

WHAT NOW WHAT NEXT?

Ai GROUP'S
11TH ANNUAL
ECONOMIC FORUM



Australia's Productivity Challenge

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What is 'productivity'?

- 'Productivity' is a measure of how effectively or efficiently a workplace, a business or government agency, a region or a nation as a whole uses the resources at its disposal to produce goods and services which are in turn valued, in some way, by those who consume or use them
- For individual enterprises, 'productivity' may refer to a measure of production or output per unit of some specific input
 - eg litres of milk per cow or tonnes of grain per hectare
 - ounces of gold per tonne of ore extracted
 - motor vehicles produced per worker per day
 - 'weighted inlier equivalent separations' per occupied bed day (in hospitals)
- For an entire economy, 'productivity' is measured as
 - output (gross product or value added) per unit of labour input (usually hours worked) – *labour productivity*
 - or output per unit of labour *and* capital services input – '*multi-factor productivity*'



Why does productivity matter?

‘Productivity ... isn’t everything, but in the long run it’s nearly everything’

- Paul Krugman, *The Age of Diminished Expectations* (1994)

‘Productivity is the prime determinant in the long run of a nation’s standard of living, for it is the root cause of per capita national income. High productivity not only supports high levels of income but allows citizens the option of choosing more leisure instead of longer working hours. It also creates the national income that is taxed to pay for public services which again boosts the standard of living. The capacity to be highly productive also allows a nation’s firms to meet stringent social standards which improve the standard of living, such as in health and safety, equal opportunity and environmental impact’

- Michael E Porter, *The Competitive Advantage of Nations* (1991)



Productivity is one of the “three P’s” of long-run economic growth

$$\begin{aligned} \text{GDP} &= && \text{Population} \\ & \times && \frac{\text{Labour force}}{\text{Population}} && \text{(labour force participation rate)} \\ & \times && \frac{\text{Employment}}{\text{Labour force}} && \text{(1 – unemployment rate)} \\ & \times && \frac{\text{Hours worked}}{\text{Employment}} && \text{(average hours worked)} \\ & \times && \frac{\text{GDP}}{\text{Hours worked}} && \text{(labour productivity)} \end{aligned}$$

Productivity isn't *everything* ...

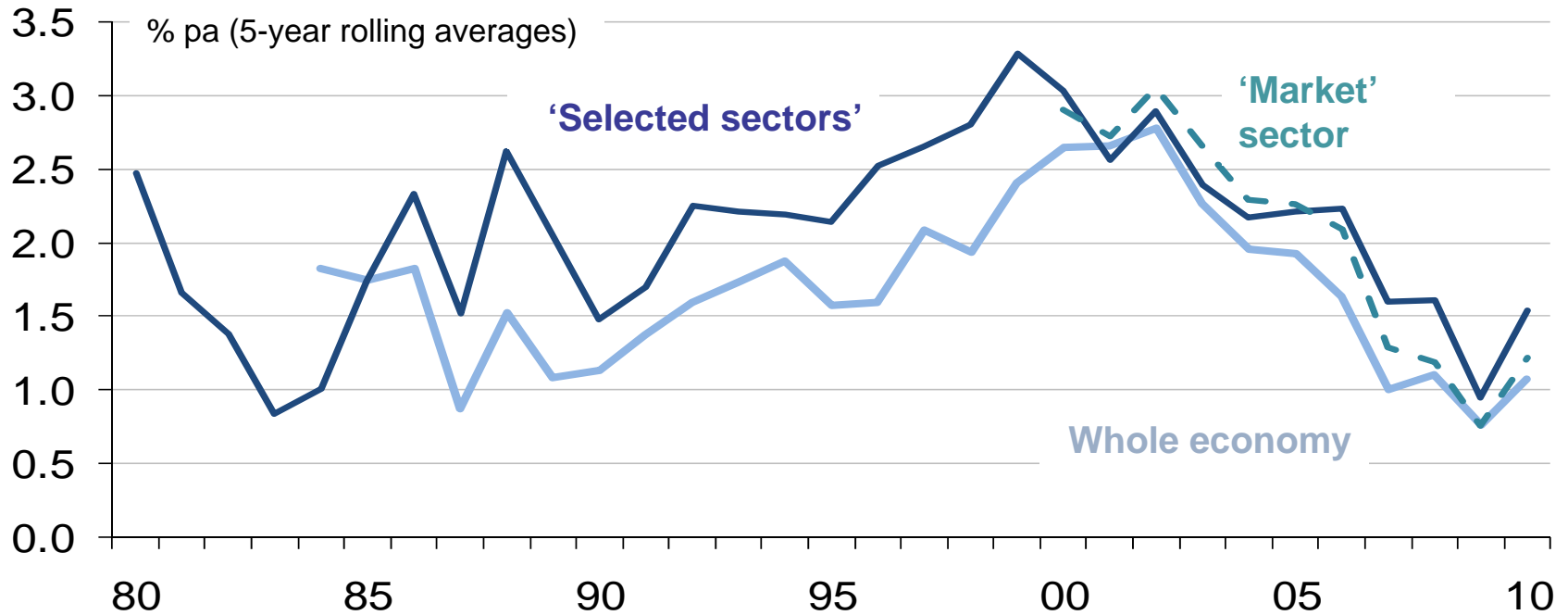
- **Productivity is measured, at the aggregate level, as gross value added or GDP per unit of factor input(s)**
 - and we know that GDP – or even GDP per capita – are incomplete and inadequate measures of ‘well-being’
- **Pursuit of other appropriate or desirable objectives may detract from measured productivity growth**
 - for example, promoting greater labour force participation by people with low skills or who have been marginalized or excluded from the labour force
- **There may be a conflict between productivity and ‘allocative efficiency’**
 - that is, shifting resources into ‘high productivity’ sectors like mining or finance may lift measured productivity but fail to satisfy patterns of demand

... but productivity growth can play a vital role in confronting some of Australia's medium-term challenges

- **Demographic change**
 - which will detract from economic growth through slower population growth, lower levels of labour force participation and lower average hours worked
- **Helping non-resource trade-exposed industries survive the 'resources boom'**
 - in particular those affected by a strong dollar (manufacturing, agriculture, tourism, higher education) and higher interest rates (construction, retailing)
- **Reconciling the looming conflict between environmental constraints on resource depletion and ongoing human aspirations for rising standards of living over time**
 - strong 'multi-factor' productivity growth offers the possibility of continued growth in per capita GDP with less intensive (and possibly even zero growth in) environmental resources

