Australian Government
Productivity Commission

Advancing Prosperity

Presentation to the Professional Standards Council Foresight Forum

Sydney - 16 July 2024

Dr Alex Robson, Deputy Chair

Outline

1. Productivity – what is it, why does it matter, where is it heading?
2. Foresight and headwinds
3. Advancing Prosperity: The Commission's 5 year review

What is productivity?

- Labour productivity – output per hour worked
- Working ***smarter***, not longer or harder
- Capital Deepening and MFP
- Practical examples

Then and now

Ford Model T (1908)	VS	Tesla Model 3 (2022)
20hp crank started Internal combustion	Engine	283hp electric
~70km/h	Top speed	>250km/h
34-64 km	Range	600km
no seat belts	Safety	seat belts, air bags, automatic braking and computer aided collision avoidance systems
Paper maps	Navigation	GPS navigation on an internal touch screen
Sprung Leather seats stuffed with horsehair and cotton	Comfort	Heated seats and steering wheel and 13 speaker audio system

Apple PowerBook 100 (1991)	VS	Apple MacBook Air (2022)
9 inch monochrome (1 colour) 640 x 400 pixels	Screen	13.3 inch touch screen, millions of colours, 2560 x 1600 pixels
Lead acid battery with <4 hours	Battery	Lithium polymer up to 18 hours
2.3kg	Weight	1.3kg
up to 40 megabytes	Storage	1TB (25,000 times larger)
Plastic	Material	Aluminium
serial modem	Communication	WiFI, Bluetooth and built in high definition camera
Single speaker	Sound	Stereo speakers & headphone jack

Why does it matter?

Productivity growth improves standards of living

- Cheaper goods and services
- Better quality goods and services
- Wider variety of goods and services

The productivity dividend I

Table 1.1 – Australians need to work fewer hours to afford most goods and services[a,b]

Hours of work to pay for goods and services

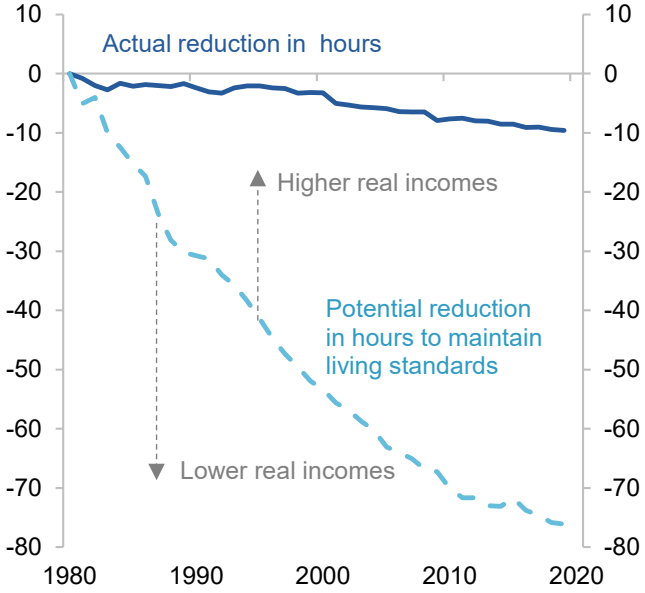
Good or service	1901	1990	2000	2010	2019
	Hours	Hours	Hours	Hours	Hours
Double bed, mattress, blanket and pillows	185	41	37	24	18
Bicycle	473	-	14	8	6
Rent	20	12	11	10	9
Theatre (minutes)	321	81	84	69	62
Loaf of bread (minutes)	18	5	6	6	4
Smartphone	-	-	-	60	16
Cars (new, months)	-	17	13	7	5

a. Number of hours required to purchase good calculated by dividing the nominal price of each good/service by the average nominal wage (inclusive of tax, bonuses and superannuation benefits). Nominal prices for all products (except smartphones and cars) is known for 1901 and 2000 and for other years the price was extrapolated using the consumer price index series corresponding most closely with that product. Wages were calculated as labour compensation from the national accounts divided by aggregate hours worked in the economy. For pre-1960 wages, the wage estimates for 1960 were backcasted using a variety of data sources including the Long-term productivity database and Butlin. Nominal prices for smartphones and cars come from 2021 and were extrapolated backwards using the consumer price index. **b.** For figures quoted in months, one month is taken to be 20 work days of 8 hours each.

