fuel excise to distance-based charging, congestion pricing, and general revenue (and potentially, in the longer-run, to pricing that could more generally vary by location or time of use). Road funds would be used to allocate funding to where the returns from investment were highest.

The **expected productivity impact of these recommendations is high** and would **likely be realised in the medium term**. First, improved planning and zoning can help business entry, aiding competition, dynamism and investment. At a higher level, a more flexible and outcome-oriented approach could improve the efficiency of land use as a resource. The efficient use of urban land is increasingly important given home-based work, online retailing, and the need for climate change adaptation.

Road-user pricing would be a significant step towards more efficient investment in public infrastructure. Existing models of road funding and investment do not provide signals about where roads should be built and to what capacity, nor do they limit congestion. Given that excise revenue will fall with electrification, there is a need to provide an efficient and equitable source of revenue to fund road maintenance and provision.

Specific actions

- Reform planning and zoning by:
 - implementing standardised business and industrial land use zones across local government areas
 - aggregating existing zones, where possible, to broaden the range of permissible activities
 - requiring urban planning decision-making processes to consistently consider the community-wide economic benefits from the introduction of competition to incumbent businesses, recognising that dynamic local economies allow businesses to exit as well as enter.
- Progress road-user pricing by:
 - working towards an intergovernmental agreement on road user charging for all vehicle types, focusing on distance priced charging, including any road damage premiums, and subsequently, incorporating congestion charges for crowded roads
 - considering the inclusion of compulsory third party insurance costs in distance-based charges and menu options for motorists to choose between higher distance-based charges and lower fixed charges.

This recommendation has higher complexity. Changes to planning and zoning can have complex effects on urban density, transport flows, public amenities and some markets. Such reforms would be the primary responsibility of State and Territory Governments, with the involvement of Local Governments. Progress on road-user charging is complicated by unresolved constitutional challenges, but will, in any case, require all governments to coordinate their actions. An intergovernmental agreement would help set out roles, clarify how revenue will be used and allocated, and ensure appropriate funding for local, state and national roads. In practical terms, distance-based pricing could be established relatively quickly.

REFORM DIRECTIVE 21

Pursue economic resilience and the benefits of open trade and foreign investment



The Australian Government should pursue economic resilience by harnessing open trade and investment, recognising the potential expansion of trade in services. Public interventions should focus only on vulnerable and critical supply chains that present major risks for Australia and cannot be addressed in other ways. The Australian Government should also ensure its Foreign Investment Review Framework considers its potential chilling effects on investment.

The **expected productivity impact of this recommendation is high**, with the **benefits likely to be realised in the medium term**. Trade in goods and services and foreign direct investment (FDI) are key sources of competitive pressure for domestic businesses, reduce prices for end-users, and are important mechanisms for diffusing knowledge and innovation.

Supply chain shocks and global upheaval do not diminish the case for openness. As a small advanced economy, increased global linkages are likely to be the best way for Australia to build resilience to deal with global uncertainties. While businesses and governments are reconsidering how to manage the risks associated with supply chain disruptions, there is the danger that calls for 'sovereign capability' can encourage rent seeking, which would entail significant economic costs.

Growth of trade in services stems from the advancement and proliferation of technology, as well as rising incomes among Australia's trading partners. Australia is well-placed to benefit from import competition and export opportunities in a number of services.

Specific actions

- Take immediate action to unilaterally reduce Australia's statutory import tariff levels to zero. (Some administrative architecture may remain to deal with non-tariff regulation at the border.)
- Progressively remove Australia's anti-dumping and countervailing measures and subject any new measures to an economy-wide cost benefit test.
- Increasingly accept product standards adopted in other leading economies as 'deemed to comply', provided that a transparent review could be undertaken in cases where the Australian Government identified a significant safety risk.
- Bring application fees for proposed FDI into agricultural land assets closer into line with other forms of investment, including by:
 - applying indexation to the threshold investment value, as is done with most commercial investments
 - adjusting the fee tiers so as to reduce the marginal rate fee as a proportion of investment amount.
- Address potential barriers to trade in services both 'at the border' and 'behind the border'. Some relevant policy and regulatory levers include trade policy, tax settings, occupational licensing, foreign direct investment, improved recognition of overseas qualifications and temporary migration settings.

This recommendation has high complexity. While eliminating nuisance tariffs is relatively straightforward, other changes involve greater complexities. Addressing 'at the border' and 'behind the border' barriers to trade in services will involve a range of policy levers, such as tax settings, occupational licensing and changes to the regulation of foreign direct investment. Trade protections such as anti-dumping measures benefit a relatively narrow set of businesses; their removal may warrant broader consideration of the role of government in facilitating and reacting to structural adjustment. The acceptance of international standards is often agreed to in principle, but progress needs to be encouraged.

REFORM DIRECTIVE 22**Implement best practice resource allocation when funding public infrastructure**

The Australian, State and Territory Governments should improve institutional and governance arrangements that address the systemic absence or disregard of rigorous cost-benefit analysis (CBA). This is particularly the case for major infrastructure projects and, in the longer term, for other government expenditures, such as defence and social services. Independent CBAs should be published and provided to government decision makers before an investment decision is made, and there should be transparency and consistency in the assumptions and inputs used, as well as accountability for how decision makers use (or do not use) results in project selection.

The expected productivity impact of this recommendation is high. Governments spend tens of billions on public infrastructure each year. These projects routinely suffer from optimism bias, with large cost blowouts and long completion delays. Even small improvements from better use of CBA — such as a slight shift in government decision making or a small percentage reduction in cost overruns — would amount to substantial efficiency gains in dollar terms. Following the recommendation's implementation, the **benefits will likely be realised in the short term**, as new CBA arrangements and uses could be applied immediately to subsequent infrastructure investments and project selection.

Specific actions

- Governments should ensure that for major infrastructure projects, robust CBAs are undertaken and assessments are published and provided to government decision makers before an investment decision is made. This should include independent evaluation of the assumptions and inputs used in a CBA, which could be undertaken by a single institution across Australian, state and territory governments to support consistency and comparability across different projects and programs (such as the proposed Evaluator General at the Australian Government level). It should involve transparency about the analysis, including on cost and benefit estimates and forecasts and scenario selection, with independent assessments to be published and provided to government decision makers before an investment decision is made. Government officials should also align their investment decisions with CBA results and be held accountable for how the CBA outcomes are used — or not used — in project selection.
- Alliance contracting or collaborative contracting for major infrastructure projects — which involve contractors earlier in the planning and scoping stages of a project — could improve governments' understanding of costs and benefits during project planning stages.
- Governments should consider the improvements to institutional and governance arrangements required to support consistency and comparability across different projects and jurisdictions. This could be informed by successful models from overseas, including the standardised approach to cost and benefit estimates used by the US's Washington State Institute for Public Policy for consistency across a range of programs.
- CBA should also be applied to other government activities like defence and social services, noting that these areas are often more complex. These areas are currently predisposed to use other tools for assessment, like cost effectiveness studies, which provide less guidance to governments about how to allocate finite budgets across projects that are very different in nature.

This recommendation has low complexity. The elements of good practice CBA are widely known, and there are numerous existing CBA evaluation models that can be adopted. There may be some aspects of governance arrangements that need to be tailored for specific levels of government or project types. For example, the Grattan Institute has recommended that before government funds are committed to an infrastructure project valued at \$100 million or more, independent infrastructure advisory bodies across all levels of government should have a legislated role to assess the quality and assumptions underpinning the project's business case, costs and benefits, and publish this assessment.

REFORM DIRECTIVE 23

Using health funding approaches to diffuse innovations



Australian governments should reform healthcare funding to improve the functioning of the healthcare system and should better diffuse best practice in health services that they deliver or procure. They should use co-operative funding models that support long-term and patient-centred care, to encourage providers to innovate and better meet consumers' needs.

With Australian, State and Territory Governments spending a total of \$142.6 billion, about 7% of GDP, on health in 2019-20, the **expected productivity impact of this recommendation is high**. Following the recommendation's implementation, **the benefits will likely be realised in the medium to long term**. The productivity and welfare costs of inefficiencies and clinical variation in healthcare, such as over-prescription of antibiotics or regional variation in preventable hospitalisations, can be reduced by reforming funding models to encourage a more patient-centred approach with greater focus on longer-term and/or preventative care. And allocating government funding to procedures and services that have been proven to lead to good patient outcomes, such as by regularly updating the Medicare Benefits Schedule (MBS), would be a direct mechanism for providing medical practitioners with best practice guidance.

Specific actions

- The Australian Government should require the Medical Services Advisory Committee (MSAC) to undertake an annual review of selected MBS items so that funding is only provided to treatments that use current medical best practice. This should be focused on treatments where emerging Australian and/or international evidence questions the efficacy or cost effectiveness of existing procedures; treatments that MSAC has received clinician feedback on doubting their effectiveness; and highly costly treatments that receive large government subsidies through the MBS and have not been reviewed in the past 10 years. The Australian Government should assess the need for higher levels of funding for MSAC to undertake these annual reviews as a standing function.
- The Australian and State and Territory Governments should work together to accelerate and scale up long-term co-operative funding mechanisms that align the incentives of primary and hospital providers to avoid costly hospital admissions. Capitation models, like the Victorian HealthLinks program, and mechanisms supported by the Independent Hospital and Aged Care Pricing Authority are examples that should be considered to achieve this.
- Successful implementation of longer term, patient centred and co-operative funding models will also require overcoming regulatory and legislative obstacles, such as through changes to the *Health Insurance Act 1973* (Cth) (which can restrict the primary health activities that insurers and others can fund) and improving health data sharing across different parts of the system (between health care providers, between health care providers and government funders/regulators, and between health care providers and service users).

This recommendation has high complexity. Regularly updating the MBS would require significant effort and could require the government to provide MSAC with more resources. Implementing funding models that align incentives across the health system and support a longer-term patient-centred approach would be complex given the highly fractured funding and governance mechanisms across the system.

REFORM DIRECTIVE 25

Create policy settings that enable and respect private adaptation decisions



Australian, State, and Territory governments should pursue an adaptation policy that: recognises that individuals, households, and business will continue to be the principal decision makers about which occupations, sectors, and regions they will transition into as Australia's climate changes; helps inform these private decisions; and avoids policy settings that inadvertently constrain them.

This recommendation is expected to have a **high impact on productivity**, and following implementation, the **benefits would begin to be realised in the medium term**. Inadvertently constraining private adaptation decisions risks placing a growing amount of economic resources at risk over coming decades.