Australia's labour productivity growth rate has slumped over the past decade

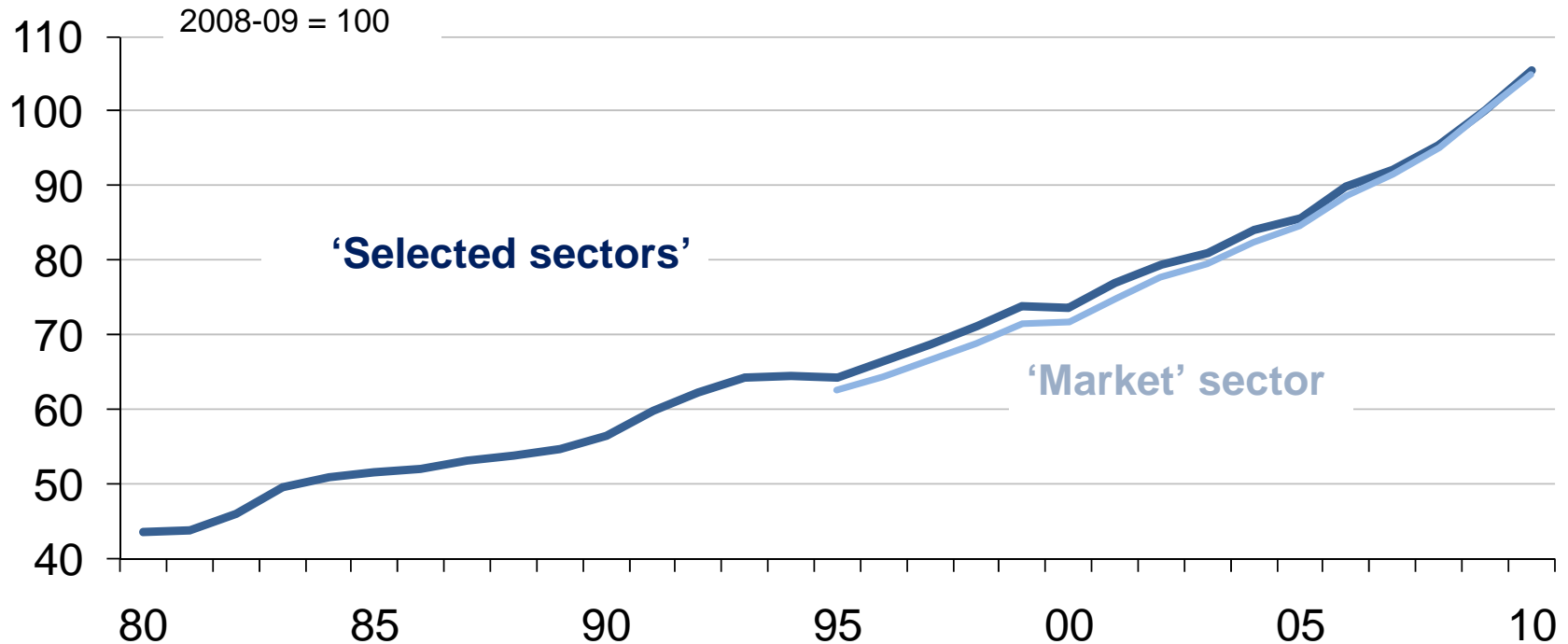
Labour productivity growth



Note: 'Selected sectors' are agriculture, forestry & fishing; mining; manufacturing; electricity, gas, water & waste services; construction; wholesale trade; retail trade; accommodation & food services; transport, postal & warehousing; information, media & telecommunications; financial & insurance services; and arts & recreation services. 'Market sector' comprises these sectors plus rental, hiring & real estate services; professional, scientific & technical services; administrative & support services; and other services. Data are for financial years ended 30 June. *Sources:* ABS; Grattan Institute.

... despite a substantial increase in the amount of capital available to each worker, on average ...

Capital-labour ratio

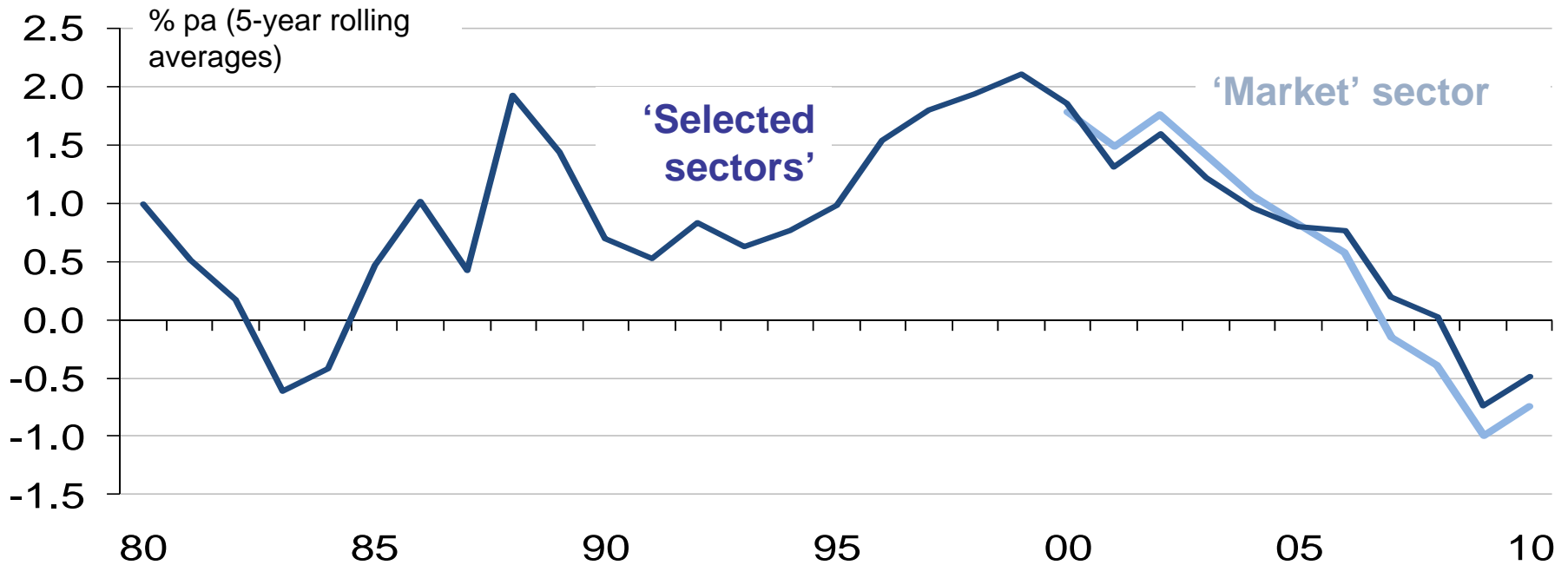


Note: 'market sector' and 'selected sectors' are as defined for previous chart. Data are for financial years ended 30 June.

Sources: ABS; Grattan Institute.

... implying that the slowdown in 'multi-factor' productivity growth has been even more pronounced

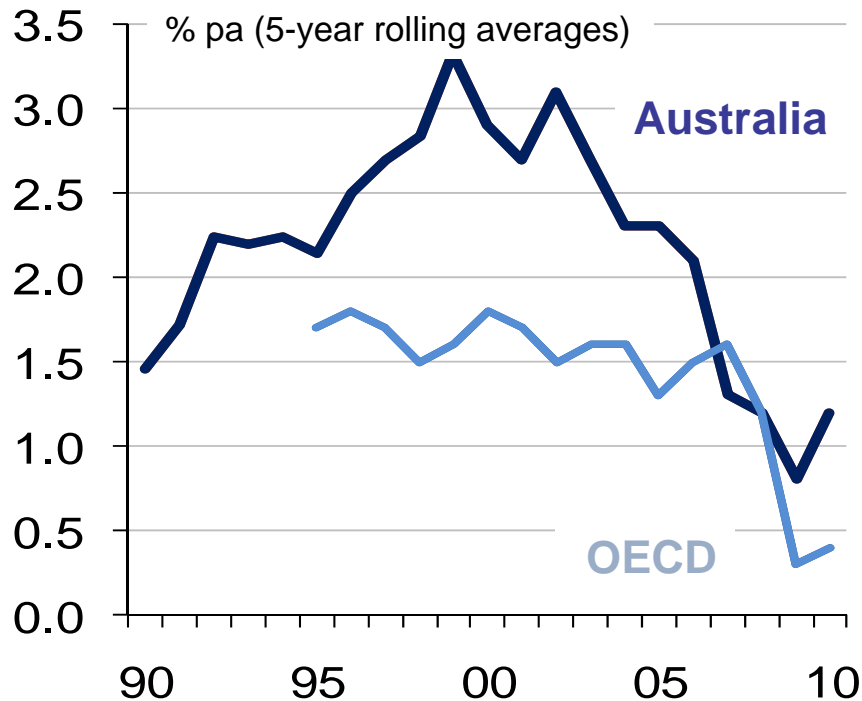
'Multi-factor' productivity growth



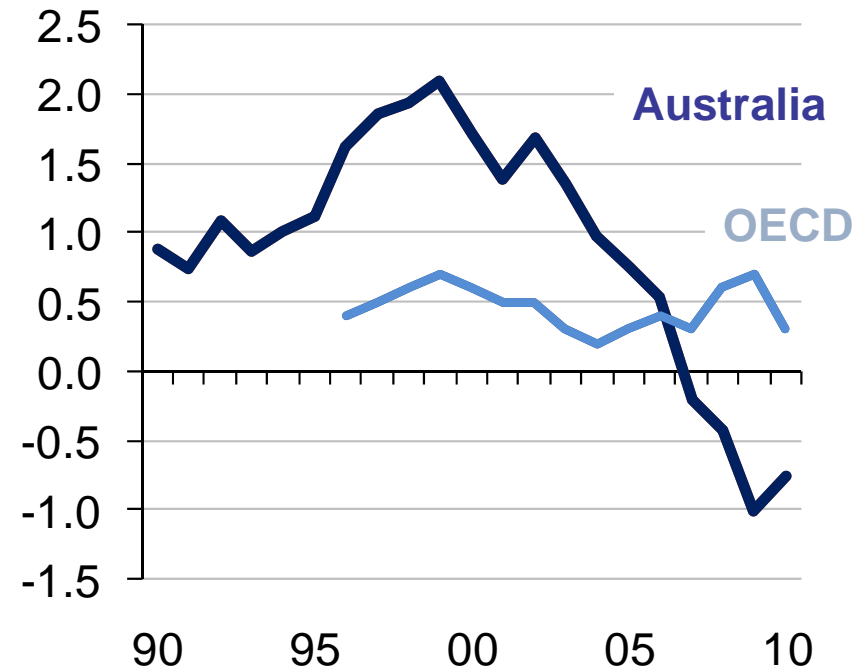
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Productivity growth has slowed in most OECD countries, but not by as much as in Australia

