



The forces shaping Australia's economy over the next decade

Queensland Economics Teachers' Association Conference
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Danielle Wood, CEO

GRATTAN
Institute

Economic trends: the forces that will shape Australia

Stagnating economic growth

- Australia's economic growth has stagnated
- What are the major opportunities to reboot growth?

The changing face of work

- Australia is increasingly a services economy
- Delivering care and digital workforces is a significant challenge

Managing structural budget pressures

- Structural pressures on budgets are growing as population ages
- Policies have supercharged the challenge – can we wind back?

Forging a path to net zero

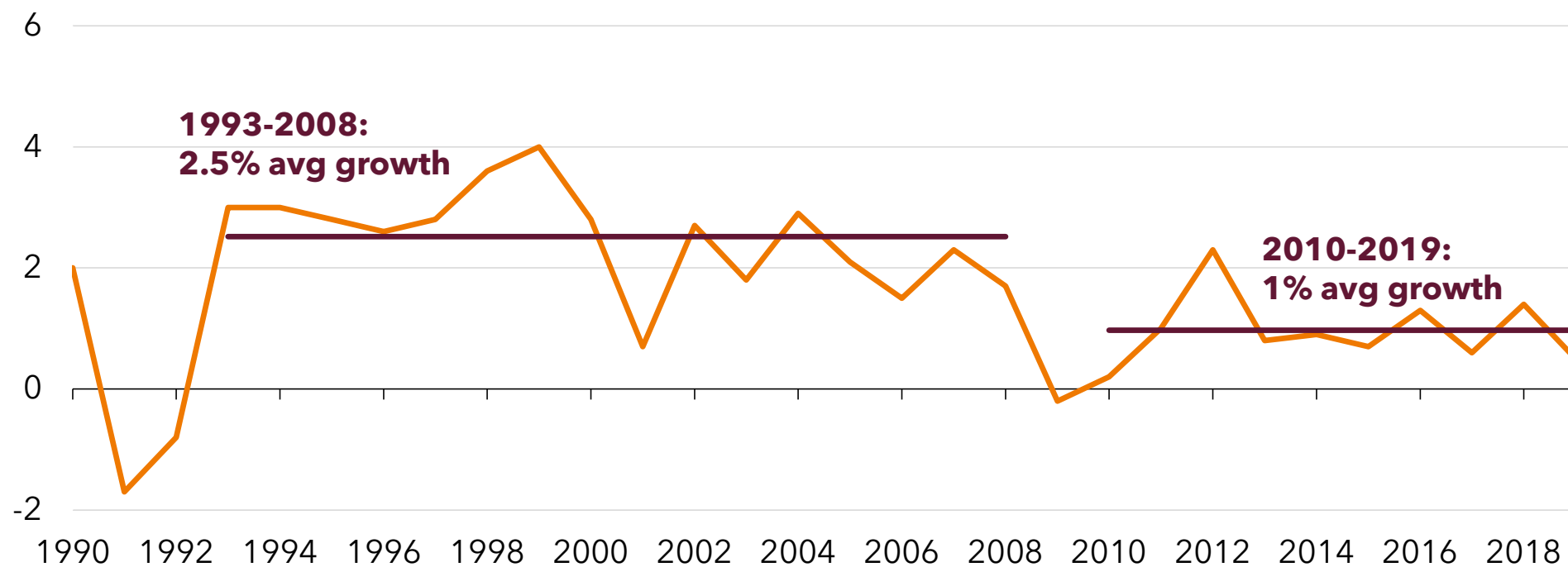
- More progress needed in 2030s to avoid a disruptive change in 2040s and 2050s
- Supporting the transition and looking for opportunities

Shifting geo-political sands

- Short-term economic implications as well as long-term risks
- Do not want to unwind the benefits of globalisation

Growth stagnated in the decade pre-COVID

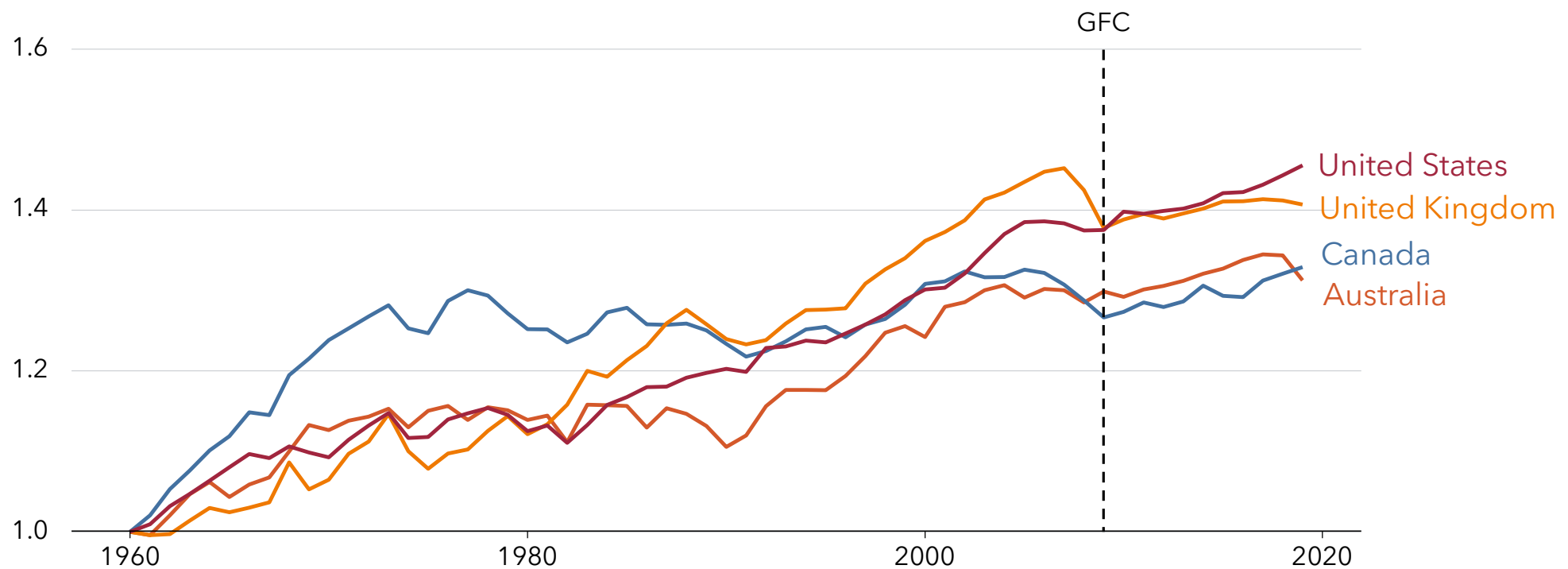
Growth in real GDP per capita, 1990-2019, per cent change



Sources: ABS National Accounts; Grattan analysis.

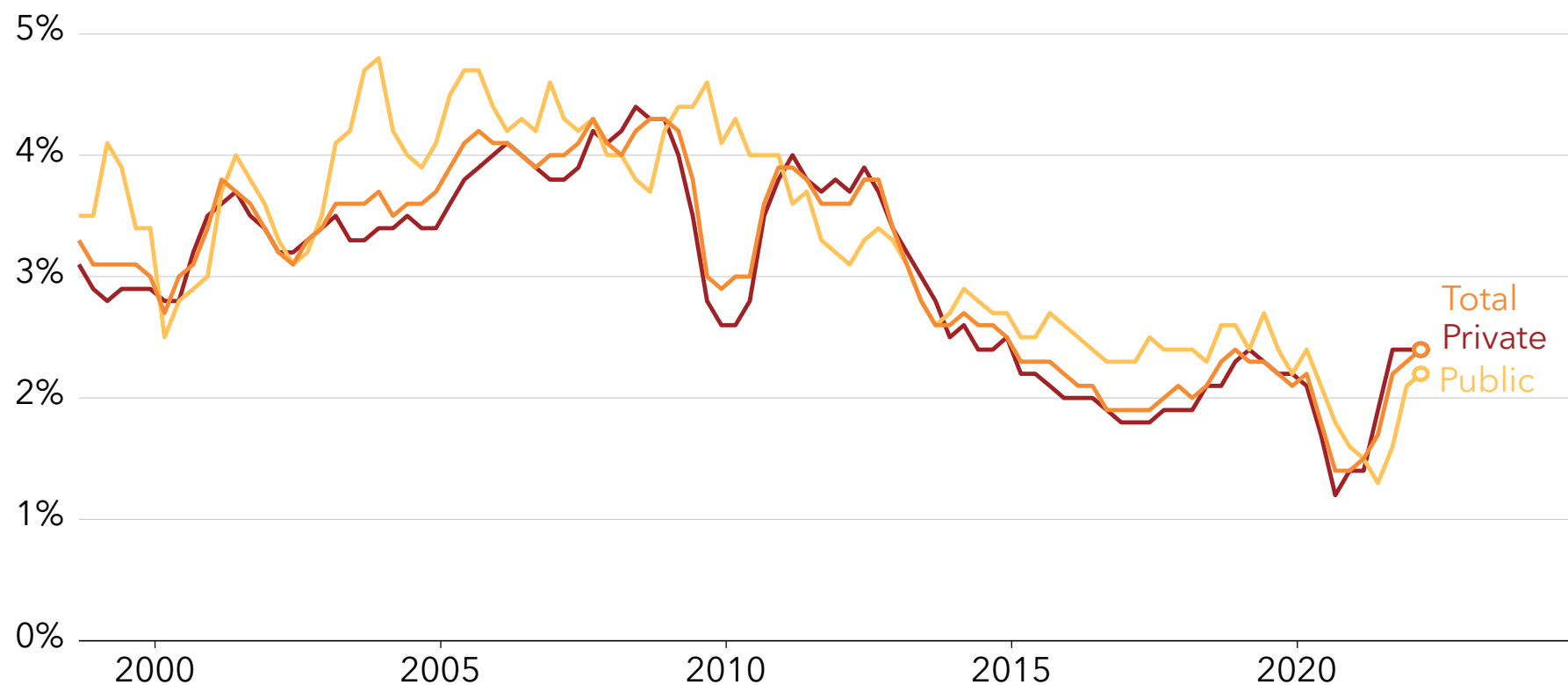
Productivity flatlined across many industrialised nations

Total factor productivity, indexed to 1960=1



And wages growth slumped

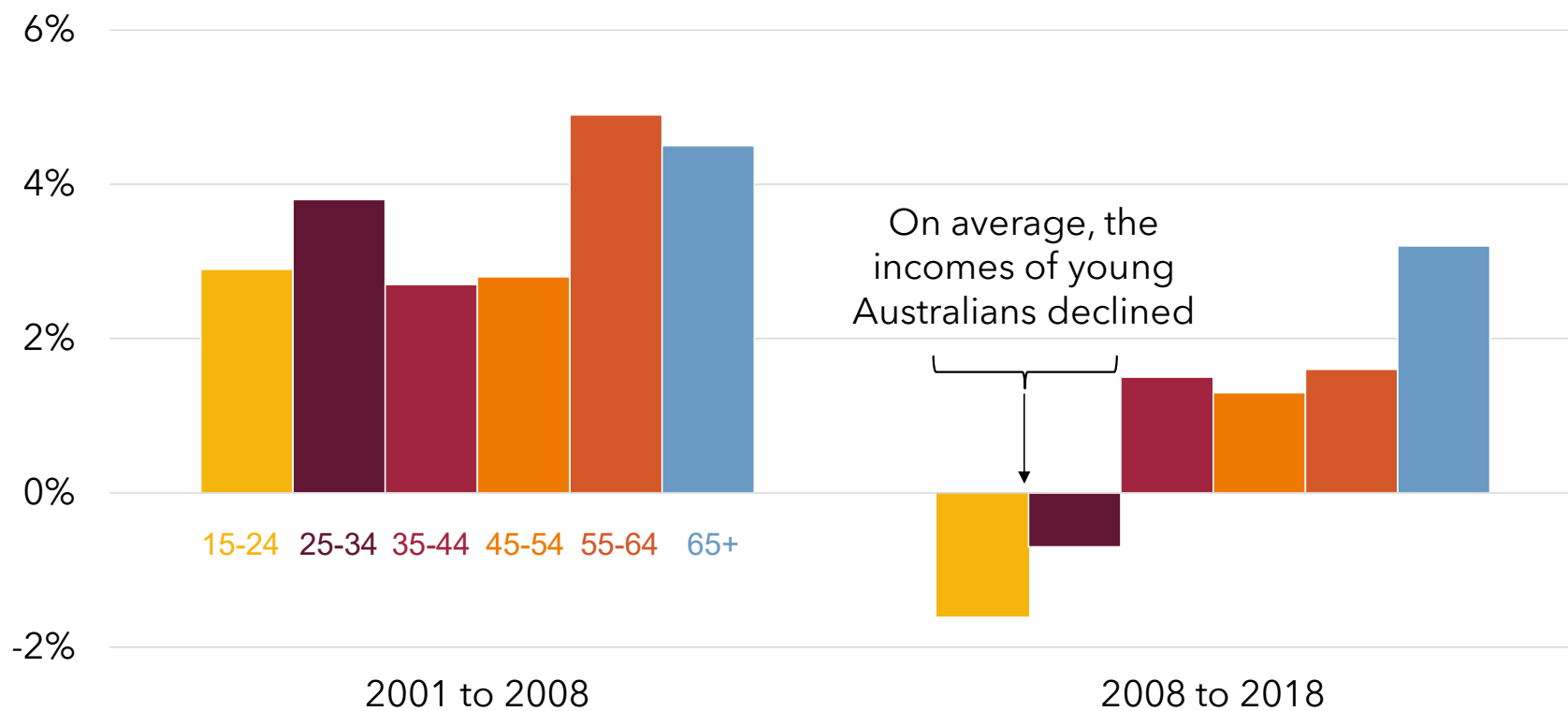
Annual growth in the Wage Price Index



Source: ABS Wage Price Index.

This particularly hurt young people

Annual growth in average disposable incomes by age



Note: Expressed in real terms, adjusted by CPI.

Source: Productivity Commission estimates based on HILDA data.

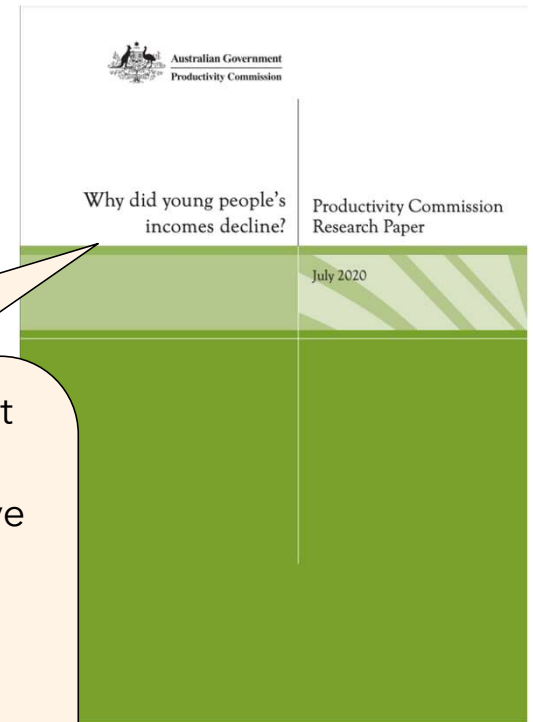
As they fell down the 'jobs ladder'



Andy Haldane, former Bank of England Chief Economist

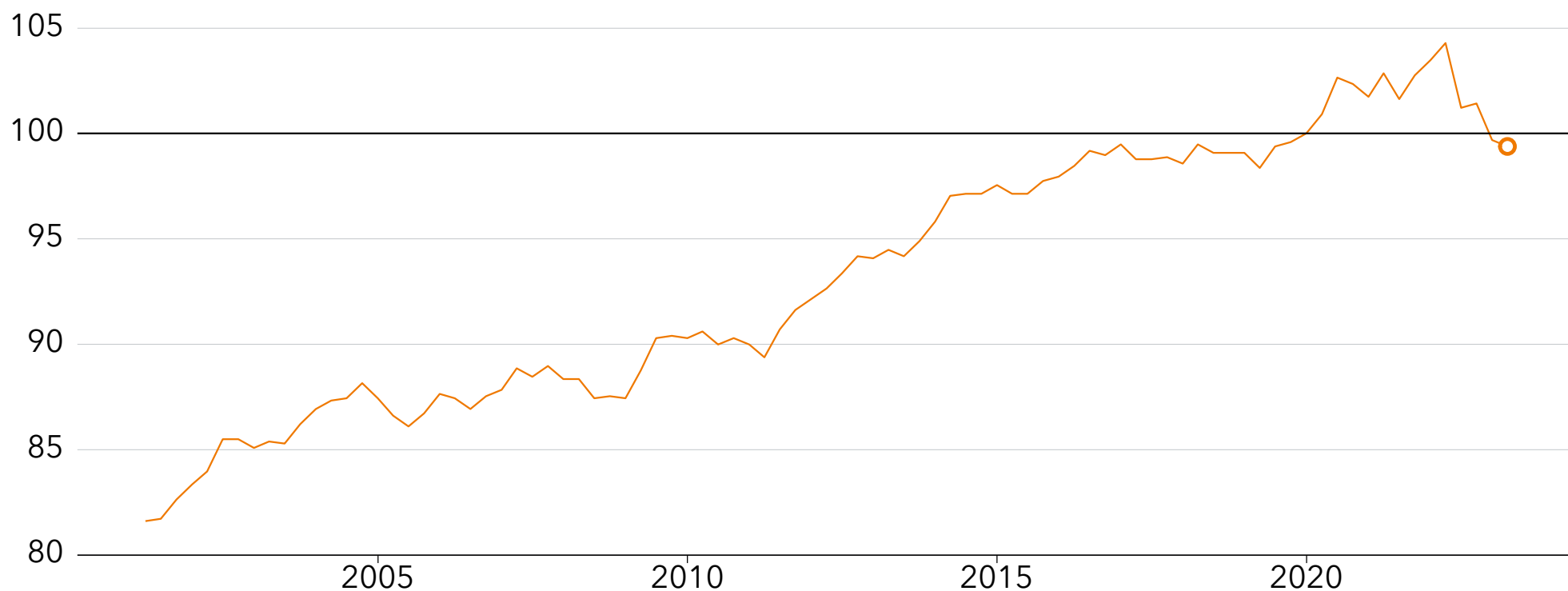
Contributing to poor outcomes is that younger people are 'falling down the jobs ladder'

The **Productivity Commission** found that people joining the workforce in the past decade have graduated into less attractive occupations on average, for a given level of education, than previous generations. This pushes other young people without the same qualifications even further down the ladder - into part-time and casual work.