Specific actions

It is recommended that:

- Australian governments should avoid the expansion of insurance sector interventions and set a medium-term time frame for the phase out of the Northern Australia Reinsurance Pool.
- State and Territory governments should mandate the pre-sale disclosure of climate risks facing individual residential and commercial properties.
- For greenfield developments, the cost of climate risk reduction measures should be incorporated into the price of buying into the new development, through mechanisms like developer levies, that ensure that future residents face cost-reflective pricing.
- If transitional assistance is provided to particularly climate-impacted regions, industries and workers, it should be structured in a way that lets people decide which regions, sectors, and occupations they are best placed to transition into. It should not be made conditional on recipients committing to live or work in a particular region, sector, or occupation.
- Proposed adaptation-related infrastructure projects (including projects to rebuild or relocate communities impacted by large scale natural disasters) should be subject to rigorous cost-benefit analysis that incorporate plausible climate projections over the projected life of the asset, and compared with that of alternative proposals. In the case of community rebuilding proposals, a rigorous cost-benefit analysis would consider the broad range of costs and benefits — cultural, social, economic, and environmental — of rebuilding in-situ with increased defensive measures, relative to rebuilding in an alternative location.

These recommendations have **lower complexity** as in many instances the benefits come from not implementing damaging policies and through undertaking better processes in the allocation of resources towards new adaptation projects. That said, some legislative change at the State and Territory Government level may be required to implement developer levies.

REFORM DIRECTIVE 26

Elevate the Safeguard Mechanism to be Australia's primary emissions abatement mechanism



The Australian Government should progressively convert the Safeguard Mechanism (SM) into Australia's primary economy-wide emissions abatement mechanism, covering a wider range of sectors, deepening its coverage within sectors, and allowing for the transfer of emissions rights from those sectors and facilities that can readily reduce emissions to those that face higher abatement costs.

Implementation of this recommendation could be expected to have a **high impact on productivity** that could be **realised over the short-term in regard to facilities currently captured by the SM**, and **over the medium-term in regard to additional facilities that might be included at a later date**. This productivity benefit would principally flow from the reduced risk of investment associated with greater policy certainty for entities that are otherwise ready to pursue efficient emissions abatement. Modelling of the broader Powering Australia Plan, of which a reformed SM is one element, was estimated to drive \$76 billion in investment between now and 2030. Any policy driven misallocation of this investment could weigh notably on productivity over the longer-term.

Specific actions

The Australian Government should progressively turn the SM into Australia's primary economy-wide emissions abatement mechanism by collectively implementing the following recommendations:

- Define SM facility baselines, the total amount of net emissions that captured facilities are allowed to produce each year, in absolute emissions terms, not emissions intensity terms.
- Expand SM coverage by reducing SM facility thresholds, the total amount of annual emissions that a facility can produce before becoming subject to the SM, from 100 000 tonnes of CO₂-equivalent (CO₂-e) to 25 000 tonnes of CO₂-e.
- Impose SM baselines on individual electricity generators, not at the sectoral level. Failing that, the sectoral baseline for the grid connected electricity sector should be progressively ratcheted down to remove the bulk of headroom between current emissions and the sectoral baseline, though this would not have the same efficiency benefits as directly including individual electricity generators in the SM.
- Expand transport sector coverage: once electricity generators are covered at facility level, the SM should be extended to liquid fuel wholesalers, with downstream vehicle emissions imputed to them.
- Allow generation of sub-baseline abatement credits. If SM baselines are expressed in absolute emissions terms, SM facilities should be allowed to generate emissions credits for emissions abatement below their SM baseline.
- No additional Emissions Intensive Trade Exposed Industries (EITEIs) protections should be provided through the SM. Under the design of the SM, all sub-baseline emissions are allocated for free, providing inbuilt protection against carbon leakage.

The implementation of the recommendations under this reform directive has **lower complexity**. They would be administratively straightforward to implement given that many facilities that would become captured by the SM over time are already required to periodically report their emissions under the National Greenhouse and Energy Reporting Scheme. The creation of credits for sub-baseline abatement by SM facilities will be enabled by the passage of legislation currently before Parliament (Safeguard Mechanism (Crediting) Amendment Bill 2022).

REFORM DIRECTIVE 27**Increase the integrity of carbon offsets**

The Australian Government should increase the integrity of Australian Carbon Credit Unit (ACCU) offsets as an instrument for carbon avoidance or removal, increasing the likelihood that the Safeguard Mechanism will achieve credible emissions reductions at least cost over coming years.

Ensuring the integrity of ACCUs is expected to have a **high impact on productivity**, with the **benefits realised in the short term**.

Specific actions

- The Australian Government should discontinue the 25-year permanence period option currently available for sequestration-based ACCU projects.
- The Australian Government should introduce an additional class of sequestration-based ACCUs with permanence requirements that align with the more enduring permanence provisions of biodiversity market.
- State and Territory governments should stipulate the volume or the proportion of biogas that needs to be captured by existing ACCU-generating landfill gas capture projects under existing regulations.
- The Australian Government should require the Clean Energy Regulator (CER) to publish project offset reports submitted to the CER, and periodic ACCU project audit reports.

This recommendation has **lower complexity**. Releasing information that is already provided to the CER, stipulating how existing regulations are enforced, no longer allowing sequestration-based projects to opt-in to 25-year permanence periods, and leveraging existing biodiversity market principles to create a new class of projects, are comparatively straightforward actions to increase the integrity of carbon offsets.

REFORM DIRECTIVE 28

Remove emission reduction measures that are not complementary to the Safeguard Mechanism



The reform of the Safeguard Mechanism (SM) should be accompanied by a process to identify and phase out emissions abatement policies that are not complementary to the SM. New and remaining emissions reduction policies should have their indirect carbon costs independently estimated and made public.

These recommendations are estimated to have a **high impact on productivity**, with **benefits realised in the short term**. Phasing out higher-cost abatement policies and constraining the introduction of new higher-cost policies, will promote least-cost emissions abatement and productivity growth.

Specific actions

To give effect to this recommendation:

- The Australian Government should commission a review of existing Australian, State, and Territory emissions abatement policies to assess their complementarity to a reformed SM and recommend a timetable for the removal of non-complementary measures identified by the review.
 - A 'complementary measure' would be one that either drives emissions abatement from emissions sources not covered by the SM, addresses market failures that constrain the pursuit of abatement from emissions sources covered by the SM, or that deliver broader non-carbon abatement related benefits.
- Australian, State, and Territory governments should commit to stipulating how remaining non-Safeguard Mechanism policies, and new emissions abatement policy proposals, are complementary to the SM, and have their estimated indirect carbon prices independently estimated and made public.

This recommendation has **lower complexity**. Reviews of the complementarity of existing climate measures have been previously commissioned by Australian governments, and methodologies for estimating the indirect carbon price of policy measures are readily available.

REFORM DIRECTIVE 29**Pursue a least cost approach to securing electricity supply**

The government proposed Capacity Investment Scheme (CIS) should be implemented on a technology-neutral basis and be open to both supply and demand side participation by large scale and small-to-medium sized scale electricity users and suppliers, with the latter potentially coordinated through ‘virtual power plant’ platforms. An example of demand side participation is a virtual power plant operator that funds the installation of the technology required to reduce non-essential electricity demand at those times when electricity supply is lower than demand, supporting grid stability in the process. The CIS should also be subject to a five-year sunset clause, with an independent review commissioned to assess the value of its continuation before deciding whether to extend its life.

These recommendations are estimated to have a **high impact on productivity**, with **benefits realised in the short term**. Failing to underwrite electricity grid stability during Australia’s transition to a renewable electricity grid risks broader economic disruptions, with associated losses to productivity. Establishing a potential path back to using variability in wholesale prices as the central intermittence management policy may also come at lower long run costs than a permanent CIS.

Specific actions

The CIS that Australian, State, and Territory governments have proposed to implement should be:

- implemented with a five-year sunset clause, and independently reviewed ahead of any decisions to extend its life
- implemented on a technology neutral basis, allowing for both supply and demand-side participation by households and businesses
- open to both large scale participants and small-to-medium sized participants, potentially aggregated and coordinated through ‘virtual power plant’ platforms.

This recommendation has **lower complexity**. Setting the overarching goals that are to be achieved by projects bidding into the CIS, rather than deciding ex-ante what technologies can achieve those goals, will lower the search costs for projects that will best deliver desired policy outcomes.

3. Recommendations linked to reform directives

Building an adaptable workforce: *education*



Reflecting the role of education in creating a high skilled and highly adaptable workforce, broad-ranging reforms are proposed across higher education, vocational education and training (VET), schools and lifelong learning. These reforms emphasise stronger foundational learning to support further skills acquisition throughout individuals' working lives via a broader array of flexible options.

Higher education reforms aim to create a more dynamic university sector, putting greater emphasis on quality teaching. Loan reforms would expand access to high quality VET, and encourage emerging vocational options that develop broad, adaptive and less occupation-specific skills.

A more coherent approach to lifelong learning and ongoing skill development is based on targeted tax incentives, and the improved availability and recognition of flexible, short form training options.

Long-term improvements in school outcomes are possible through increasing (and judicious) use of learning technology and a stronger link between pedagogical evidence and classroom practice. Proposed reforms focus on assisting governments and schools in this journey.

Reform directive 1: Improve schools' capacity to lay the educational foundations for the future workforce



Recommendation 8.1

Leverage digital technology in schools

State and Territory Governments should work with schools to extend, improve and embed the use of education technology in order to realise future benefits for students.

Initiatives should aim to:

- enable teaching practices to evolve with the changing classroom environment by prioritising the development and implementation of digital tools to support teaching and learning, while balancing flexibility for individual jurisdictions' needs – this could include developing an online assessment tool and giving the Australian Education Research Organisation (AERO) responsibility for researching and vetting effective digital technologies to be implemented in schools
- replace manual school administrative processes with technology-based and automated solutions where this has not been done already – this could include evaluating technology-based solutions for administrative processes currently in place and developing mechanisms to diffuse these to other schools
- support continuous commitment to ongoing professional development modules that support teachers in using data analytics to drive student improvement.



Recommendation 8.2

Make best practice teaching common practice

State and Territory Governments should facilitate greater classroom access for the Australian Education Research Organisation (AERO) to support more principal and teacher involvement in education research to ensure that evidence-based research provides information that is salient and readily applicable by practitioners.

