

OFFICIAL



Australian Government
Productivity Commission

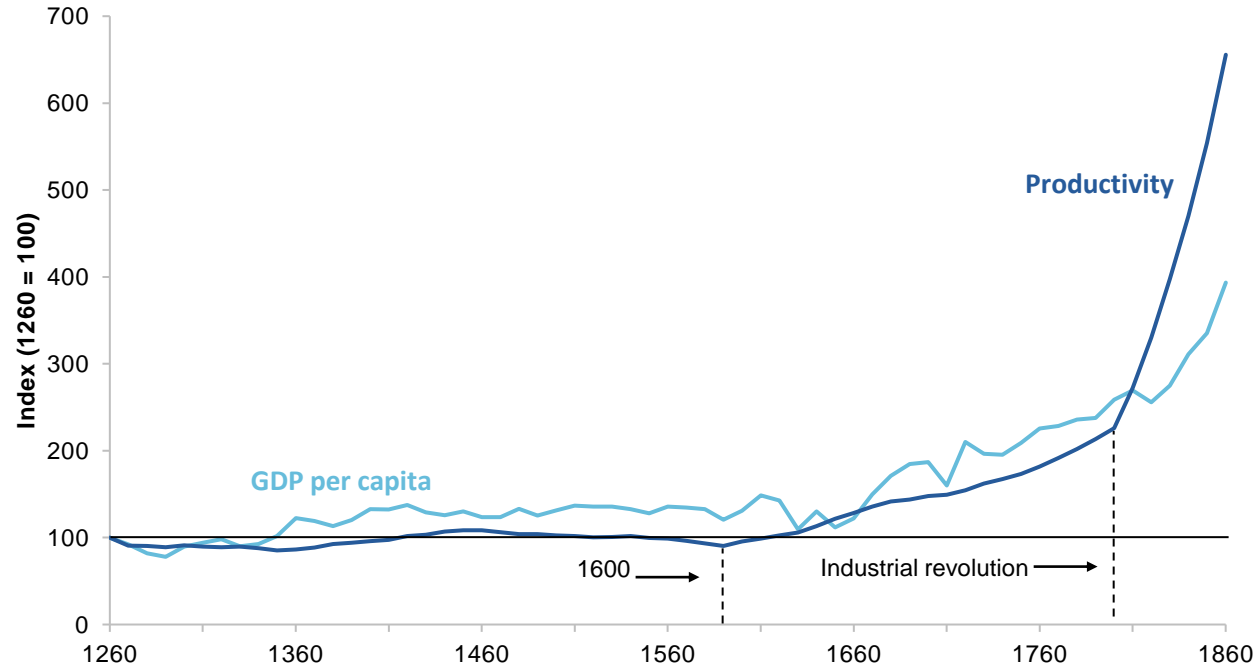
The 5-year productivity inquiry

Parliamentary Library, 7 June 2023

Colin Burns, Elina Gilbourd, Hudan Nuch, Cameron Eren

Productivity – a key to prosperity





UK GDP per capita and productivity



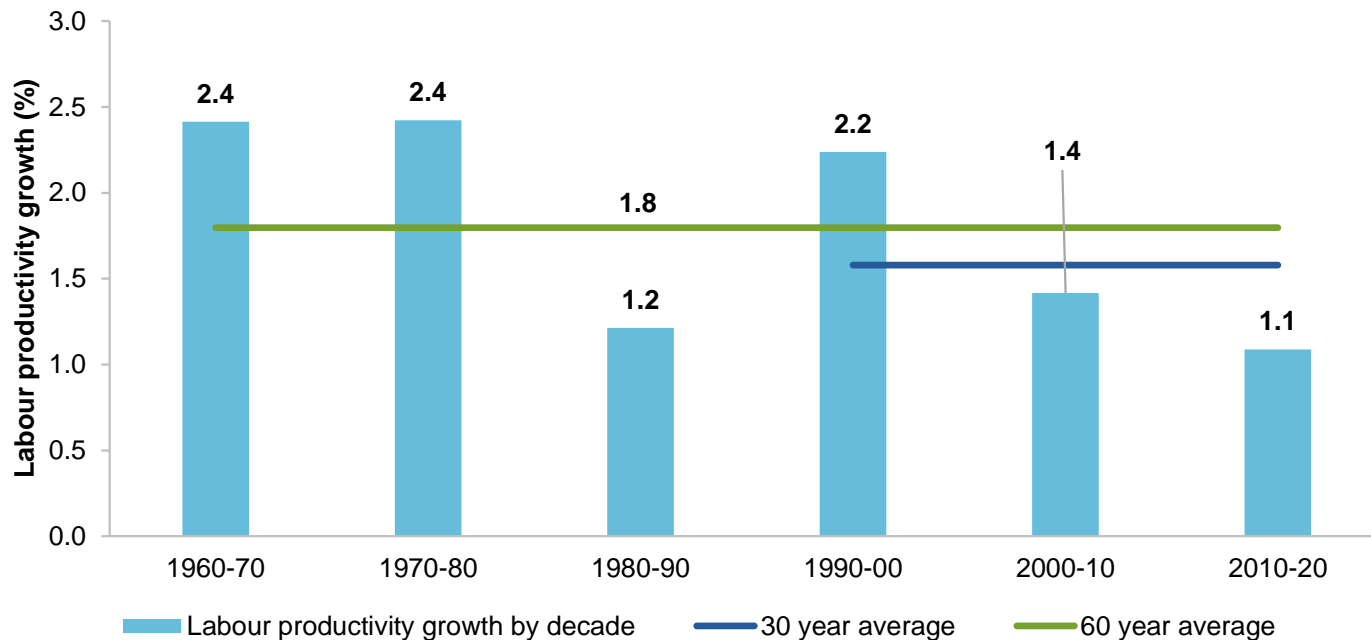
Productivity – makes things cheaper

Good or service	1901	1990	2000	2010	2019
	Hours	Hours	Hours	Hours	Hours
Double bed, mattress, blanket and pillows	185	41	37	24	18
Bicycle	473	-	14	8	6
Rent	20	12	11	10	9
Theatre (minutes)	321	81	84	69	62
Loaf of bread (minutes)	18	5	6	6	4
Smartphone	-	-	-	60	16
Cars (new, months)	-	17	13	7	5