In the COVID recovery, productivity growth has gone backwards

Non-farm GDP per hour, December quarter 2019 = 100



Source: RBA Statistical Table H4.

What's going on? Unpacking the main theories

- **Shift to less capital-intensive industries** - the march of the services sector and the rise of intangibles
- **Reduced boost from technological change**
- **Smaller gains from education** / human capital accumulation
- **Reduction in economic dynamism** - slower rate of job switching (including movement from low to high productivity firms) and slower rate of new business formation (except sole traders) and firm exit
- **Increase in market concentration and power**
- **Lack of policy reform**

But reform momentum has slowed

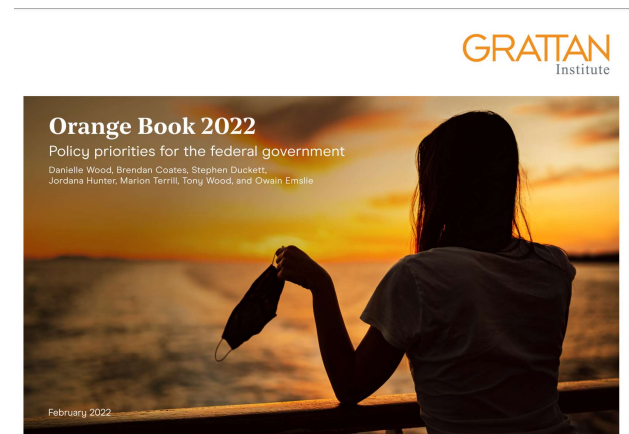
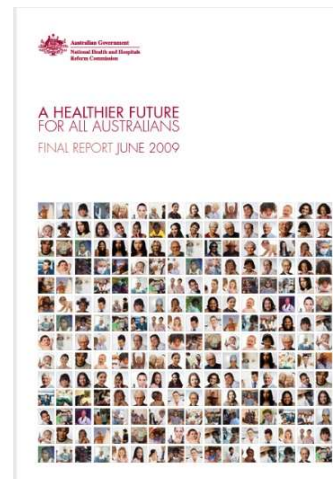
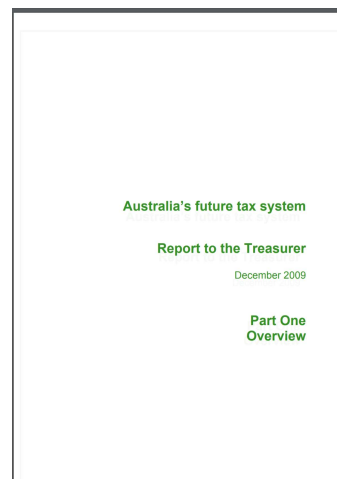
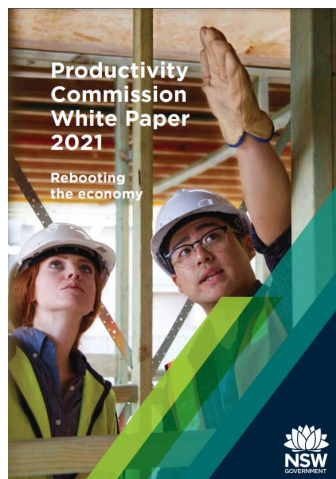
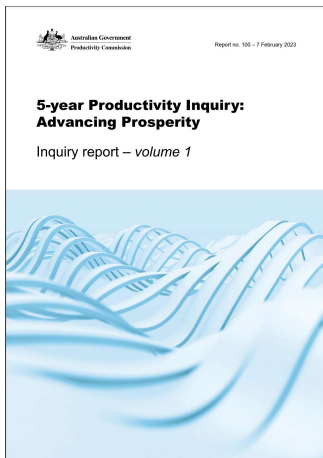
	Hawke/Keating 1983–1996	Howard 1996–2007	Rudd/Gillard 2007–2013	A/T/M 2013–2020
Trade and currency	Float A\$ International students Tariff reductions			FTAs End auto assistance
Macro/budget policy	RBA inflation targets	Balanced budget commitment	PBO	
Labour markets	Accord Enterprise Bargaining	Workplace Relations Act Skilled migration Work Choices	Fair Work Age Pension access 67	Age Pension access 70 Child Care Subsidy reforms
Competition policy	Hilmer review	National Competition Policy	Demand-driven higher ed	
Privatisation	GBE reform CBA sale Elec Water Airline IPO	Telstra sale (1, 2, & 3)		Medibank sale
Regulation	Foreign bank entry Telco deregulation	Bank capital reform	National Reform Agenda	Super fees
Tax	Capital Gains Tax Dividend imputation Super-annuation	GST Personal income tax cuts Company tax cut	Carbon pricing	Super tax Company tax Income tax cuts?
Federalism	Medicare	Federal/state financial reform	Federal/state health reform	NDIS School funding

Notes: Reforms that were not passed, or that were subsequently substantially wound back or repealed, are shown shaded out. A/T/M = Abbott/Turnbull/Morrison. FTAs = Free Trade Agreements. PBO = Parliamentary Budget Office. GBE = Government Business Enterprise. CBA = Commonwealth Bank of Australia. Airline IPO = the sale and Initial Public Offering of Qantas in 1993 and 1995.

Sources: Daley & Anderson, *The track record of OECD Economic Surveys*, Grattan blog; Access Economics (2019); *The Economist* (2011); Grattan analysis

There is no shortage of ideas

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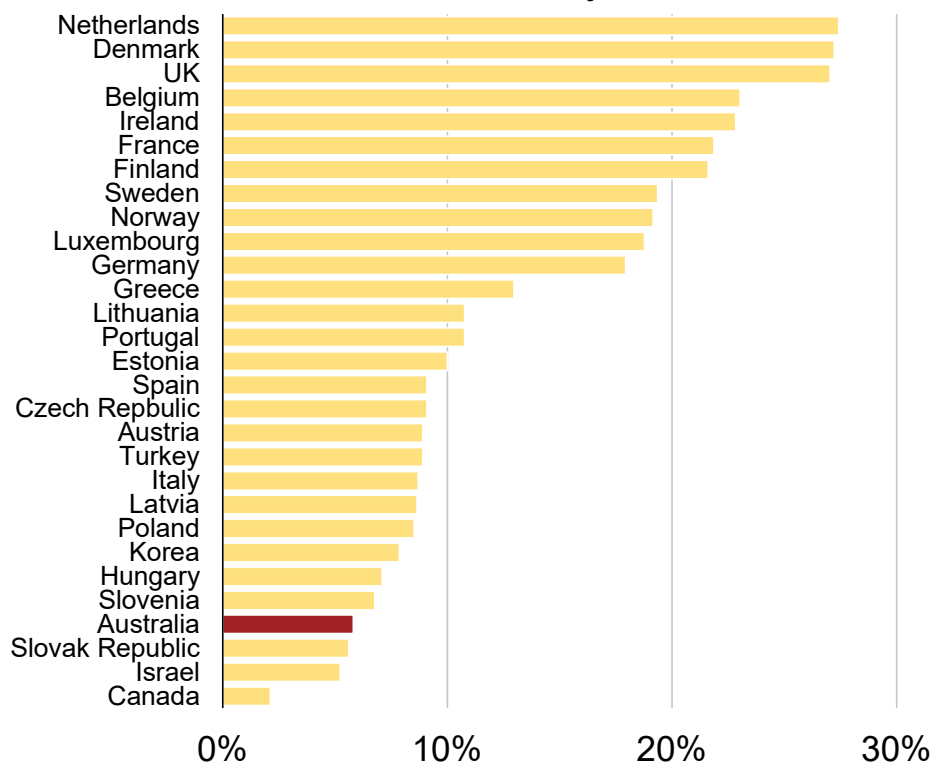


What could make the biggest difference?

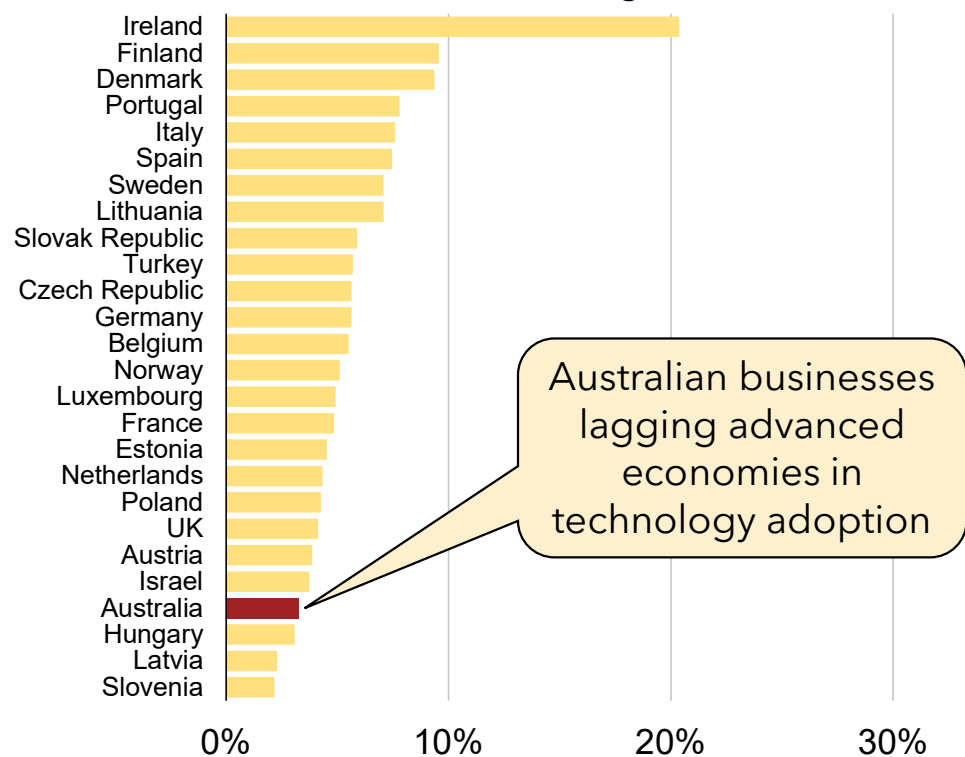
(1) The digital transformation

Share of businesses that use data analytics (2019) and artificial intelligence (2020)

Data analytics



Artificial intelligence

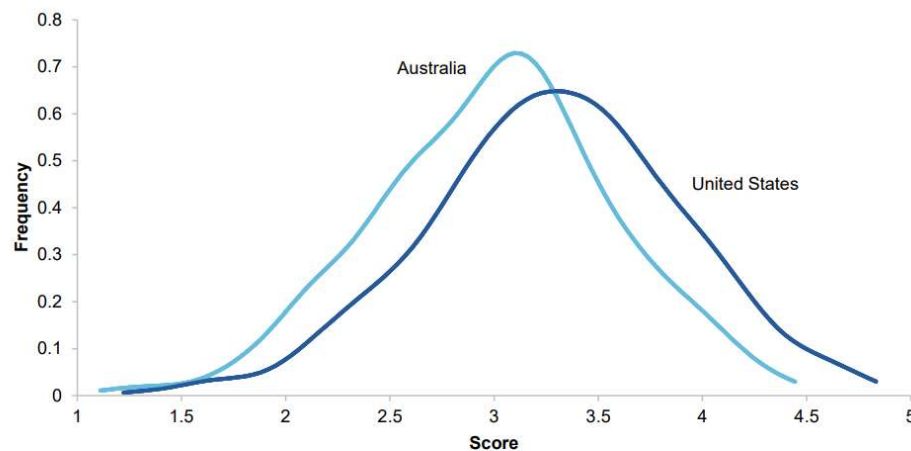


Australian businesses
lagging advanced
economies in
technology adoption

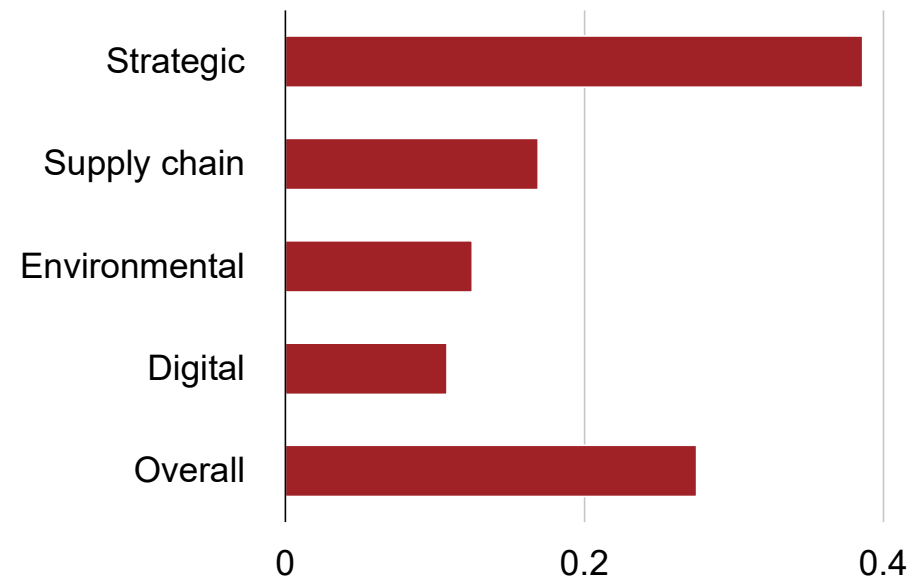
Australian management lags when it comes to identifying and integrating digital innovation

Scope for Australian firms to move closer to the best practice management frontier

Average Australian management capability scores across 5 domains



a. Density kernels based on data from 451 Australian and 953 US manufacturing businesses from the World Management Survey (Bloom et al. 2021) and described in Bloom et al. (2014). Higher scores represent better management capability.



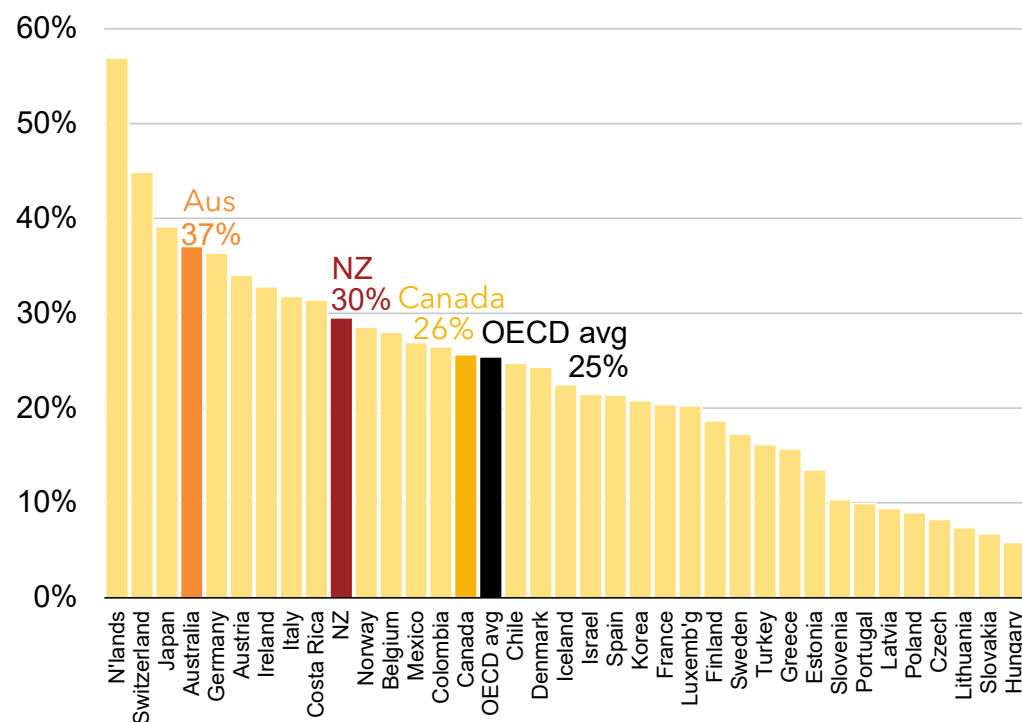
What could make the biggest difference?