Initiatives should focus on:

- enabling greater observation of, and feedback on, classroom teaching practices, by supporting more informal teacher networks, and creating or strengthening the existing roles within the local school system for highly accomplished and lead teachers (HALT) to share their in-depth knowledge and skills with their colleagues
- increasing curriculum implementation support for teachers, by curating high-quality, evidence-based and government endorsed curriculum resources (curriculum plans, whole-subject sequences, lesson plans and classroom tools), to be made available for teachers and school leaders from a single source.

Reform directive 2: Enable innovative schooling approaches for improved learning outcomes



Recommendation 8.3

Enable experimentation with alternative approaches to schooling

State and Territory Governments should be open to experimenting with new, innovative school models or operational changes where there is an evidence base (including overseas) to suggest outcomes could be improved for Australian students.

In the first instance, legislative, regulatory, administrative or policy barriers that would prevent individual schools varying their operating model should be removed. In addition, there should be capacity and appropriate resourcing within the local school system to allow the merits of any trials to be evaluated.

Innovations should aim to:

- offer different lesson delivery options to lift quality teaching and learning, including for example, offering online classes in the absence of a teacher with the relevant expertise in a topic, or trials of untimed syllabus approaches to promote a continuous learning process
- better cater to student needs to encourage school attendance and lift student outcomes, including through variations in school hours and use of technology to personalise students' learning environment.

Reform directive 3: Grow access to tertiary education



Recommendation 8.4

Grow access to higher education over time

The Australian Government should adopt an improved demand-driven model for providing Commonwealth supported places to domestic undergraduate university students, subject to measures outlined in other recommendations that: contain fiscal costs (recommendation 8.5); and ensure all students are adequately supported (recommendations 8.13 and 8.14).



Recommendation 8.5 **Better targeting of investment in higher education**

The Australian Government should introduce a new university funding model to better target investment while facilitating wider access to higher education.

- Total university funding per student by field of study (comprising the student contribution and government contribution) should continue to be the cost of delivery for that field (reflecting a median estimate of efficient costs with the methodology to be refined over time as outlined in recommendation 8.6).
- The student contribution should be set based on average expected earnings for each field of study, with students with a greater capacity to repay incurring more debt. Student contributions should be higher, on average, to recoup a greater share of the costs of university from those who benefit from attending university, rather than recouping this from the broader tax base. This would also help to fund the return to a demand-driven system.
- The government contribution should make up the gap between the student contribution and estimated cost of delivery for each field of study.



Recommendation 8.6 **Improve price setting in tertiary education**

The Australian Government should conduct regular costing exercises to estimate the cost of delivering tertiary teaching and research. The methodology underpinning these cost exercises should be periodically reviewed and refined to inform more accurate cost estimates, and should aim to ultimately reflect only efficient costs. These cost estimates should inform funding as well as price and loan caps, to encourage efficient delivery of quality education and research by tertiary institutions.



Recommendation 8.7 **Expand loan eligibility to more students**

The Australian Government, in consultation with State and Territory governments, should gradually expand VET Student Loan eligibility.

- Access should expand to more Diploma and Advanced Diploma level courses. Instead of current criteria, all courses should be eligible except those that are primarily taken for leisure or have demonstrated poor labour market outcomes. This expansion should be evaluated after a suitable period, including observed effects of the earlier expansion on student participation, course decisions and employment outcomes; and any evidence of sorting by providers. Following this evaluation, and addressing any implementation issues, eligibility should also be considered for Certificate IV and Certificate III courses.
- Loan fee arrangements should also be equalised across the tertiary sector, levied on all students regardless of type (that is, extended from fee-for-service VET students and non-university higher education students to include subsidised VET students and university students). The loan fee rate should also be lowered reflecting application to a broader base of students.

Reform directive 4: Support a culture of lifelong learning for an agile workforce



Recommendation 8.8

Consolidate support for lifelong learning

The Australian Government should consolidate and examine the effectiveness and accessibility of available programs to support lifelong learning and to reduce gaps and increase uptake. In doing so, it should evaluate the effectiveness of targeted programs to inform and prioritise policies for a consolidated lifelong learning strategy by:

- trialling policies that target support at employed lower-income people, including vouchers for career planning and work-related upskilling and reskilling
- evaluating the incoming Skills and Training Boost to assess its effects on the uptake of additional overall training, the skills it develops, productivity, labour mobility, and the characteristics of the businesses most responsive to the measure. Government linked administrative datasets will be useful for such an evaluation but might need to be supplemented
- extending the existing capacity for self-education deductions to education that is likely to lead to additional income outside of the employee's existing employment. This change should be evaluated after a suitable period, and pursued subject to assurance that strong integrity measures can effectively reduce the risks of fraudulent claims
- examining the effectiveness of training programs delivered to people who are unemployed and those transitioning to work such as Employability Skills Training programs, particularly for people later in life.

Government should also increase the accessibility, flexibility, and coherence of available pathways by:

- extending income-contingent loans to more VET courses (recommendation 8.7)
- providing alternative exit opportunities through the provision of nested qualifications (recommendation 8.13)
- requiring publicly-funded universities to make their lecture materials available online, with consideration of extending this to some aspects of government-funded VET where that is practically feasible (recommendation 8.9)
- ensuring that the Australian Government's Microcred Seeker extend beyond courses supplied by TEQSA-recognised providers to the VET sector and where possible, to other private and well-recognised domestic and international course offerings
- constraining regulations that make acquiring new skills and moving to new occupations overly onerous. Most particularly, through regular review of occupational licensing policies and addressing issues in scope of practice (reform directive 10).

Reform directive 5: Increase tertiary education teaching quality to underpin a well-trained workforce



Recommendation 8.9

Leverage information to improve quality

The Australian Government should:

- increase the transparency of teaching performance by requiring universities to provide all lectures online and for free
- refine and validate new Quality Indicators for Learning and Teaching (QILT), and use these and other data to develop and publish more meaningful indicators of tertiary teaching quality and performance
- adapt the ComparED tool to address the risk that students may misunderstand its information and consider the option of abandoning it and providing additional QILT data to non-government funded websites that cover many other aspects of higher education providers relevant to student choice
- give the Tertiary Education Quality and Standards Agency (TEQSA) the responsibility to undertake external university teaching quality assurance review processes akin to those applied by the Quality Assurance Agency (Scotland).



Recommendation 8.10

Professionalise the teaching role

The Australian Government should bolster the incentives for, and prestige of, higher education teaching by:

- facilitating trials of additional funding for undertaking research and teaching development provided to individual staff based on their teaching performance, drawing on the Griffith Business School's Teaching Excellence Recognition Scheme (TERS)
- trialling a modest Australian Research Council Grant that provides funding for teaching focused research for 6 months to a year
- enhancing preparation for higher education teaching, informed by the evidence collected by initiatives outlined in recommendations 8.9 and 8.11.



Recommendation 8.11

Develop an Australian evidence base

The Australian Government should extend the role of the Australian Education Research Organisation (AERO) to the collection and dissemination of evidence on best practice post-school teaching, covering both VET and higher education. As part of this new role, AERO should also:

- draw on the lessons from the teaching practices of awardees of the Australian Government's Australian Awards for University Teaching
- undertake a rapid review of the use of formative and summative review processes and professional development initiatives in higher education institutions.



Recommendation 8.12

Favour light-handed and simple incentives over performance-based funding

The Australian Government should:

- put on hold the scheduled commencement of performance-based funding of universities in 2024 and only reinstitute if its risks are better managed and if other approaches to improving the performance of universities have proved ineffective
- explore the option of financial rewards to higher education providers that AERO identifies as having made successful efforts to improve and use formative assessment tools and professional development (drawing on recommendation 8.11).

Reform directive 6: Better and more flexible matching between students and work opportunities



Recommendation 8.13

Expand alternative exit opportunities through the provision of nested qualifications

The Australian Government should require that for any given undergraduate degree, Australian higher education providers create at least one subset of courses that, if completed, lead to a lower level qualification for students who decide to withdraw before completing the whole degree ('a nested qualification').

The Australian Government should leave the design, requirements, and timing of the nested qualification/s to providers' discretion, with the exception that any qualification would need to meet the relevant Tertiary Education Quality and Standards Agency (TEQSA) standards and monitoring requirements.



Recommendation 8.14

Give students support to complete and clarity to exit

The Australian Government should amend the *Higher Education Support Act 2003* (Cth) (HESA) to support completion where desirable and facilitate early exits where necessary.

It should do this by:

- providing grants to encourage higher education providers to experiment with and share new strategies for student retention
- assessing any individual grant for its effectiveness and lessons in post implementation reviews and evaluating the higher education grant program as a whole after six years to determine whether rounds of funding under the grant have contributed to a demonstrable improvement in student completion rates
- amending the 'census date' in the HESA to the 'payment date' and requiring that universities effectively communicate to students that the payment date is the time when they can exit without having to pay fees for any initially commenced course.

Reform directive 7: VET reform that supports an adaptive workforce



Recommendation 8.15

Support a responsive VET sector

The Australian Government, in consultation with State and Territory governments, should continue reforms that enable the VET sector to support an adaptive workforce and keep pace with industry needs, by:

- monitoring the development of training packages under the newly formed Jobs and Skills Councils (JSCs) to:
 - ensure their development takes place within acceptable timeframes
 - identify and disseminate best practice and innovative training package design models
- prioritising the development of cross sectoral skills standards that are applicable across industries over the next year to both reduce duplication in training package development for the JSCs and allow individuals enrolled in the VET system to be assessed against these new standards as soon as possible.



Recommendation 8.16

Improve VET teaching, pathways and partnerships

To ensure the successful implementation of Skills Reform, the Australian Government should:

- fund extra training and development programs for VET trainers and assessors so they can adequately perform independent and proficiency based assessment
- task the National Centre for Vocational Education Research to conduct a census of the VET workforce, focusing broadly on the characteristics of teachers at the provider level, including their pedagogical and occupational qualifications, as well as industry experience.

The Australian Government, together with State and Territory governments, should also continue to improve pathways between VET, higher education and industry.

- Other State and Territory governments should monitor and follow the example set by the New South Wales Government's Institutes of Applied Technology, and support local models of vocationally oriented tertiary education that deliver qualifications combining VET and higher education content together with industry expertise.

Building an adaptable workforce: *migration*



Significant reforms to skilled migration could yield large productivity benefits. A shift away from occupation-based lists towards wage thresholds as the basis for employer sponsored migration can re-focus the program on productivity.