Then and now

Ford Model T (1908)	VS	Tesla Model 3 (2022)
 <p>20hp crank started Internal combustion</p> <p>~70km/h</p> <p>34-64 km</p> <p>no seat belts</p> <p>Paper maps</p> <p>Sprung Leather seats stuffed with horsehair and cotton</p>	<p>Engine</p> <p>Top speed</p> <p>Range</p> <p>Safety</p> <p>Navigation</p> <p>Comfort</p>	 <p>283hp electric</p> <p>>250km/h</p> <p>600km</p> <p>seat belts, air bags, automatic braking and computer aided collision avoidance systems</p> <p>GPS navigation on an internal touch screen</p> <p>Heated seats and steering wheel and 13 speaker audio system</p>
Apple PowerBook 100 (1991)	VS	Apple MacBook Air (2022)
 <p>9 inch monochrome (1 colour) 640 x 400 pixels</p> <p>Lead acid battery with <4 hours</p> <p>2.3kg</p> <p>up to 40 megabytes</p> <p>Plastic</p> <p>serial modem</p> <p>Single speaker</p>	<p>Screen</p> <p>Battery</p> <p>Weight</p> <p>Storage</p> <p>Material</p> <p>Communication</p> <p>Sound</p>	 <p>13.3 inch touch screen, millions of colours, 2560 x 1600 pixels</p> <p>Lithium polymer up to 18 hours</p> <p>1.3kg</p> <p>1TB (25,000 times larger)</p> <p>Aluminium</p> <p>WiFi, Bluetooth and built in high definition camera</p> <p>Stereo speakers & headphone jack</p>

Productivity – Labour productivity growth is slowest in 60 years



The policy agenda

Factors influencing the Commission's choice of focus area

Determinants of market growth

Human capital



Investment



Innovation



Role of Government in markets

Laws and regulations



Taxes and spending



Institutional settings



Headwinds to productivity

Rise of services

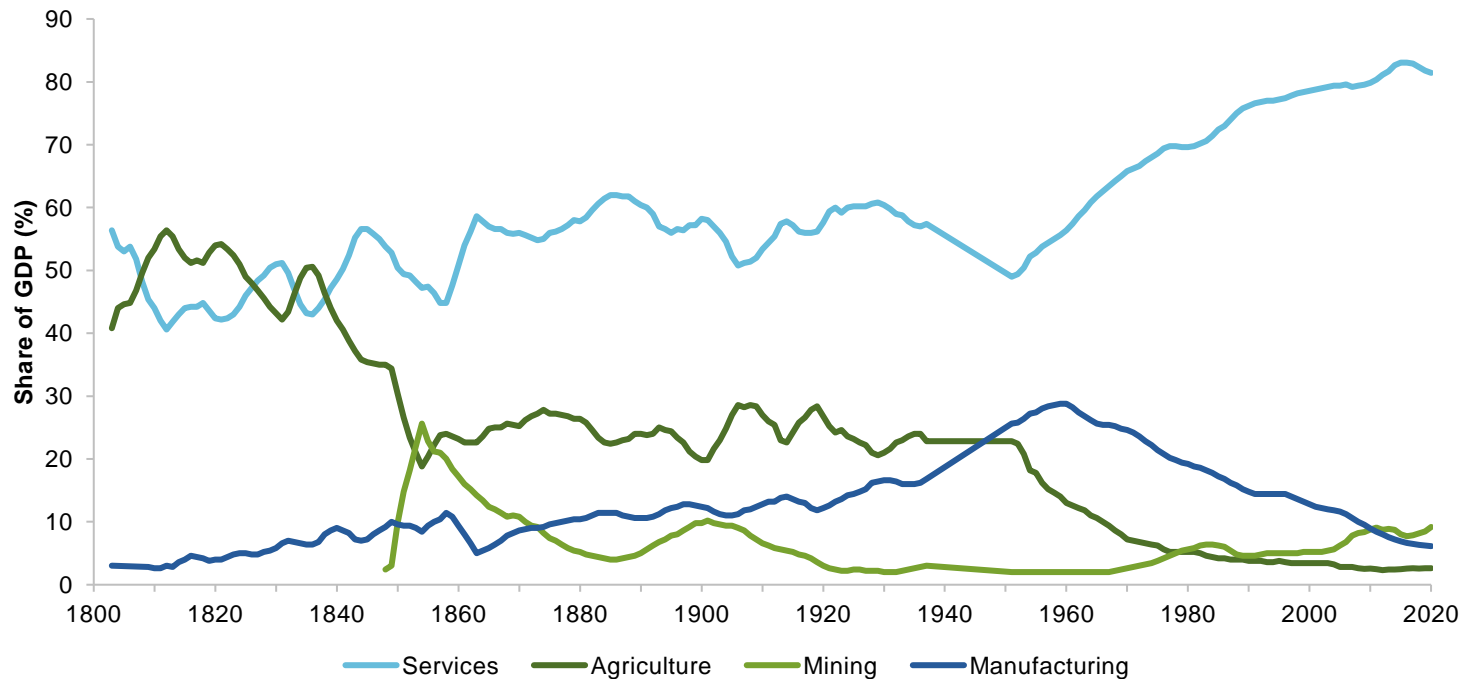


Climate change and geopolitical tensions



Services have come to dominate the economy

Sectoral shares of GDP (%)



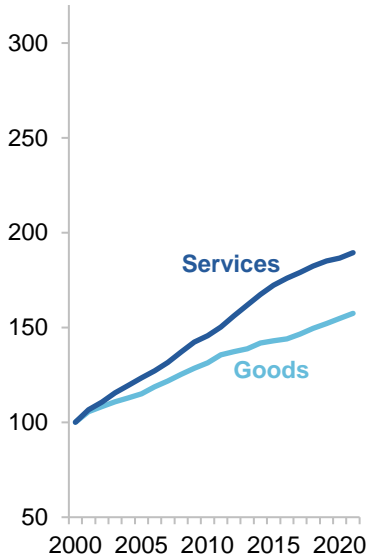


**How to improve
productivity here?**

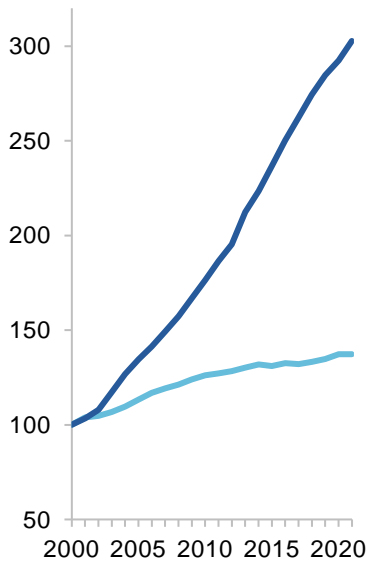
Price growth in services has outstripped goods

CPI index for various pairs of related services and goods (2000 = 100)