(2) Deepening talent pools

Growing women's workforce participation has been a major contributor to Australia's economic growth over the past half-century, but there's still **further to go**:

- Australian women are more likely to work part-time than their overseas counterparts
- Women with children typically work 2-3 days per week. Many say they would like to work more
- Australia has a highly gender-segregated workforce - most Australians work in industries that are at least 60% male or female

Australia's rates of part-time work for women are among the highest in the OECD (2019) (share of employed women)



Barriers exist in workplaces and outside them

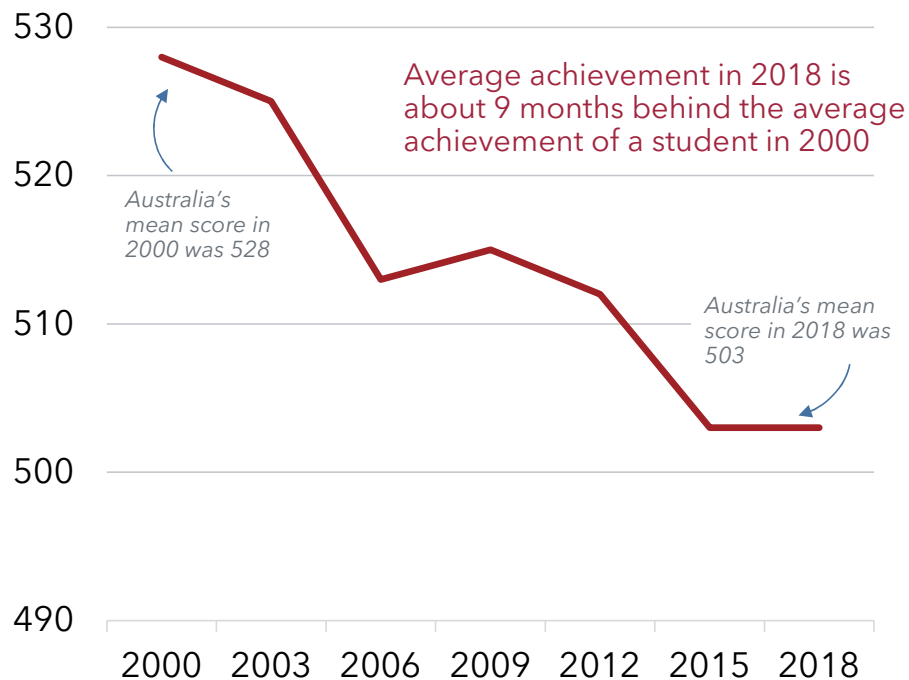


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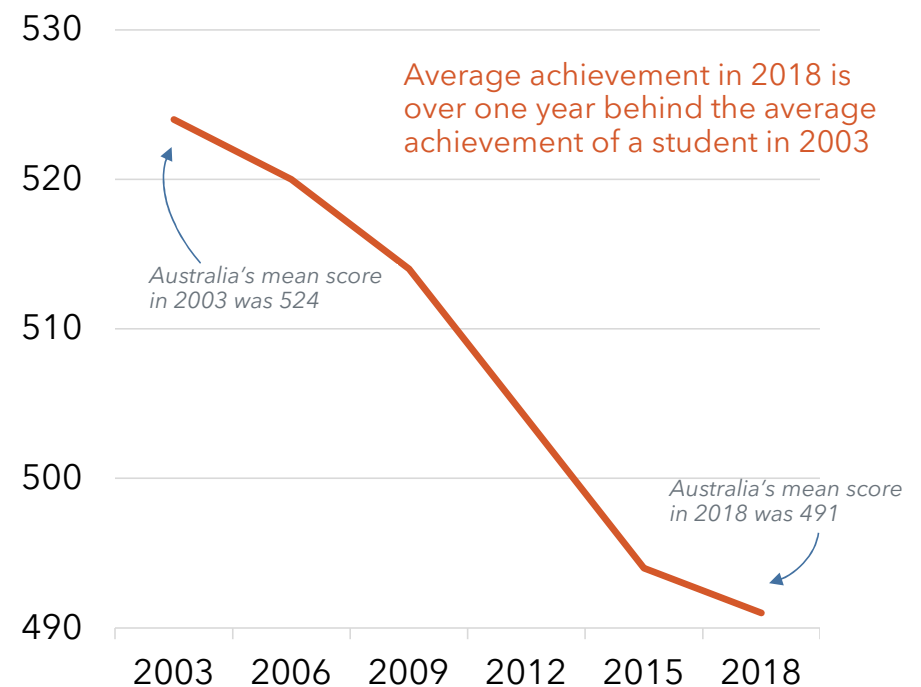
(3) Boosting Australia's educational performance

Australian students' performance is declining over time

Aust's mean score in PISA **reading** literacy (2000-2018)



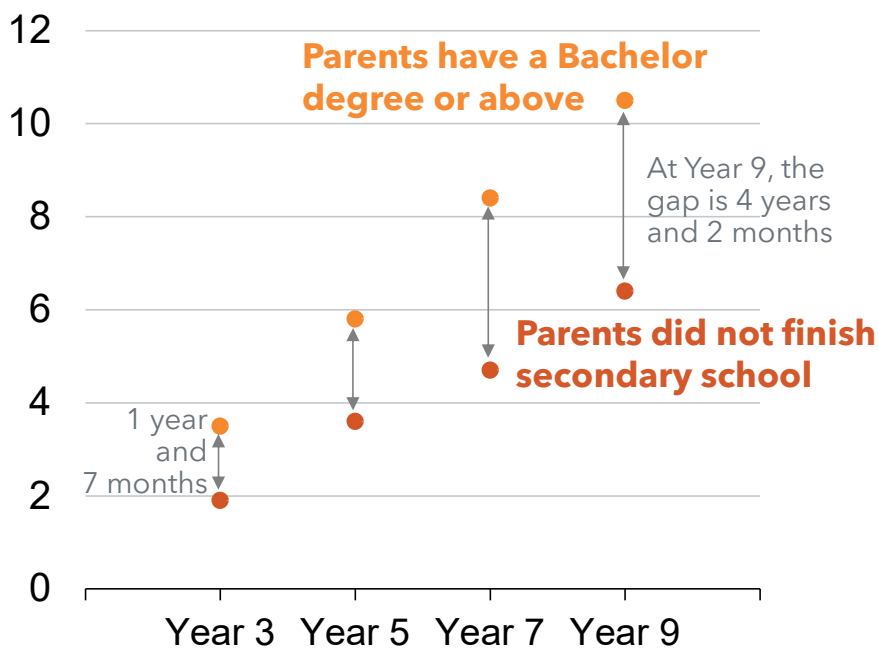
Aust's mean score in PISA **mathematics** (2003-2018)



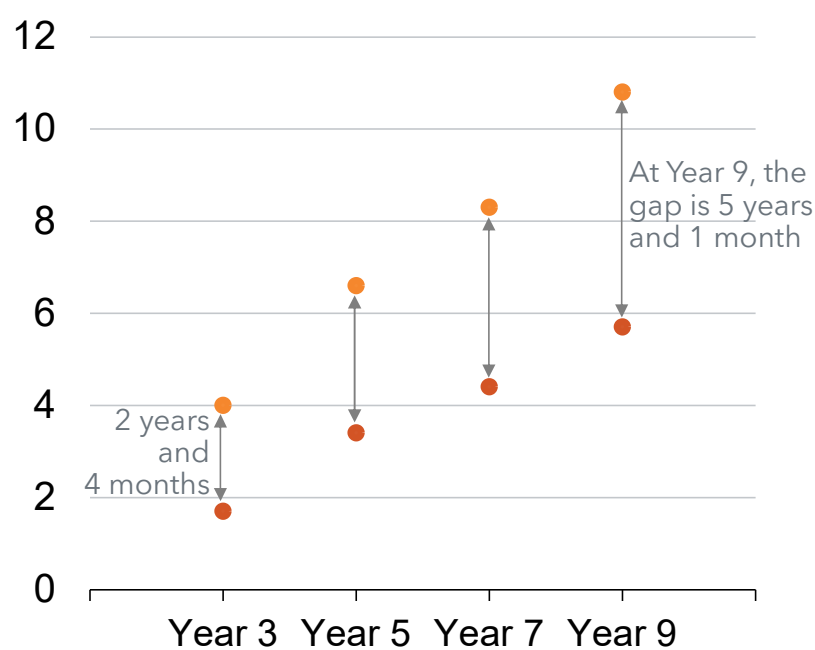
There is a big equity gap in numeracy and reading

Equivalent year level, NAPLAN, median, Australia, 2021

Numeracy



Reading



Source: Grattan analysis of ACARA (2021) using Grattan (2016) methodology for determining equivalent year levels.

We know a lot of the policies that could make a difference



Create a top teacher career path to improve expertise

- Australia urgently needs a strategic approach to building and using subject-specific teaching expertise.
- Grattan recommends two new roles with higher pay (+\$40k / +\$80k) and new responsibilities to guide/coach teachers.



Reforms to boost effectiveness of the wider school workforce

- There is a large and growing gap between government expectations for schools and teachers' capacity to deliver on these.
- But there are big opportunities to improve how schools operate and reduce work pressures, including teacher workloads e.g., better use of specialists and assistants.



Give teachers access to the right curriculum materials

- Using high-quality, school-wide curriculum materials saves time and boosts learning, especially for new teachers and struggling students.
- Grattan recommends government procure high-quality curriculum materials and radically increase curriculum expertise in schools.



Improve reading and maths instruction

- Improving reading and maths has big pay-offs.
- More support is needed for teachers to implement effective instruction in class – better instructional guidance & training for teachers is essential.
- Small-group tutoring should be embedded in all schools to catch-up students that are falling behind.
- Specialist maths teachers could improve teaching quality in primary schools.

These are just some of a long list of levers...

Major levers	Policy tools
Increasing participation	Migration policy Workforce participation - women, older people, disability and chronic disease Tax reform
Increasing human capital	Improve school education Post school: Stabilise VET, better pathways, boosting university outcomes Lifelong learning Redesign migration policy
Boosting economic dynamism	Barriers to mobility (e.g. stamp duties, planning laws, occupational licencing) Ensure competition laws are fit for purpose IR and tax reform Remove low value regulatory barriers Stop supporting zombie firms/industries
Technological development and diffusion	R&D investment Address capital market failures Regulatory barriers to technology diffusion (IP laws) Better climate policy
More effective government	Improve delivery of government services (e.g. health, education, justice) Better government investment decisions and price signals (e.g. infrastructure) Market design in quasi-markets (e.g. childcare, disability, superannuation) Improve chances of good policy (institutional reforms)

Mega-trends: the forces that will shape Australia

Rebooting productivity growth

- Embracing digital technology
- Deepening talent pools
- Improving our education system

The changing face of work

- Australia is increasingly a services economy
- Delivering care and digital workforces is a significant challenge

Managing structural budget pressures

- Structural pressures on budgets are growing as population ages
- Policies have supercharged the challenge – can we wind back?

Forging a path to net zero

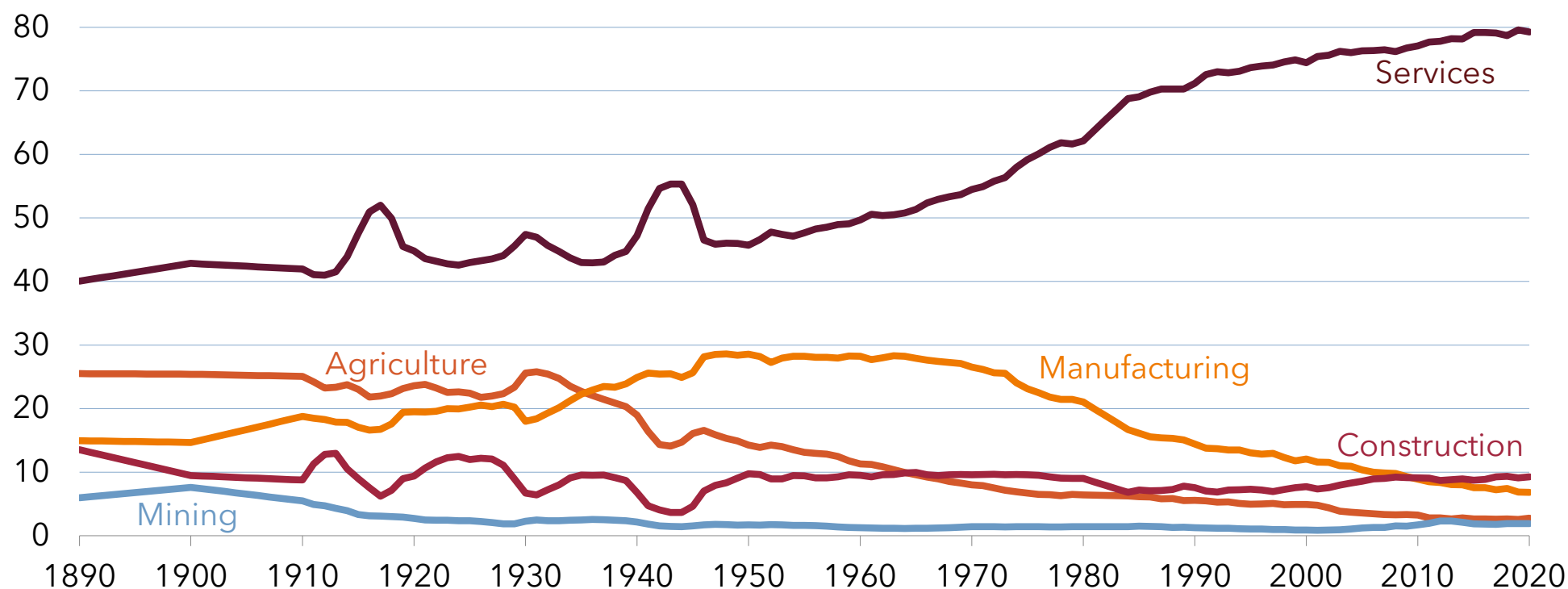
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Australian jobs are increasingly in the services sectors

Industry share of workforce, Australia, per cent

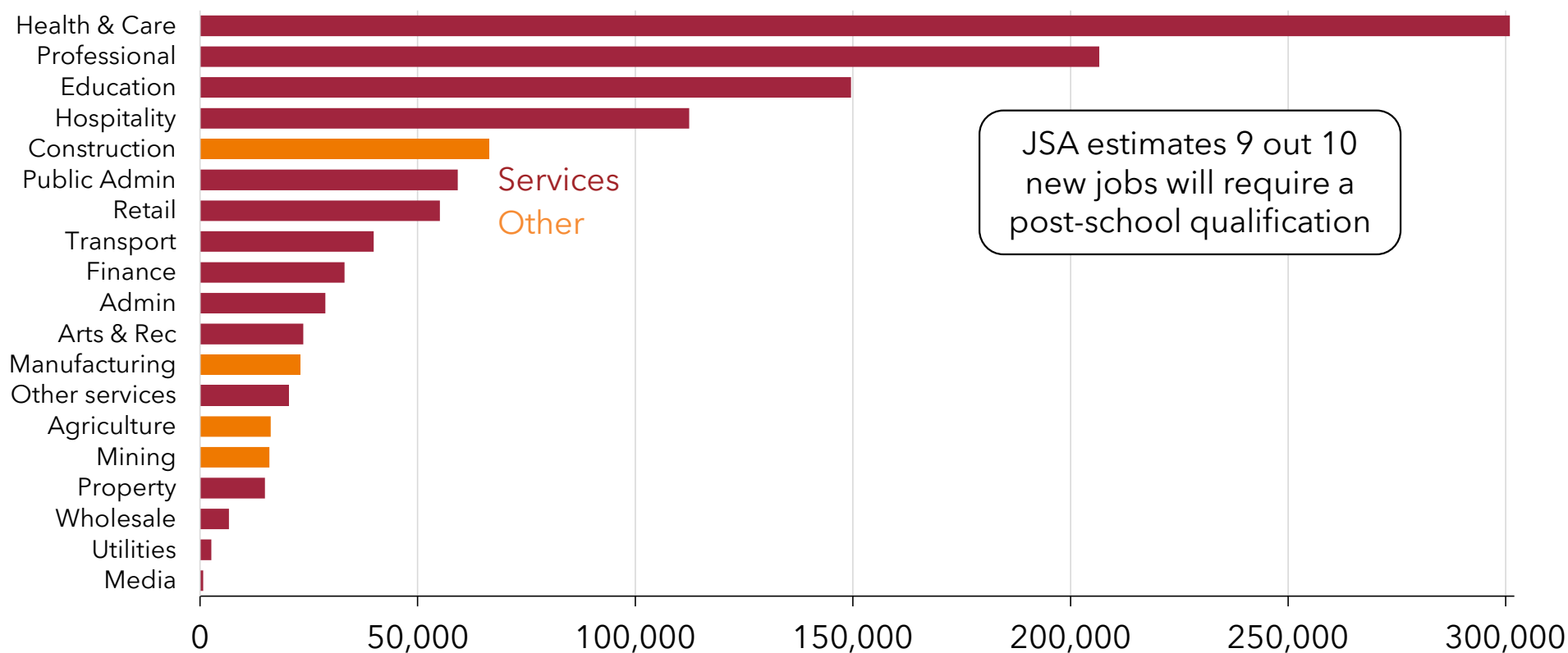


Note: 1981-1983 are interpolated using 1980 and 1984 data.

Sources: Withers, Endes, and Perry, 1890-1980 *Australian Historical Statistics: Labour Statistics*; ABS, 1984-2020: *Labour Force, Australia*, Detailed, Table 4.

And this trend is expected to continue

Projected change in jobs from November 2021 to November 2026



Source: Reproduced from National Skills Commission (2022) Employment Outlook.