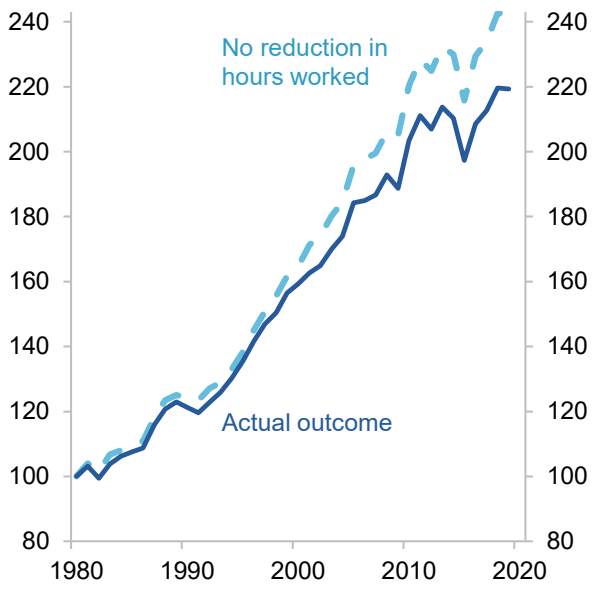
Source: Productivity Commission estimates using ABS (*Australian System of National Accounts,* 2020-21 financial year, Cat. no. 5204.0, table 1; *Consumer Price Index, Australia,* March 2022, Cat. no. 6401.0, table 7); Bradstock (2021); Birot (2021); Butlin, Dixon and Lloyd (2015); Feenstra, Inklaar and Timmer (2015).

Productivity growth makes it possible to consume more and work less

Actual vs potential change in hours worked per week to maintain GDP per capita at 1980



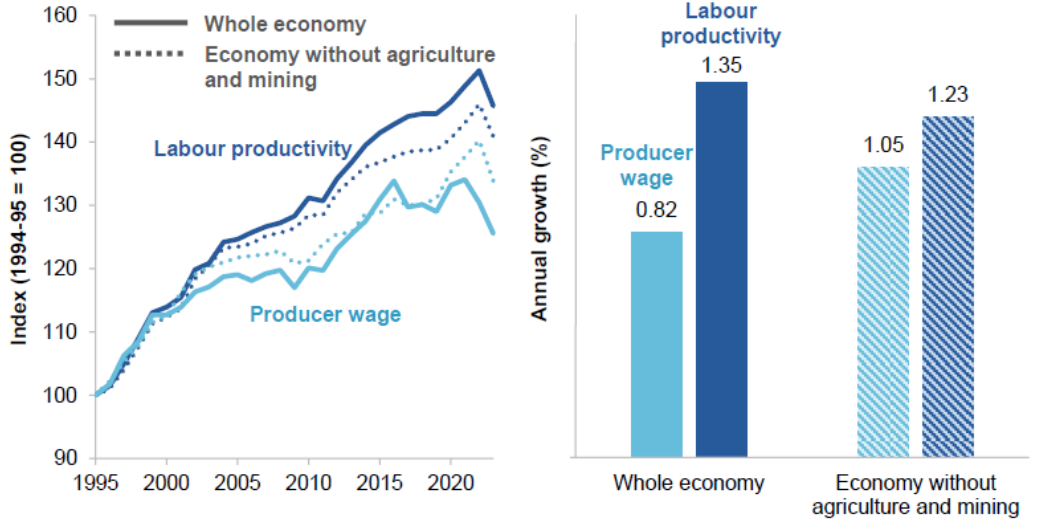
Actual vs potential income (GDP per capita) growth since 1980a (index 1980=100)



GDP measured at chained PPPs in million 2017US$ using data from 2019.

