

# Australia's productivity performance & drivers of future prosperity

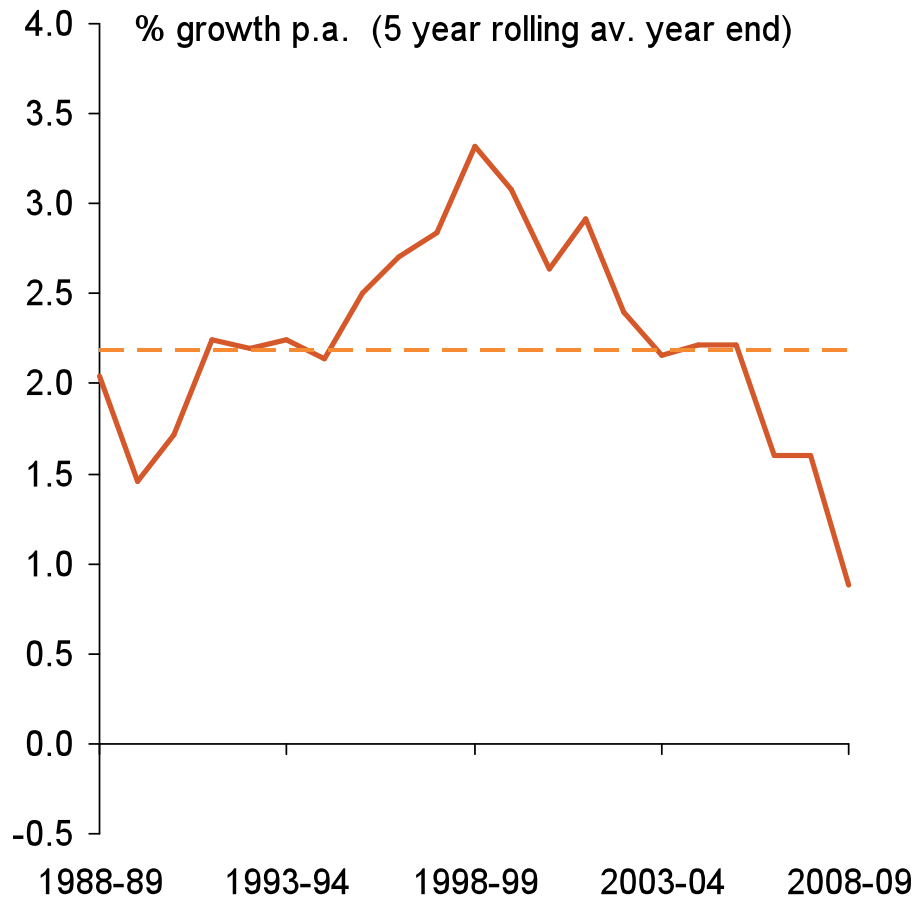
**ABS NatStats conference  
16 September 2010**