The 5Cs National Skills Commission – 'skills of the future'

Communication



Care

**Clean
energy**



**Cognitive
ability**



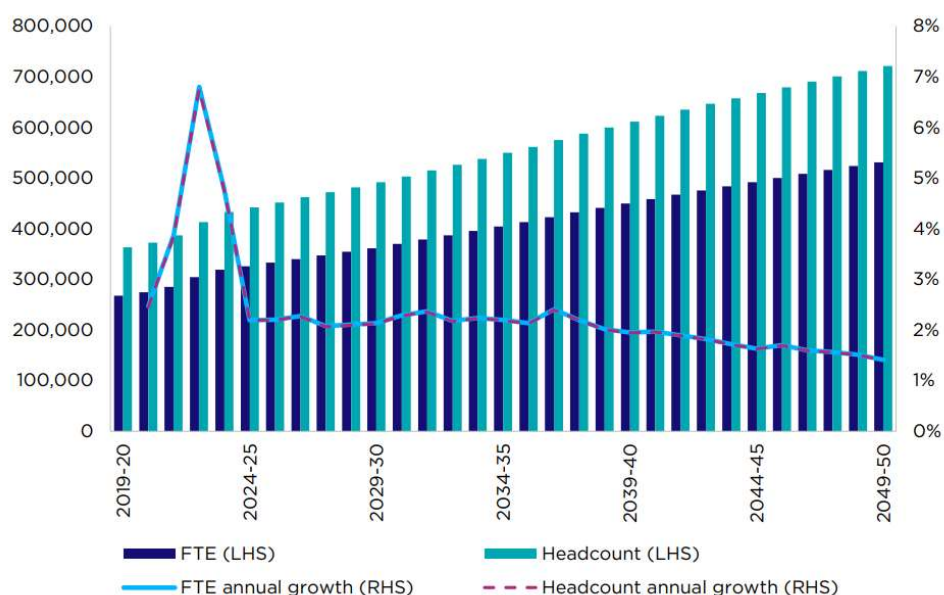
Computers

For care jobs – we already face shortages and ageing population and policy will exacerbate them

Current care shortages are biting:

- In **aged care**, CEDA estimates an additional **30-35,000** direct care workers will be needed annually
- In **childcare**, ACECQA estimates an extra **39,000** workers needed in 2023 (and likely more when the subsidy increases) and a recent workforce survey showed a shortage in every classification of ECEC worker
- In **disability care** the Joint Standing Committee on the NDIS estimates an extra **83,000** workers will be needed by 2024

Projected workforce demand, 2019-20 to 2049-50



Source: Deloitte Access Economics, 2021.

One of the big problems is retention

What do the workers say?

Aged care

Pay is a key factor for 2/3 of aged care workers in deciding whether to continue working in the sector

Source: ACF Survey of Aged care workers 2019

Child care

1/3 of childcare workers plan to leave and of those who don't, 1/2 still think about it regularly. Main reasons for leaving:

- Workload (73%)
- Low pay (63%)
- Feel undervalued (47%)

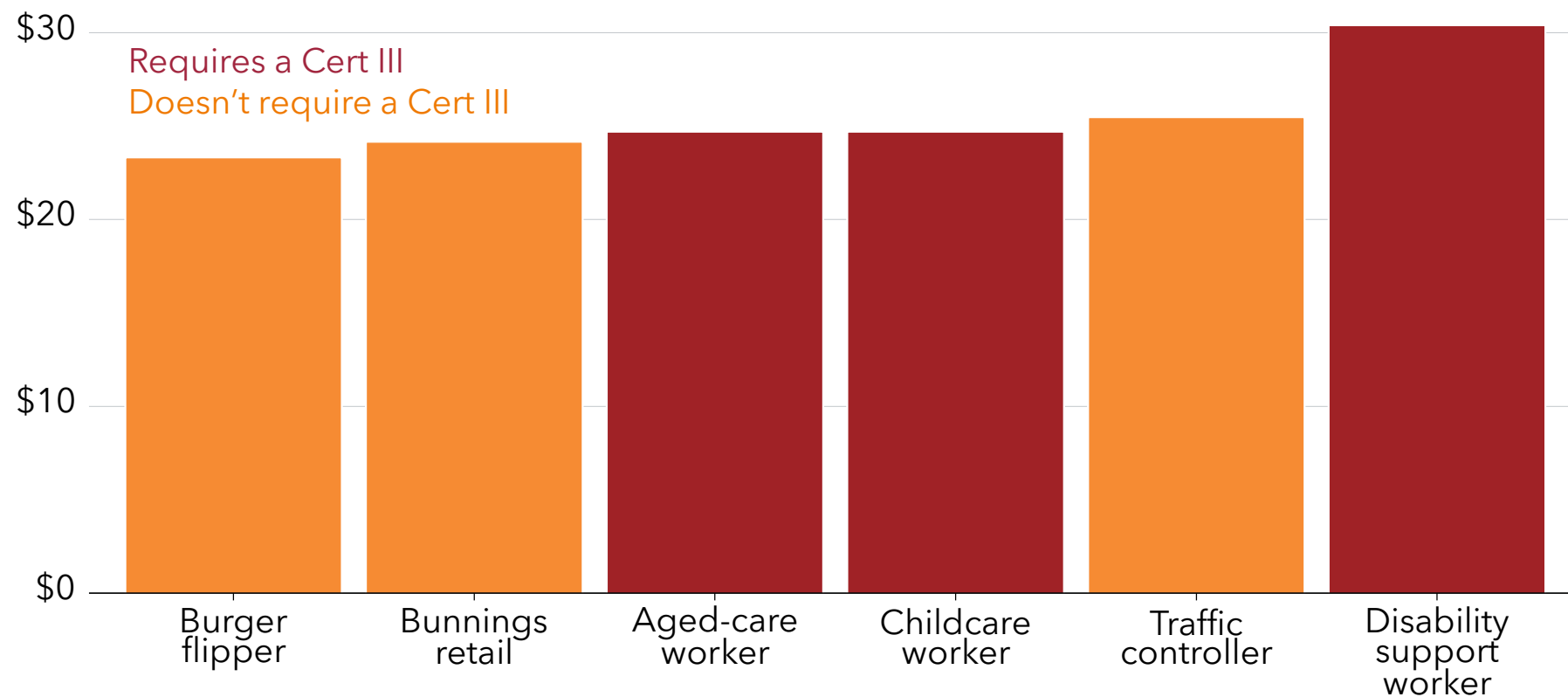
Sources: <https://bigsteps.org.au/report-shows-early-education-workforce-in-crisis/>.

I moved into the early childhood sector because I discovered a love for helping kids, and I still do. But after 5 years, I question my future. How can I continue in a role where I am constantly sick and having to take unpaid leave? Where I am paying off almost \$60,000 in student debt for a bachelors and masters degree, a number too close to my salary? Where I don't feel like I'm doing a good job? Where I can't even do what I supposed to do? Where I am underpaid and unsupported?

Belynda Kennedy
Early childhood worker

Unsurprising given pay is similar to many less skilled jobs

Hourly wages for permanent staff

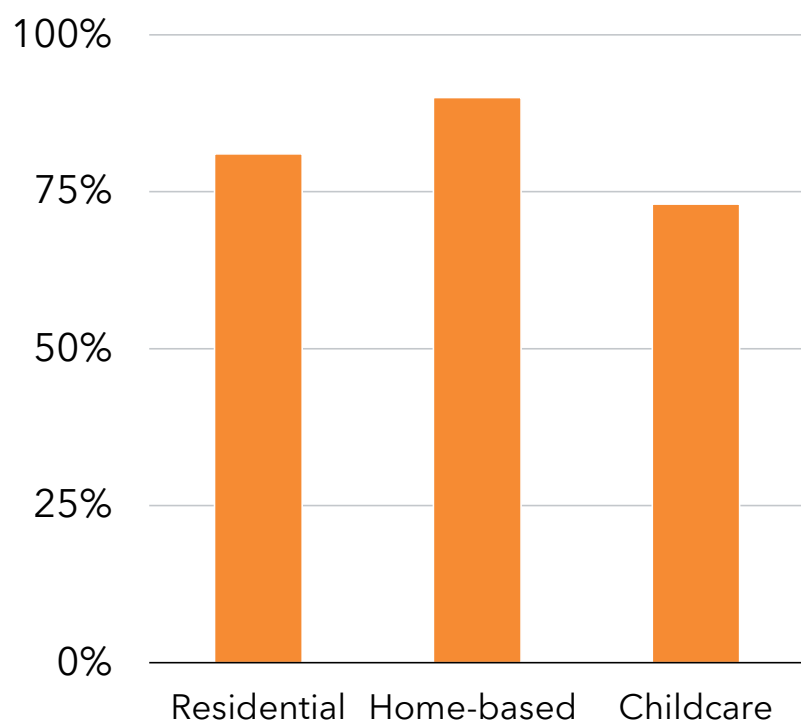


Notes: Wages at October 2022. Bunnings workers fall under an enterprise agreement; all other occupations calculated using award wages. Child care and aged care levels require Cert III qualifications.

Sources: P.A.C.T pay tool (2022); SDA (2022).

Recent workplace relations changes should help (but are costly to budgets)

Share of total cost covered by government



Changes to the *Fair Work Act* to:

- Make gender equity an explicit objective
- Remove requirement for male comparator in work value cases

... among other institutional changes will help

Stronger chance of success where government intervenes (as major funder)

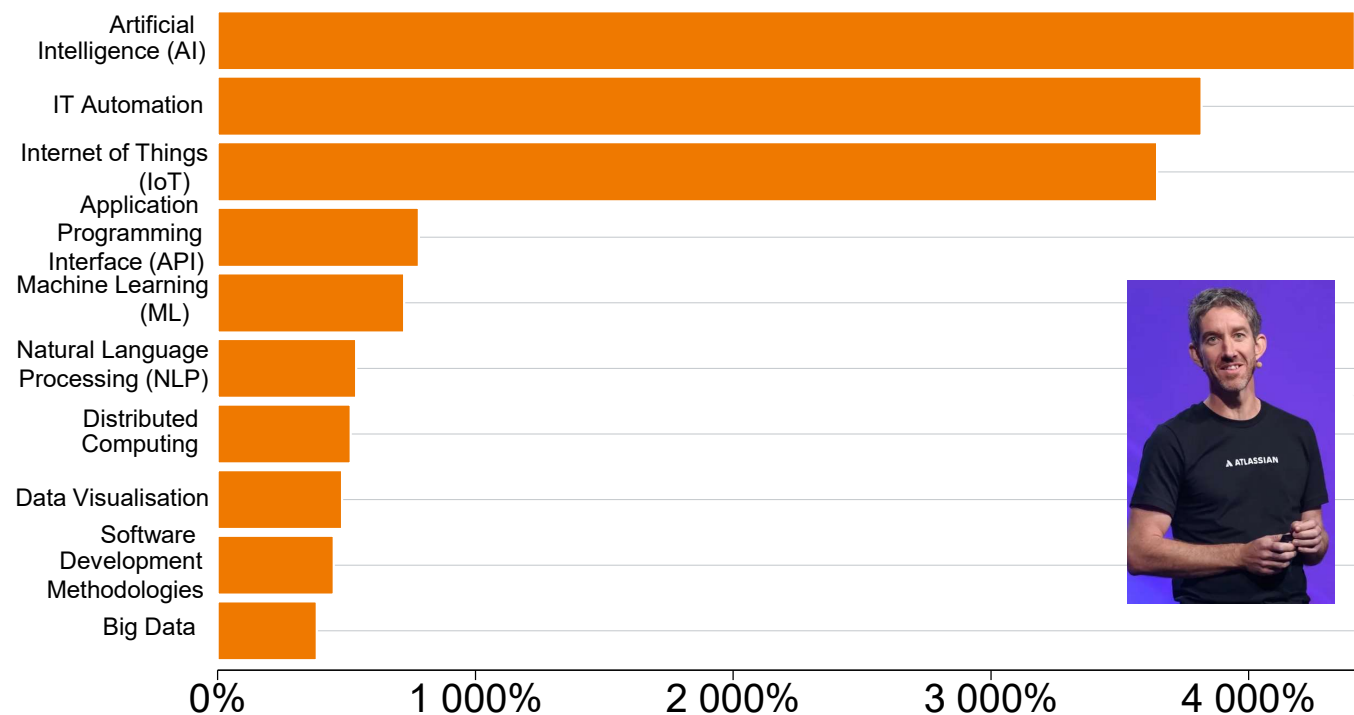
Recent Fair Work Commission decision to increase pay for aged care workers by 15 per cent

BUT comes at a cost - approximately \$2.3 billion a year from government budgets

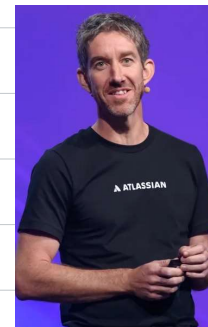
Note: Share of childcare costs covered by government is an estimate based on total government expenditure (federal and state) compared to IBISWorld revenue for the sector, scaled up to include independent pre-schools.

Demand for cutting-edge digital skills is growing rapidly

Estimated growth in demand, 2013-2020



The Tech Council estimates Australia needs **653,000** people to join the tech workforce by 2030 (186,000 above BAU expectations)



"These are the jobs of the future. And if we can't fill all these roles here, they are jobs that can be done around the world, so we'll look elsewhere."

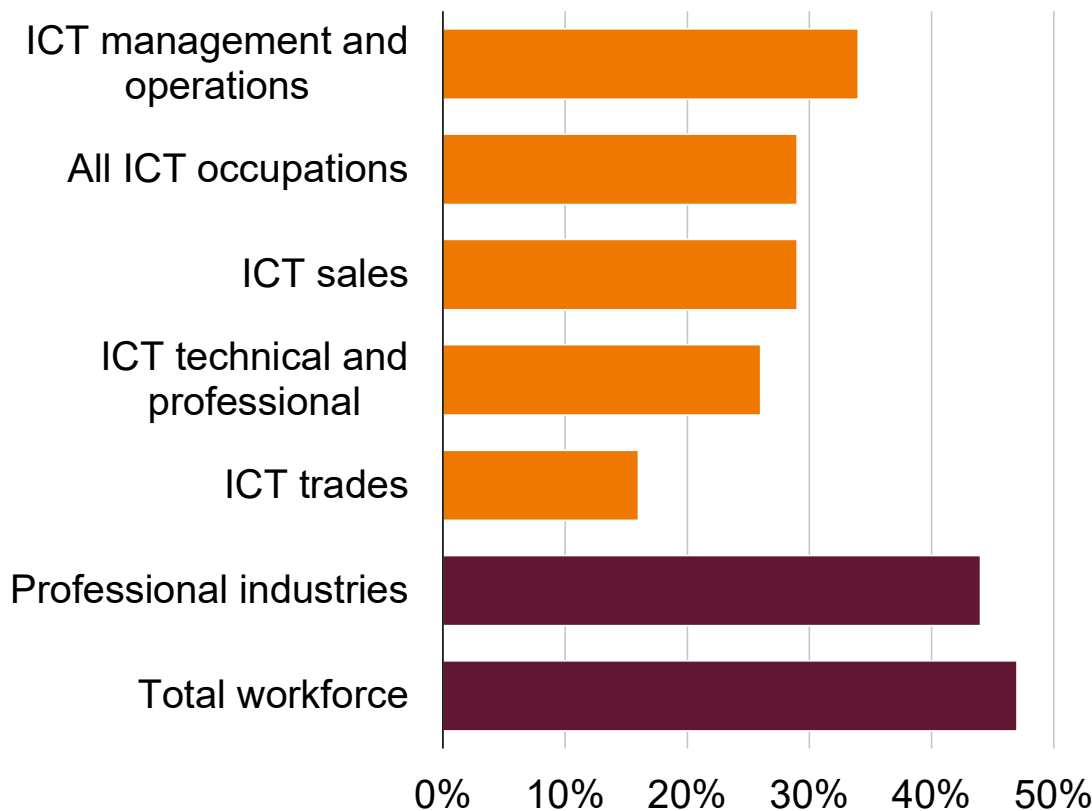
- Scott Farquhar, co-founder of Atlassian

Notes: See source for estimation details.

Source: Nationals Skills Commission (2021), State of Australia's Skills Report (Chapter 7: Emerging Skills, Table 21).