Productivity and real wages

Producer wages and labour productivity between 1994-95 and 2022-23



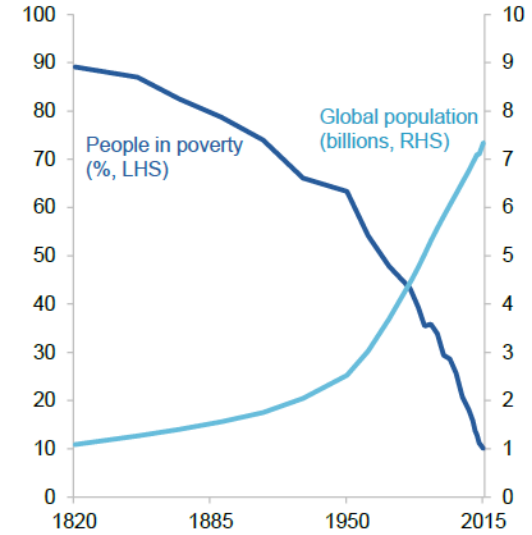
a. The industries excluded are Mining and quarrying, and Agriculture, forestry and fishing. **b.** Methodology is in appendixes A and B.1 of PC 2023b.

Source: Commission estimates using: ABS (Australian System of National Accounts, 2022-23, Cat. no. 5204.0., table 46; Labour Account Australia, September 2023, Cat. no. 6150.0.55.003, industry summary tables; Labour Force, Australia, Detailed, December 2023, Cat. no. 6291.0.55.001., table EQ05; Consumer Price Index, Australia, Cat. no. 6401.0., table 1).

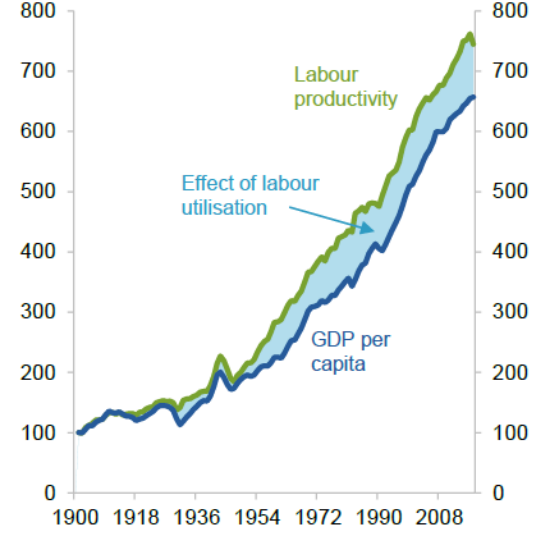
The productivity dividend II

Figure 1.1 – Productivity makes people better off

a. Extreme poverty has plummeted while populations soared[a]



b. Australians are better off due to rising productivity[b] (index = 100 in 1901)



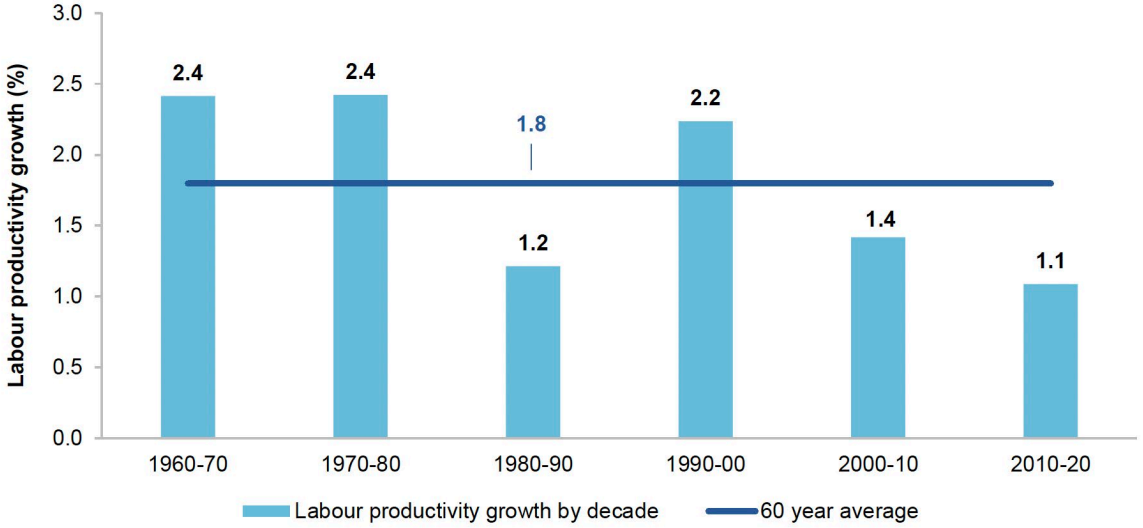
a. Extreme poverty is defined as an income lower than 2.15 USD per day (2017 prices, the equivalent of 1 USD in 1985 prices) (World Bank 2022a). **b**. The effect of labour utilisation is the difference in growth between GDP per capita and labour productivity. Here this effect has been negative (decreased growth in GDP per capita) because the ratio of total hours worked in the economy to total population has fallen due to falling average hours worked.