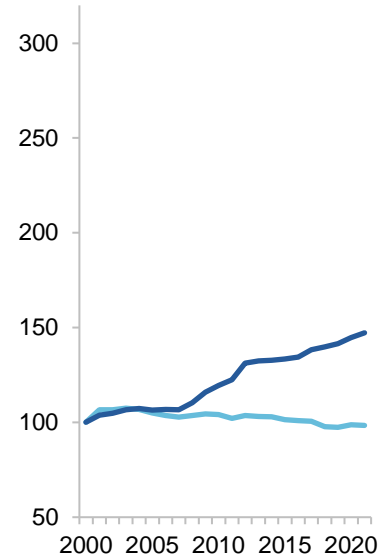
All goods and services



Medical products

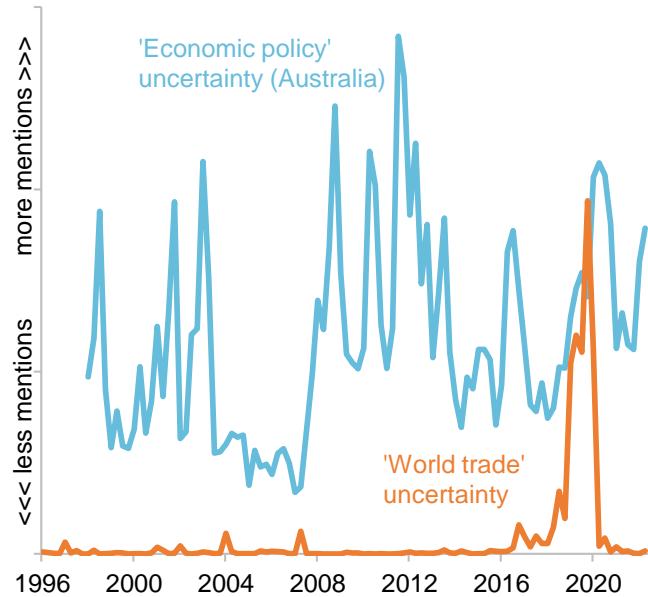


Clothing products

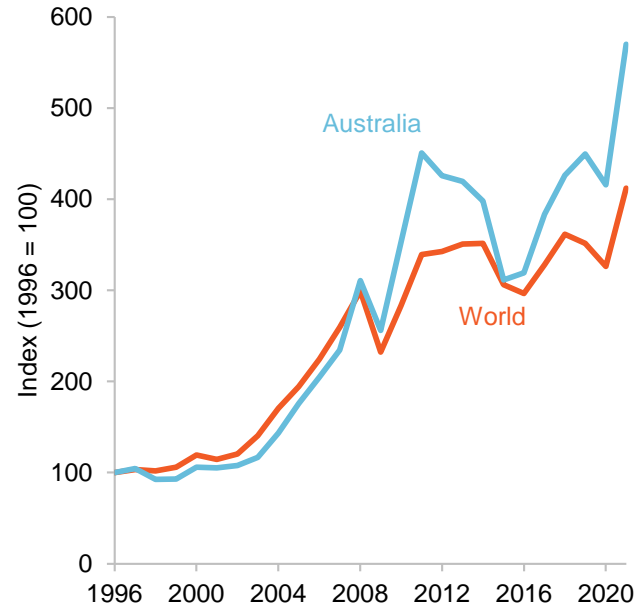


Trade tensions and COVID 19 caused significant trade uncertainty

Uncertainty according to media mentions*



Global trade in merchandise



* Economic policy uncertainty in Australia is based on the number of articles in 8 Australian newspapers that contain variations of the word uncertainty. World trade uncertainty is based on the number of times uncertainty is mentioned within a proximity to a word related to trade in the Economist Intelligence Unit country reports (see Figure 3.1 in Volume 3 of the Productivity Inquiry for more detail)

The policy agenda

The policy agenda for a more productive Australia



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



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



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



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



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

Building an adaptable workforce

In the context of the Productivity Inquiry we focused on the role human capital can play in boosting productivity.

Education increases people's capabilities

- underpins the capacity to make the fullest use of technology, generate new ideas, and apply knowledge.
- allows more or better work in the same time.

It also:

- makes society healthier, safer, better informed, and more civically engaged
- fosters social mobility.

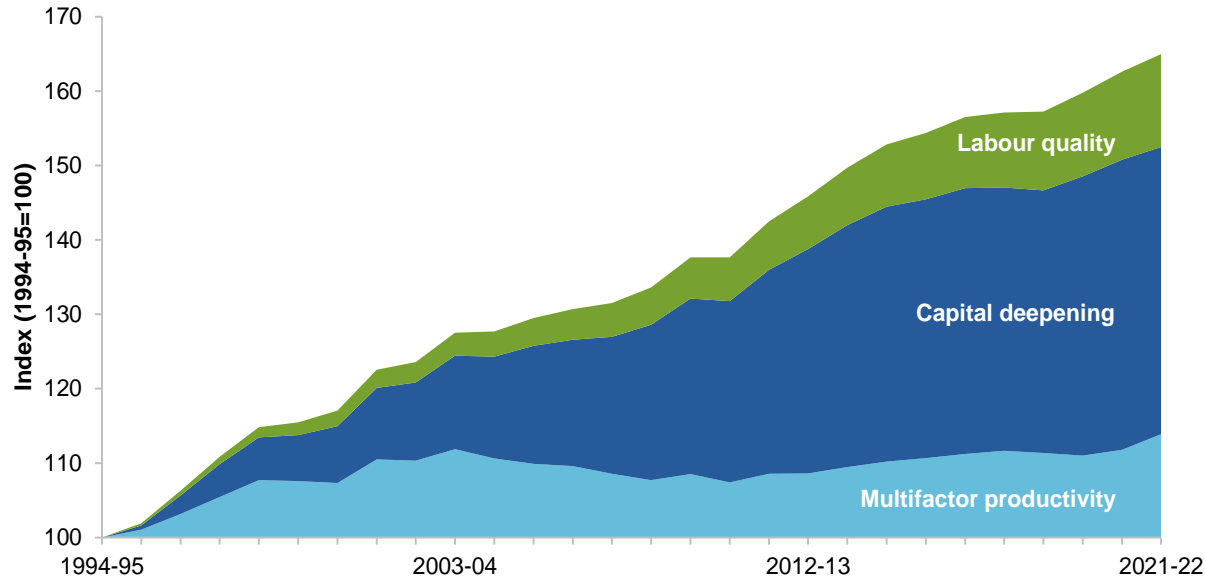
Migration is another avenue to meet skill needs in the Australian labour market.

It also has:

- social objectives
- allows Australia to meet international obligations
- has environmental impacts.