These jobs are struggling to attract half the population

Share of women in technology occupations, 2020



- Just **29%** of the technology workforce in Australia are women
- The proportion of female workers in tech is growing by **less than 1%** each year
- **One in five** graduates in IT are women
- 'Confidence gaps' are evident even in school

There are lots of policies that could make a difference



Improve school education (currently going backwards in maths and reading)



Improve VET and higher education links with industry



Lifelong education (e.g. micro-credentials, on-the-job training)



Boost pipeline of women in the technology workforce



Make Australia an attractive destination for highly talented individuals (composition and functioning of skilled migration program)



Invest in digital public goods (e.g. cyber)



Improve government's own digital capacity and service delivery

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Short term budget news is rosy

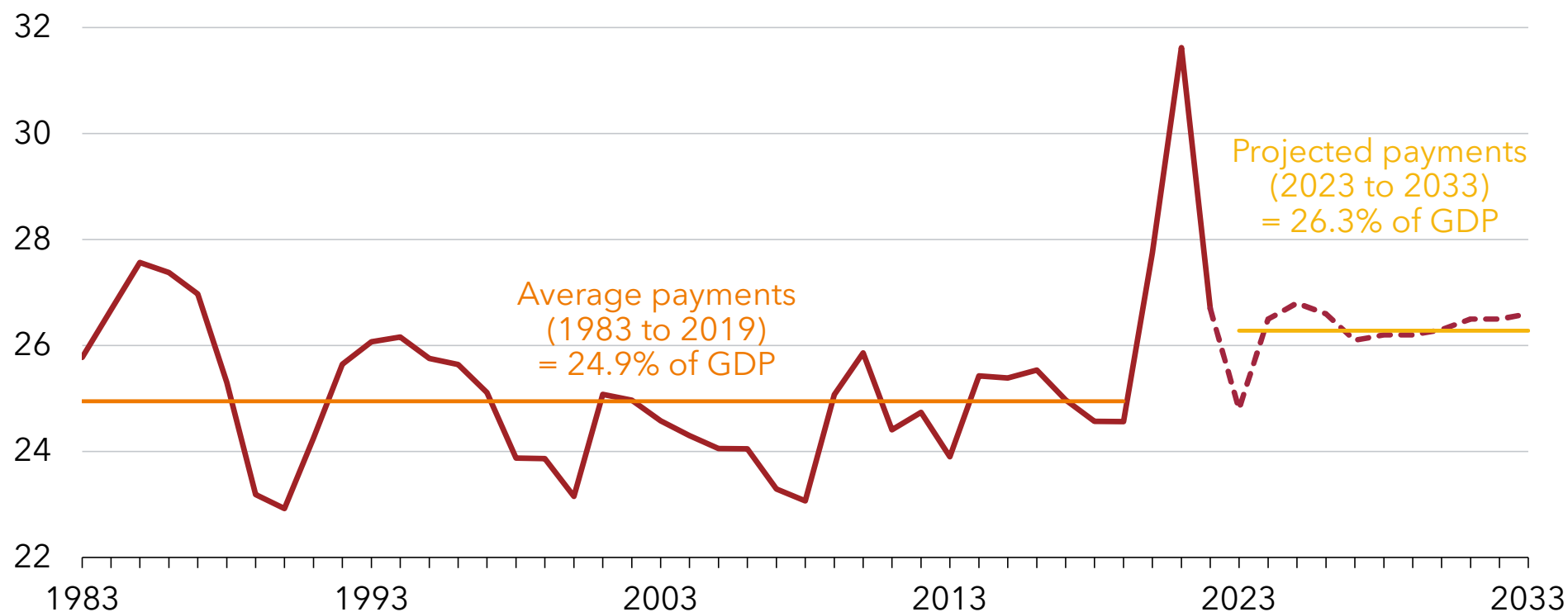


So, I'm pleased to say that two days out from the end of the financial year, we're still on track.

In fact, we're in a significantly better position than we forecast. We're expecting the surplus will be bigger than forecast in May.

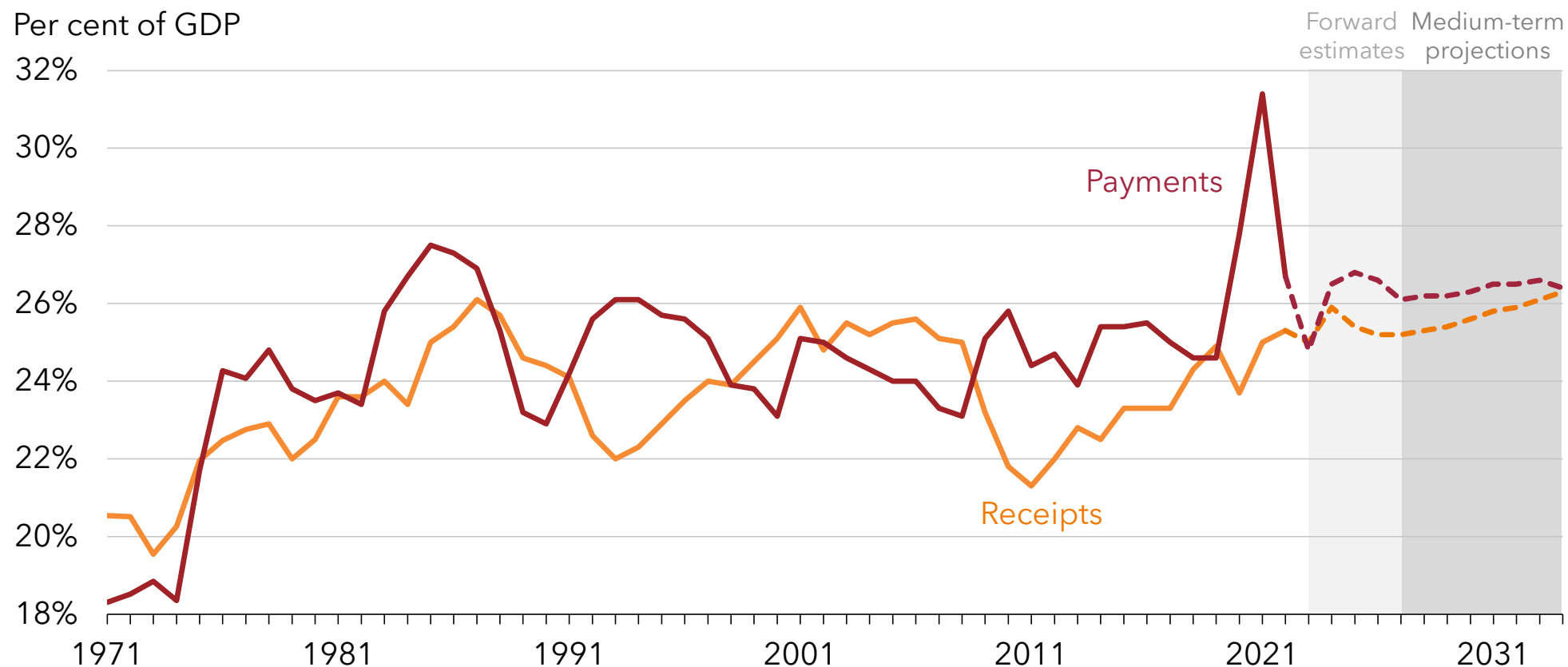
But the size of government has grown

Federal government expenses (per cent of GDP) over 50 years



Sources: PBO Historical Fiscal Data (October 2022 Budget), Table 1; 2022-23 October Budget, Figure 3.12.

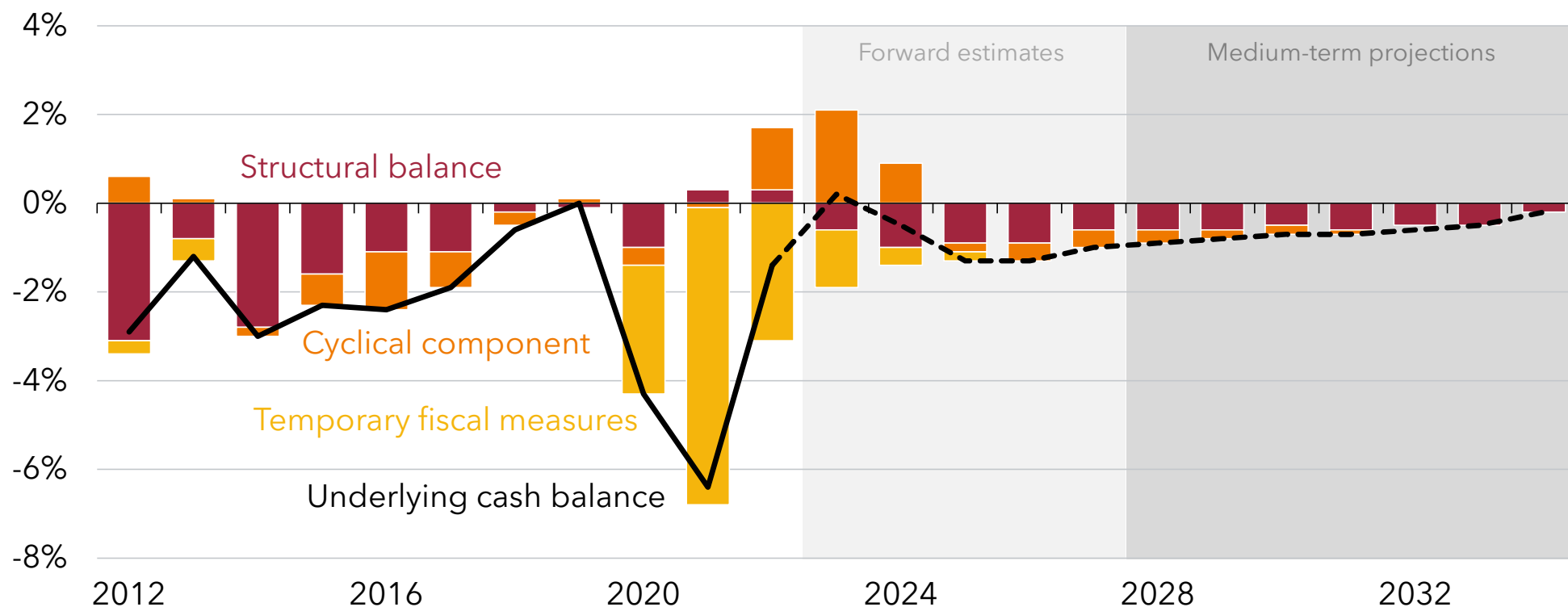
Receipts are expected to fall behind over the decade



Source: Budget 2023-24, Budget Paper No. 1, Chart 3.6.

Houston we have a structural deficit: although looks smaller than expected!

Budget components as a proportion of GDP



Notes: Data are for the financial year. The cyclical component includes automatic stabilisers and cyclical movements in commodity and asset prices. Other fiscal measures include COVID-related direct economic and health support measures.

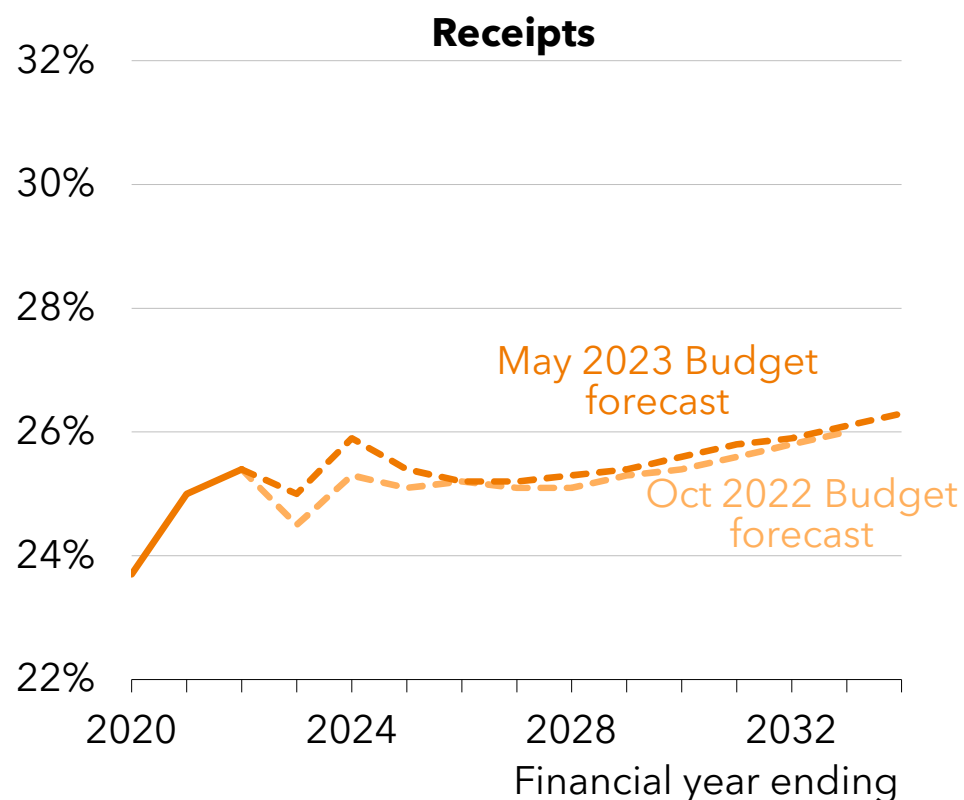
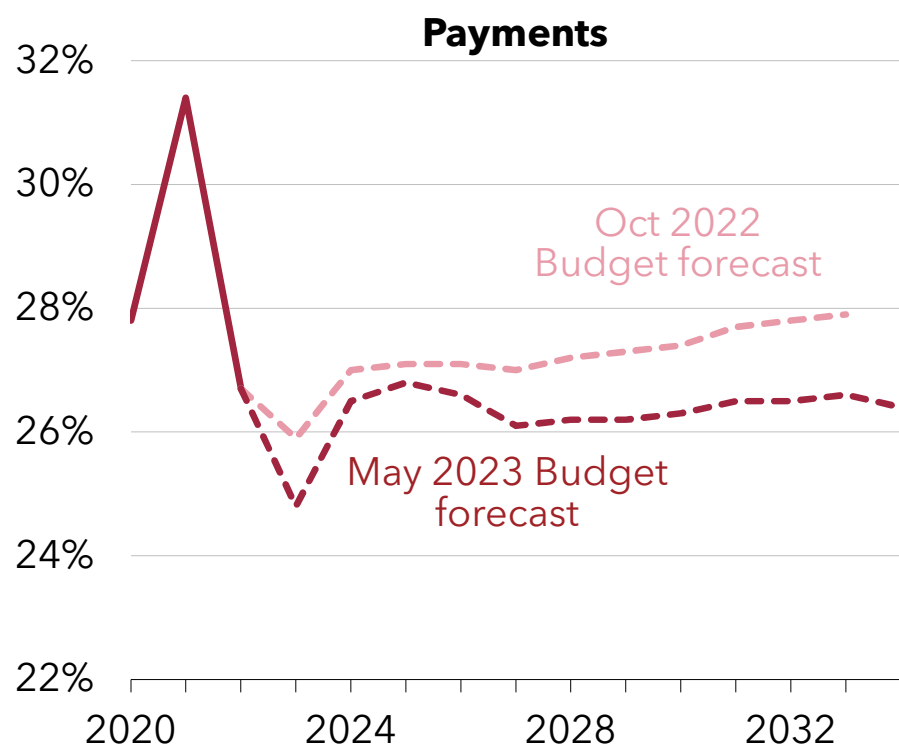
Source: Budget 2023-24, Budget Paper No. 1, Chart 3.19.

Happy days! But what's changed since October?



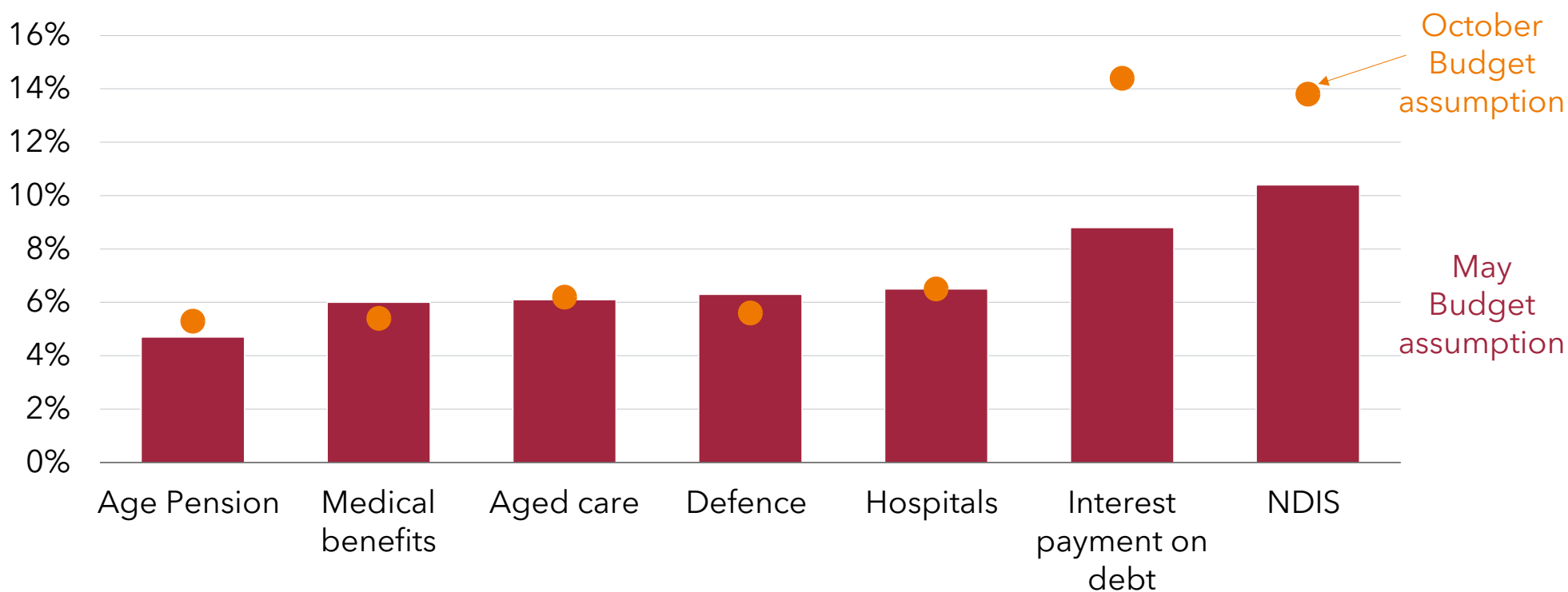
Much more optimistic about payments restraint

Total payments and receipts projected compared with October 2022 Budget, per cent of GDP