Source: Productivity Commission estimates using Bergeaud, Cette and Lecat (2016); Roser, Ortiz-Ospina and Giattino (2019).

Productivity growth over 60 years

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.

Foresighting Productivity Growth: the nature of the long term challenge

1. Small changes over long periods matter
2. Yeast or mushrooms?
3. Headwinds – services and cost disease

Foresight I: Small Changes Over Long Periods Matter

- Consider an optimistic scenario in which productivity grows at 1.8% per annum over the next 40 years.
- At the end of that period, compared to today, the increase in average annual incomes would be around $59,000.
- But if productivity growth turns out to be slower – increasing at 1.2% per annum over the same period – then the average annual income gain would be just $36,000.
- So over long periods of time, a seemingly minor slowdown in productivity growth can add up to a significant downgrading of the expected growth in future living standards – 40% in this hypothetical example.
- And, conversely, seemingly small increases in the pace of future productivity growth will add up to a lot over time.

Foresight II: Yeast v Mushrooms

- In modern, market-based economies, new ideas and new ways of doing things – and the application of old ideas in new situations – have a funny way of popping up where we least expect them.
- Some productivity gains even happen by accident.
- So, we cannot know for sure where the next big productivity boost will come from, or exactly what it will look like.
- Will it be in particular industries? Or will it be widespread, such as through a general-purpose technology like AI? Will be it gradual or sudden? Will it be a temporary, or will it be permanent?
- Or, using the terminology of respected economist Arnold Harberger – will it be like yeast, or mushrooms? We cannot know for sure ahead of time.
- So the right policy approach is not to seek to mechanically lift productivity growth by a specified numerical amount.

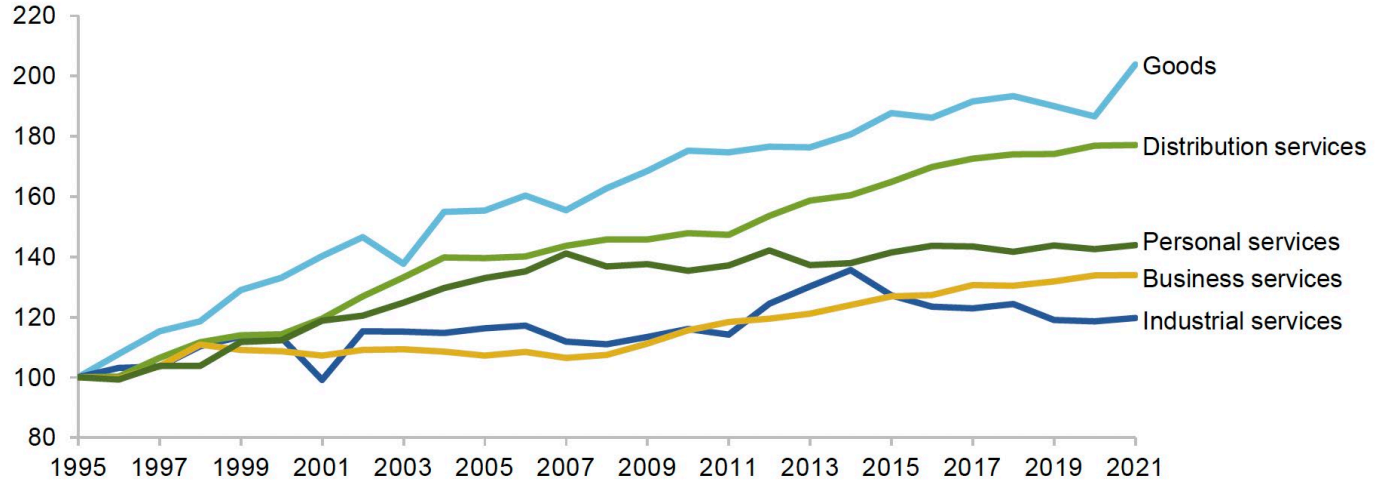
Foresight III: The Importance of Services