Reform directive 8: A better targeted skilled migration system



Recommendation 7.1 Abolishing investor visas

The Australian Government should abolish the Business Innovation & Investment visa program. Temporary migration should be facilitated for people with genuine plans to start a business in Australia, while pathways to permanent residency should involve the revised Skilled Independent visa, based on a points test that better accounts for income levels and age.



Recommendation 7.2 Implementing wage thresholds for employer sponsored visas

The Australian Government should remove current list-based restrictions for employer-sponsored temporary and permanent skilled visas and set an income threshold well above the Temporary Skilled Migration Income Threshold rate. The income threshold that applies to temporary migration should be lower than for permanent. The income threshold for employer-sponsored permanent visas should increase with age, though at some older age, people would no longer be eligible for this visa category.



Recommendation 7.3 Improving Skilled Independent visas

For the Skilled Independent visa (subclass 189), the Australian Government should remove current list-based restrictions, but the points system should be able to award points for any factors shown to be associated with fiscal and employment benefits. Additional points should be awarded for ongoing employment in Australia according to income level, with different income benchmarks for different age groups. Moreover, the design of the points system should be updated regularly based on empirical research.



Recommendation 7.4

Meeting the needs of human services without stifling wage increases

The Australian Government should introduce a pilot of a special permanent visa subclass for occupations in human services sectors largely funded by government (such as aged and disability care), but only if these are facing likely enduring and significant labour shortages that are weakly responsive to wage increases. The visa subclass should be subject to the current Temporary Skilled Migration Income Threshold, and include a condition that the applicant remain employed in the relevant sector for 4 years.

The pilot should be evaluated for its impacts and need after several years.

It should also be abandoned if the Australian Government develops sustainable alternative funding options for aged care that are sufficient to meet the wage increases required to limit labour shortages.



Recommendation 7.5

Improving temporary migration and pathways to permanent residency

The Australian Government should amend settings for temporary skilled migration to increase their duration to 6 years, subject to continuous employment (for a set percentage of a given year) with a sponsoring employer (with the ability to move to a new sponsoring employer under the same visa).

While temporary skilled migration visas should not come with an expectation of permanent migration, pathways to permanent migration should be available under revised employer-sponsored and independent skilled visas.

For international students, obtaining a qualification from an Australian tertiary education provider should be associated with some expectation of being able to test their skills in the Australian labour market, but not an expectation that their qualification alone will qualify them for permanent residency. The Australian Government should increase the duration of stay for Temporary Graduate visas (subclass 485) for graduates with Bachelor and higher level degrees, such that an extension to five years is guaranteed subject to proof of ongoing employment above a set wage threshold.

These changes should be subject to the revised Employer Nominated and Skilled Independent visas, both of which would place greater emphasis on age and income (recommendations 7.2 and 7.3).



Recommendation 7.6

Improving job mobility for employer-sponsored visas

The Australian Government should amend settings for employer-sponsored temporary and permanent visas to better allow workers to switch to competing employer-sponsors including by permitting a short period of unemployment while looking for a new sponsor.

Building an adaptable workforce: *occupational licensing*



Following on from automatic mutual recognition of occupational licences, a number of reform directions are proposed to ensure that licensing is not creating undue barriers to the mobility and adaptability of the workforce. Streamlining international recognition and expanding allowable scope of practice within licensed occupations are key priorities.

Reform directive 9: Improve occupational licensing arrangements to reduce barriers faced by skilled migrants



Recommendation 7.7

Expanding the default recognition of international licences

Australian governments and regulators should pursue further international mutual recognition of occupational licences by improving (and potentially formalising) links between Australian licensing bodies and those in similar countries.



Recommendation 7.8

Aligning migration and occupational license requirements

Australian governments and regulators should coordinate to align skilled migration requirements with occupational license recognition requirements, including by removing duplication of assessment where possible.

Reform directive 10: Occupational licensing regimes that are fit-for-purpose



Recommendation 7.9

Address known issues in scope of practice

Australian governments should work with the relevant regulators to re-examine boundary issues relating to occupational licences. In particular, where independent reviews have already highlighted problems or potential gains to service quality, safety, and productivity, governments and regulators should develop plans to implement those changes.

As an example, the Australian Government should work with the Australian Health Practitioner Regulation Agency to expand Medicare Benefits Schedule and Pharmaceutical Benefits Scheme items to nurse practitioner services that currently receive inadequate funding. Consideration should be given to amending requirements for collaborative arrangements and to credentialing policy, given their importance to the employment of Nurse Practitioners.



Recommendation 7.10

Pursue trials into expanded scope of practice

State and Territory Governments should undertake trials for expanded scope of practice in health services where supported by evidence. Where service funding is determined by an intergovernmental agreement (between state and federal levels) the Australian Government should allow the appropriate funding arrangements to encourage the use of evidence-based trials.

As an example, State and Territory Governments should undertake similar trials as those run in New South Wales and Queensland with regard to the prescription scope of pharmacists' providing vaccinations and low-risk medications. The Australian Government should ensure that the novel arrangements that are the subject of these trials are given equivalent funding through the Medicare Benefits Schedule or the Pharmaceutical Benefits Scheme, where the benefits are substantiated.



Recommendation 7.11

Improved process for regular review of licensing policy

Australian governments should conduct regular, independent review of occupational licensing systems in their jurisdictions, aiming to improve efficiency without compromising safety outcomes, considering efficient scope of practice as well as the optimal mix of licensing and other forms of safety regulation. Individual jurisdictions should drive the process, sharing the findings and conclusions publicly such that other jurisdictions may benefit. In some cases, the process of review and reform could usefully be driven by the coordinated efforts of all Australian governments, including through regular meetings at the ministerial level.



Recommendation 7.12

Digital licensing designed to enable future data sharing and analytics

State and Territory Governments should continue to develop digital licensing platforms, prioritising choices in technology and design to enable future integration, information sharing and analytics.

Building an adaptable workforce: *workplace relations and platform work*



We propose a suite of practical reforms to labour market regulation to increase the scope for business-level productivity improvement while maintaining effective protection of accepted minimum standards.

To promote the productivity benefits of the gig economy while addressing risks to workers, we outline a regulatory framework with safeguards relating to insurance, safety and dispute resolution.

A renewed focus on awards is a key priority – to expand flexibility for many small businesses, improve compliance and provide a better basis for formal agreement-making. Incremental changes to the latter would also make it easier for businesses and workers to make mutually agreed workplace changes through formal agreements, and re-focus enterprise agreements on their core objective — productivity improvement.

Reform directive 11: Improve workplace outcomes and ensure a fair sharing of the gains from productivity improvements



Recommendation 7.13

A more efficient and fairer approach to adjusting awards

The Australian Government should amend the *Fair Work Act 2009* (Cth) to:

- replace the paragraphs of s.134(1) with seven paragraphs that cover:
 - (a) the needs of the employed
 - (b) the need to increase employment
 - (c) the needs of employers
 - (d) the need to achieve gender equality in the workforce
 - (e) the needs of consumers
 - (f) the need to ensure that modern awards are easy to understand
 - (g) the likely impact of any exercise of modern award powers on efficiency and productivity.
- remove the need for work value reasons alone for variations to award minimum wages outside of the Annual Wage Review, allowing the Fair Work Commission to have the same power to adjust award minimum wages in award reviews as the minimum wage panel currently has in annual wage reviews
- make it explicit that the Fair Work Commission should make variations to awards that would *better* achieve the modern awards objective, rather than only being required to make changes that are necessary to comply with the objective
- require that when reviewing and varying modern awards, the Fair Work Commission should use robust analysis to set issues for assessment, prioritised on the basis of likely high yielding gains, and consult widely with the community on reform options.



Recommendation 7.14 **Introducing menus into industrial awards**

In making variations to awards, the Fair Work Commission should seek to include options that allow employers some choice about how they can meet award requirements, subject to meeting the modern awards objective and appropriate consultation with affected employees.



Recommendation 7.15 **Limit restrictive enterprise agreement content**

The Australian Government should limit the ability for enterprise agreements to restrict productivity enhancing changes to technology or workplace practices that are best left to managerial prerogative by:

- leaving employers and employee representatives free to develop mutually beneficial consultation clauses in enterprise agreements, but amending section 205 of the *Fair Work Act 2009* (Cth) so that the model consultation term (as currently prescribed by Schedule 2.3 of the *Fair Work Regulations 2009* (Cth)) would be the only legally enforceable consultation term in an agreement if there was a dispute.
- exploring a mechanism that enables the Fair Work Commission to specifically authorise an alternative enforceable term or limit an excessive term.



Recommendation 7.16 **Review of recent bargaining changes**

The review of the *Fair Work Legislation Amendment (Secure Jobs, Better Pay) Act 2022* (Cth) should particularly focus on the:

- degree to which it has promoted single-enterprise bargaining and achieved productivity-enhancing improvements in workplaces
- use of multi-enterprise bargaining and its effect on wages, prices, competition, and productivity
- potential need for further clarification on elements reliant on the Fair Work Commission's discretion.



Recommendation 7.17 **Disentangle enterprise agreements from awards**

The Australian Government should explore methods to further loosen the relationship of enterprise agreements with awards when there is genuine agreement between employees and employers. This should include an amendment to the Better Off Overall Test such that even if some employees are worse off from a change in an agreement, the Fair Work Commission could nevertheless approve an agreement if a range of public and private interest tests were met, including the degree to which the benefits to winners are larger than the losses to losers.

Any changes should have adequate protections in place to avoid undesirable outcomes as exemplified by the *Construction, Forestry, Mining and Energy Union v One Key Workforce Pty Ltd* case.

Reform directive 12: Regulation that works with new workforce models



Recommendation 7.18

Introduce independent dispute resolution for platform workers

The Australian Government should introduce an external, independent dispute resolution function within the Fair Work Commission that can provide conciliation and arbitration services relating to suspension or termination disputes or non-payment of earnings. The function should be funded by platforms and should be designed to encourage platforms to improve internal processes, rather than relying on the external body as the primary method of resolving disputes.



Recommendation 7.19

Evaluate insurance arrangements for platform work where there are significant risks to workers

Governments should evaluate insurance arrangements of classes of platform work where there are significant risks to worker safety, drawing on data and consultation with platforms, workers and their representatives. Classes of platform work that are likely to be of initial interest are those with many workers or total hours worked and those where there are material risks to work health and safety.