Labour productivity



Multi-factor productivity

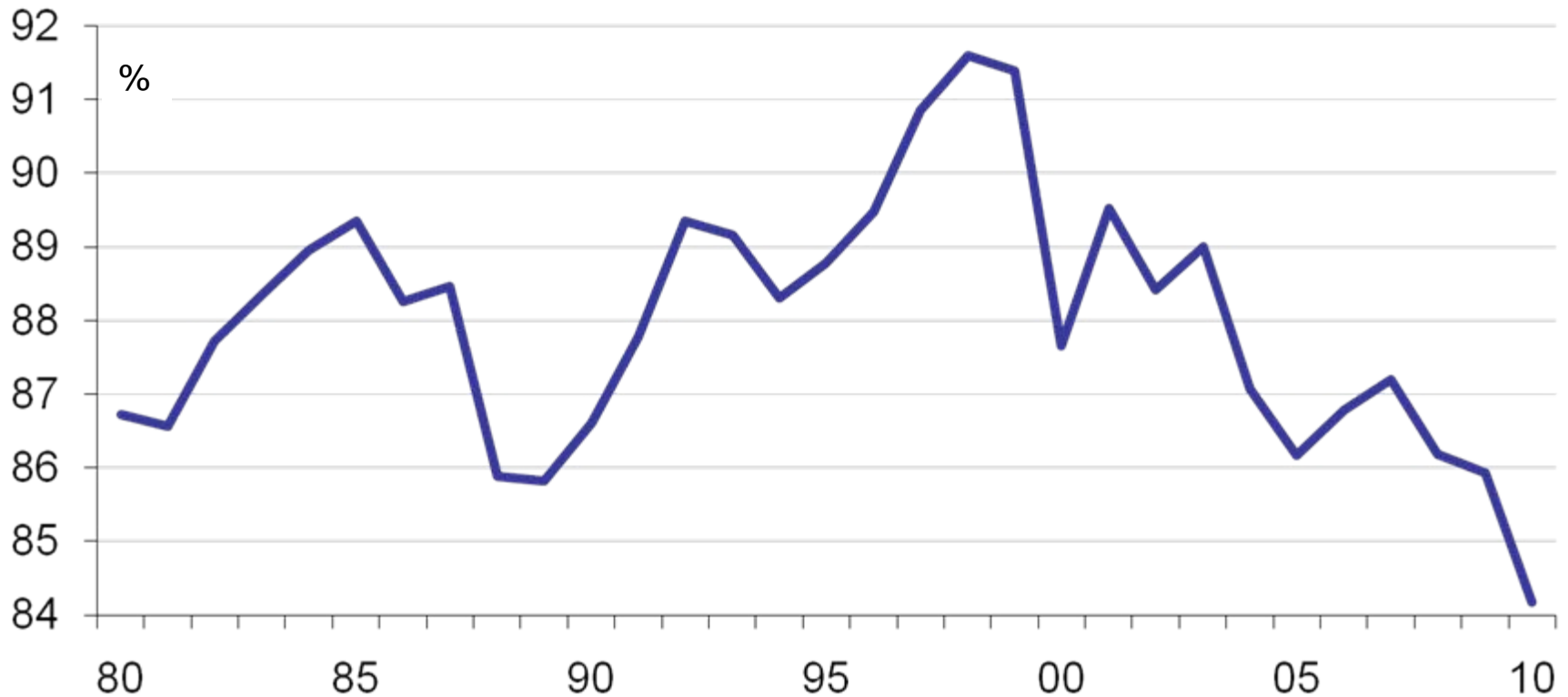


Note: OECD labour inputs measured as persons employed (as opposed to hours worked).

Sources: ABS; OECD; The Conference Board.

Relative to the US, Australian labour productivity is now lower than it was in the late 1980s and early 1990s

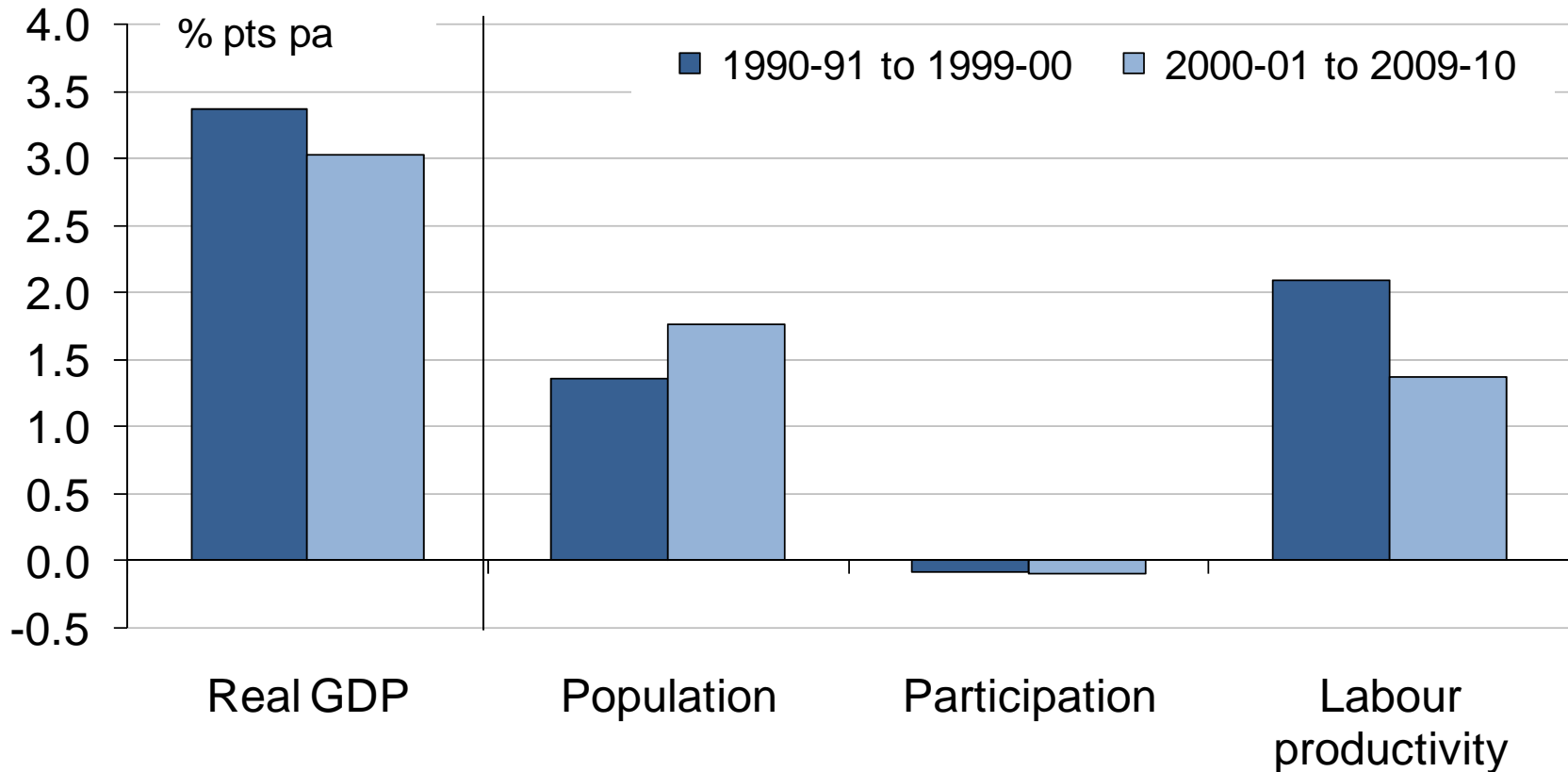
Australian labour productivity as a percentage of the US



Sources: The Conference Board Total Economy Database, January 2011, www.conference-board.org/data/economydatabase/; Grattan Institute.