- On average over the past 35 years, productivity growth in the goods sector has been higher than in most parts of the services sector; and the goods sector has been shrinking in relative terms.
- Our services sector now employs almost 9 out of 10 workers and accounts for about 80 per cent of economic output. So it is an obvious place to start looking.
- The risk is that this so-called cost disease and weak productivity growth in the services sector will create an ever-growing drag on future overall productivity growth.
- A further point is that productivity growth in these services sectors can be difficult to observe and measure.

Services Productivity

Figure 1.2 – Labour productivity growth in Australia by subsector[a,b]

Index (1995 = 100) between 1994-95 and 2020-21

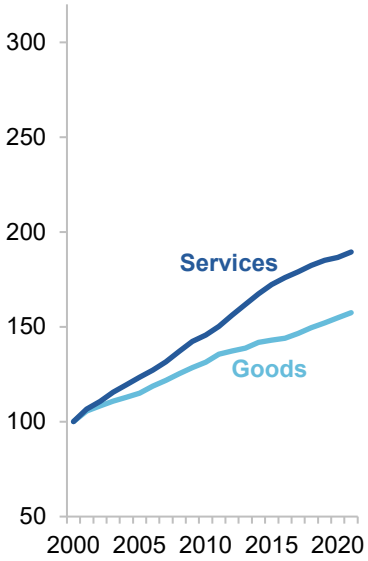


a. Industries at the Australian and New Zealand Standard Industrial Classification (ANZSIC) 1 digit level were aggregated into sectors by weighting the growth in labour productivity by the hours share of that industry (in the previous year). **b.** See volume 2, chapter 2, footnote 17 for definition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

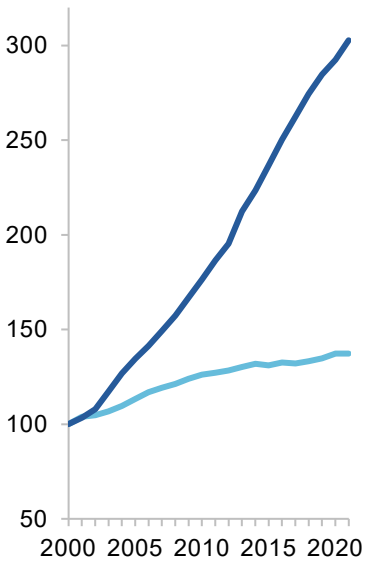
Price growth in services has outstripped goods