Labour productivity has grown partly due to a more skilled workforce

Factors accounting for labour productivity growth



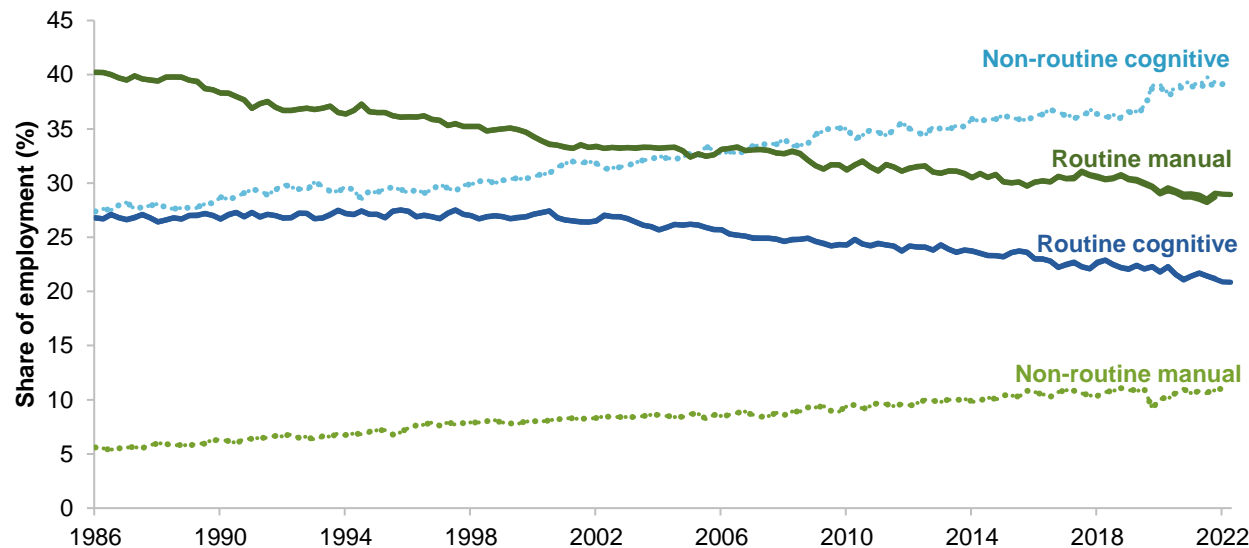
Rising skill levels have contributed to Australia's productivity growth, although it is challenging to measure the share of growth attributable directly to education.

More educated workers are more likely to participate in the labour force and earn more over their lifetime.

However, **one in five Australians** have low basic skills, which limits their job opportunities, versatility, capacity to acquire further skills, and lifetime wages.

Source: ABS (*Estimates of Industry Multifactor Productivity, 2021-22 financial year, Cat. no. 5260.0.55.002, table 2*).

Non-routine skills are increasingly demanded, particularly cognitive



As our reliance on the services sector expands, **human capital will play a more important role than physical capital in improving productivity.**

This will require **general/foundational skills** and **specific skills** (data and digital technology, allied health care and community services).

Still, we **cannot predict many jobs** that will emerge over coming decades.

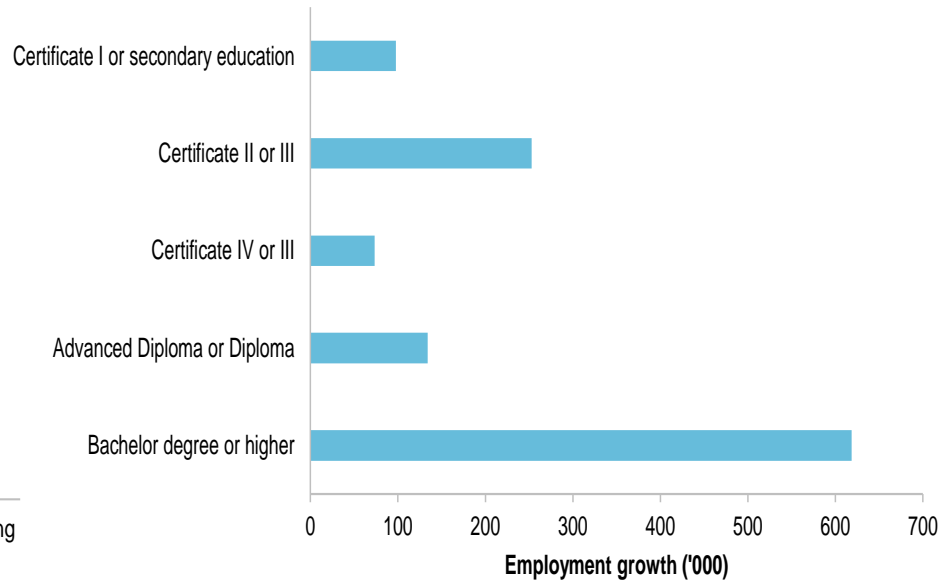
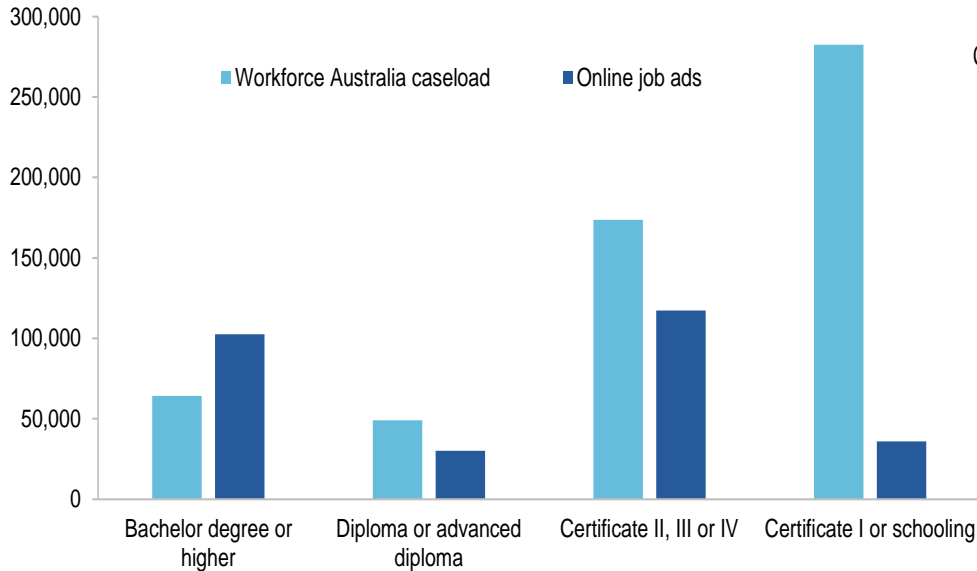
An **adaptable education system** can provide resilience to change.

Source: ABS (Labour Force, Australia, Detailed, November 2022, Cat. no. 6291.0.55.001, table 7).