**Session 3A: Policy, Finance and Productivity**

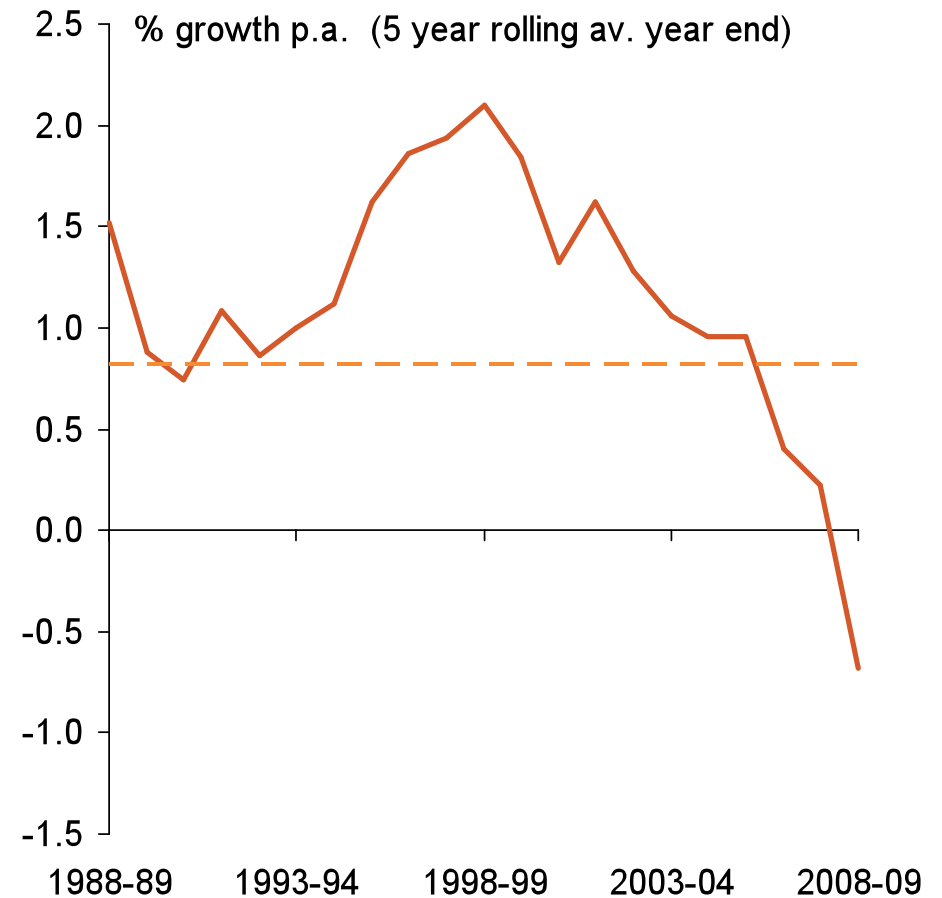
**Saul Eslake  
Grattan Institute**

# Australia's productivity growth has slowed over the last five years, after 15 years of above average growth

## Labour productivity

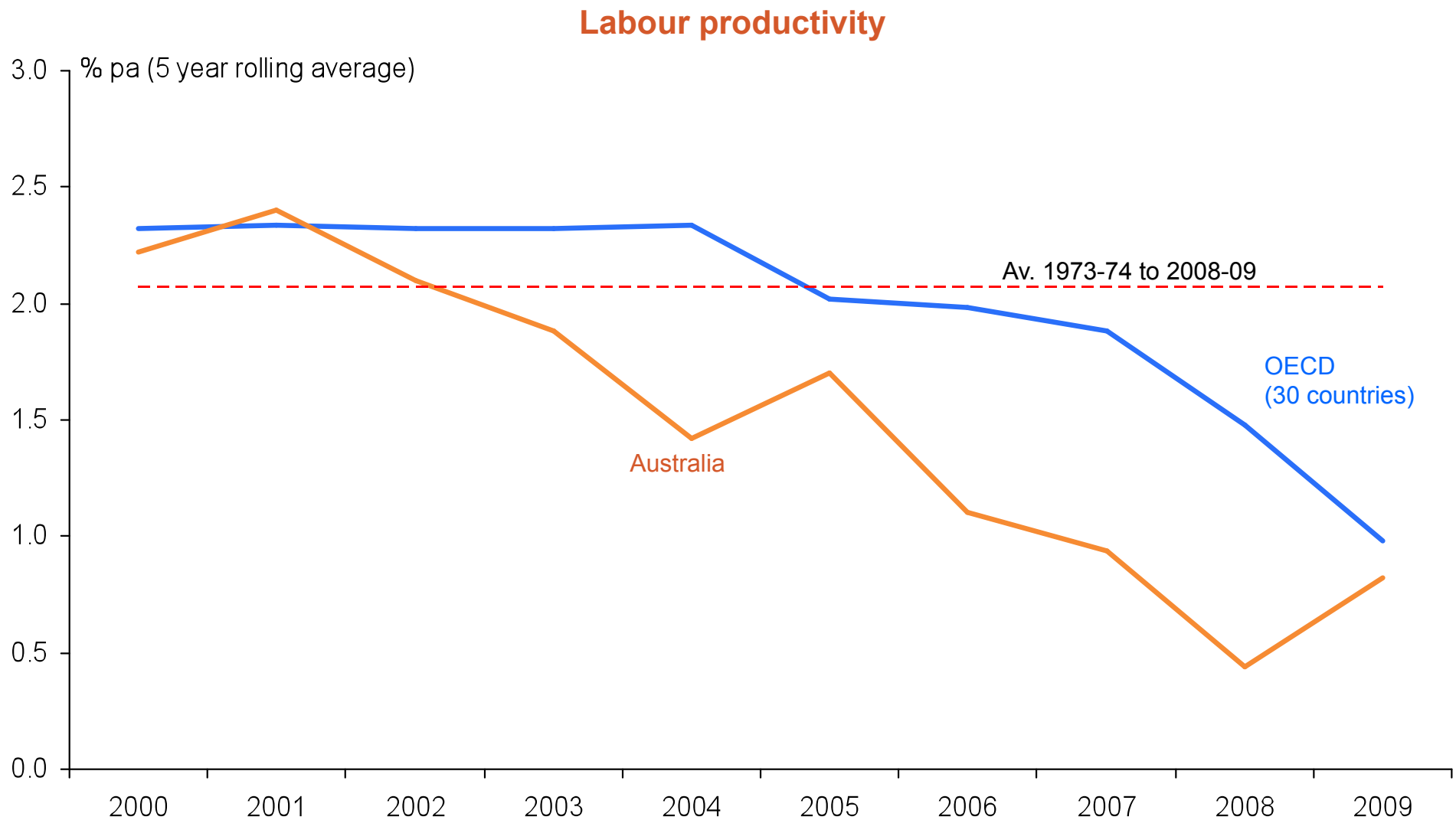


## Multi-factor productivity



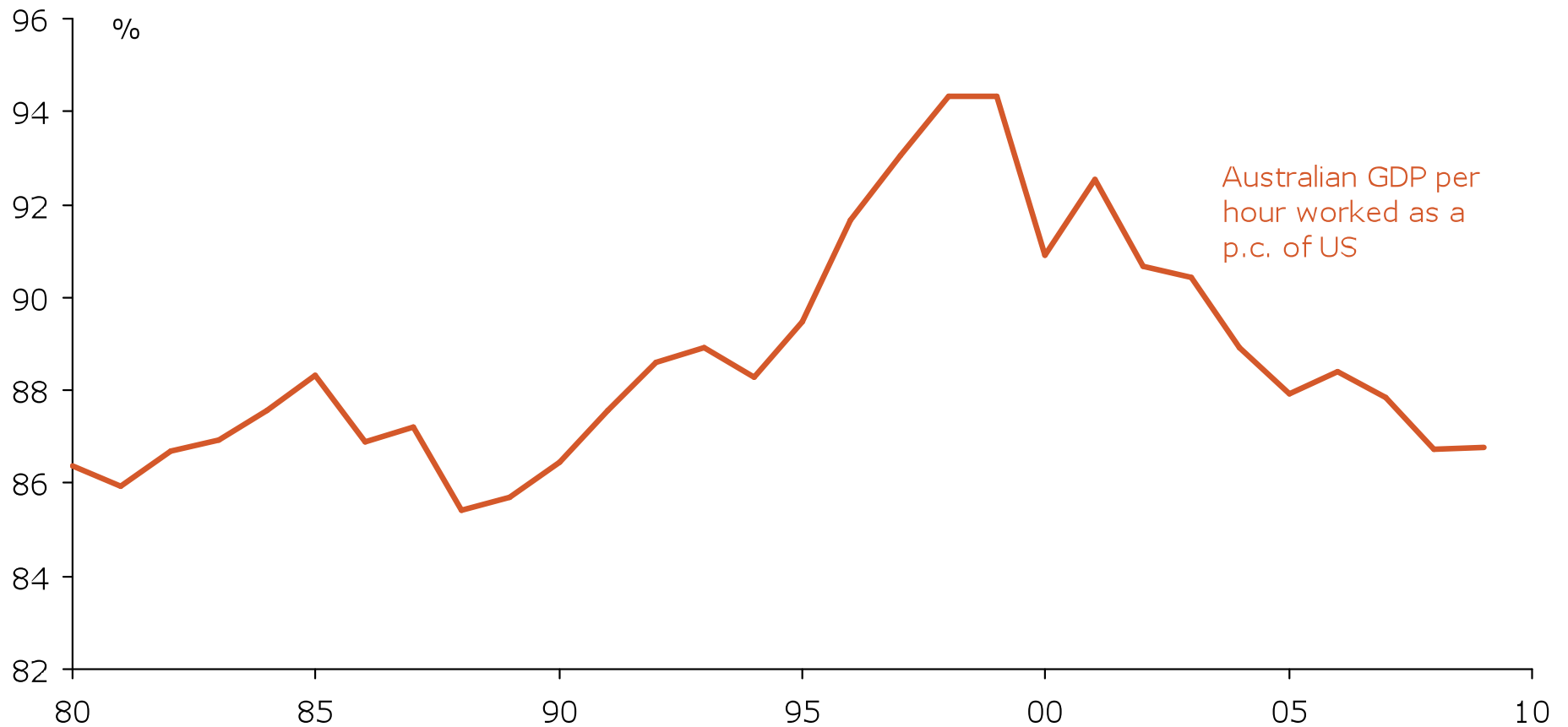
--- Av. 1973-74 to 2008-09