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

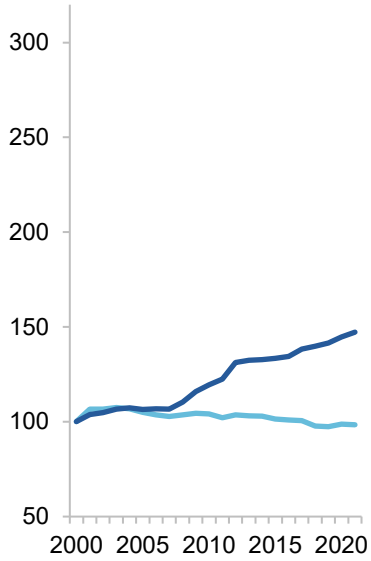
All goods and services



Medical products

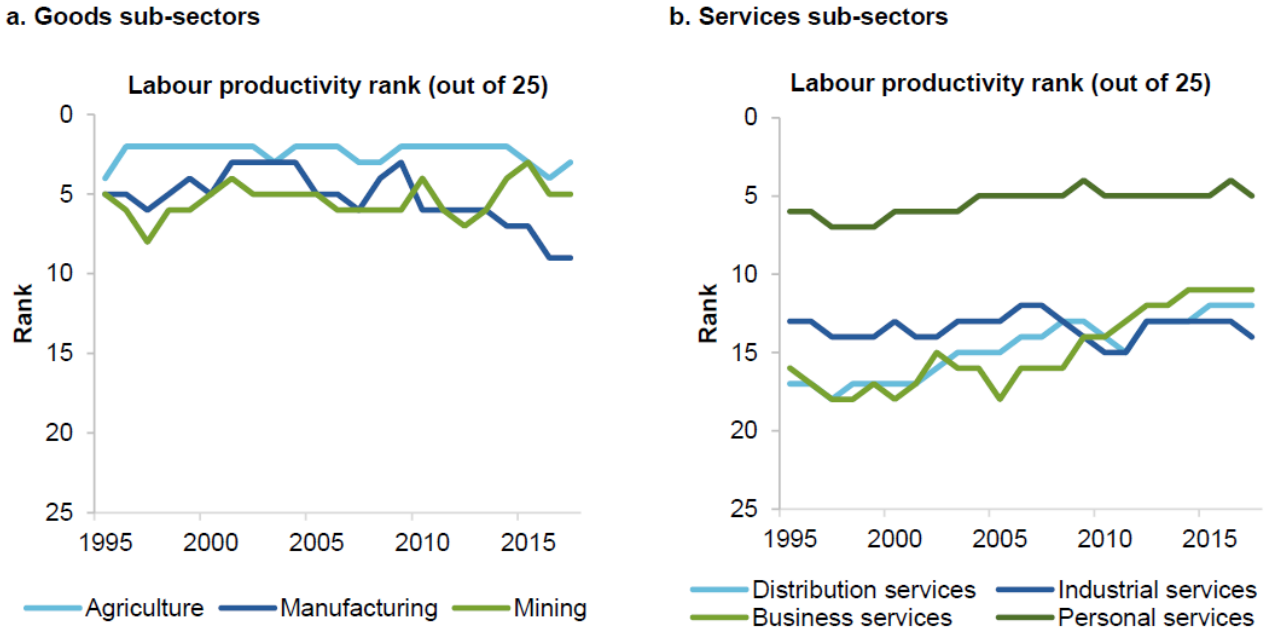


Clothing products



Professional Services Productivity Lags our International Peers

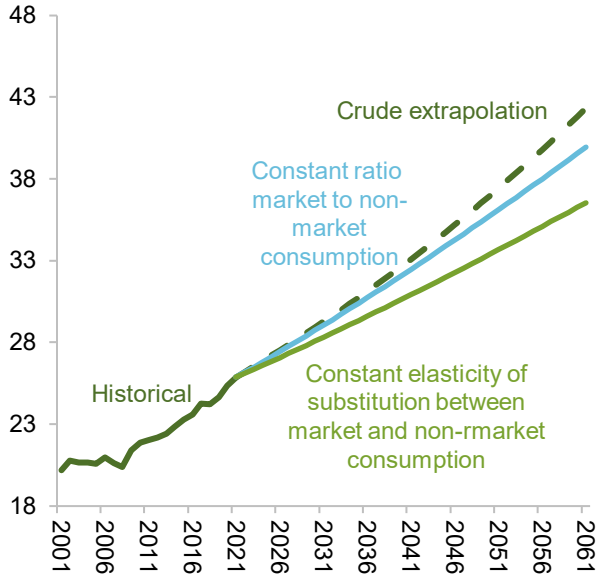
Figure 2.8 – Manufacturing and industrial services are Australia's productivity laggards