Higher skills are needed now and into the future

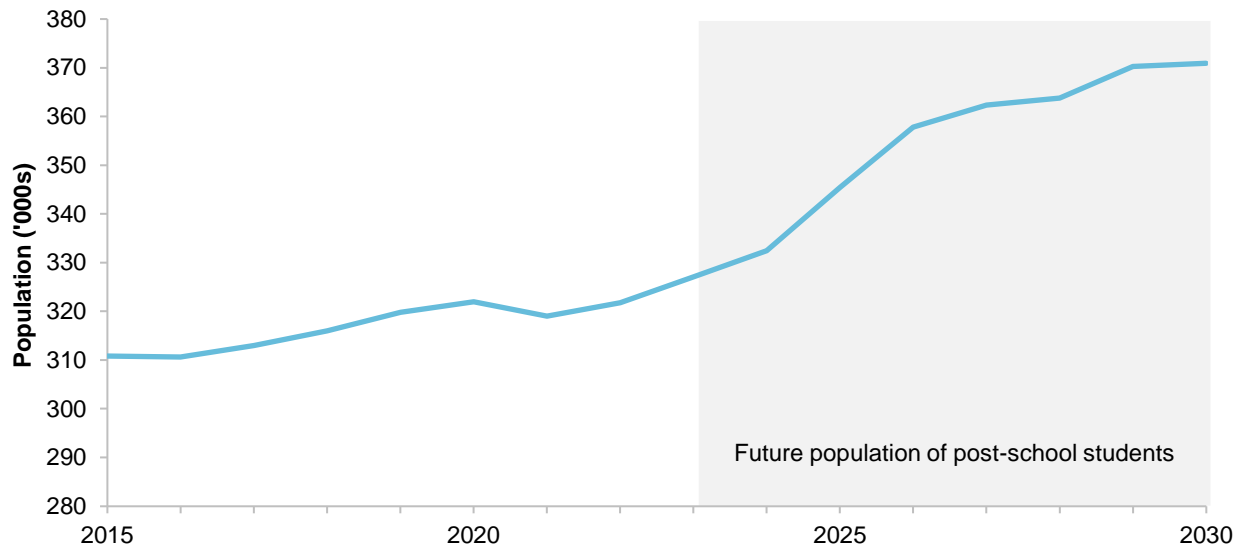
Many job vacancies need higher qualifications than job seekers have...

...And almost all new jobs will need tertiary education (5-year projection)



Source: LHS: Productivity Commission analysis based on unpublished DEWR data and Jobs and Skills Australia (2022); RHS: Adapted from NSC (2022).

The population of school leavers will expand considerably in coming years



Those born during the 'Costello baby boom' of 2005–2008 will start to leave school shortly, dramatically increasing the population of potential tertiary students.

The higher education sector, in particular, will be unable to meet this additional demand under current funding arrangements.

Source: ABS (Population Projections, 2017 (base) — 2066, Cat. no. 3222.0, table B9); ABS (National, state and territory population, June 2022, Cat no. 3101.0, table 59).

Tertiary education - Investing for future skill needs

Expanding tertiary places



Uncapping places to meet skill needs

Recalibrating funding



Student contribution

Gov't contribution



Setting cost-reflective prices



Provider revenue per student

Increasing loan access



Income-contingent loans for more students

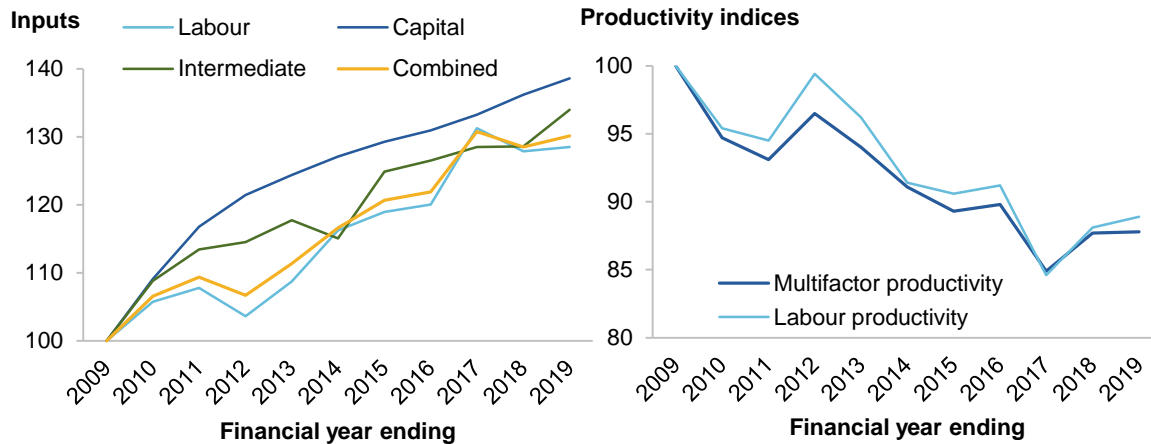
Supporting lifelong learning



Targeted government support

Outcomes are reasonable but there is still room to improve - schools

Academic achievement (NAPLAN/PISA scores) among children has been stagnating, while the productivity of schools has been declining in recent years.



Source: ABS (*Experimental school education multifactor productivity estimates*, September 2021, Cat. no. 8104.0).

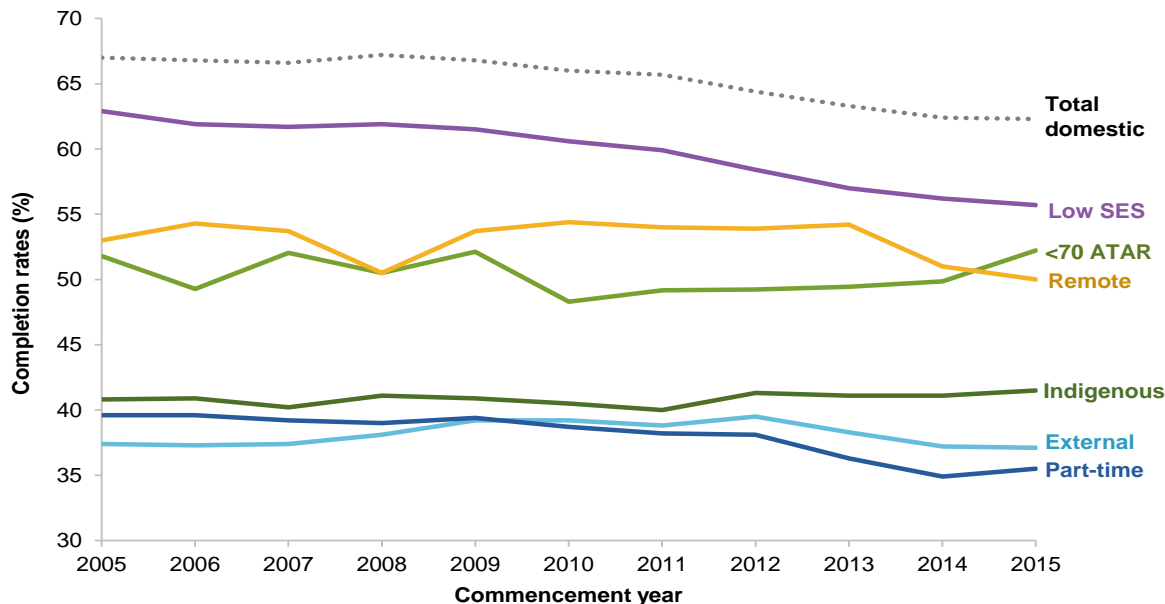
Outcomes are reasonable but there is still room to improve

- tertiary

Outcomes for tertiary students that complete their studies are good:

- **Almost 90% of VET graduates** are employed (full or part time) or in further study after completion
- **Over 90% of university graduates** are full time employed 3 years after graduation.