# Productivity growth has slowed in most OECD countries, but the slowdown has been more marked in Australia



# Relative to the US, Australian labour productivity is back to where it was in 1990

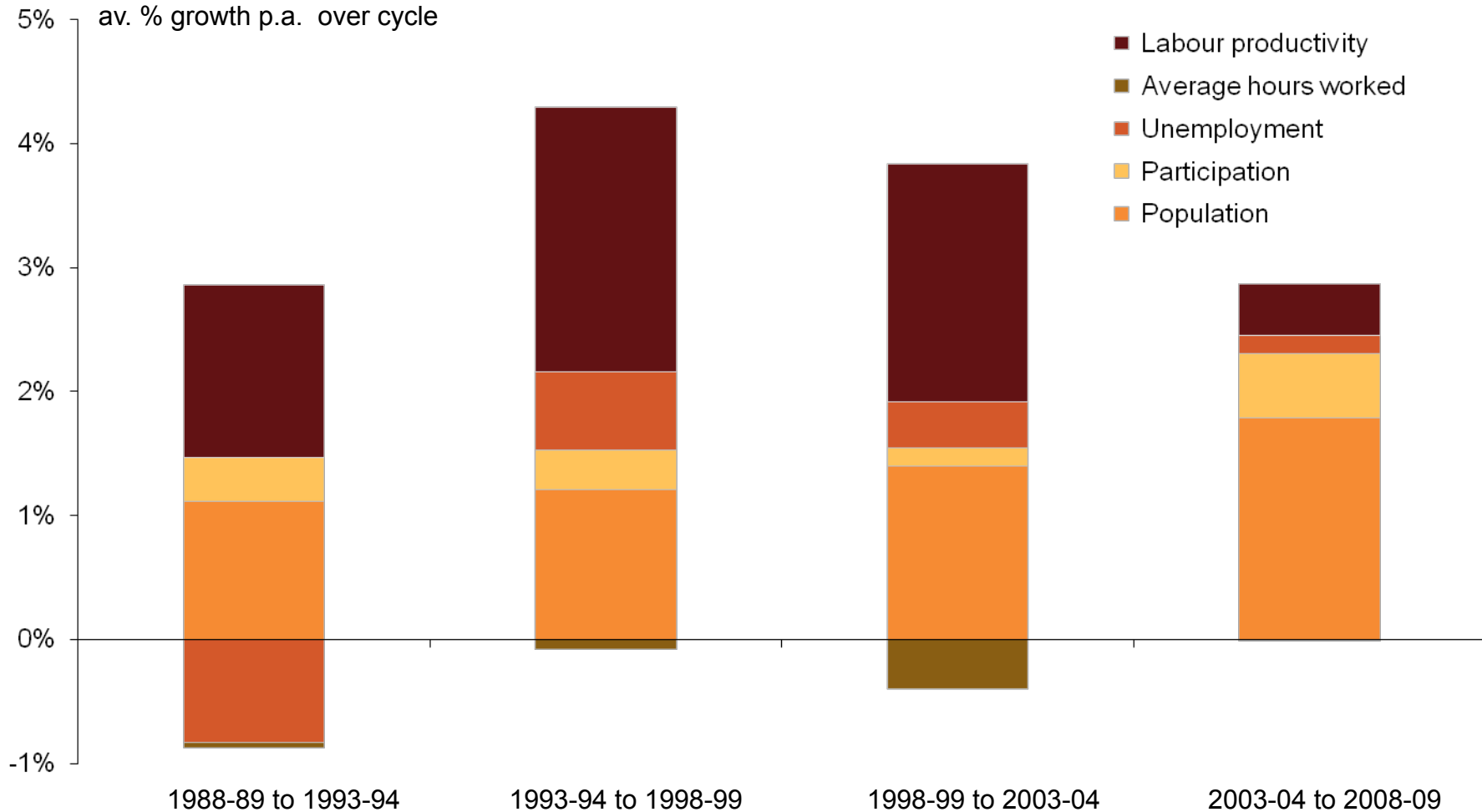
## Australian labour productivity as a percentage of the US



Sources: The Conference Board *Total Economy Database 2010*; Grattan Institute.