Restraint in the 'speedy 7' is part reality, part optimism

Average annual growth in major payments 2023-24 to 2033-34, per cent

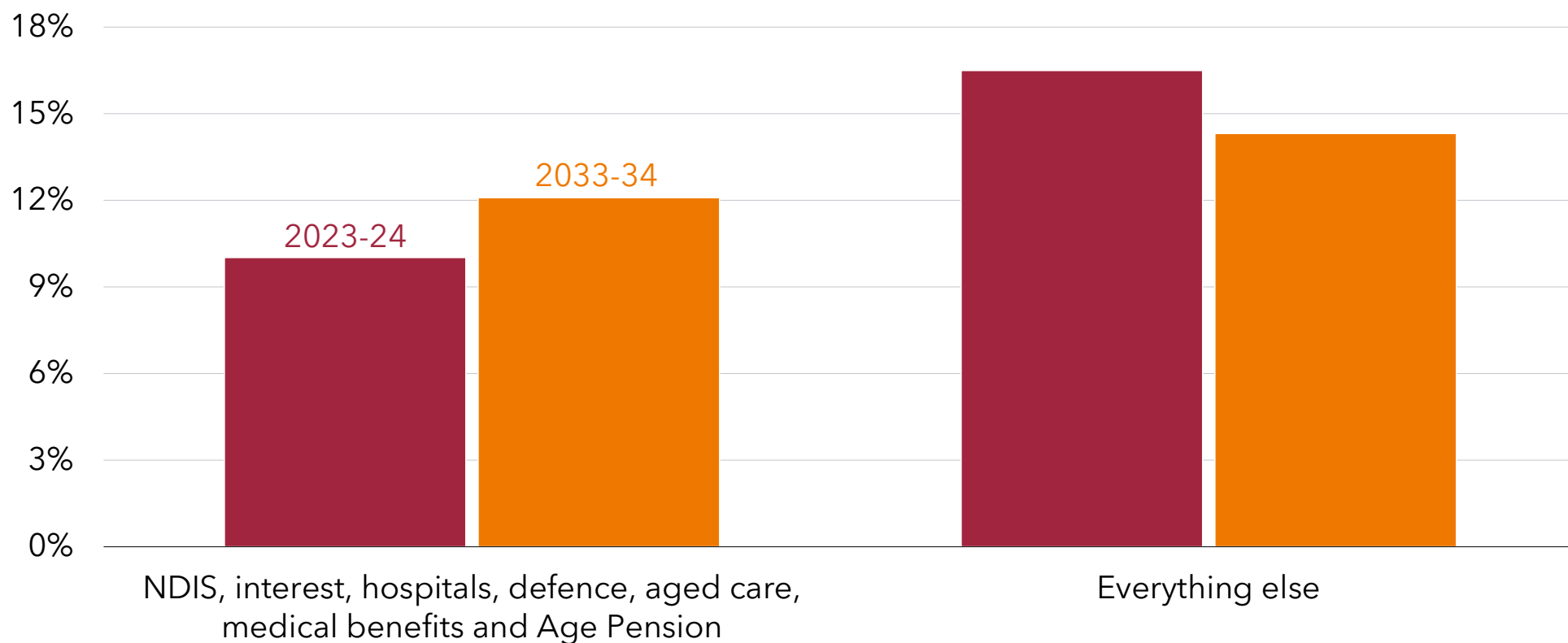


Notes: Growth rates from the October 2022-23 Budget are for 2022-23 to 2032-33. NDIS refers to the Commonwealth's contribution to payments for NDIS participant supports.

Source: Budget 2023-24, Budget Paper No. 1, Chart 3.8.

Also relies on strong spending restraint elsewhere

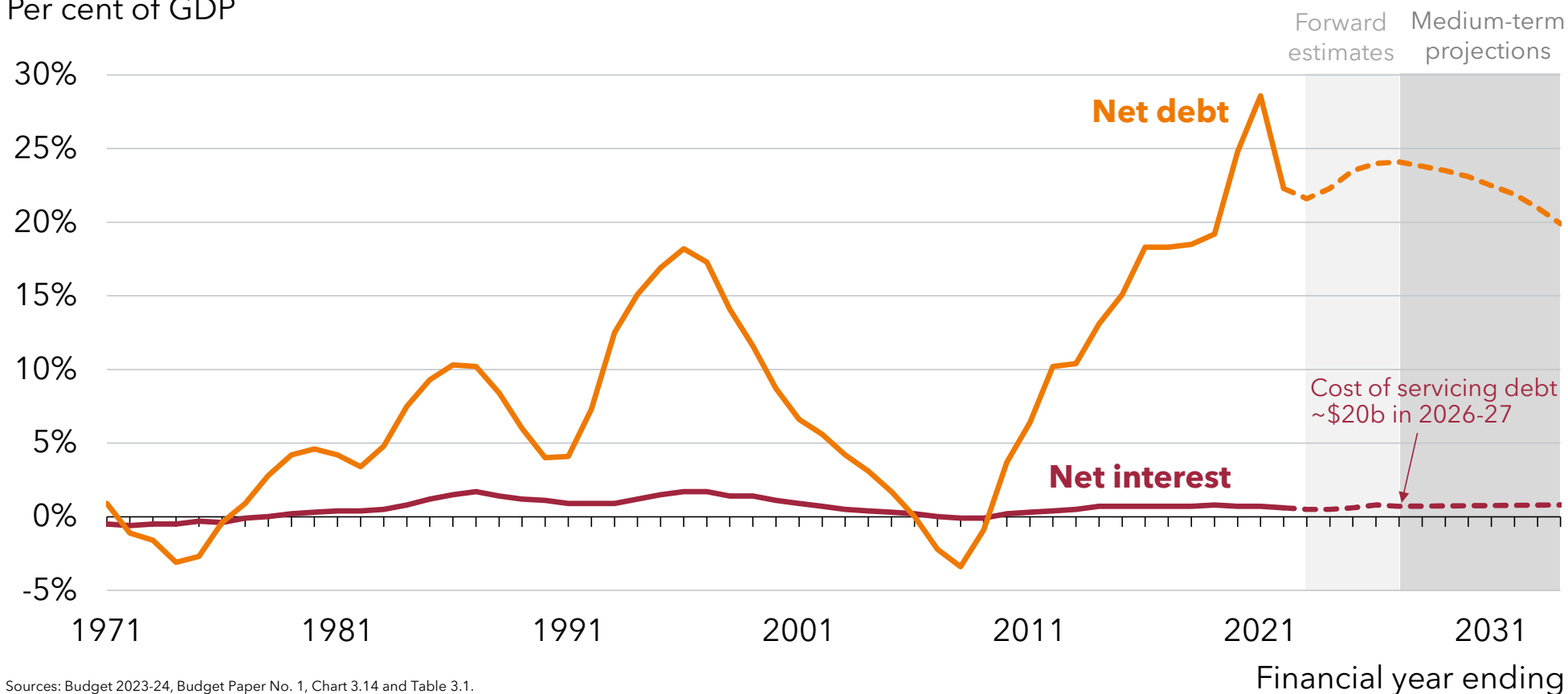
Spending in selected categories, per cent of GDP



Source: Grattan Institute analysis of Budget 2023-24, Budget Paper No. 1, Charts 2.30, 3.8 and 3.10, and Tables 6.3.1 and 6.5.

Even with optimistic assumptions net expected to remain elevated

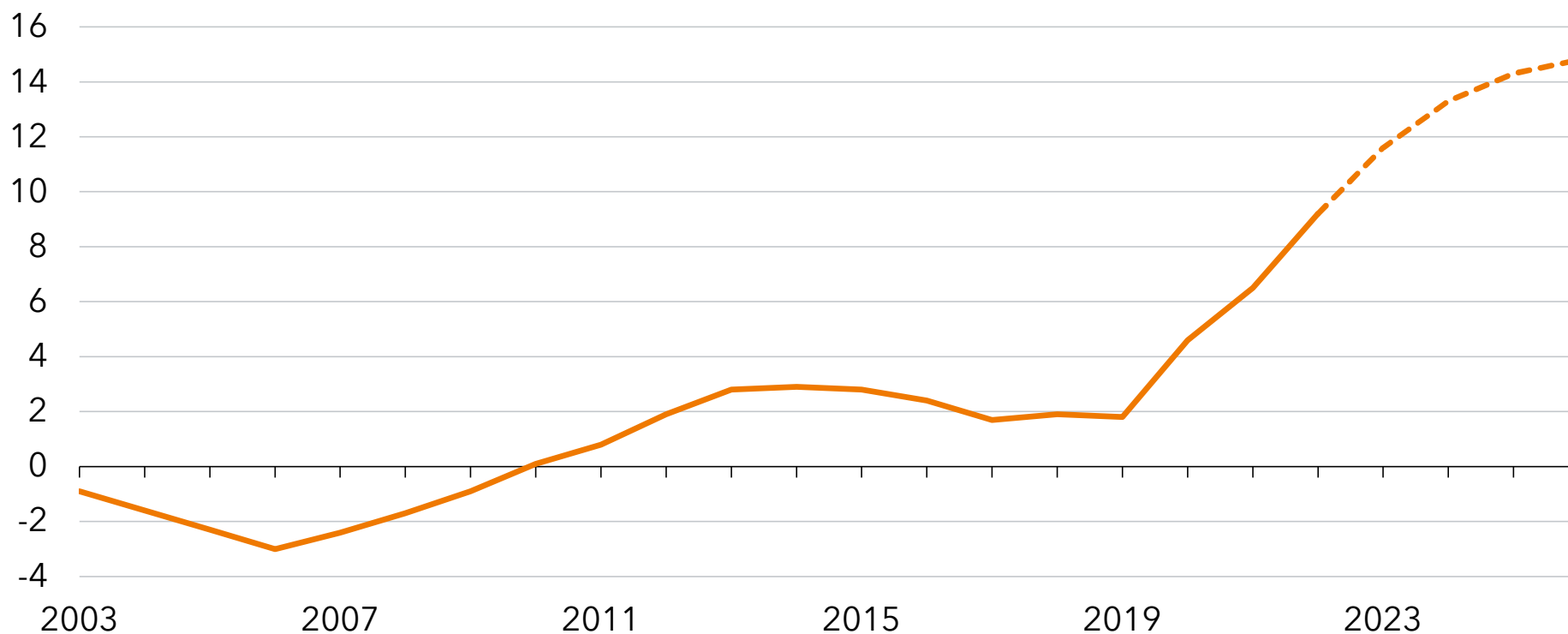
Per cent of GDP



Sources: Budget 2023-24, Budget Paper No. 1, Chart 3.14 and Table 3.1.

And is increasing for state and territory governments

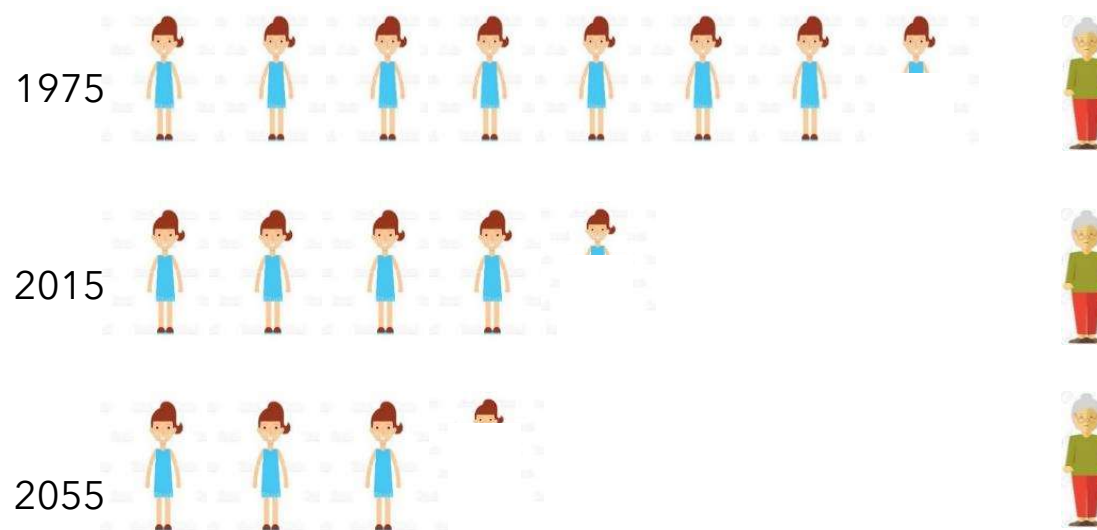
Total net debt of states and territories as per cent of Australia's GDP



Notes: Data are for the financial year. The Dashed line represents forward estimates.

Source: PBO (2022), 2022-23 National Fiscal Outlook, C5.

And population ageing means even bigger long term challenges

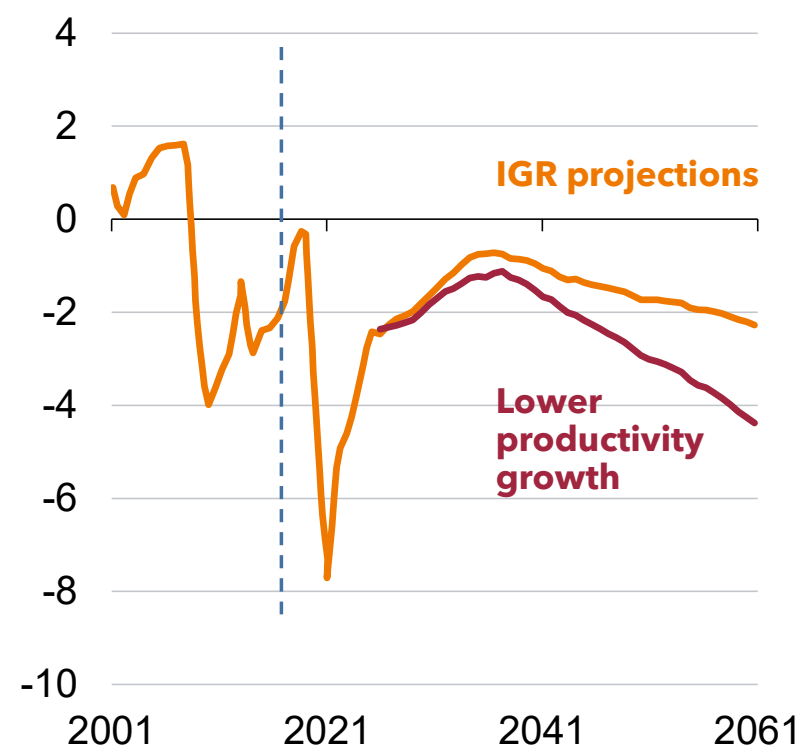


Australians aged 15-64 for every Australian 65+

Notes: In 1974-75 there were 7.4 Australians aged 15-64 for every Australian aged 65 or more. In 2014-15 there were 4.4. In 2054-55 this is projected to be 3.2, taking into account the most recent population projection estimates. Sources: Intergenerational Report (2015, p.12) and ABS population projections (2017).