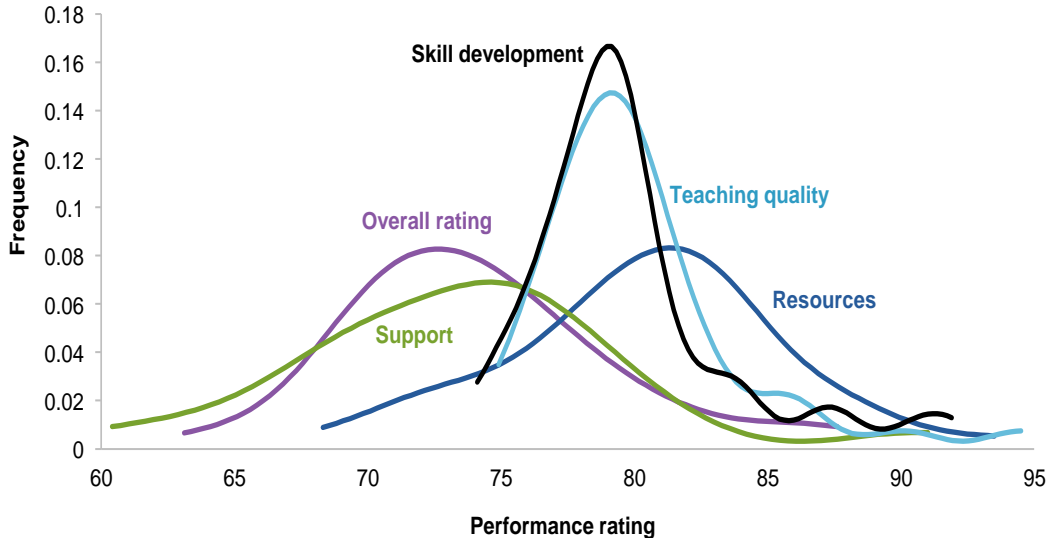
But **completion rates** have been stubbornly low for certain types of university students.



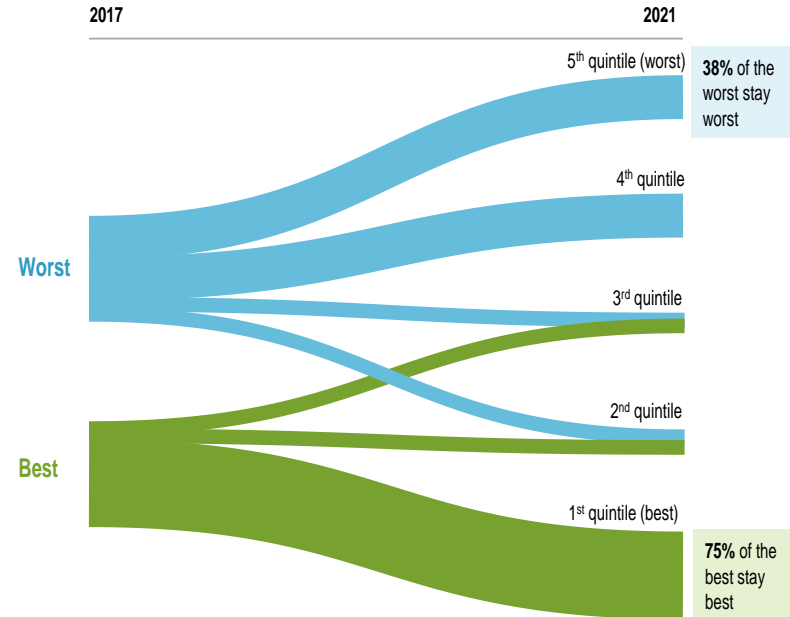
Source: ABS (*Experimental school education multifactor productivity estimates*, September 2021, Cat. no. 8104.0).

Outcomes are reasonable but there is still room to improve - tertiary

Distribution of education quality across universities based on student surveys



The good stay good, the mediocre stay mediocre...



Improving outcomes for a given number of years in education

School education

Leverage digital technologies



- Minimise administrative processes.
- Expand access to quality teaching.
- Reduce teaching out of field.
- Government guidance about effective digital learning options.

Diffuse best practice



- Credible evidence alone will not achieve good outcomes.
- Leverage spreading mechanisms: observation and feedback, and curriculum implementation.

Support experimentation



- The basic model of school operation in Australia has changed little over the past century.
- Greater openness to experimenting with school models and evaluating what works.

Tertiary education

Leverage information



- Require universities to share all lectures online and for free.
- Improve evidence and indicators of performance.

Reward & spread best practice



- Funding research and innovation in teaching.
- Hold off implementing the proposed performance based funding of universities, favouring lighter touch financial rewards.

Support completion



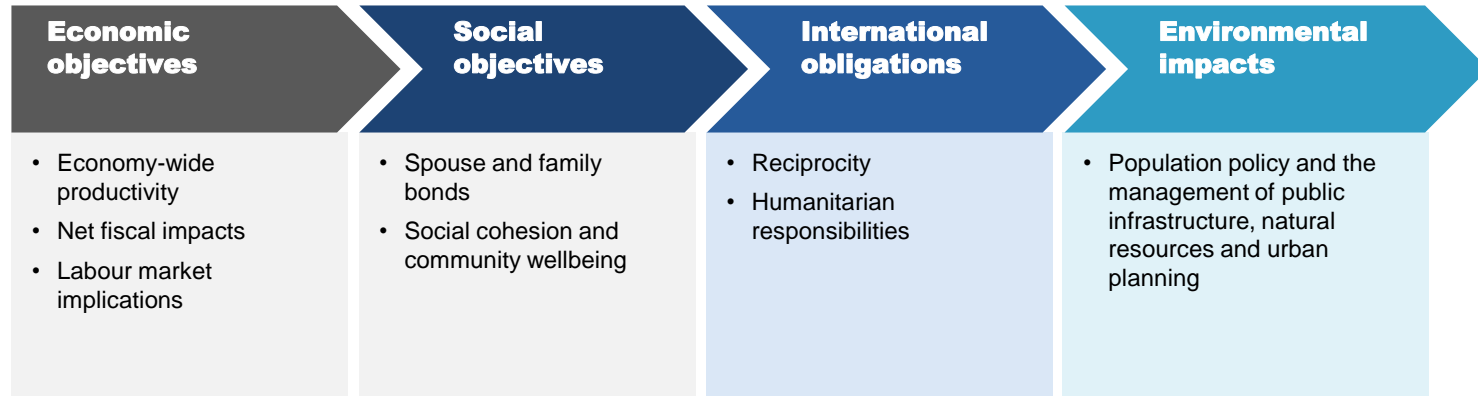
- A grant program to support experimentation with new retention strategies.
- Nested qualification to support better outcomes for non-completers.