# Real GDP growth has become increasingly reliant on population growth and rising workforce participation ...

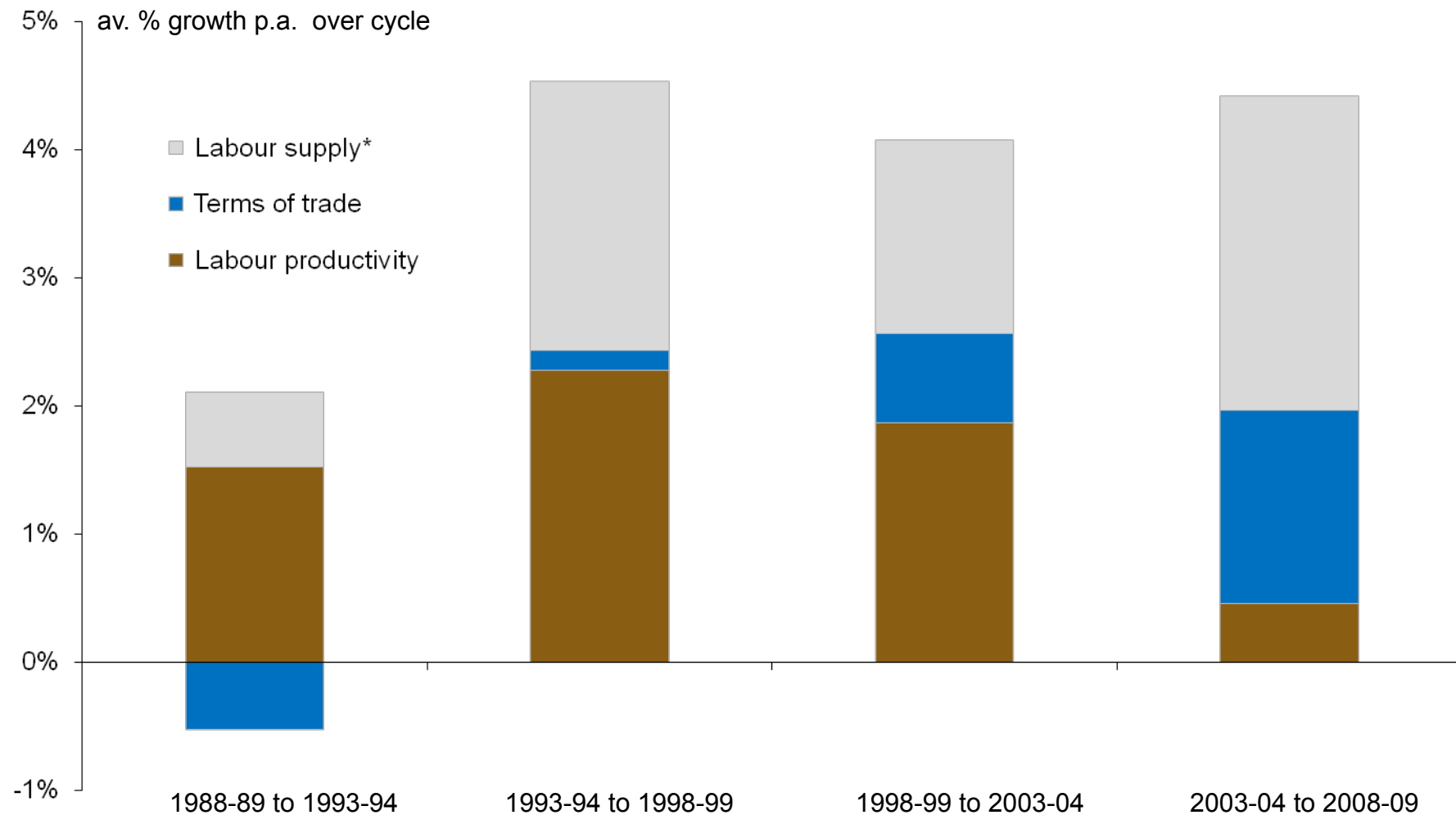
## Sources of real GDP growth (1988-89 to 2008-09)



Sources: ABS, Grattan Institute.

# ... while real income growth has become increasingly dependent on favourable shifts in the 'terms of trade'

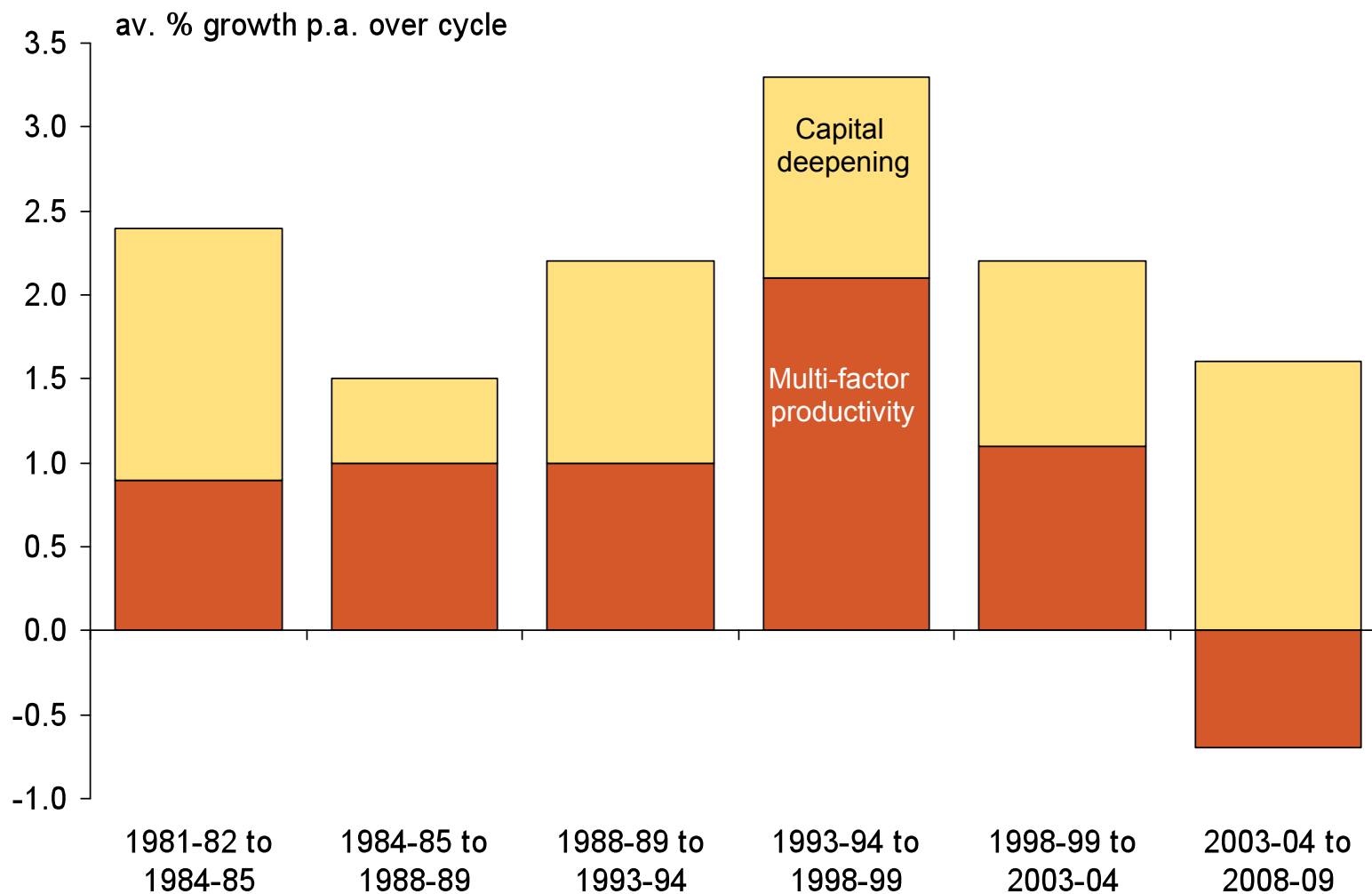
## Sources of real GDI growth (1988-89 to 2008-09)