For both federal and state governments

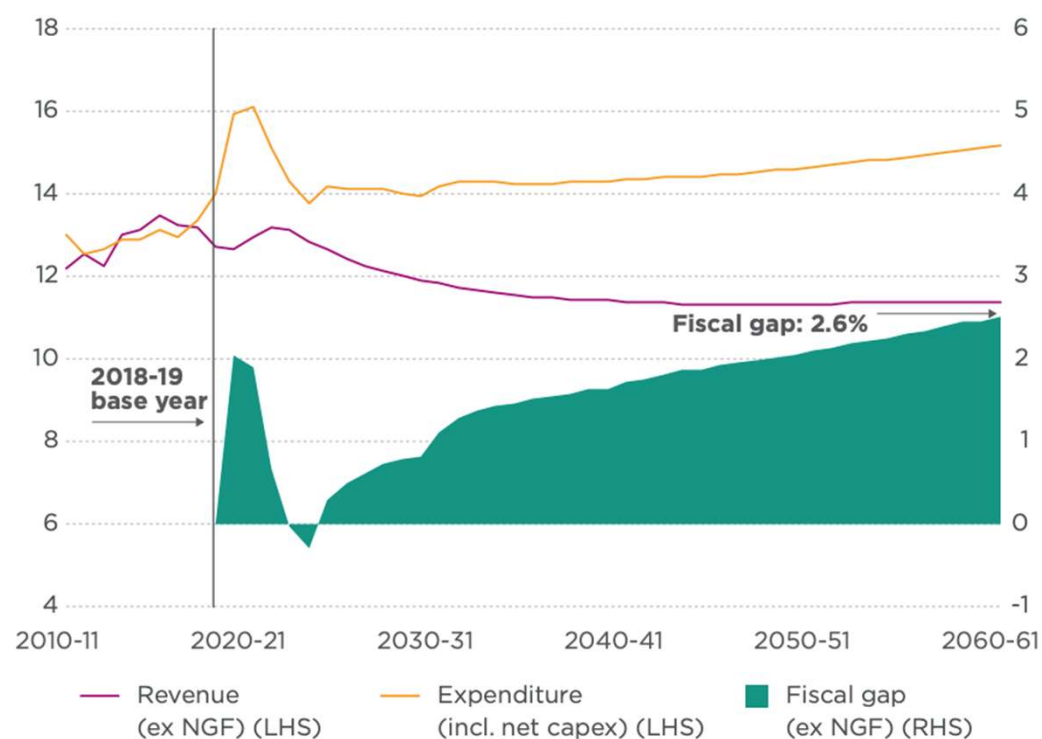
Underlying cash balance, % of GDP



Note: Financial year ending

Source: IGR 2021, Table 4.6

The NSW fiscal gap, % of GSP

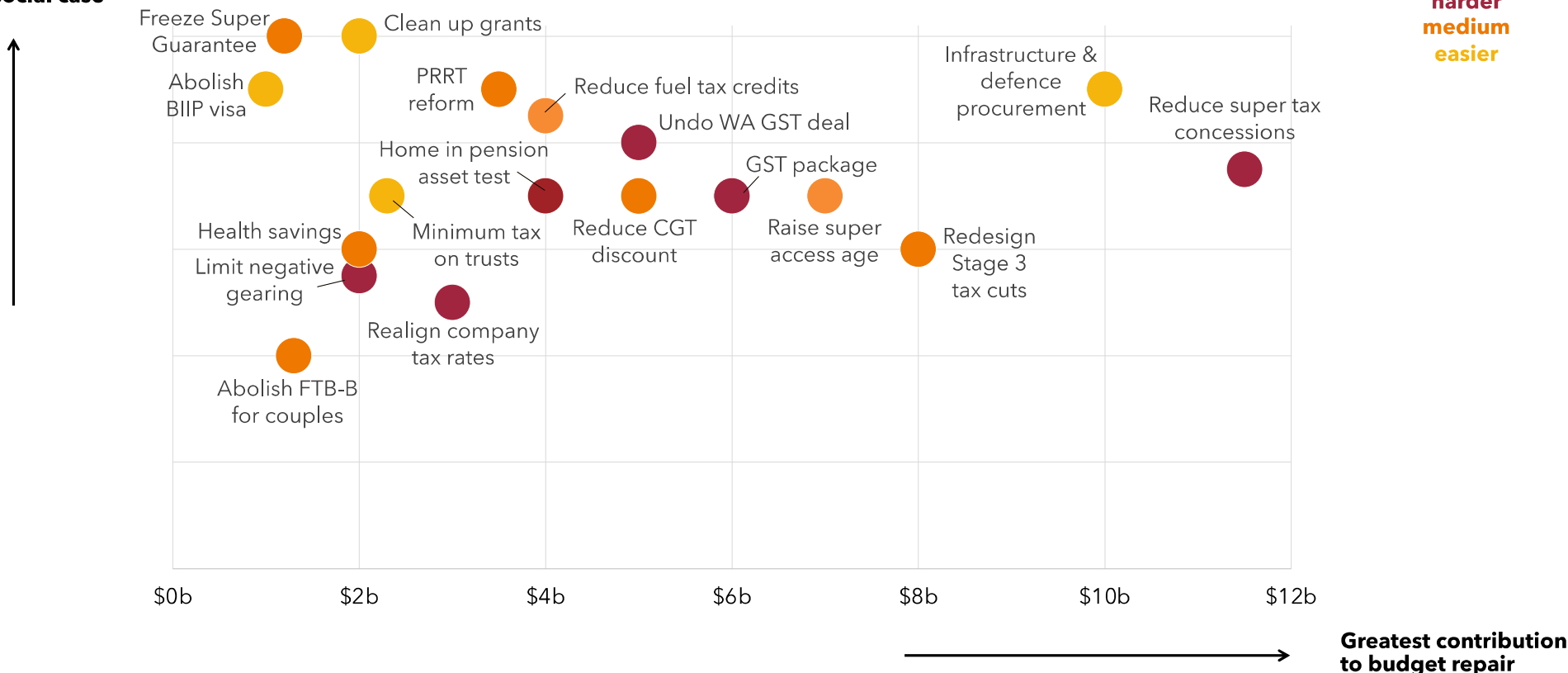


Source: NSW Treasury.

There are no easy options, but some could make a difference if governments have the appetite

Strongest economic
and/or social case

Politically
harder
medium
easier



Notes: BIIP = Business Innovation and Investment Program; CGT = Capital Gains Tax; FTB-B = Family Tax Benefit part B; PRRT = Petroleum Resource Rent Tax. Labels are short-hand for the reforms detailed in Chapters 3 and 4. In ranking the tax measures, we focused on efficiency (whether the reform fixes or creates additional distortions in decision making), rather than the distributional consequences (factoring in the distributional consequences would provide additional impetus for some reforms). In ranking the spending measures, we focused on both efficiency and impacts on the vulnerable.

Source: Wood, D., Griffiths, K., and Chan, I. (2023), *Back in black? A menu of measures to repair the budget*, Grattan Institute, Figure 2.1.

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Managing structural budget pressures

- Structural pressures on budgets are growing as population ages
- Policies have supercharged the challenge – can we wind back?

Forging a path to net zero

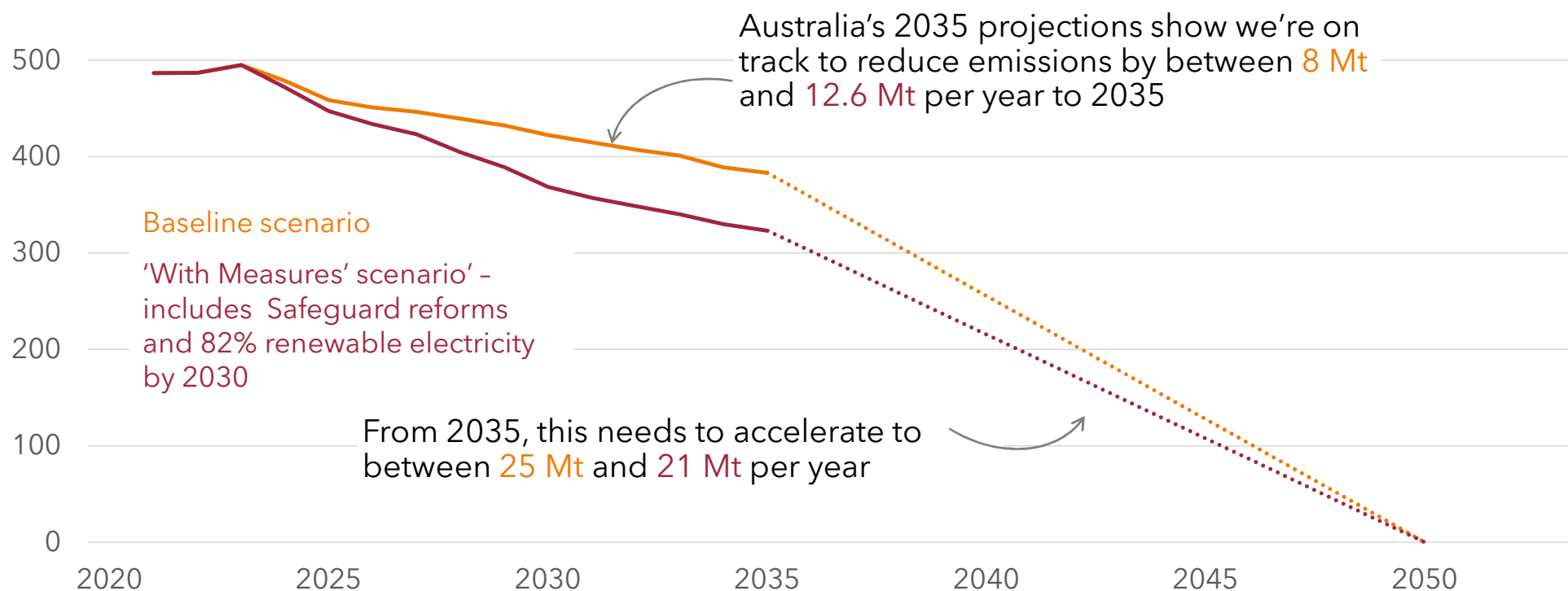
- More progress needed in 2030s to avoid a disruptive change in 2040s and 2050s
- Supporting the transition and looking for opportunities

Shifting geo-political sands

- Short-term economic implications as well as long-term risks
- Do not want to unwind the benefits of globalisation

We must do more in the 2020s to avoid disruptive shock in the 2030s and 2040s

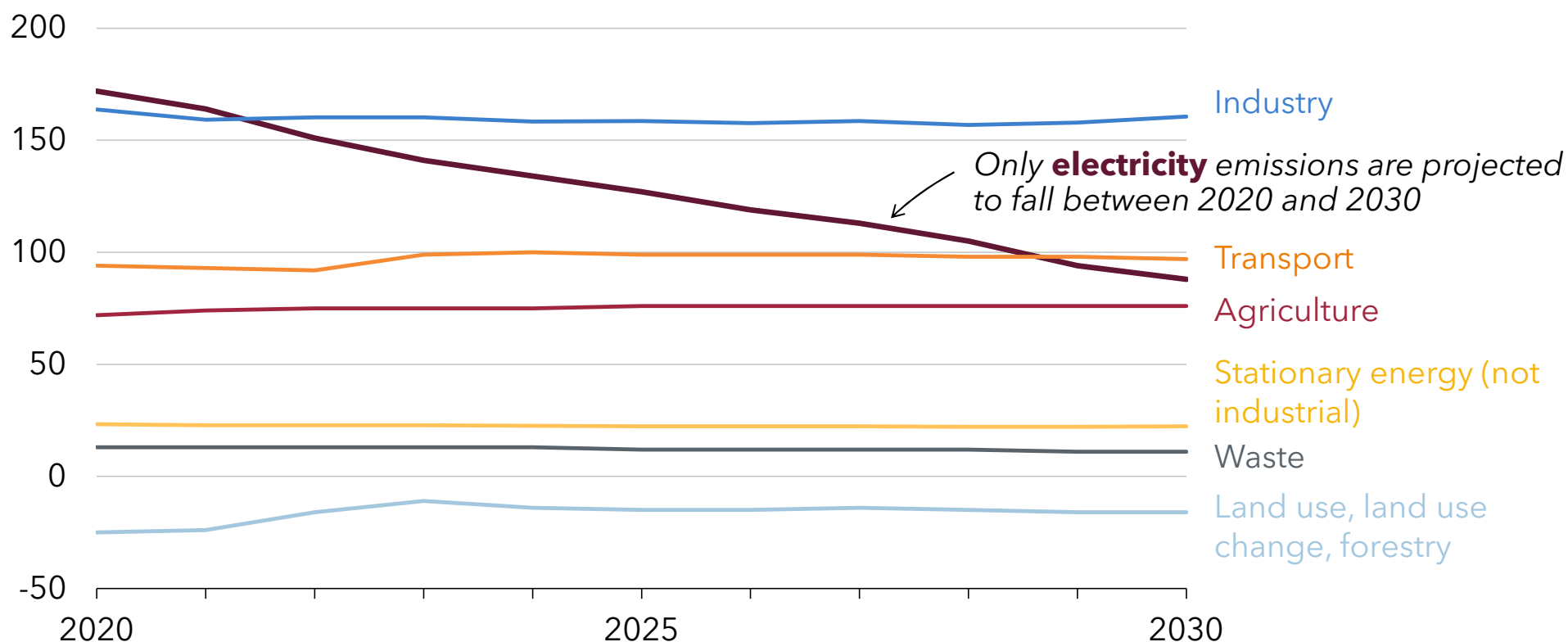
Emissions (millions of tonnes of carbon dioxide-equivalent)



Note: Trajectories beyond 2035 are indicative only. Source: Grattan analysis of DCCEEW (2022).

We are not yet bending the curve on most sources of emissions

Emissions (millions of tonnes of CO₂-equivalent)

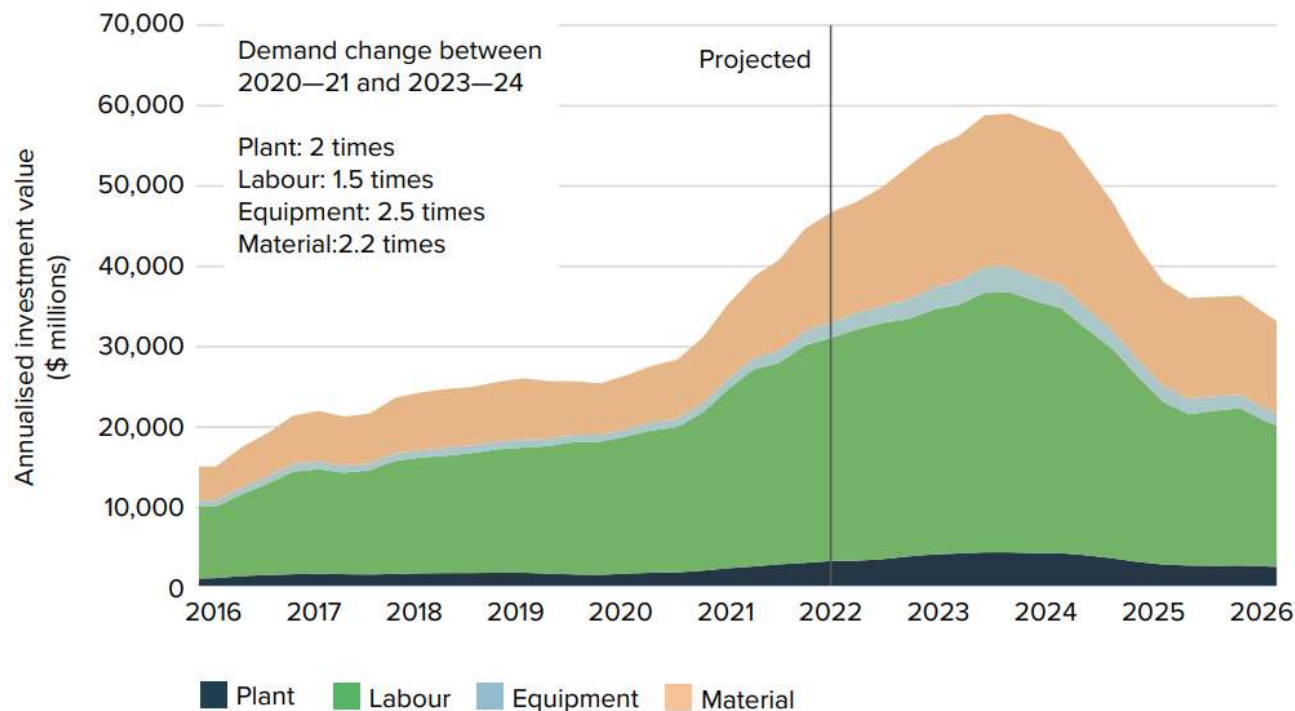


Note: Industrial emissions comprise all Scope 1 emissions from industrial processes, all stationary energy emissions except those from the commercial and residential sectors, and all fugitive emissions except those from gas pipelines and networks.

Source: Grattan analysis of DISER (2021d).

Major challenge is the ramp-up in the energy transition (while also expanding other infrastructure spend)

Major public infrastructure expenditure profile



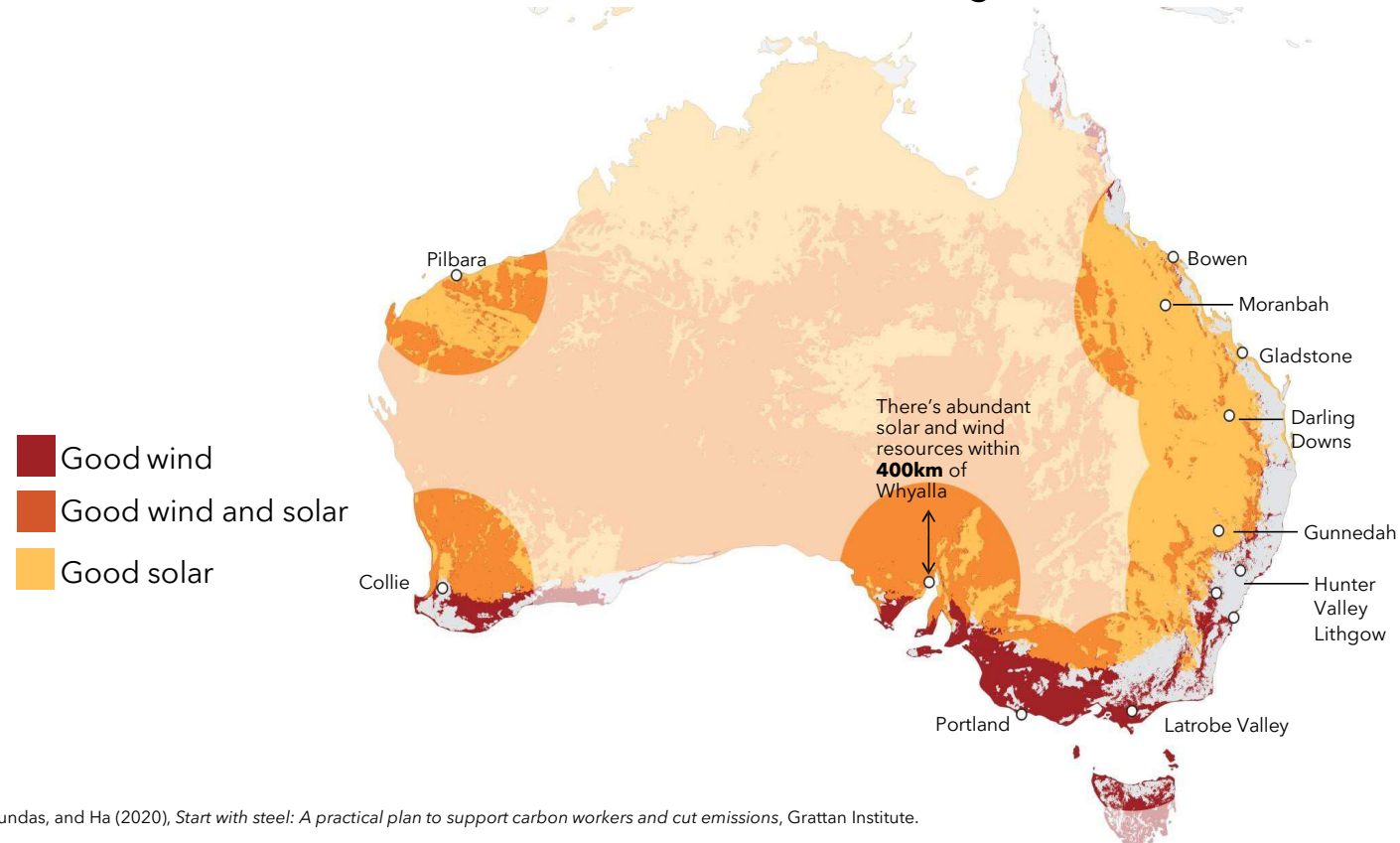
There are extremely limited short-term opportunities to address [the labour shortage]. Demand-side solutions are the only realistic short-term solution, including data-driven, proactive demand management via intelligent pipeline sequencing.