Bolster VET teaching



- VET sector reforms underway will help secure its relevance but rely on successful implementation.
- Prioritise cross sectoral skills, prompt training package updates, support the VET workforce, and test more flexible models.

The objectives of migration policy



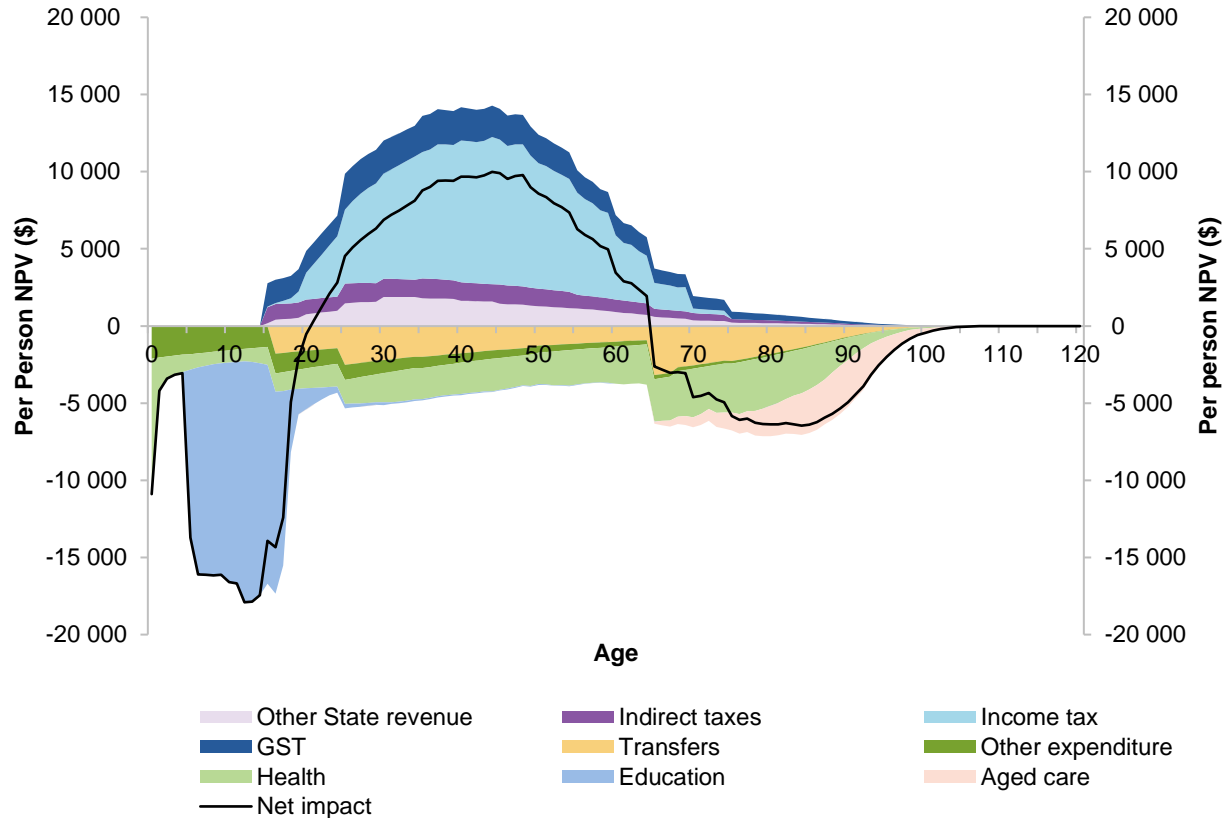
Our focus was on **productivity** as distinct from **participation** although both have made important contributions to increases in real income levels.

We focused on productivity, which means we are more interested in

- How well labour is utilized / the **matching of skills and jobs**
- **Lifetime fiscal impacts**

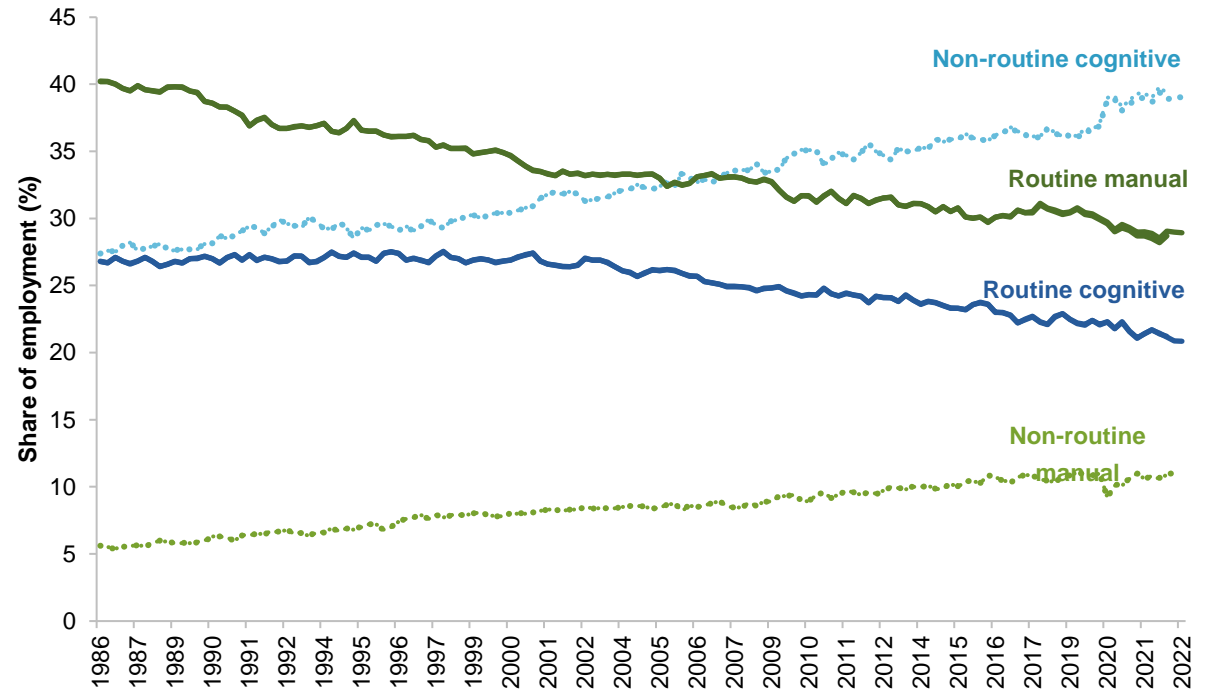
Fiscal risks are age-related

Assuming that migrants have a similar net fiscal impact as non-migrants, fiscal risks are concentrated in early ages and post-retirement