Note: Real GDI (gross domestic income) is real GDP adjusted for changes in the terms of trade (the ratio of export to import prices). 'Labour supply' is total hours worked (ie population x participation rate x (1 - unemployment rate) x average hours worked). Sources: ABS, Grattan Institute.

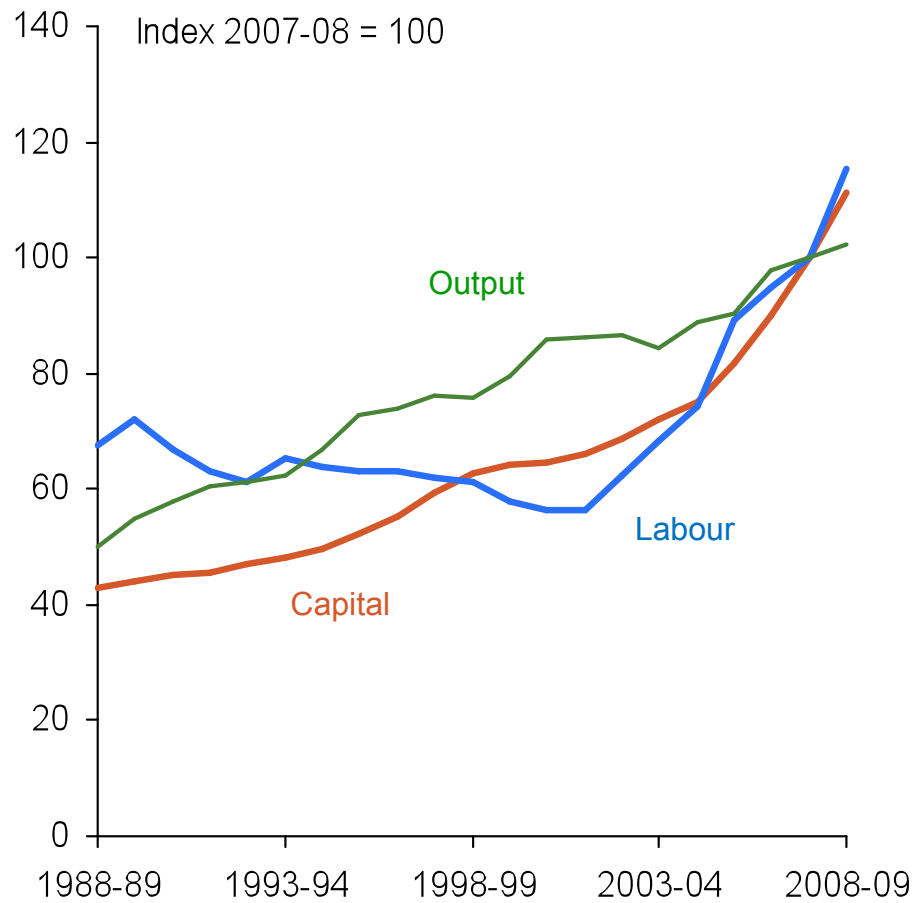
# Labour productivity growth has in turn become wholly dependent on 'capital deepening'