Significant action is needed both in public infrastructure planning and workforce training and supply to ensure Australia can meet its infrastructure ambitions.

Infrastructure Australia,
December 2022

But with transformation comes great longer-term opportunities

Wind and solar resources within 400km of carbon-intensive regions



Source: Wood, Dundas, and Ha (2020), *Start with steel: A practical plan to support carbon workers and cut emissions*, Grattan Institute.

Steel is the largest clean manufacturing opportunity for Australia in a low-carbon world

Industry	Share of global emissions	Current market size (2019 real US\$b)	2050 market size (2019 real US\$b)	Limits on low-emissions commodity production in Australia
Steel	7.0%	660	590	None
Cement	4.5%	490	540	Carbon dioxide storage reservoir capacity
Aviation fuel	1.9%	160	230	Biomass availability
Shipping fuel	2.2%	110	180	Depends on technology pathway
Aluminium	1.4%	70	130	Economics of firming wind and solar
Alumina	0.2%	60	110	Market size
Ammonia	0.8%	60	100	Market size

Note: Aluminium market size excludes value of alumina to avoid double-counting.
Source: Grattan analysis.

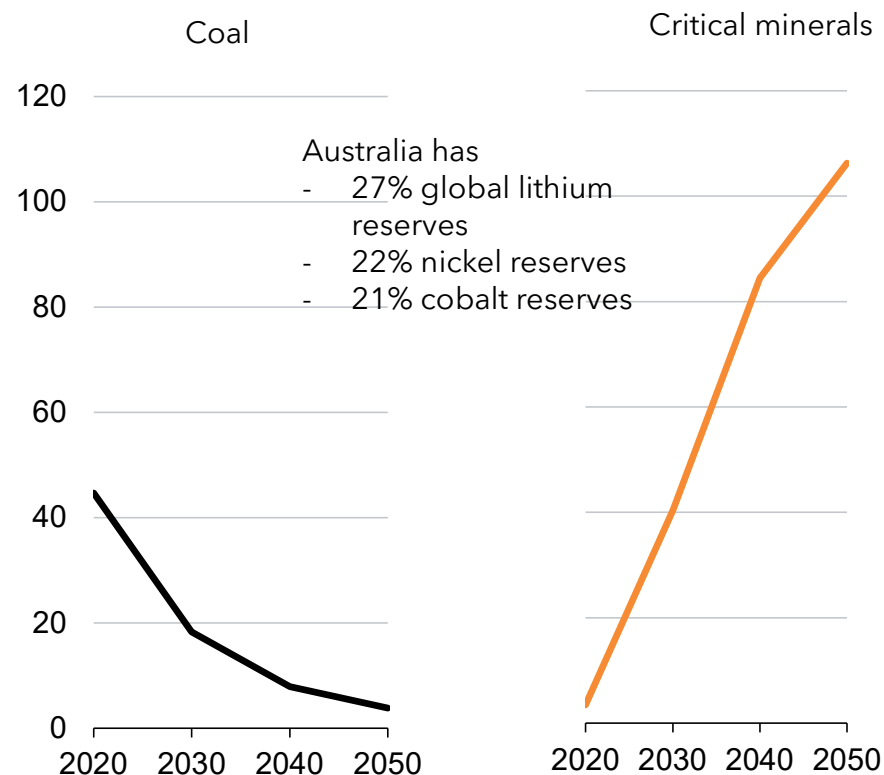
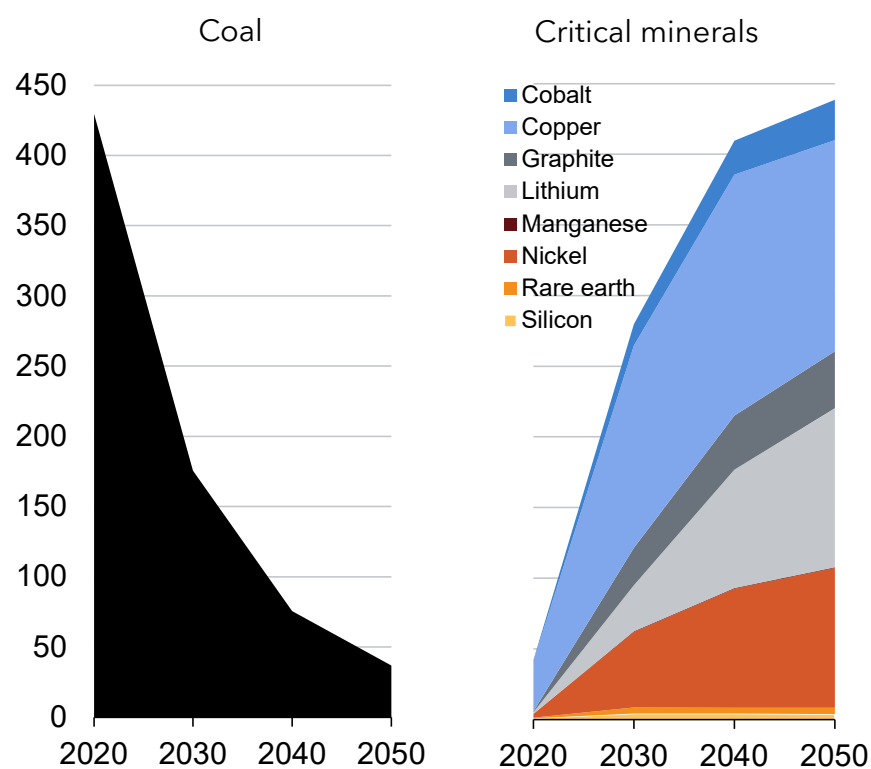
Grattan estimates that local production and export of green steel could create 15,000 ongoing jobs in central Queensland and 10,000 in Hunter Valley

NEED Government investment in capability, incl:

- green hydrogen technology
- Developing storage basins
- Forward looking planning
- Worker retraining
- Social license

And there are other big opportunities for Australia in the green economy

Global market value (US\$b, real 2019)



Source: Wood, Reeve, and Ha (2021), *Towards net zero: A practical plan for Australia's governments*, Grattan Institute.

Mega-trends: the forces that will shape Australia

Rebooting productivity growth

- Embracing digital technology
- Deepening talent pools
- Improving our education system

The changing face of work

- Australia is increasingly a services economy
- Delivering care and digital workforces is a significant challenge

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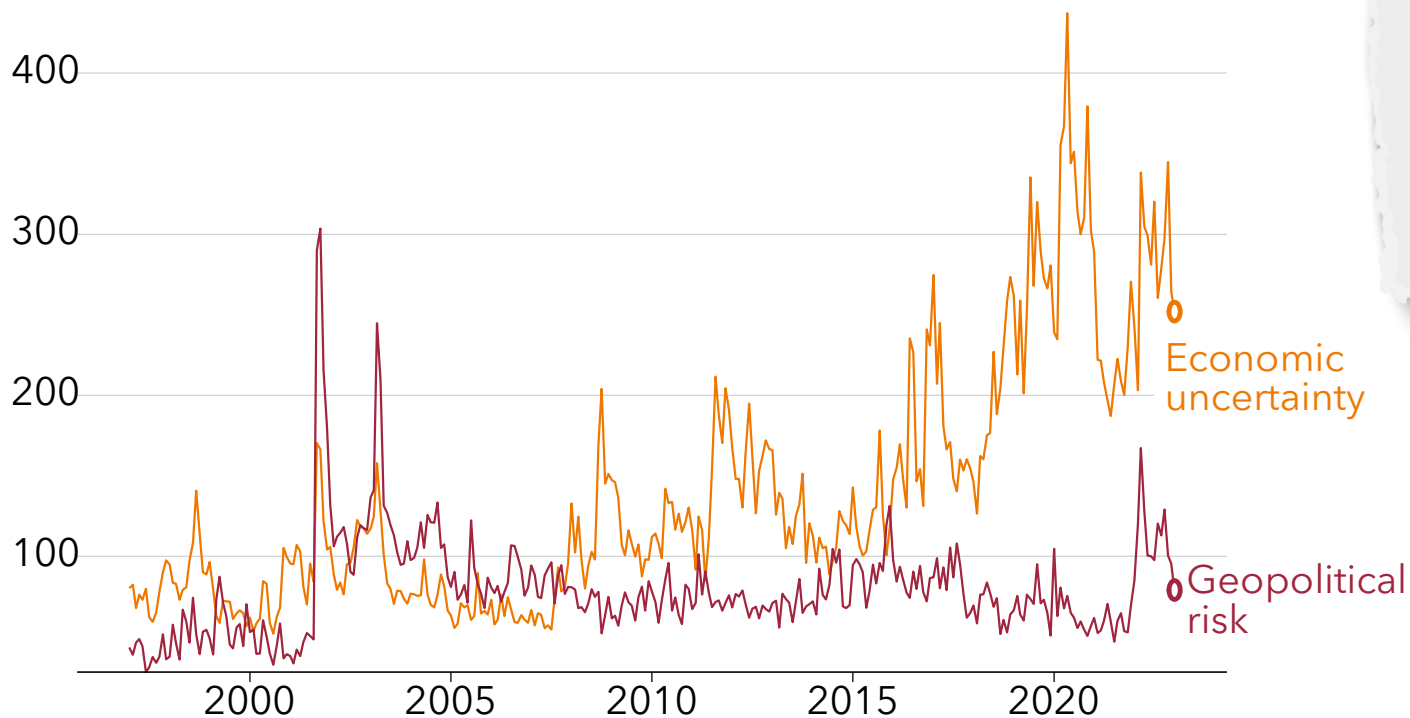
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We live in uncertain times

Global indexes



Notes: Higher index values denote higher geopolitical risk of economic uncertainty.

Source: Treasury 2023-24 Budget (Budget Paper 1, Chart 4.1).

Truce or a bloody stalemate? It all rides on Ukraine's spring offensive

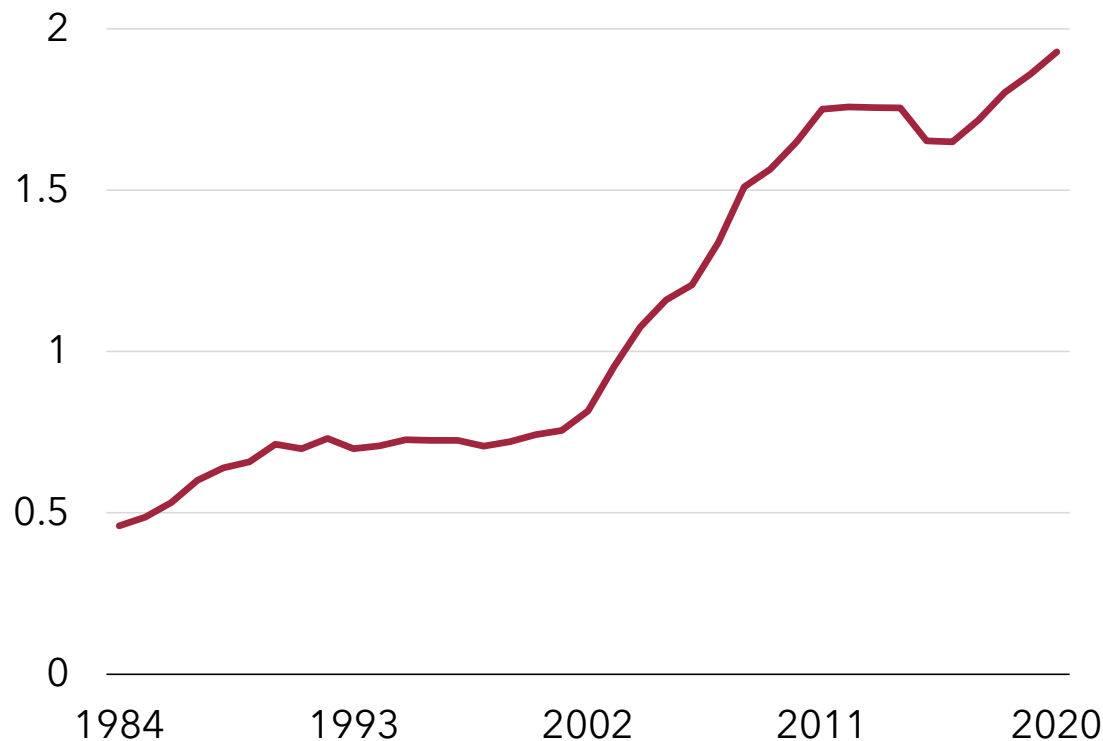
The Guardian (23 April 2022)

'This is about striking fear':
China's Taiwan drills the new normal, analysts say

The Guardian (10 August 2022)

Globally defence spend is on the rise (and Australia is no exception)

Global defence expenditure (USD, current prices)



Labor offered bipartisan support... including for \$270 billion of capability acquisition. We have also offered support for the nuclear-powered submarines. We recognise this will mean Defence budgets **beyond the 2 per cent** [of GDP] benchmark.



Anthony Albanese,
10 March 2022

COVID disruptions and geo-political tensions have left many calling time on globalisation

"The Russian invasion of Ukraine has put an end to the globalisation we have experienced over the last three decades"



Black Rock CEO, Larry Fink

"Are we going to strengthen our skills and training and manufacturing capacity to ensure we're not left isolated at the end of global supply chains?"



Prime Minister Anthony Albanese

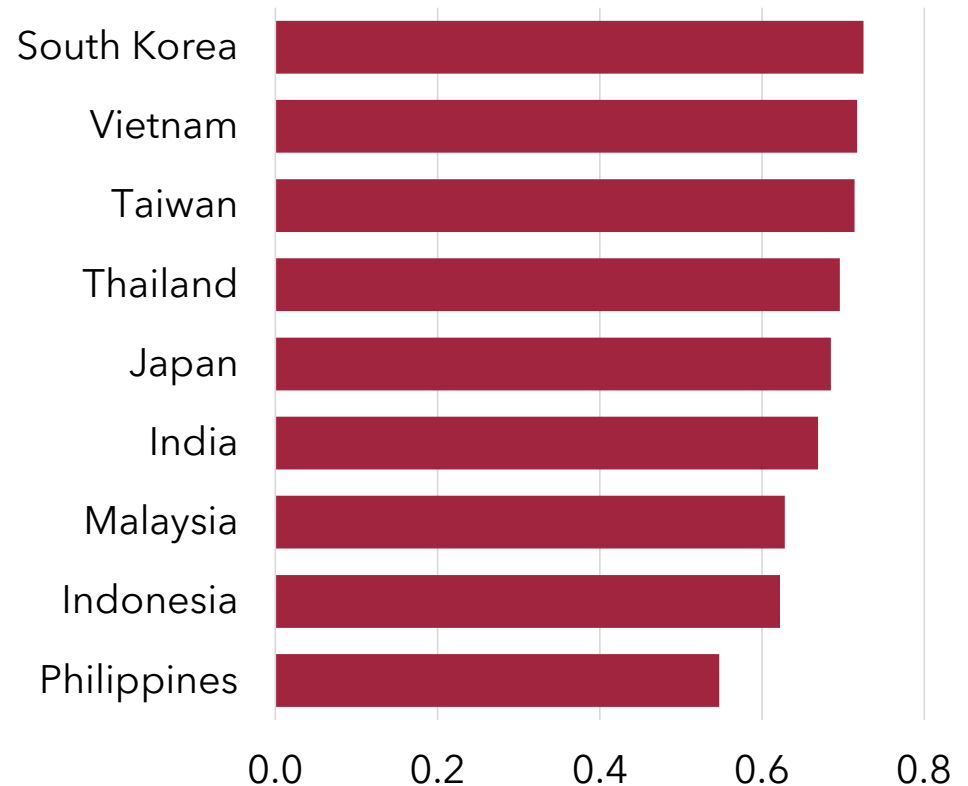
On-shoring, near-shoring and friend-shoring have entered the business and policy lexicon

"Friend-shoring is about deepening relationships and diversifying our supply chains with a greater number of trusted partners to lower risks for our economy and theirs"



US Treasury Secretary Janet Yellen

Spearman Correlation Coefficient, 2021



Sources: Global Trade Atlas; JETRO via KOTRA

But shifting away from China will hard, and costly

China's success in global production chains is not just driven by cheap labour - it reflects substantial skilled labour (particularly in process engineering)

China has gone from being the 'world's factory' to the 'world's workshop'. These skills are not easily transferred or replicated elsewhere

Shifting production will be costly (and comes with a different set of risks)

Political and business leaders need to make decisions about robustness/resilience of supply chains versus the efficiency

"A key message is that we may be on the cusp of a new inflationary era. The forces behind high inflation could persist for some time... the structural factors that have kept inflation low in recent decades may wane as globalisation retreats."



Agustin Carstens, BIS

Conclusion

Major economic challenges mean that we need great economists even more than ever.....



Thank you for everything that you do!!





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improve the lives of all Australians**

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