Where insurance arrangements are insufficient, governments should consider at minimum mandating a baseline level of insurance to be provided and paid for by platforms, or creating an industry-wide insurance scheme, or extending workers compensation. Each of the policy options would be best funded by the covered platforms. The appropriate policy option will depend on the class of platform work and its risks, and implementation considerations such as the existing level of insurance provided by platforms and the financial sustainability of the scheme.

Harnessing data, digital technology and diffusion



Innovation policy should broaden and give more emphasis to the spread and adoption of new technology and best practice. In particular, adoption of digital technology, such as AI, and the better use of data by businesses can boost productivity and be encouraged by government action. Reforms are proposed to further extend data sharing, improve funding of digital infrastructure and streamline cyber reporting regulation.

Reform direction 13: Faster and more reliable internet access to underpin productivity growth in regional Australia



Recommendation 4.1

Better access to digital infrastructure in regional communities by improving funding mechanisms

The Australian Government should more efficiently and transparently fund digital infrastructure investments to motivate improved provision in Australia's regional communities.

This would ultimately require a transition in funding arrangements from the current patchwork of programs to a single market-based tender mechanism for delivering the Universal Service Guarantee, once the market for internet connectivity services across all technology types (fixed line, mobile, satellite) is sufficiently competitive to support such an arrangement.

The government should request that the Australian Communications and Media Authority and/or the Australian Competition and Consumer Commission undertake market testing to understand whether it is currently feasible or, if not, when technology improvements and new market entrants would enable a more efficient tender mechanism to be implemented.

In the meantime, governments should improve transparency about how funding is allocated for existing regional digital infrastructure programs, including publishing the reasons for funding decisions and evaluating the outcomes of previous investments.

Reform direction 14: Cyber security compliance arrangements to underpin a productive digital economy



Recommendation 4.5 **A single interface for cyber incident reporting**

The cost for businesses of complying with cyber security regulations should be reduced by streamlining incident reporting requirements, with all reporting to occur via a single online interface. The operating system underlying this interface would then direct reports to the Australian Cyber Security Centre or other relevant government agency as required. This could provide the platform for the government to work with cyber security software providers to build incident reporting functions into commonly used software, so that reports are automatically sent to relevant agencies if an incident occurs.

Reform direction 15: Maximise the value of government-collected or funded data holdings



Recommendation 4.2 **Expanding use cases for the Australian Government Digital Identity**

The Australian Government, working with the Council on Federal Financial Relations, should increase access to its Digital Identity so that State and Territory Government services that require identity verification (such as applying for a driver's licence) and private sector services that require identity verification (such as opening a bank or utility account) are able to use the system, with appropriate access controls and safeguards.

Governments should work towards adopting a single national digital identity, rather than different jurisdictions having fragmented identity systems that require citizens to verify their identity with governments and businesses through different channels.



Recommendation 4.3 **Private sector access to government data**

The Australian Government should enable government data to be securely shared with the private sector, so that not-for-profit organisations and businesses can undertake research and develop improved products and services for Australians.

This could be enabled by extending the *Data Availability and Transparency Act 2022* (Cth). Extension could be gradual, starting with accredited private organisations using the data for policy and research purposes to achieve social objectives, before being opened for accredited businesses to use the data commercially. Appropriate safeguards should be employed to ensure security and privacy concerns are addressed, and the government could consider utilising advances in technology for individual privacy preservation.



Recommendation 4.4

Sharing data from government-funded services

The Australian Government should increase the safe sharing and use of data collected by government-funded service providers, including community, not-for-profit and private organisations. This would include identifying relevant data that could be safely shared and linked to benefit individuals receiving services, setting technical standards for data sharing to promote interoperability, and using funding levers to incentivise service providers to gather and share data that could improve service delivery and productivity.

Healthcare data should be targeted in the first instance to enable wellbeing benefits for individuals and productivity benefits at the practitioner and system levels. This could be implemented using My Health Record (MHR) as the foundation for a comprehensive data sharing system, and include provisions for:

- **opting out of the system:** Where consumers have not exercised their right to opt out of the system, practitioners should be required to upload agreed relevant health records to MHR. Patients that opt out should be required to confirm their decision each year after discussing with their general practitioner
- **health software compatibility and standards:** In the short term, the Australian Government should publish a register of health practice software that is integrated with MHR. In the medium term, it should set conformance standards that require all health practice software to be compatible with MHR to enable ready uploading of relevant records to MHR and extraction of patient data in an easy-to-use, secure and transferable format. The standards should also include consistent language and terminology, and a secure gateway to enable practitioners using different software to connect with each other
- **de-identification to support system planning:** The Australian Government should, in consultation with healthcare practitioners and the community, develop a framework for using the data in MHR in a de-identified way for health system-wide planning and policy development.

To support seamless service delivery, safe sharing of data held by government-funded service providers outside of healthcare — such as school education, childcare, aged care, criminal justice, community services and infrastructure contracts — should also be investigated and facilitated by the Australian Government.

Reform direction 16: Actively promote the diffusion of new knowledge and best practice across the business community



Recommendation 5.1

An enabling environment for small business access to finance

The Australian Government should monitor the effects of APRA's changes to capital requirements and risk weights for loans to small and medium enterprises (SMEs) that are not secured by property, and the activities of the Australian Business Securitisation Fund, to understand whether they are having the desired impacts on SME lending. Adjustments or further responses could be required if barriers to SMEs accessing finance remain. APRA may need to collect more detailed data about business lending to enable the government to undertake this monitoring.



Recommendation 5.2

An industry-agnostic approach to the National Industry PhD Program

The Australian Government should actively promote innovation diffusion across a range of industries as part of its role in capability building. By adjusting the National Industry PhD Program so that it is industry ‘agnostic’ and does not preference applications aligned with the National Manufacturing Priorities, the Government could encourage diffusion of new knowledge and best practice into the services and social sciences.



Recommendation 5.3

Improving collaborative networks and knowledge transfer

Governments could strengthen collaborative networks for diffusion and facilitate knowledge transfer through:

- trialling government-funded extension services, which have so far been focused on the agriculture industry in Australia, to support diffusion of technical knowledge and relevant technologies in other sectors. The initiative should be tailored by sector depending on what services are relevant for most small businesses in that sector, with early engagement between government and businesses to identify the types of services that would be most beneficial
- requiring open access for government funded research in journals, papers and publications that is currently locked behind paywalls. In implementing this change, the government should compare the benefits and costs of the Chief Scientist’s proposed open access model with the benefits and costs of other potential approaches
- partnering with intermediaries — such as industry associations and other advisory or network bodies — that have existing connections between industry, government, researchers and markets when implementing programs to support diffusion (such as capability development initiatives and extension services). This would enable governments to reach a wider audience with their diffusion initiatives.



Recommendation 5.4

Reducing administrative barriers to academic consulting

The Australian Government should reserve the right to facilitate more consulting by university academics, should universities be unable or unwilling to lower unnecessary administrative barriers that disincentivise academics from undertaking consulting. This could be incorporated into the Australian Universities Accord, with the government setting guiding principles to govern universities’ approaches to academic consulting and standardised processes and fee requirements.

**Recommendation 5.5****Using government-held data for benchmarking purposes**

Government agencies should use data they collect to help businesses benchmark their performance and provide insights that promote diffusion of best practice.

- Existing efforts to provide data collected from businesses back to businesses for performance comparison purposes, such as those by the ABS, ATO and ABARES, should be extended — for example, by making benchmarking tools with tailored results accessible online, or by accompanying benchmarking results with other analysis such as case studies on best practice.
- Other opportunities to use government-held data for benchmarking should be explored, including in specific sectors where applicable (for example, APRA and ASIC data for financial services and ACCC data for various consumer products).

**Recommendation 5.13****No-cost or low-cost access to ideas that have large public good value**

To support the diffusion of best practice and knowledge that has already been generated by innovative businesses, not-for-profits and government organisations, the Australian Government should:

- make mandatory standards freely available and look at new funding models for Standards Australia to reduce or eliminate the pricing of voluntary standards that have high public good value
- require open access to research principally funded by governments (see recommendation 5.3 of this report for further detail)
- reform fair use provisions in intellectual property regulations to adopt a principles-based fair use exception.

Creating a more dynamic economy



A dynamic economy is a proven ‘machine’ for spreading innovations. Proposed reforms to boost competition, business entry, investment and dynamism go beyond general competition law to include general settings like tax, trade and regulation (e.g. planning).

A proposed generational review would focus on Australia’s fragmented private and social insurance arrangements, where short-term changes can pave the way for substantial long-term reform.

Technology-enabled pricing is a big emerging opportunity. Incremental reforms to apply it to transport can boost productivity through better infrastructure decisions and improving mobility.

Reform directive 17: Create a risk protection system that encourages entrepreneurship and a long-term view



Recommendation 3.1

A generational review and reform process for Australia’s risk protection ‘system’

Government could commence a review of Australia’s risk protection and social insurance arrangements, focusing on:

- encouraging individual entrepreneurship
- removing barriers to innovative service models by insurers
- fostering efficient mitigation and early intervention.

In the near term, incremental gains could be made by progressing:

- abolition of stamp duty on insurance premiums
- continued incremental expansion of the range of out of hospital services that private insurers can fund
- targeted exemptions from risk equalisation for innovative, evidence-based preventative initiatives by health insurers
- greater flexibility for life insurers to fund (on a discretionary basis) some approved health-like services, particularly in areas like mental health
- increased sharing of government held or funded data, particularly data collected through health providers (recommendation 4.4)
- continued exploration of the ‘insurance approach’ in government programs through measures such as payment by results, social impact bonds, actuarial evidence and innovation funds.

Reform directive 18: Create an investment environment that allows the right activities to occur in the right places



Recommendation 3.2 **More flexible and streamlined planning and zoning**

State and Territory Governments should revise their planning regulations to ensure residential, commercial and industrial zoning is not unduly restrictive. This should include:

- implementing standardised business, and industrial zones across local government areas
- aggregating existing business and industrial zones to reduce the number of zones where possible and to broaden the range of permissible activities
- ensuring that urban planning decision-making processes consider the introduction of competition to incumbent businesses as a positive outcome.



Recommendation 3.5 **The next steps toward road user charging**

Australian governments should work towards an intergovernmental agreement on road user charging for all vehicle types, focusing on distance-priced charging including any road damage premiums, and subsequently, incorporating congestion charges for crowded roads. The agreement should set out the roles of the different level of governments, how road funds and trials should be implemented, and the appropriate transition pathway away from fuel excise.