## Components of labour productivity growth

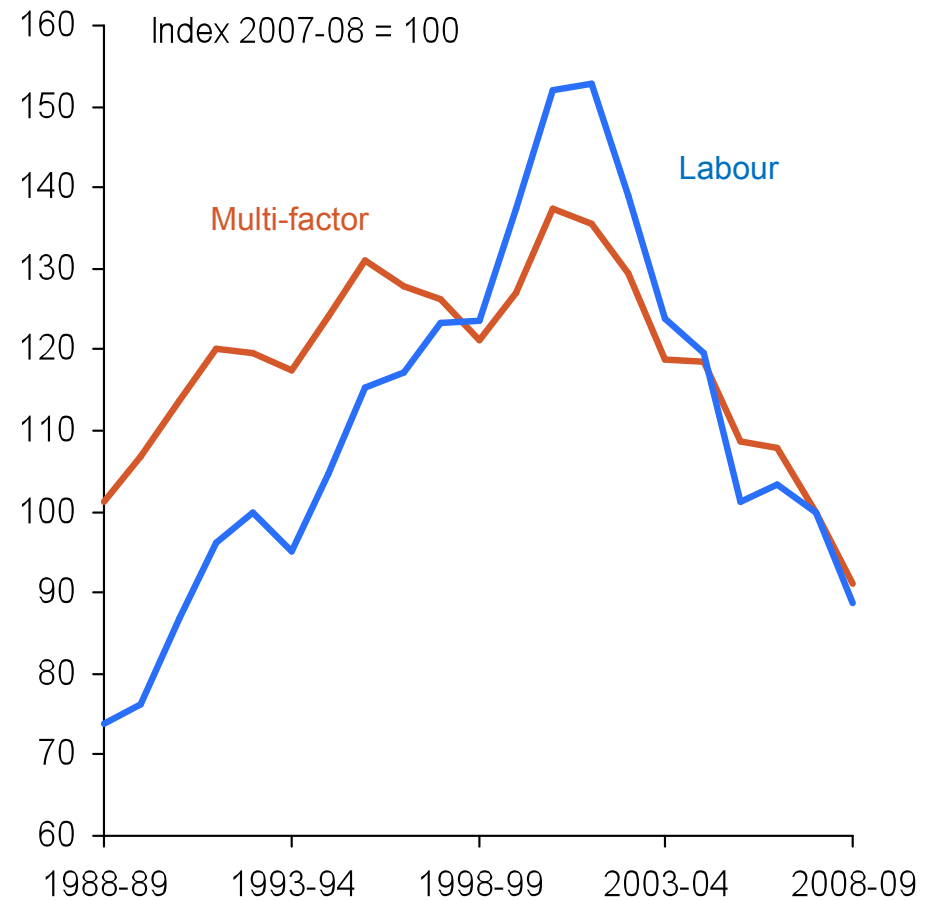


# In the mining sector, substantial increases in factor inputs are yet to be reflected in commensurate output gains ...

### Mining sector factor inputs and outputs



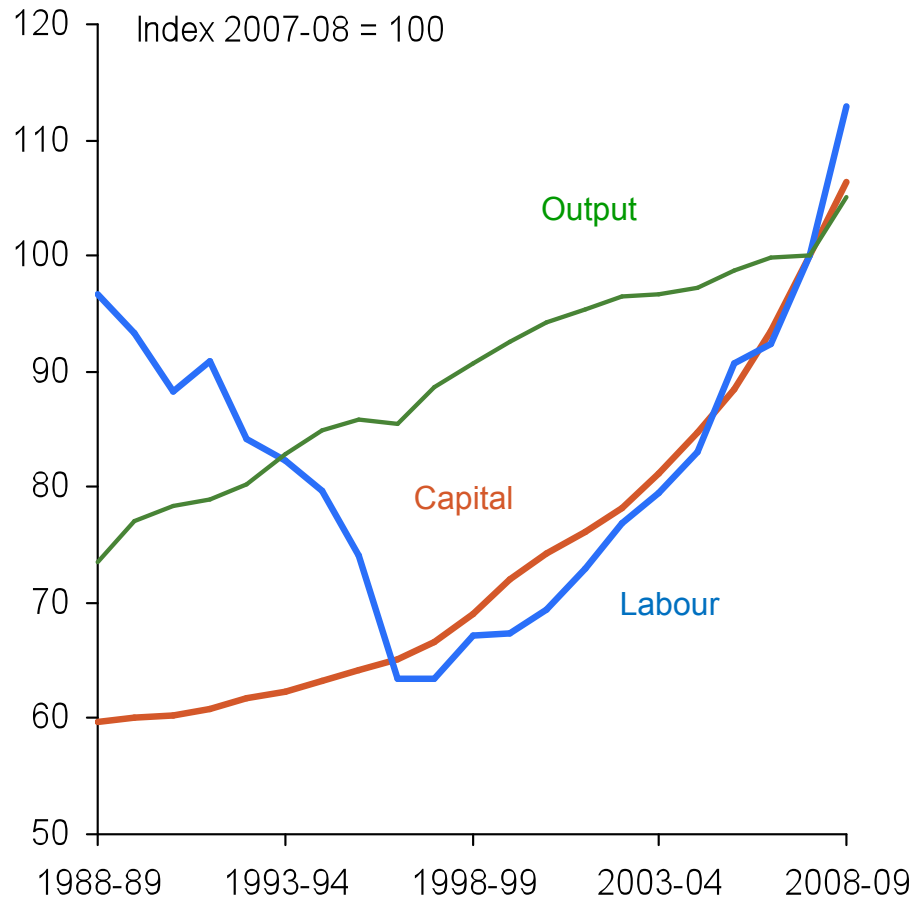
### Mining sector productivity



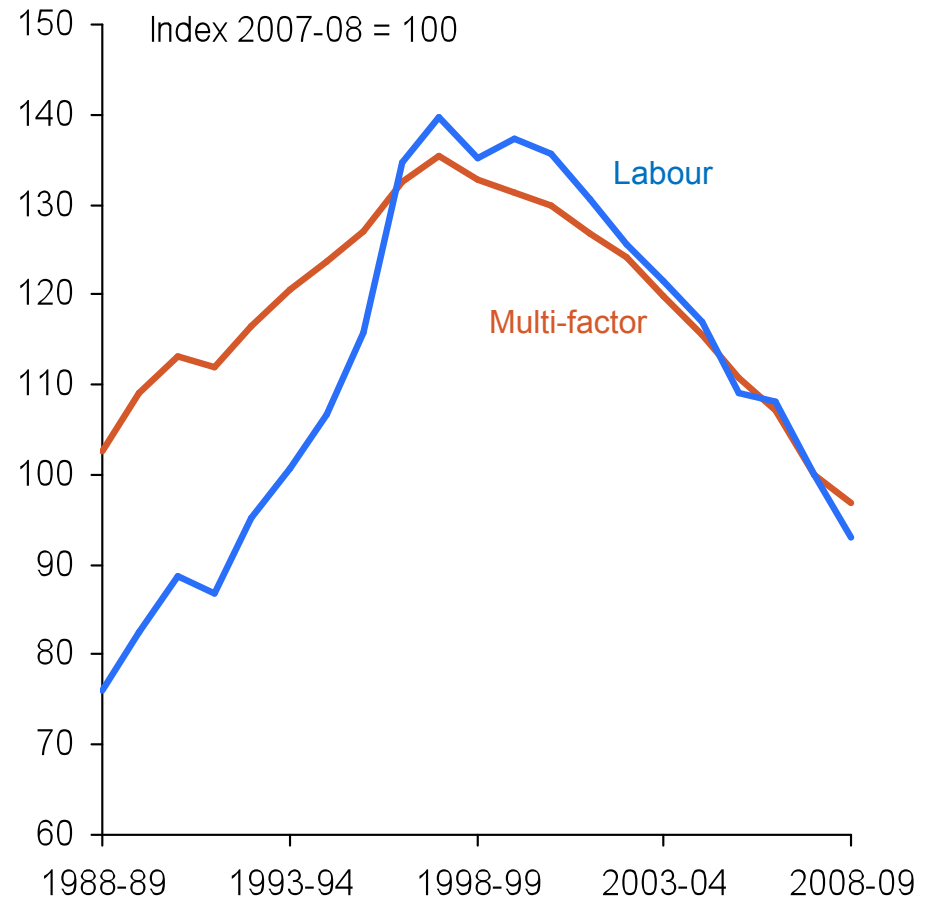
Note: 'inputs' are hours worked and capital services; 'output' is chain-volume gross value added.  
Source: Australian Bureau of Statistics.