Faster population growth has largely offset the impact of slower productivity growth on overall economic growth

Sources of real GDP growth (1989-90 to 2009-10)



Sources: ABS, Grattan Institute.

... while the huge gains in Australia's terms of trade have produced an acceleration in domestic income growth

Sources of real GDI growth (1989-90 to 2009-10)

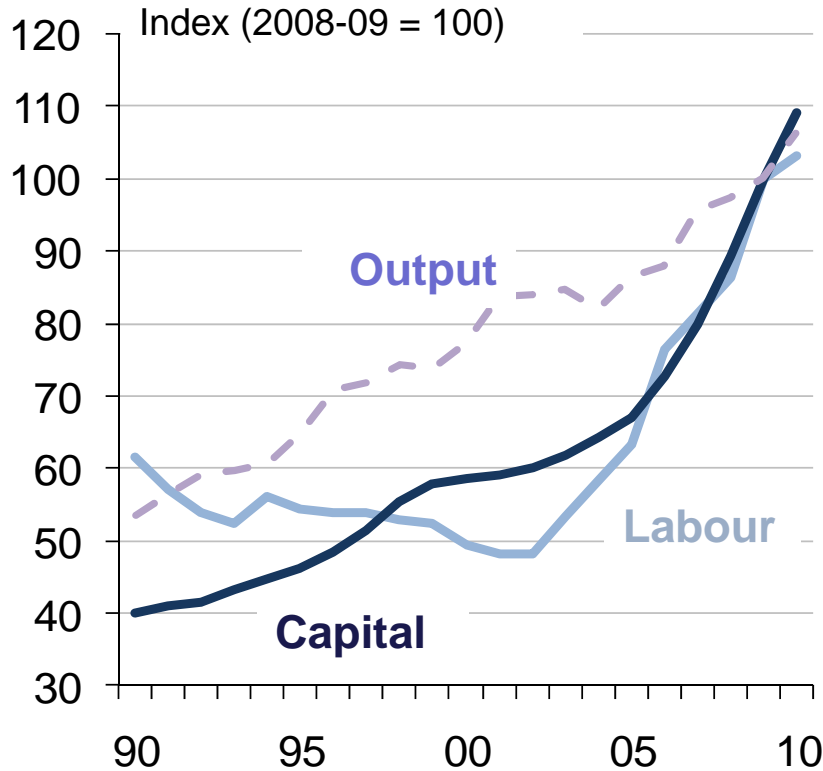


Note: 'GDI' (gross domestic income) is GDP adjusted for changes in the terms of trade.

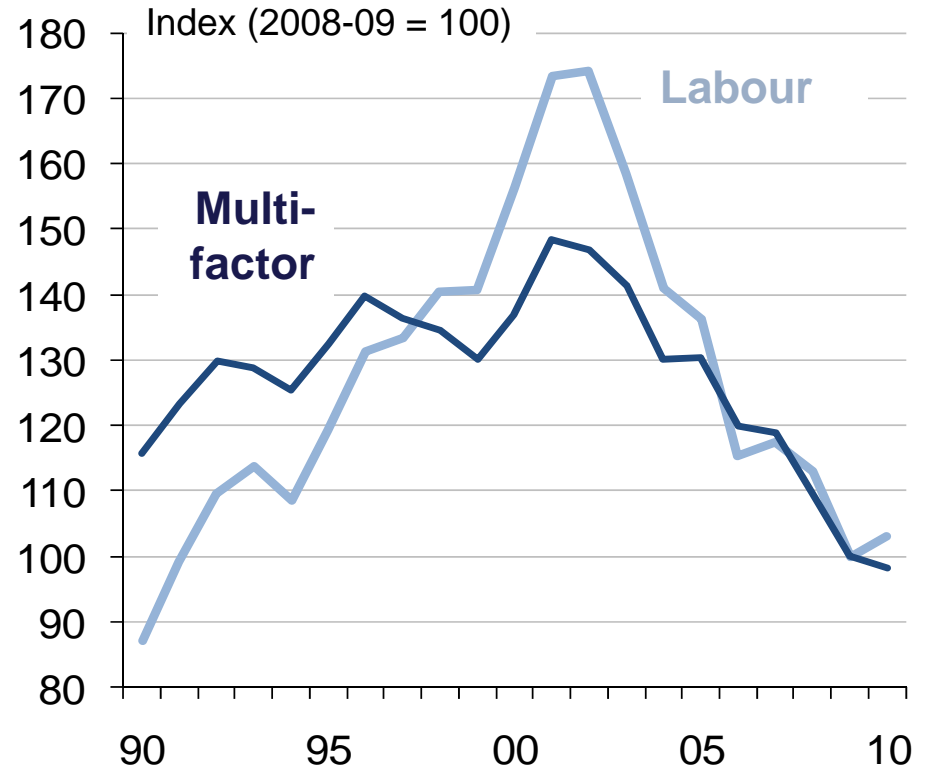
Sources: ABS, Grattan Institute.

Perverse trends in mining sector productivity have detracted from Australia's overall performance ...