In developing a new pricing regime, Governments should consider the inclusion of compulsory third party insurance costs in distance-based charges and menu options for motorists to choose between higher distance-based charges and lower fixed charges.

The appropriate level of distance-based and fixed road charges, and the desirable extent of exemptions and concessions, should be based on trials and the experiences of overseas jurisdictions that have already employed them.

Ultimately, governments should work towards the longer-term objective of more efficient pricing of road use, including through the use of congestion charging in urban centres.



Recommendation 3.6 **More efficient public transport fare settings**

Public transport fares across all states and territories should apply the pricing framework used by the NSW Independent Pricing and Regulatory Tribunal, including consideration of fares that take into account peak-time crowding, reduced road congestion, distance-based charges and fares that reflect the lower costs of buses compared with trains.

States and territory governments without independent bodies to make jurisdiction-specific recommendations should improve fare setting through other channels, such as publishing pricing strategies and rationales for decisions, and increasing fares annually by growth in public transport costs.

Reform directive 19: Address lack of competitive market incentives in highly regulated sectors



Recommendation 3.3

Improve competitive pressures in highly regulated sectors

The Australian Government should remove impediments to competitive pressures in sectors where it has a substantial regulatory footprint. In the first instance, this could include:

- assessing the implications for competition, health outcomes and productivity of regulatory arrangements in private health insurance, as part of the generational review of Australia's risk protection and social insurance arrangements (recommendation 3.1)
- removing anti-competitive regulations on the ownership and location of pharmacies.

Other sectors where the Government has a large regulatory footprint should similarly and subsequently be examined to remove any impediments to competitive pressures that are not supporting a broader social or environmental policy objective.

Reform directive 20: Transition tax system incentives to invigorate productivity growth



Recommendation 3.4

Transition the tax system to reinvigorate productivity growth

In their use of the tax system for fiscal consolidation over the next decade, governments should, including through the Council on Federal Financial Relations, systematically transition the tax system to be supportive of productivity growth through tax arrangements that:

- promote skilled labour supply
- improve tax neutrality in respect of savings and investment
- encourage efficient asset transfers and capital allocation
- foster market entry and competition
- support efficient risk management by firms and individuals.

Reform directive 21: Pursue economic resilience through open trade and foreign investment



Recommendation 3.7 **Pursue trade resilience through openness**

The Australian Government should pursue economic resilience by harnessing open trade. Public interventions in vulnerable and critical supply chains should be considered as a last resort, given the incentives for and capacity of private businesses to manage supply chain risks. Calls for assistance in vulnerable and critical supply chains should be subject to assessment of economy-wide net benefits by the Office of Supply Chain Resilience, with some form of transparent, public reporting on the justification and/or costs of any intervention.



Recommendation 3.8 **More open trade and greater recognition of international standards**

The Australian Government should promote open and resilient trade in goods including by:

- reducing Australia's statutory import tariff levels to zero
- progressively removing Australia's anti-dumping and countervailing measures, and subjecting any new measures to an economy-wide cost-benefit test.
- increasingly accepting product standards adopted in other leading economies as 'deemed to comply', provided that a transparent review could be undertaken in cases where the Australian Government identified a significant safety risk.



Recommendation 3.9 **Addressing potential chilling effects of the Foreign Investment Review Framework**

While the Australian Government should ensure its Foreign Investment Review Framework is fit for its purpose in addressing fraud and strategic risks, its design should be cognisant of the potential chilling effects on investment and subsequent costs to productivity. Application fees for proposed foreign direct investment (FDI) should not be used as a tax base.

More specifically, application fees for proposed FDI into agricultural land assets should be brought closer into line with other forms of investment, including by:

- applying indexation to the threshold investment value, as is done with most commercial investments
- adjusting the fee tiers so as to reduce the marginal rate fee as a proportion of the investment amount.



Recommendation 3.10

Prepare for increased global trade in services

In order to ensure the Australian economy is well-placed to benefit from the global increase in trade in services, Australian governments should reduce barriers to trade in services both 'at the border' and 'behind the border'. This will require consideration of not only trade policy (recommendations 3.7 and 3.8), but also tax settings (recommendation 3.4), occupational licensing (recommendations 7.9 to 7.12), foreign direct investment (recommendation 3.9), improved recognition of overseas qualifications (recommendations 7.7 and 7.8) and temporary migration settings (recommendation 7.5).

Lifting productivity in the non-market sector



Governments should persevere with the hard work of driving innovation and spreading good practice in their own services. Reforms to funding models will be a key enabler of service innovation.

The innovation 'ecosystem' in much of the non-market sector is incomplete. Reforms focus on strengthening the role of public bodies to spread ideas and best practice; more transparency and better use of data to inform consumers, funders and regulators.

Health reform is a work in progress; next steps toward integrated patient-centred, data enabled care can drive long-term productivity benefits.

Reform directive 22: Implement best practice resource allocation when funding public infrastructure



Recommendation 5.7

Collaborative procurement on major projects to increase productivity

The Australian, State and Territory Governments should improve the quality and productivity outcomes of public infrastructure projects by increasing the use of alliance contracting or collaborative contracting for major projects, so that contractors are involved earlier in the planning and scoping stages of a project. This could also include building incentives into contracts for the achievement of certain targets or standards.



Recommendation 5.8

Improving the efficacy of public expenditure through better investment decisions

Governments can improve the efficacy and productivity outcomes of public expenditure through institutional and governance arrangements that address the systemic absence or disregard of rigorous cost-benefit analysis (CBA) for both major infrastructure projects and in other government activities, such as defence and social services. Such arrangements should include:

- independent evaluation of the assumptions and inputs used in a CBA, which could be undertaken by a single institution across the State, Territory and Commonwealth levels to support consistency and comparability across different projects and programs. The proposed Evaluator General at the Commonwealth level could be a starting point for this improvement
- transparency about the analysis, including on cost and benefit estimates and forecasts and scenario selection, with independent assessments to be published and provided to government decision makers before an investment decision is made
- government officials aligning their investment decisions with CBA results, and being held accountable for how the CBA outcomes are used — or not used — in project selection.

Reform directive 23: Using health funding approaches to diffuse innovations



Recommendation 5.6

Using health and human service funding approaches to improve diffusion

Governments should use their funding and procurement approaches to drive improved efficacy, innovation and diffusion in health and human services that they deliver or contract external service providers to deliver. This could include:

- improving the diffusion of good practice in primary healthcare by regularly updating the Medicare Benefits Schedule (MBS) to reflect effective treatments. The Medical Services Advisory Committee (MSAC) should be required to undertake an annual rolling review of selected MBS items, focusing on treatments where emerging evidence or clinician feedback questions their efficacy or cost effectiveness. The Australian Government should assess the need for higher levels of funding for MSAC to undertake these annual reviews as a standing function
- implementing funding models that support the diffusion of innovation in healthcare, including preventative care, and a more patient-centred approach by aligning incentives across different parts of the health system. This includes by accelerating and scaling up long-term co-operative funding mechanisms that align the incentives of primary and hospital providers to avoid costly hospital admissions and support integrated care, such as capitation models that have demonstrated success and other mechanisms supported by the Independent Hospital and Aged Care Pricing Authority. Governments should also seek to overcome obstacles to implementing co-operative models, such as changing the *Health Insurance Act 1973* (Cth) and improving data sharing
- encouraging human service providers to innovate and compete to meet consumers' needs by providing citizens with more control over how government funding allocated to these services is spent. This could apply to the allocation of housing assistance to people rather than properties, end-of-life care, public dental services and healthcare
- increasing default contract lengths to 5–7 years for government-funded services delivered by community organisations to support innovation and diffusion. Suitable contract lengths will depend on the type of service provided, and the lengths of contracts that are retendered could be reconsidered upon their expiry.



Recommendation 5.11

A bigger role for diffusion bodies

Expand or strengthen the role of existing diffusion bodies — such as the Australian Commission on Safety and Quality in Health Care, Aged Care Research and Industry Innovation Australia, Australian Education Research Organisation, CSIRO and Australian National Audit Office — with the aim of disseminating best practice, including the elimination of practices no longer underpinned by adequate evidence. Trial innovation funds in selected public services where there is no existing body for diffusing best practice, such as in mental health service delivery.

Reform directive 24: Promote innovation and diffusion within government agencies and regulators



Recommendation 5.9

Using performance data on government services to diffuse best practice

Governments should collect and use data on service outcomes and provider performance to benchmark their own service delivery and diffuse best practice. This should go beyond simple descriptive performance comparisons by providing more like-with-like comparisons, so that governments and service providers can understand what is driving differences in performance and how, when not justified, these differences could be narrowed.



Recommendation 5.10

Recruiting public sector workers from overseas to bring in global best practice

Improve the diffusion of global best practice in the public service by loosening the security and citizenship requirements, and overly bureaucratic processes, which currently limit the recruitment of workers from outside Australia who bring innovative ideas and different models to the public service. This could include expedited security approval processes for overseas workers who have already obtained similar levels of security clearance in their home country, where Australia has a security or intelligence agreement with that country (for example, the Five Eyes alliance).



Recommendation 5.12

Encouraging regtech development and diffusion

Governments should support greater use of productivity-enhancing regtech by:

- providing regulation in forms that lend themselves to regtech solutions, such as coding regulatory rules into machine-interpretable documents, like the NSW Government's machine-readable version of the *Community Gaming Regulation 2020*. New regulations that are likely to be amenable to a regtech solution should be implemented in a machine-interpretable format at the outset, to avoid the need to go back and codify such regulations in the future
- working with software providers to identify areas where they could improve foundational settings to encourage industry to design compliant regtech solutions. The Fair Work Commission's efforts to develop an application programming interface that enables software providers to directly access its awards database, in co-design with stakeholders, is an example of such an improvement.

Securing net zero and adapting to a changing climate at least cost



Adapting to climate change and achieving net zero at least cost will be key determinants of Australia's future productivity performance.

Proposed reforms make use of existing policy levers — broadening and strengthening the safeguard mechanism, maximising confidence in the integrity of offsets, and ensuring individuals and businesses have the necessary information to make decisions that reduce their future climate adaptation costs.

Reform directive 25: Create policy settings that enable and respect private adaptation decisions



Recommendation 6.1

Avoid government subsidised reinsurance schemes

Australian governments should avoid expansion of climate-related insurance sector interventions and set a medium-term time frame for the phase out of the Northern Australia Reinsurance Pool. Government interventions in private insurance markets risk subsidising the movement of individuals, households, and businesses into harm's way, and increasing overall adaptation costs. Setting a medium-term time frame for the phase out of the Northern Australia Reinsurance Pool would provide time for private insurance providers to secure alternative reinsurance services.