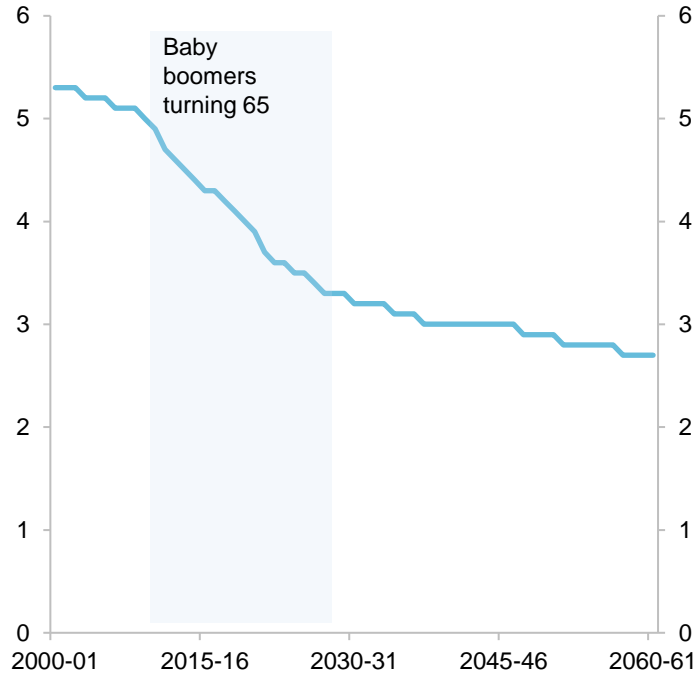
The matching of skills and jobs

Matching the skills supplied by migrants to the skills demanded by employers will be subject to various labour market trends



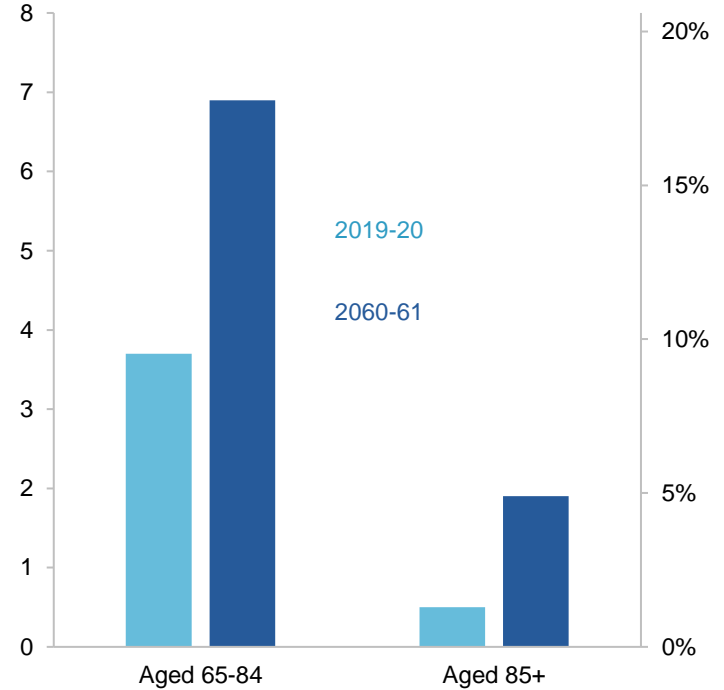
The matching of skills and jobs

Old age dependency ratio



Matching the skills supplied by migrants to the skills demanded by employers will be subject to various labour market trends

Older Australians by level (millions) (LHS) and share (RHS)



Issues with the visa system

Skill lists	Slow to update to account for new professions. Poorly defined and measured.
Employer Nominated visas	Positive fiscal impact but not always highly-skilled. Should account for age. TSMIT too low.
Skilled Independent	Attracts highly-qualified migrants but also higher unemployment and underemployment
Investment visas	Negative lifetime fiscal impacts, low skills. Contribution to investment is negligible.
Temporary migration	Increasingly unskilled – not filling shortages. Not always a good substitute for permanent.
Pathways to permanent	Not attracting international student graduates. Recognition of qualifications is often slow.
Care workers needed	Care workers already in shortage. All reports forecast further demand.

Solutions for permanent skilled visas

Skill lists	Stop using lists as filtering mechanism
Employer Nominated visas	<ul style="list-style-type: none">- Remove list restriction and increase wage threshold- Wage threshold to vary by age- Allow for switching employers
Skilled Independent	<ul style="list-style-type: none">- Revise points list (generally)- Place greater emphasis on ongoing employment and salary by age group
Pilot human services visa	Although funding for care services should improve
Investment visas	Abolish (or major overhaul)
Occupational licensing	Improve processes for recognition

Solutions for temporary visas and pathways

Temporary migration

- Remove skill list and increase TSMIT
- Allow sponsored migrants to switch employers
- Increase duration
- Less restrictive on age than permanent

Pathways to permanent

- Extend duration of Graduate Visa to enable graduates to test the labour market
- Revised points test means greater emphasis on ongoing employment and salary rather than qualification alone
- Revised sponsorship means greater emphasis on salary than skill list

Climate change will loom large over Australia's future productivity



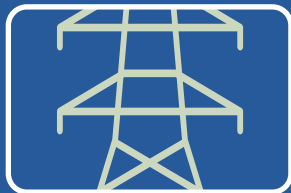
Physical impacts

- Agriculture and fisheries productivity
- Sectors that rely on labour in heat-exposed environments



Adaptation

- Constrained movement between climate-affected sectors and regions would weigh on productivity growth



Emissions reduction policies

- The pursuit of unnecessarily expensive emissions reductions options, over more cost-effective alternatives, will weigh on productivity growth

Building a sustainable climate policy architecture

Building blocks

Safeguard Mechanism

- Apply to electricity and road transport, at facility level
- Facility thresholds reduced to 25,000 tonnes of CO₂-e
- Absolute emissions baselines
- Sub-baseline crediting

Australian Carbon Credit Units

- Discontinue 25 year permanence period for sequestration projects
- Develop a new class of sequestration ACCU with more enduring permanence provisions of biodiversity market
- Publication of ACCU offset and project audit reports

Complementary measures

- Estimate and publish the indirect carbon prices of non- Safeguard Mechanism abatement policies
- Progressively phase out policies found not to be complementary to the Safeguard Mechanism



productivity.inquiry@pc.gov.au



@ozprodcom



@productivitycommission



@productivity-commission