Mining sector factor inputs and outputs



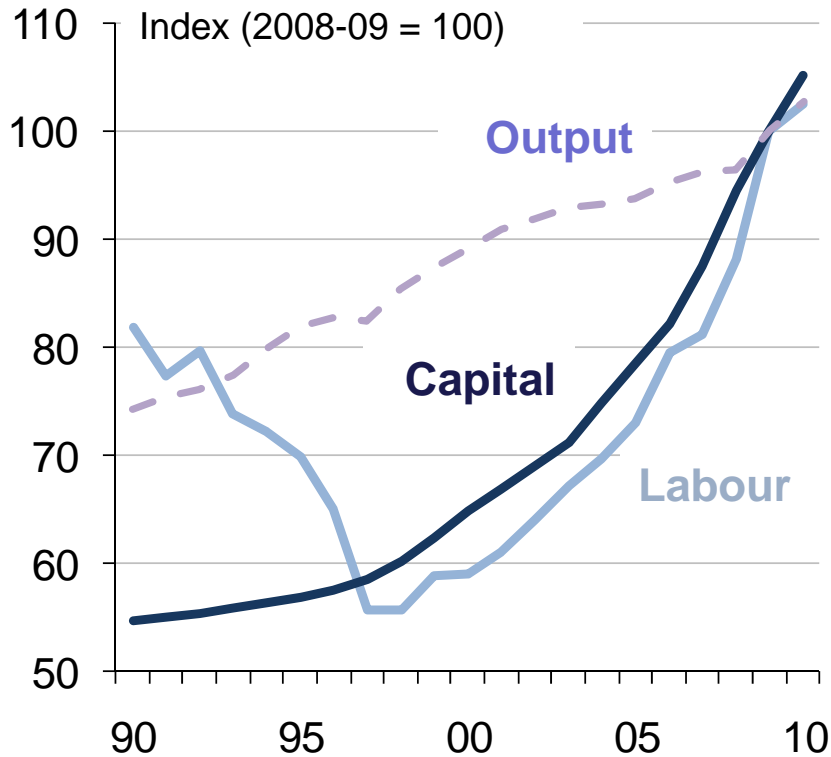
Mining sector productivity



Source: ABS

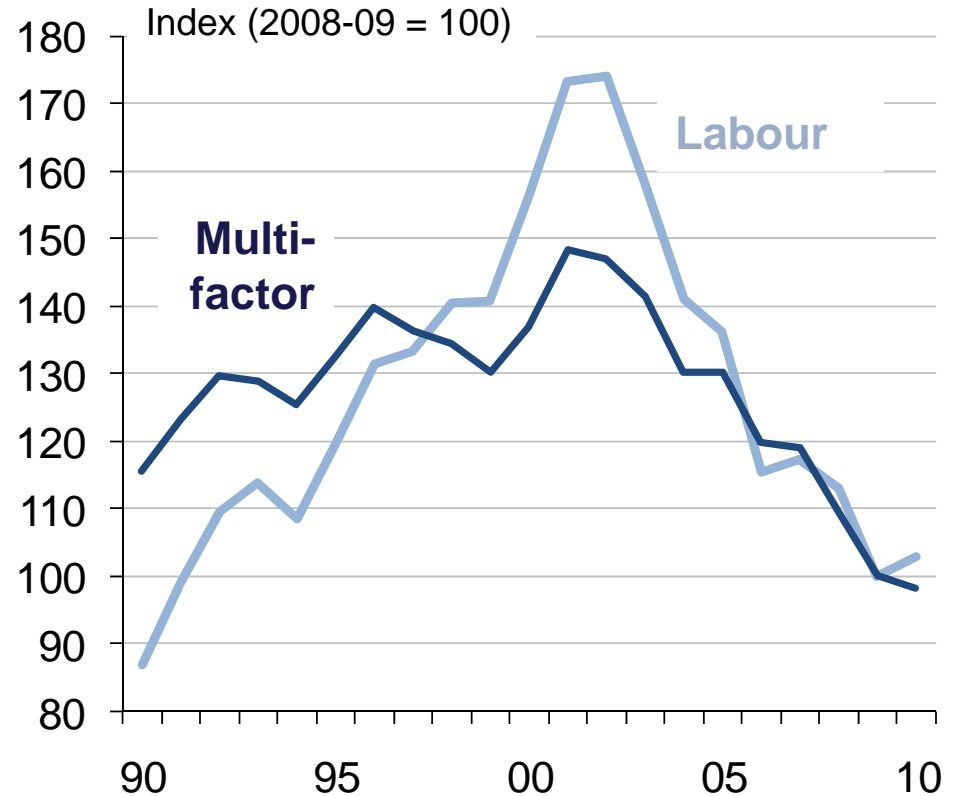
... as have similar developments in the electricity, gas, water and waste services (utilities) sector

Utilities sector factor inputs and outputs



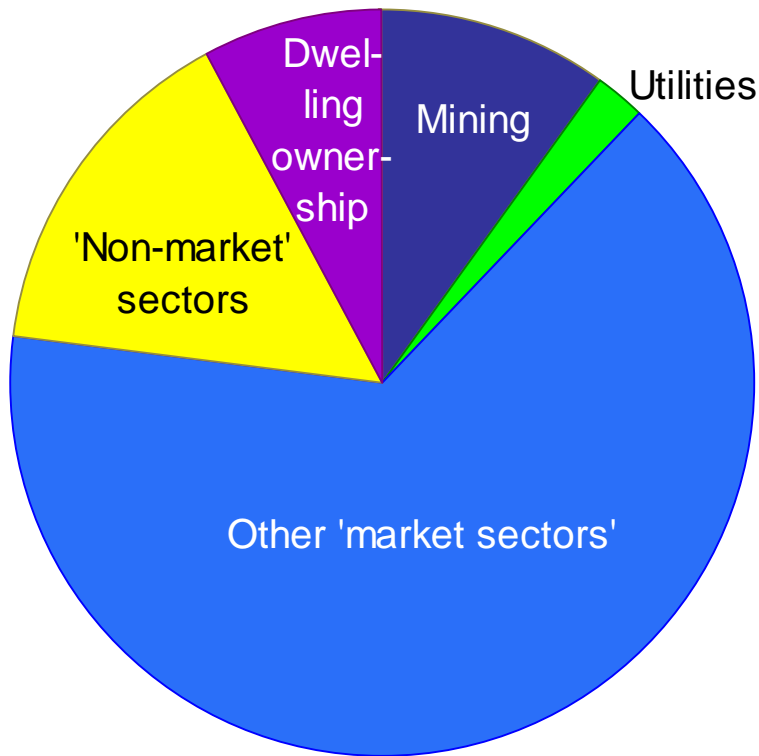
Source: ABS

Utilities sector productivity

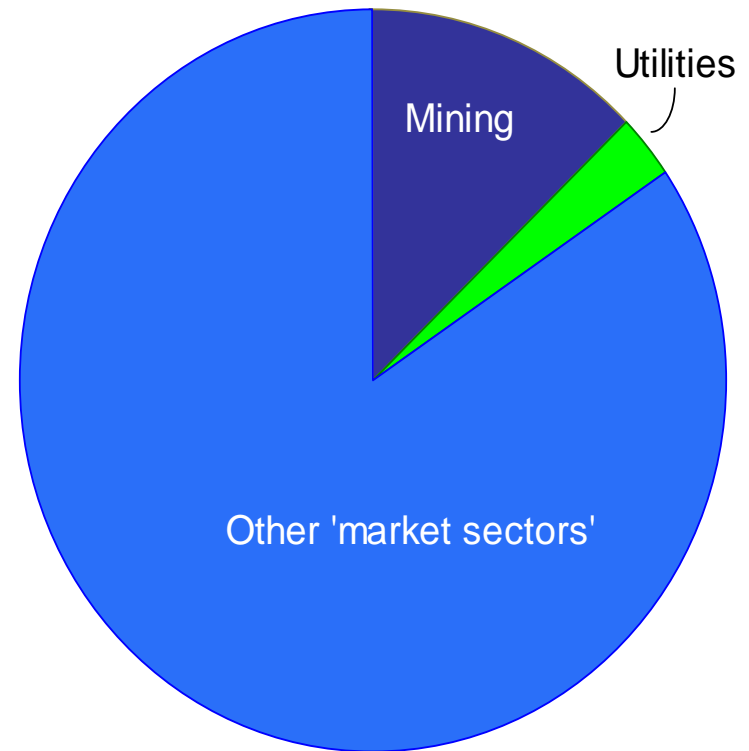


But mining and utilities account for less than 12½% of gross value added, and less than 15% of 'market' GVA

Shares of total gross value added, 2009-10

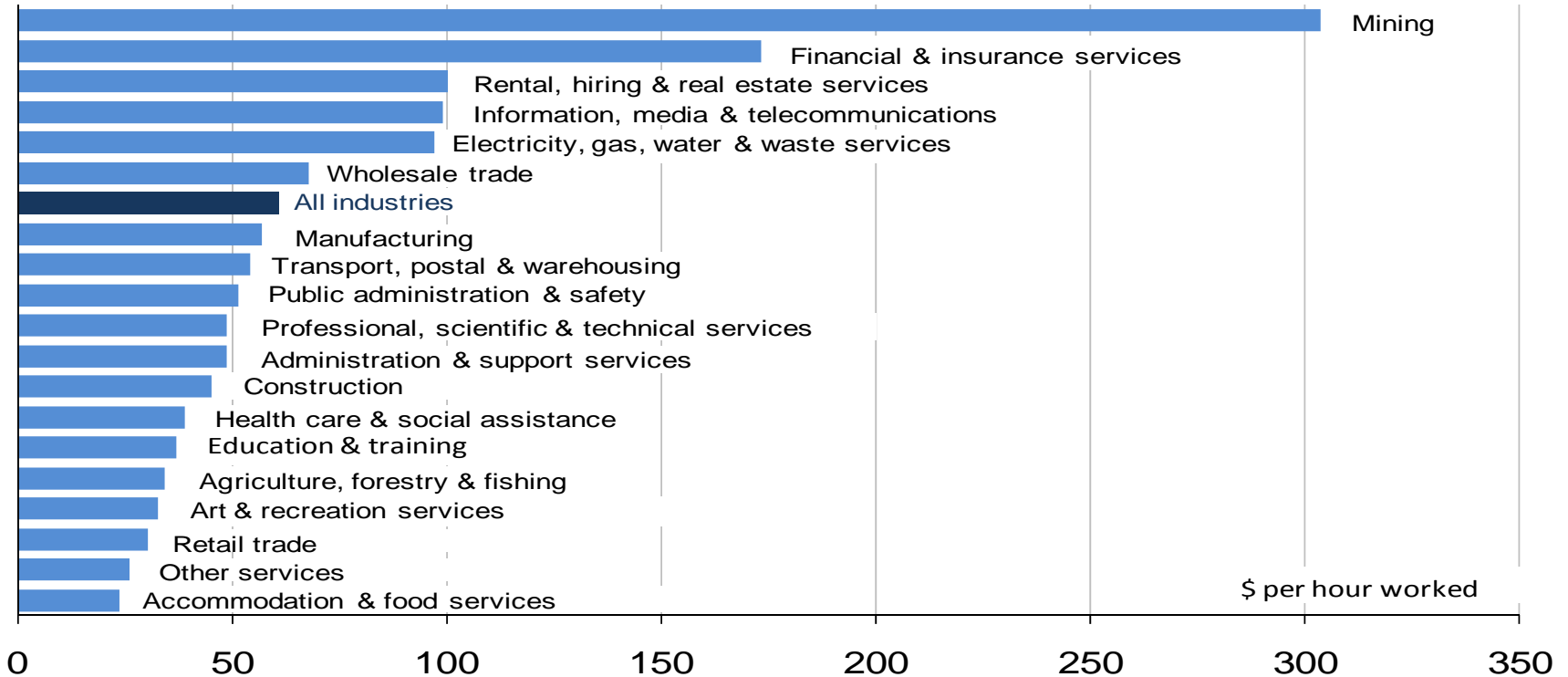


Shares of 'market sector' gross value added, 2009-10



ABS national accounts & hours worked data can be used to construct 'additive' measures of labour productivity