Recommendation 6.2

Helping to inform adaptation investment decisions

Households and businesses should be provided with the information they need to make informed adaptation decisions. State and Territory governments should mandate the pre-sale disclosure of climate risks for all residential and commercial property sales.

- Such disclosure should be based on existing climate change projections and cover a range of physical risks including riverine flooding, sea level rise, subsidence, fire and other natural disasters.
- This disclosure could operate in the same way that States and Territories mandate the pre-sale disclosure of building reports.

For new greenfield developments the cost of climate risk reduction measures should be incorporated into the price of buying into the new development, through mechanisms like developer levies, which will help ensure that future residents face cost-reflective pricing.



Recommendation 6.3

Transitional assistance should not distort adaptation decisions

If transitional assistance is provided to climate-impacted regions, industries, and workers, it should be structured in a way that lets people decide which regions, sectors, and occupations they are best placed to transition into. It should not be made conditional on recipients committing to live or work in a particular region, sector, or occupation.



Recommendation 6.4

Cost-benefit analysis for adaptation-related infrastructure projects

Proposed adaptation-related infrastructure projects (including projects to rebuild or relocate communities impacted by large scale natural disasters) should be subject to rigorous cost-benefit analysis that incorporates plausible climate projections over the projected life of the asset and compared with that of alternative options. In the case of community rebuilding proposals, a rigorous cost-benefit analysis would consider the broad range of costs and benefits - cultural, social, economic, and environmental - of rebuilding in-situ with increased defensive measures, relative to rebuilding in an alternative location.

Reform directive 26: Elevate the Safeguard Mechanism to be Australia's primary emissions abatement mechanism



Recommendation 6.5

Make the Safeguard Mechanism Australia's primary emissions abatement mechanism

To increase certainty, reduce investment risk, and promote least-cost abatement, the Australian Government should progressively make the Safeguard Mechanism (SM) Australia's primary economy-wide abatement mechanism. To this end, the Government should collectively implement the following changes to the SM over time:

- define SM baselines, the total amount of annual net emissions that captured facilities are allowed to produce, in absolute emissions terms, not emissions intensity terms
- expand SM coverage by reducing SM facility thresholds, the total amount of annual emissions that a facility can produce before becoming subject to the SM, from 100,000 to 25,000 tonnes of CO₂-e
- impose SM baselines on individual electricity generators, not at the sectoral level. Failing that, the sectoral baseline for the grid connected electricity sector should be reduced, removing the bulk of the headroom between current emissions and the sectoral baseline, though this would not have the same efficiency benefits as directly including individual electricity generators in the SM
- expand transport sector coverage: once electricity generators are covered at facility level, the SM should be extended to liquid fuel wholesalers, with downstream vehicle emissions imputed to them
- allow generation of sub-baseline abatement credits. If SM baselines are expressed in absolute emissions terms, SM facilities should be allowed to generate emissions credits for emissions abatement below their SM baseline.
- no additional Emissions Intensive Trade Exposed Industries (EITEIs) protections should be provided through the SM. The SM already provides the majority of emissions rights for free, and will continue to do so for the foreseeable future.

Reform directive 27: Increase the integrity of carbon offsets



Recommendation 6.6

Increase the integrity of carbon offsets recognised by the Safeguard Mechanism

To make emissions reductions credible, the Australian Government should discontinue the 25-year permanence period for sequestration-related ACCU projects, introduce an additional class of sequestration-based ACCUs that align with the more enduring permanence provisions of the biodiversity market, and publish offset reports and project audit reports required by the Clean Energy Regulator. State and Territory Governments should stipulate the proportion of biogas that needs to be captured by existing ACCU-generating landfill gas capture projects under existing regulations.

Reform directive 28: Remove emission reduction measures that are not complementary to the Safeguard Mechanism



Recommendation 6.7

Phase out policy measures not complementary to the Safeguard Mechanism

Policy measures that are not complementary to the Safeguard Mechanism (SM) should be phased out to lower the overall cost of abatement. A review of existing measures should be undertaken to assess their complementarity to a reformed SM and recommend a timetable for the removal of non-complementary measures identified by the review. A 'complementary measure' would be one that either drives emissions abatement from emissions sources not covered by the SM, addresses market failures that constrain the pursuit of abatement from emissions sources covered by the SM, or deliver broader non-carbon abatement related benefits. Remaining non-Safeguard Mechanism policies should (1) stipulate how they are complementary to the SM, and (2) have their estimated abatement costs independently estimated and made public.

Reform directive 29: Pursue a least-cost approach to securing electricity supply



Recommendation 6.8

Pursue a least-cost approach to securing electricity supply

The proposed Capacity Investment Scheme should be implemented with a five-year sunset clause, and independently reviewed ahead of any decision to extend its life. It should be implemented on a technology neutral basis, allowing for both supply and demand-side participation by households and businesses.

A Inquiry conduct and participants

This appendix describes the stakeholder consultation process undertaken for the inquiry and lists the organisations and individuals who have participated.

Inquiry terms of reference

The terms of reference for the inquiry was received from the Treasurer on 7 February 2022 and is viewable on the inquiry website. The inquiry was advertised in *The Australian* on the 14 February 2022.

Engagement with inquiry participants

The Commission issued a call for submissions paper on 21 February 2022. From August to October 2022, it released six interim reports outlining its early analysis and reform directions in inquiry topic areas. Throughout the inquiry, the Commission held and benefited from the following consultation processes:

- Four roundtables (table A.4)
 - Tertiary education
 - Migration
 - Digital, data and innovation
 - Modelling
- Two days of public hearings (table A.5)
 - Melbourne (7-8 November)
 - Hearings were advertised in *The Australian* on 26 October 2022 and through an email to registered inquiry participants
- About 150 meetings were held with stakeholders across Australia (table A.3)

The Commission received 203 public submissions during the inquiry and also provided facilities on the inquiry website for interested stakeholders to lodge a brief comment (tables A.1 and A.2).

Table A.1 – Number of submissions and comments received

	Pre-interim reports	Post-interim reports	Total
Submission	74	129	203
Comments	2	15	17

Table A.2 – Submissions received

Participants	Submission no.
88.io	183
Actuaries Institute	93
Adrian Foley	130
Ahton de Silva, Emmauelle Walkowiak, Maria Yanotti, Sarah Sinclair, and Sveta Angelopoulos	125
AIA Australia	30
Alphacrucis University College (AC)	133
Animal Medicines Australia	39
APSCo	202
Associate Profess Chris Wright	100
Associated of Retired Principals of Technical Institutions	95
Association of Heads of Independent Schools of Australia (AHISA)	172
Ausfilm	48
Australasian Council of Deans of Arts, Social Sciences and Humanities (DASSH)	141
Australasian Railway Association (ARA)	65
Australian Academy of Science	200
Australian Academy of Technological Sciences and Engineering (ATSE)	8, 89, 98
Australian Aluminium Council	131
Australian Automobile Association (AAA)	6
Australian Bureau of Statistics (ABS)	127
Australian Chamber of Commerce and Industry (ACCI)	47, 175
Australian Commission on Safety and Quality in Health Care (ACSQHC)	9
Australian Communications Consumer Action Network (ACCAN)	118
Australian Competition & Consumer Commission (ACCC)	72
Australian Constructors Association (ACA)	73, 105
Australian Council of Deans of Education Vocational Education Group (ACDEVEG)	116
Australian Council of Deans of Health Sciences (ACDHS)	153
Australian Digital Health Agency	145
Australian Digital Inclusion Alliance	96
Australian Education Union Federal Office	21
Australian Energy Council (AEC)	161
Australian Healthcare and Hospitals Association (AHHA)	27, 176
Australian HR Institute (AHRI)	54
Australian Industry Group (Ai Group)	43, 179
Australian Information Industry Association (AIIA)	76, 180
Australian Institute of Company Directors	44
Australian Institute of Teaching and School Leadership (AITSL)	146

Participants	Submission no.
Australian Investment Council (AIC)	63, 71, 83, 84, 135
Australian Learning Lecture	124
Australian Local Government Association (ALGA)	61, 132
Australian Mobile Telecommunications Association (AMTA)	163
Australian Research Data Commons (ARDC)	164
Australian Skills Quality Authority (ASQA)	149
Australian Small Business and Family Enterprise Ombudsman (ASBFEO)	64, 165
Australians for Northern Development & Economic Vision (ANDEV)	3
Ben Blackburn Racing	74, 81
Beyond Blue	15
Bill Ranken	148
Black Dog Institute	24
BSA The Software Alliance	134
Bupa	69
Business Council of Australia (BCA)	16, 181
Business Excellence Australia	32, 136, 159
Career Development Association Australia (CDAA)	104
Catholic Health Australia	78
Centre for Independent Studies	42
Chemistry Australia Ltd	35
Christopher O'Donnell, Professor	40
Civic Contractors Federation	38
Commercial Radio Australia	12
Complementary Medicines Australia & The NICM Health Research Institute – Joint	29
Consult Australia	28
Consumer Policy Research Centre (CPRC)	19, 115
Cooperative Research Australia (CRA)	194
Country Universities Centre	119
CPA Australia	94, 106
CSIRO	128
Customer Owned Banking Association (COBA)	62
David Wadley	178
Department of Finance	123
Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA)	201
Desmond Griffith	143
Digital Service Providers Australia New Zealand (DSPANZ)	18

Participants	Submission no.
Dr Ann Villiers	107
Dr Holly Randell-Moon	85
Dr Ian Cornford	150
Dr Tom Karmel	197
Early Learning and Care Council Australia; The Front Project and Australian Childcare Alliance – Joint	34
eBay Australia and New Zealand	114
Electrical Trades Union of Australia (ETU)	103
Energy Skills Australia	99
Engineers Australia	85
eSafety Commissioner	87
Financial Services Council (FSC)	53
Financial Services Institute of Australasia (FINSIA)	68
Gary McLaren	137
Gemaker	13
Geoffrey Taperell	5
Global Sisters Limited	46
Graham Bary	11
GrainGrowers	193
Grattan Institute	37
Grok Academy	185
Group of Eight	187
GSK Australia	14
Hireup	109
Independent Higher Education Australia (IHEA)	111, 120
Infrastructure Victoria	10
Innovative Research Universities (IRU)	177
Institution of Chemical Engineers (ICChemE)	101
Insurance Council of Australia (ICA)	59, 203
Internet Association of Australia (IAA)	168
IPA-Deakin SME Research Centre (IDSRC)	31
Isolated Children's Parents Association of Australia Inc (ICPA)	156
JCSF Consulting Pty Ltd	97
Jenny Gordon, Dr	17
John Dahlsen	1
John O'Donnell	91
Kevin Cox	75
KPMG	60, 192