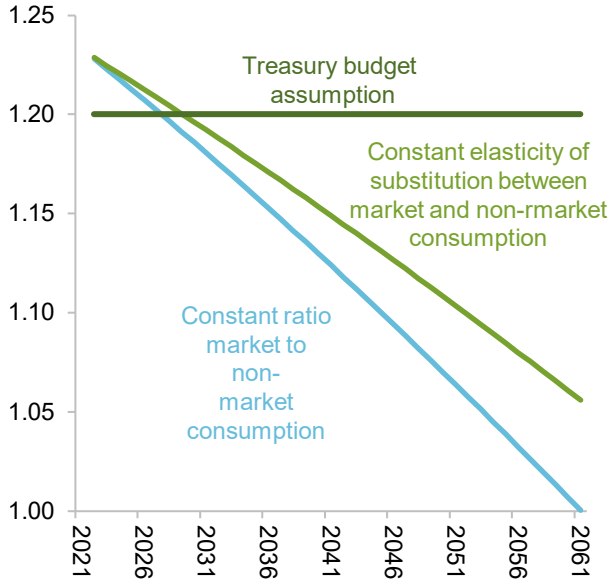
Foresight IV – the growing non-market sector

Projected growth of the non-market share and aggregate labour productivity

Non-market labour share (%)

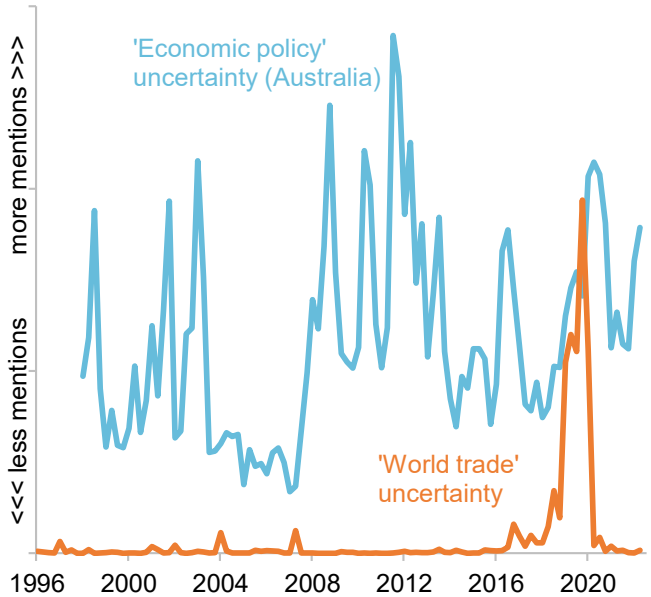


Labour productivity growth (%)

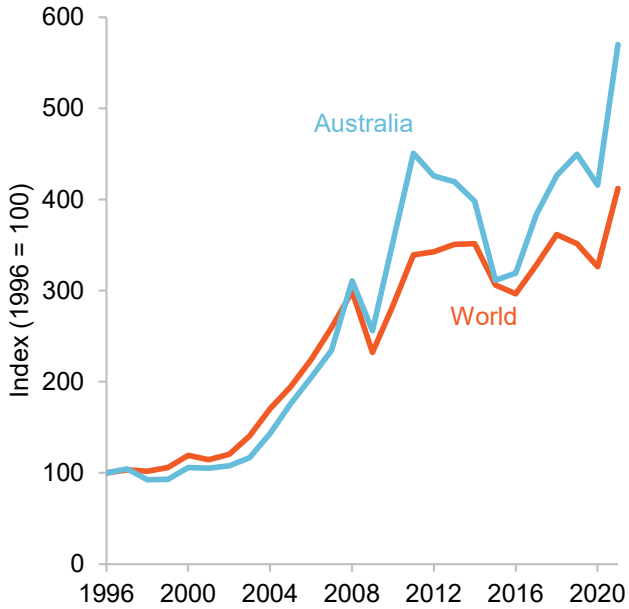


Foresight V: Trade uncertainty

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)

Foresight VI: The Transition to Net Zero

- The need to decarbonise the economy is another potential headwind.
- Decarbonising represents an effort to reduce costs — specifically the cost of carbon emissions not hitherto counted in firm profits or GDP.
- It will require global and local innovation, strong partnerships between the public and private sector and significant new investment — partly to replace rather than add to the existing capital stock.
- Australia's success in meeting this challenge efficiently will be a key determinant of our overall productivity performance in coming decades.