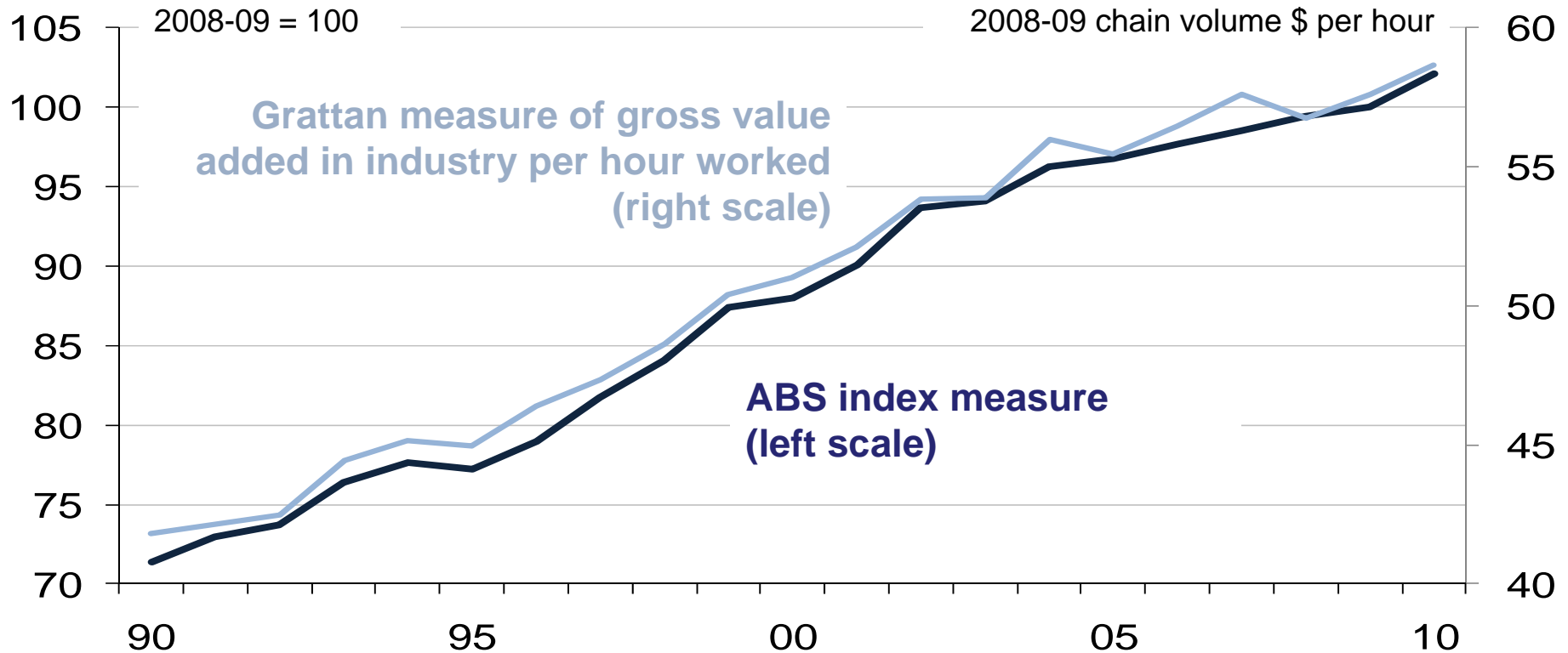
Estimates of the dollar value of output per hour worked, 2009-10



Note: Aggregate hours worked for each sector derived by 'grossing up' estimates of average hours worked in the survey week for the middle month of each quarter. 'Output' is gross value added. Sources: ABS; Grattan Institute.

These estimates produce quite similar estimates of aggregate productivity growth to those compiled by ABS

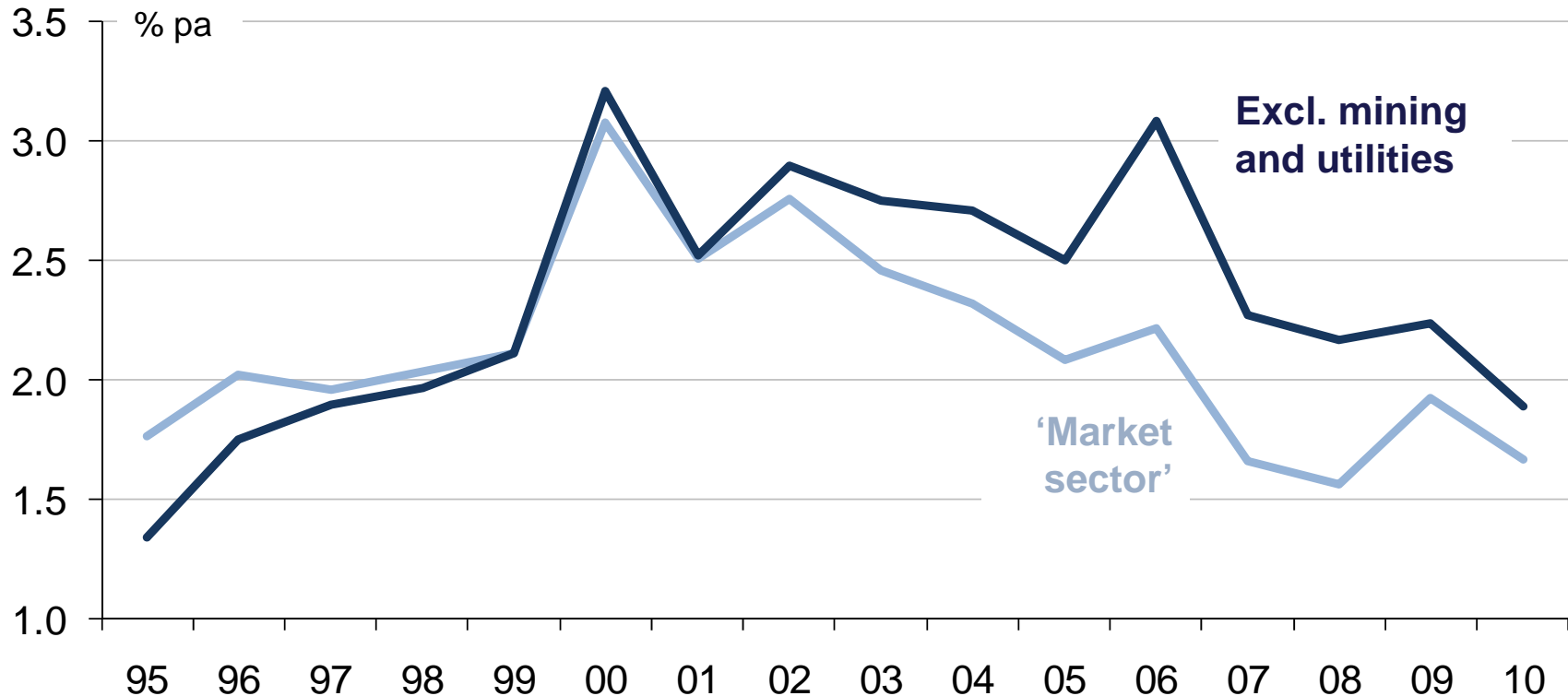
Estimates of market sector labour productivity compared



Note: left and right scales are equi-proportional. Sources: ABS; Grattan Institute calculations.