# ... and for different reasons much the same has occurred in the utilities sector

### Utilities sector factor inputs and outputs



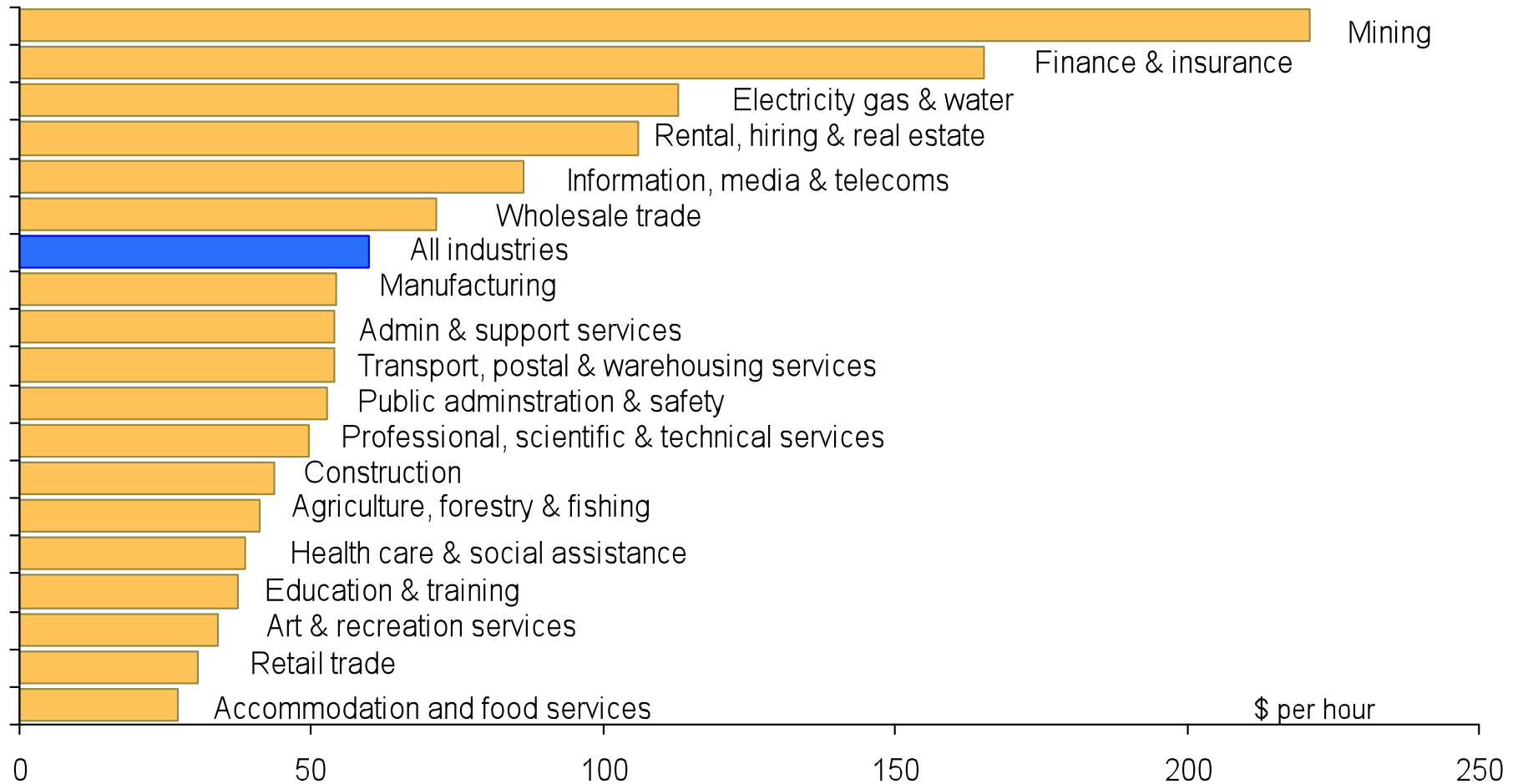
### Utilities sector productivity



Note: 'utilities' sector is electricity, gas, water and waste services.  
Source: Australian Bureau of Statistics.