Participants	Submission no.
La Trobe University	182
Large Format Retail Association (LFRA)	142
Local Government Elected Members Association Inc. (LGEMA)	4
Mable Technologies	152
Master Builders Australia (MBA)	58, 190
Medicines Australia	126
Minerals Council of Australia (MCA)	55
Monash Q Project – Monash University	160
Monash University	184
MTC Australia	140
MYOB	198
National Electrical and Communications Association (NECA)	108
National Farmers' Federation (NFF) and Regional, Rural and Remote Communications Coalition (RRRCC)	167
National Rural Health Alliance	110
National Tertiary Education Union (NTEU)	36
NBN Co	147
Office of the Australian Information Commissioner	173
Per Capita Australia	162
PEXA	82
Pfizer Australia	129
Phillip Hone	77
Primary Focus	56
Professor John Quiggin	102
Professor Julia Horne	169
Professors' Nicholas Biddle and Matthew Gray	155
Property Council of Australia	49
Queensland Nurses and Midwives Union (QNMU)	41, 90
Ray Johnson	117
Regional Development Australia Tasmania (RDAT)	189
Regional Universities Network (RUN)	154
Richard Caladine	113
Roads Australia	25
Roads Australia	151
Robert Wildermuth OAM	199
Ronald Jackson	171
Salesforce	80
Science and Technology Australia	188
Seer Data and Analytics	139

Participants	Submission no.
Self-Employed Australia (SEA)	170
Shopping Centre Council of Australia	45
Simon Kwok	138
Smartsat CRC	144
Tabcorp	57
Tasmanian Government	196
Tasmanian Small Business Council (TSBC)	20
Teachers and Teaching Research Centre (TTRC)– University of Melbourne	122
Technology Council Australia	51
TechnologyOne	66, 79
Telstra Corporation	174
Tenfold Australia	23
The Chamber of Minerals & Energy of Western Australia (CMEWA)	52
The Citizen's Dividend Organisation	2
The Honourable Reg Hamilton	50
The Medical Technology Association of Australia (MTAA)	33
The Pharmacy Guild of Australia	67, 112
The Smith Family	26
Universities Australia (UA)	70, 195
University of Melbourne	186
University of Melbourne Graduate Student Association (GSA)	158
University of Technology Sydney (UTS)	92
Urban Taskforce	88
VETASSESS	157
Vocus Group Ltd	121
Volunteering Australia	22, 166
William Merrilees	7
WiseTech Global	191

Table A.3 – Consultations

Participants
ACT Government, Chief Minister, Treasury and Economic Development Directorate
Alastair Hick
American Chamber of Commerce In Australia
Australian Constructors Association (ACA)
Associate Professor Tim Higgins, The Australian National University

Participants

Associate Professor Wayne Geerling, Monash University

Atlassian

AusIndustry

Australian Banking Association

Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES)

Australian Bureau of Statistics (ABS)

Australian Council of Education Research (ACER)

Australian Digital and Telecommunications Industry Association (ADTIA)

Australian Digital Health Agency (ADHA)

Australian Education Research Organisation (AERO)

Australian Education Union

Australian Energy Market Operator (AEMO)

Australian Healthcare and Hospitals Association (AHHA)

Australian Human Resources Institute (AHRI)

Australian Information Industry Association (AII)

Australian Institute of Teaching and School Leadership

Australian Investment Council (AIC)

Australian Medical Association (AMA)

Australian Mobile Telecommunications Association (AMTA)

Australian Prudential Regulation Authority (APRA)

Australian Retailers Association (ARA)

Australian Skills Quality Authority (ASQA)

Australian Small Business and Family Enterprise Ombudsman (ASBFEO)

Australian Taxation Office (ATO)

Australian Technology Network of Universities (ATN)

Australian Tutoring Association

Bao Hoang

Business Council of Australia (BCA)

Calix

Canberra Goulburn Catholic Education Office

CarbonAbility

DoorDash

Dr Char-lee McLennan, QUT Business School

Charles Cornish, Tabula Rasa Health Care

Chartered Accountants Australia & New Zealand (CA ANZ)

Participants

Cicada Innovations

Claire Field & Associates

Climate Risk

Committee for Economic Development of Australia (CEDA)

Commonwealth Bank of Australia

Community Colleges Australia (CCA)

Consult Australia

Cooperative Research Centre (CRC)

Council of Small Business Organisations Australia (COSBOA)

CSIRO Data 61

Curtin Research Centre

Deloitte Access Economics

Department of Agriculture, Water and the Environment

Department of Climate Change, Energy, the Environment and Water (DCCEEW)

Department of Education, Skills and Employment (DESE)

Department of Finance

Department of Foreign Affairs and Trade (DFAT)

Department of Employment and Workplace Relations (DEWR)

Department of Home Affairs

Department of Industry, Science and Resources (DISR)

Department of Industry, Science, Energy and Resources (DISER)

Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA)

Department of Prime Minister and Cabinet (PM&C)

Department of The Treasury

Digital Skills Organisation (DSO)

E61 Institute

Emeritus Professor Bruce Chapman AO, The Australian National University

Equinix

Education Services Australia

Evidence for Learning, Social Ventures Australia

Fair Work Commission

Finity

Gemaker

Grattan Institute

Group of Eight (Go8)

Participants

Hireup

Higher Education Research Group

Independent Pricing and Regulatory Tribunal NSW (IPART)

Infrastructure Australia

Innovative Research University (IRU)

Interactive Games and Entertainment Association (IGEA)

IP Group Australia

John Howard, Howard Partners

Dr Kean-Seng Lim

Knowledge Commercialisation Australasia (KCA)

Learning First

Martin Bean CBE

Melbourne Accelerator Program`

Microsoft

National Australia Bank

National Centre for Vocational Education Research (NCVER)

National Disability Insurance Agency (NDIA)

National Indigenous Australian Agency (NIAA)

National Skills Commission (NSC)

National Tertiary Education Union (NTEU)

New South Wales Centre for Economic and Regional Development

New South Wales Department of Education

New South Wales Department of Premier & Cabinet

New South Wales Treasury

NT Department of Industry, Tourism and Trade

NT Department of the Chief Minister and Cabinet

NT Department of Treasury and Finance

Office of Industry Innovation and Science Australia

Office of the Chief Scientist

Peter Tulip

Professor Andrew Macintosh, ANU College of Law

Professor Andrew Norton, Practice of Higher Education Policy, Centre for Social Research and Method, Australian National University

Professor Beth Webster, Centre for Transformative Innovation, Swinburne University of Technology

Professor Hugh Harley, School of Economics, University of Sydney

Participants

Professor Peter Dawkins, Mitchell Institute for Education and Health Policy, Victoria University

Professor Richard Holden, UNSW Business School

Professor Stephen Parker, Centre for the Study of Higher Education, University of Melbourne

Professors Alistair Royse and Colin Royse, Ultrasound Education Group, University of Melbourne

Professors Michael Ward and Russell Smyth, Monash University

Queensland Department of Education

Queensland Department of Premier and Cabinet

Queensland Treasury

Regional Universities Network (RUN)

Reputex

Reserve Bank of Australia

Restaurant & Catering Australia (R&CA)

Roller

Royal Australian College of General Practitioners (RACGP)

Sally Thorpe

South Australia Department of Education

South Australia Department of Premier and Cabinet

South Australia Department of Treasury

South Australia Productivity Commission

Sarah Pilcher, Centre for Education and Training, Ai Group

SpeedX

TAFE Directors Australia (TDA)

Tasmanian Department of Education

Tasmanian Department of Premier and Cabinet

Tasmanian Department of State Growth

Tasmanian Department of Treasury and Finance

Teach for Australia

Tech Council of Australia

Tech Policy Design Centre, Australian National University

Tertiary Education Quality and Standards Agency (TEQSA)

The Hon. Fiona Nash, Regional Education Commissioner

The Smith Family

Universities Australia (UA)

University of Technology Sydney – Human Technology Institute

Victorian Department of Education

Participants

Victorian Treasury

Western Australia Department of Education

Western Australia Department of Premier & Cabinet

Western Australia Department of Treasury

World Economic Forum (WEF)

Xero

Table A.4 – Roundtable details and participants

25 October 2022 – Tertiary education

Australian Industry Group (Ai Group)

Committee for Economic Development of Australia (CEDA)

Department of Education

Department of Finance

Emeritus Professor Bruce Chapman AO, College of Business and Economics, Australian National University

Grattan Institute

Independent Tertiary Education Council of Australia (ITECA)

National Centre for Student Equity in Australia

National Skills Commission (NSC)

National Tertiary Education Union (NTEU)

Professor Andrew Norton, College of Arts and Social Sciences, Australian National University

Professor Tom Karmel, Future of Employment and Skills research Centre, University of Adelaide

Regional Universities Network

TAFE Directors Australia

TEQSA

Victoria Department of Jobs, Precincts and Regions (DJPR)

27 October 2022 – Migration

Department of the Treasury

Department of Home Affairs

3 November 2022 – Digital, data and innovation

Atlassian

Australian National University (ANU) Tech Policy Design Centre

Australian Healthcare and Hospitals Association

Australian Retailers Association

Australian Small Business and Family Enterprise Ombudsman

Chartered Accountants Australia and New Zealand

Consult Australia

Consumer Policy Research Centre

Digital Skills Organisation

e61 Institute

Microsoft

Tech Council of Australia

Telstra

UTS Human Technology Institute

Xero

3 November 2022 – Modelling

Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES)

Centre of Policy Studies, Victoria University

Chris Murphy, Arndt-Corden Economics Department, Crawford School of Public Policy, Australian National University

Deloitte Access Economics

Department of the Treasury

Ernst & Young

George Verikios, Department of Accounting, Finance and Economics, Griffith University

Investment NSW

Sally Thorpe

Table A.5 – Public hearings

Melbourne – 7 November 2022

Transport Workers' Union

Mable

Hireup

Pexa

Vocus

Gary McLaren

Community Colleges Australia

Melbourne – 8 November 2022

Australian Constructors Association

TechnologyOne

Group of Eight

88.io