Declines in mining & utilities sector labour productivity actually account for less than 10% of the drop in the overall growth rate

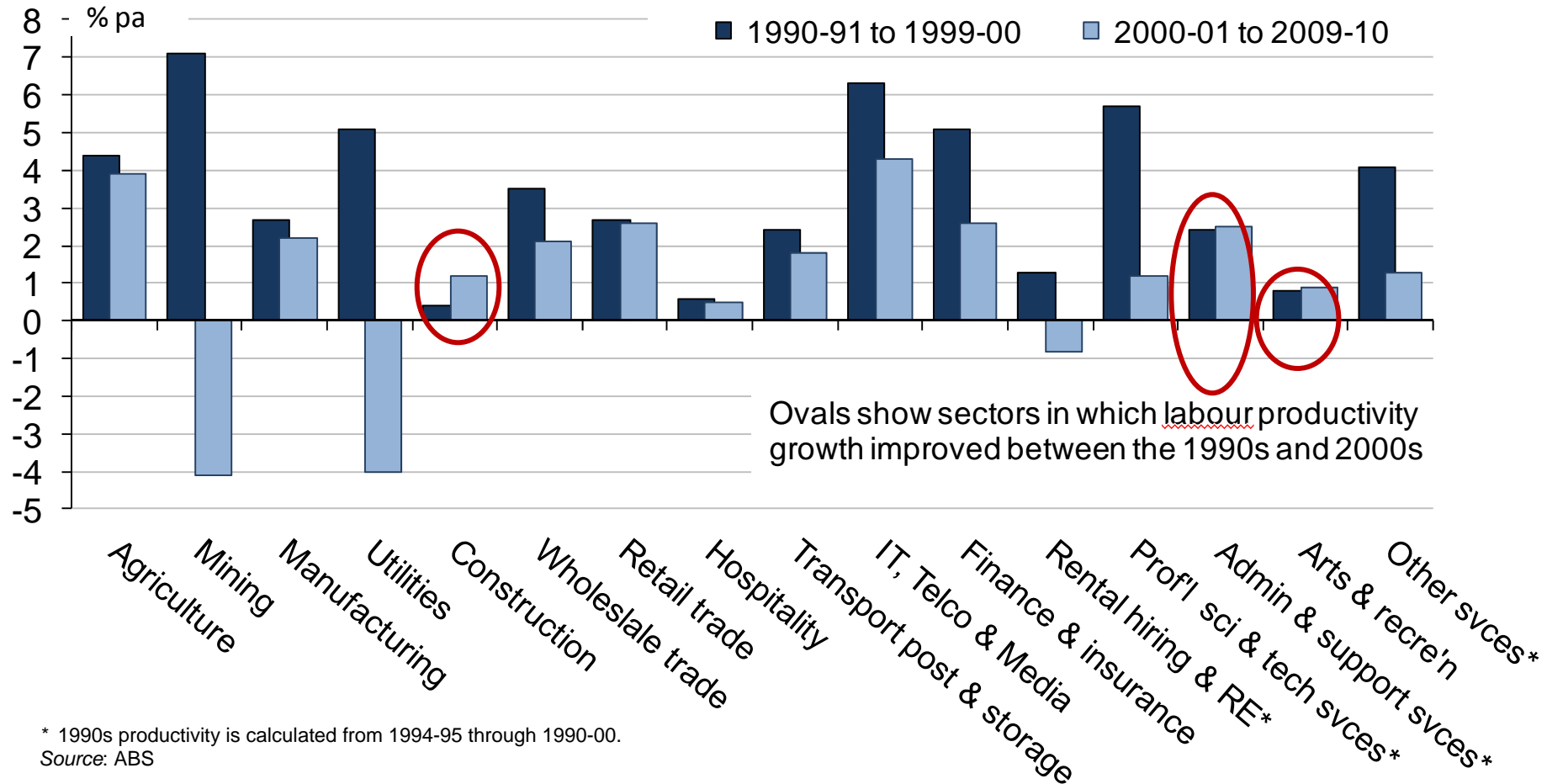
'Market sector' labour productivity growth Including and excluding mining and utilities



Source: ABS.

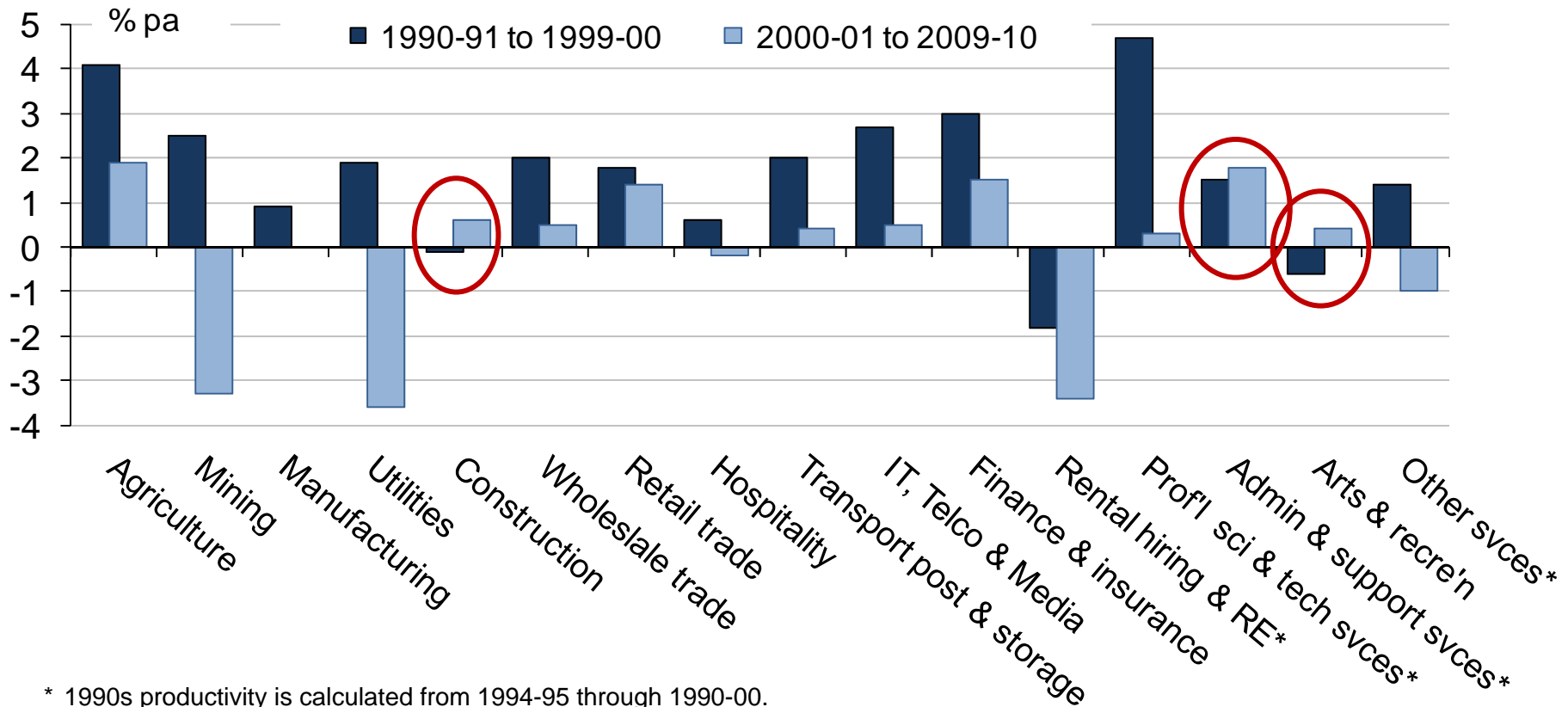
Labour productivity growth has slowed in all but three of the market sectors over the past decade

Labour productivity growth by sector over past two decades



Multi-factor productivity growth has slowed in all but three of the market sectors over the past decade

Multi-factor productivity growth by sector over past two decades



* 1990s productivity is calculated from 1994-95 through 1990-00.
Source: ABS.