Advancing prosperity

The reform 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

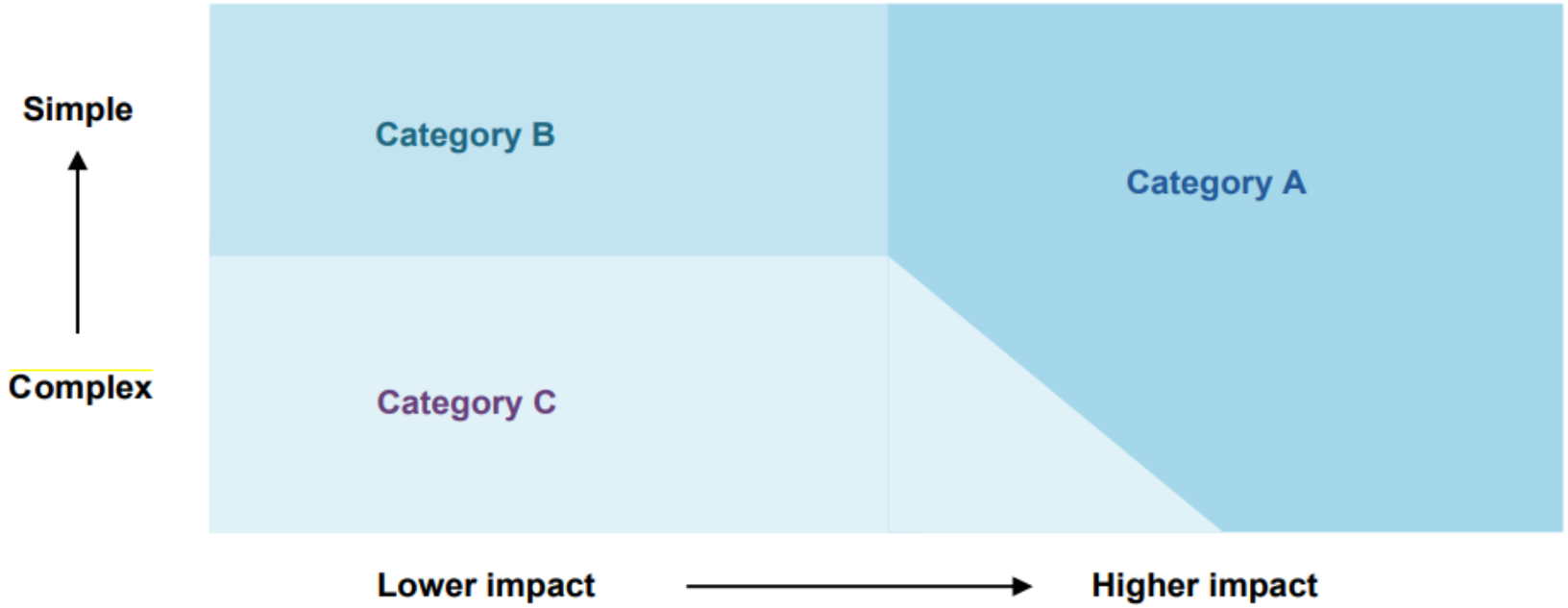
Creating a more dynamic economy through fostering competition, efficiency and contestability in markets

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

Prioritisation Framework

Figure 2.1 – Prioritisation framework



Prioritisation of Reform

- Prioritisation suggests that, given limited time and resources, governments should focus on implementing Category A reform directives, but consider initial steps towards implementation of Category C reforms.
    - State and Territory reforms
    - Reforms for multiple levels of government

Conclusion

- Services – including professional services – dominate Australia's economic landscape
- Hence, our future overall productivity performance will depend on the growth in productivity in these sectors
- Productivity growth in services will manifest as a combination of cost reductions, quality improvements and widening variety
- To secure the potential gains, there are several headwinds we need to overcome

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