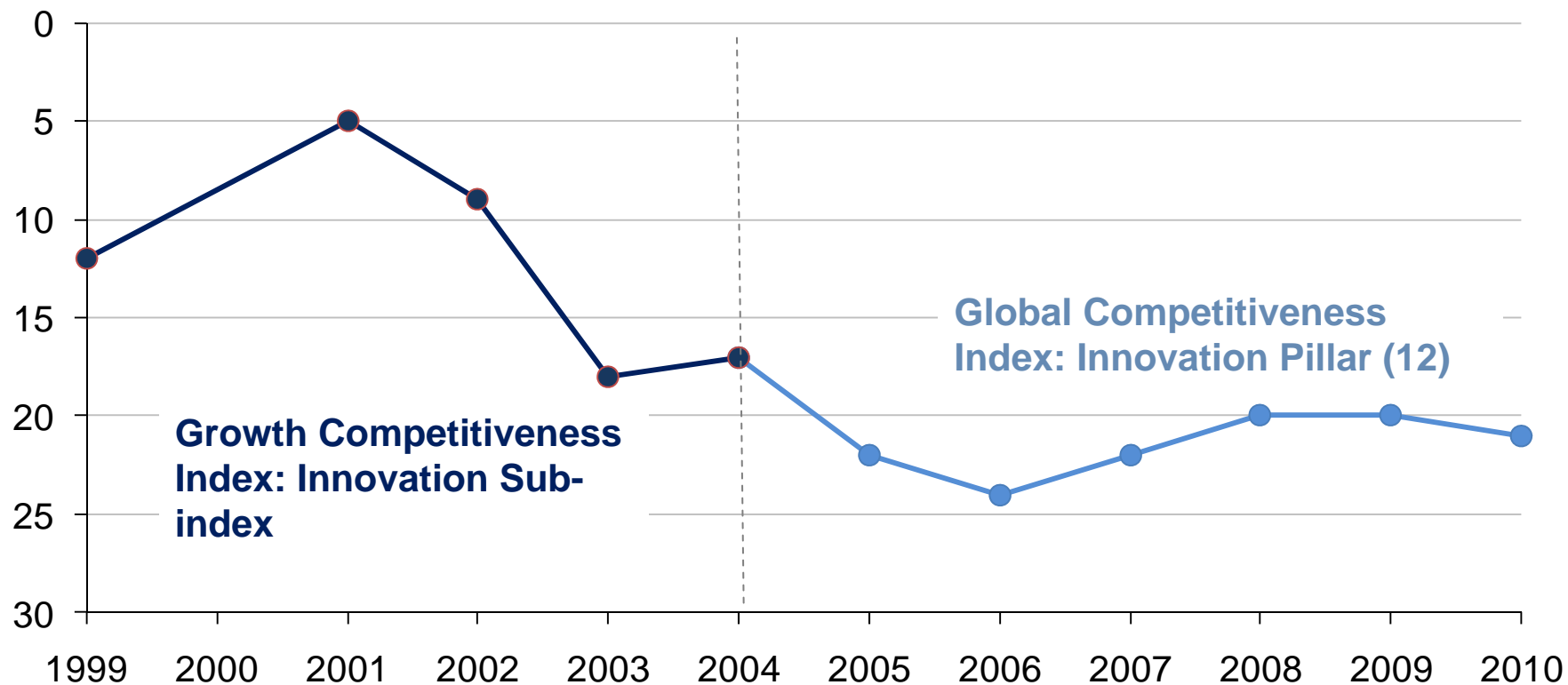
What else could explain the general slowdown in labour productivity growth over the past decade?

- As the Australian economy moved closer to ‘full employment’ (prior to the recent slowdown), additional labour and capital inputs are likely to have been increasingly less productive
- Capacity constraints – shortages of skilled labour, infrastructure bottlenecks etc. – resulted in increasing amounts of ‘down time’ detracting from productivity
- Generally buoyant corporate profitability may have diminished the importance to management of seeking out productivity improvements
 - according to a survey by Telstra, only 42% of Australian organizations measure productivity, have a target for it and know what it is
- Dearth of productivity-enhancing ‘micro-economic’ reforms since around 2000
 - most of the ‘low hanging fruit’ have been picked, and the political appetite for reform has faded
- Instead there’s been an increase in regulation directed at, eg ‘national security’ and corporate governance, which has adversely affected productivity
- There’s been some slowing in the rate of diffusion of productivity-enhancing technologies since the late 1990s

– and Australia doesn’t rank as highly on these measures as it did at that time

Australia's 'innovation ranking' (as measured by the World Economic Forum) has fallen

Australia's World Economic Forum Innovation Index ranking



Source: World Economic Forum, *Global Competitiveness Reports*

Australia now typically ranks between 15th and 22nd in terms of innovation and take-up of new technologies

	Global Comp. Report – Innovation	Global Innovation Index	Benchmarking EU & US Innovation	Innovation Imperative in Manufacturing	EIU Report	How Canada Performs - Innovation
Top Ranking Countries	<ol style="list-style-type: none"> 1. USA 2. Switzerland 3. Finland 4. Japan 5. Sweden 6. Israel 7. Taiwan, China 8. Germany 9. Singapore 10. Denmark 11. Canada 12. Korea, Rep. 13. Netherlands 14. UK 15. Belgium 16. Luxembourg 17. Iceland 18. Norway 19. France 20. Austria 21. Australia 22. Ireland 	<ol style="list-style-type: none"> 1. Iceland 2. Sweden 3. Hong Kong 4. Switzerland 5. Denmark 6. Finland 7. Singapore 8. Netherlands 9. New Zealand 10. Norway 11. USA 12. Canada 13. Japan 14. UK 15. Luxembourg 16. Germany 17. Belgium 18. Australia 19. Ireland 20. Korea, Rep. 21. Austria 22. France 	<ol style="list-style-type: none"> 1. Singapore 2. Sweden 3. Luxembourg 4. Denmark 5. South Korea 6. USA 7. Finland 8. UK 9. Japan 10. Netherlands 11. France 12. Ireland 13. Belgium 14. Germany 15. Canada 16. Austria 17. Australia 18. Czech Rep. 19. Estonia 20. Spain 21. Hungary 22. Lithuania 	<ol style="list-style-type: none"> 1. Singapore 2. South Korea 3. Switzerland 4. Iceland 5. Ireland 6. Hong Kong 7. Finland 8. USA 9. Japan 10. Sweden 11. Denmark 12. Netherlands 13. Luxembourg 14. Canada 15. UK 16. Israel 17. Austria 18. Norway 19. Germany 20. France 21. Malaysia 22. Australia 	<ol style="list-style-type: none"> 1. Japan 2. Switzerland 3. USA 4. Sweden 5. Finland 6. Germany 7. Denmark 8. Taiwan 9. Netherlands 10. Israel 11. Austria 12. France 13. Canada 14. Belgium 15. South Korea 16. Norway 17. Singapore 18. UK 19. Ireland 20. Italy 21. Australia 22. New Zealand 	<ol style="list-style-type: none"> 1. Switzerland 2. Ireland 3. USA 4. Japan 5. Sweden 6. Germany 7. UK 8. Netherlands 9. Finland 10. France 11. Denmark 12. Belgium 13. Austria 14. Canada 15. Australia 16. Italy 17. Norway
Year:	2010-11	2009-10	2009	2009	2007	2010
Author:	WEF	INSEAD	ITIF	BCG	EIU	Conf. Board

What could be done to improve Australia's productivity performance?

- **Re-invigorated commitment to productivity-enhancing reforms**
 - focussing on sectors previously in 'too-hard baskets'
 - and achieving real progress in COAG regulatory reform agenda
- **Taxation reform**
 - reducing the extent to which provisions in the tax system distort decision-making
- **Further promotion of education and skills acquisition**
 - focussing in particular on engineering and science, skilled trades
 - may require significant reform of vocational education system and funding
- **Targeted infrastructure investment**
 - need mechanisms to ensure the 'right infrastructure in the right places' with sensible pricing and access
- **Serious effort to improve Australia's innovation effort**
 - not simply about R&D spending but about access to risk finance, linkages with research institutions, relevant skills and commercialization
- **Greater awareness of productivity impact of 'risk elimination' regulation**
 - rather than knee-jerk response of eliminating risks irrespective of the probability of them recurring or the cost of preventing them

Download the full report, '*Australia's Productivity Challenge*'
at

http://www.grattan.edu.au/publications/069_productivity_challenge.pdf

Or go to www.grattan.edu.au and follow the links to the report