# \$-value labour productivity estimates can be derived from industry value added and rough estimates of hours worked

## Estimates of the dollar value of output per hour worked, 2008-09

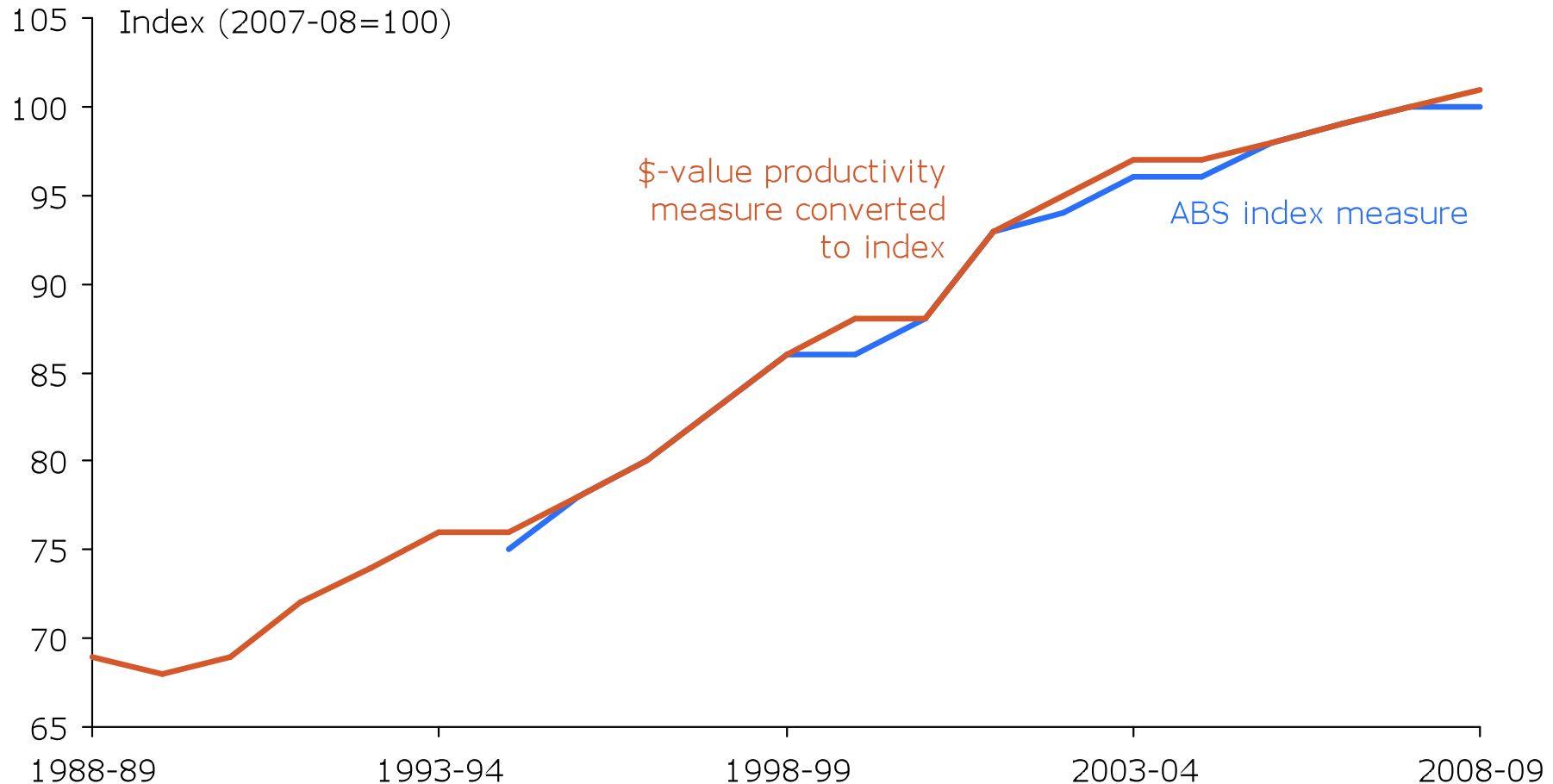


*Note:* Aggregate hours worked for each sector derived by 'grossing up' estimates of average hours worked in the survey week for the middle month of each quarter in 2008-09. 'Output' is gross value added.

*Sources:* Australian Bureau of Statistics; Grattan Institute.

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

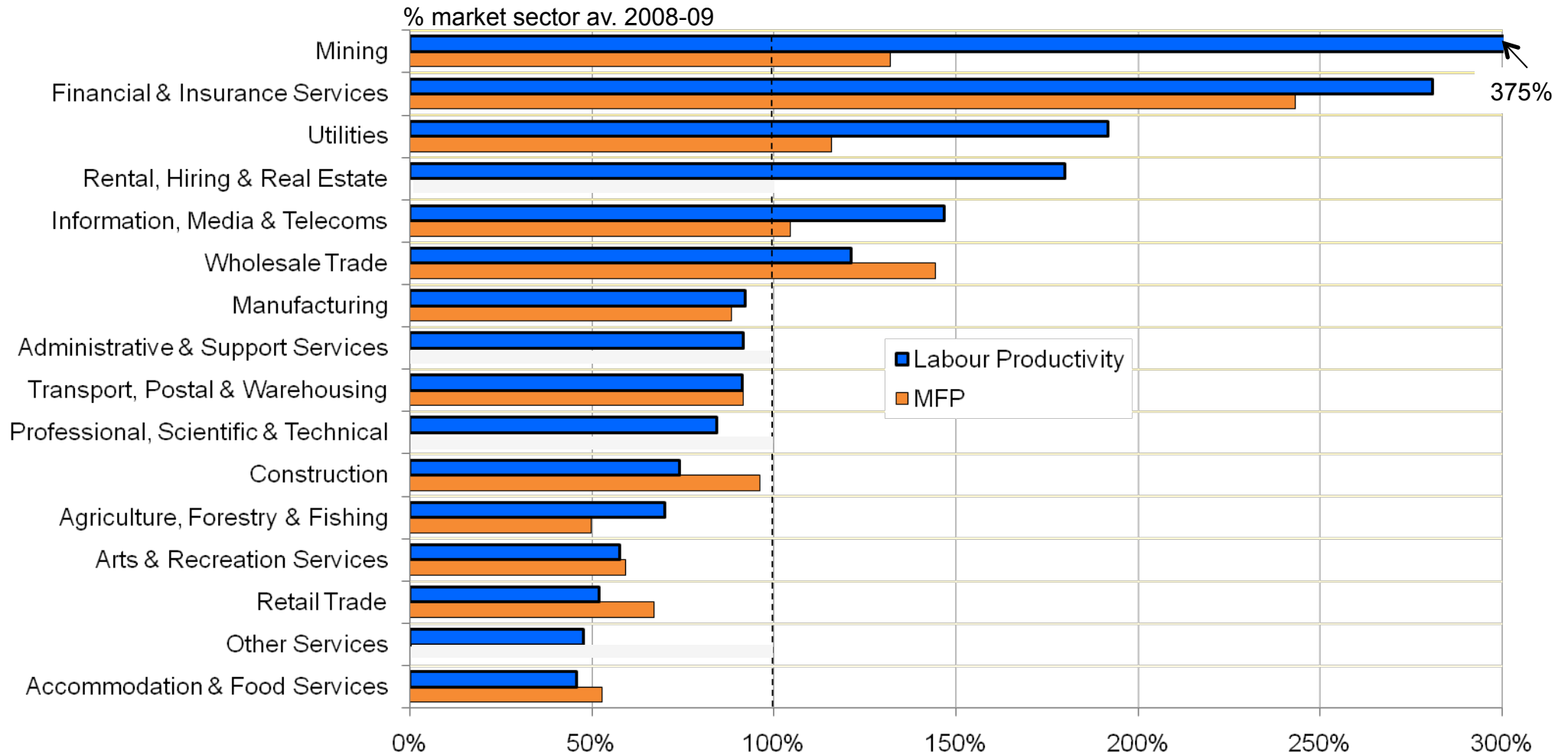
## Estimates of market sector labour productivity compared



Grattan is GVA (val. add.) per hour worked (weighted by industry excl. taxes & dwellings ). ABS from Cat. 5260.0. Differences stem from excluding dwellings and internal ABS revision of selected industry hours worked data.

# It's also possible to construct estimates of MFP for most industries

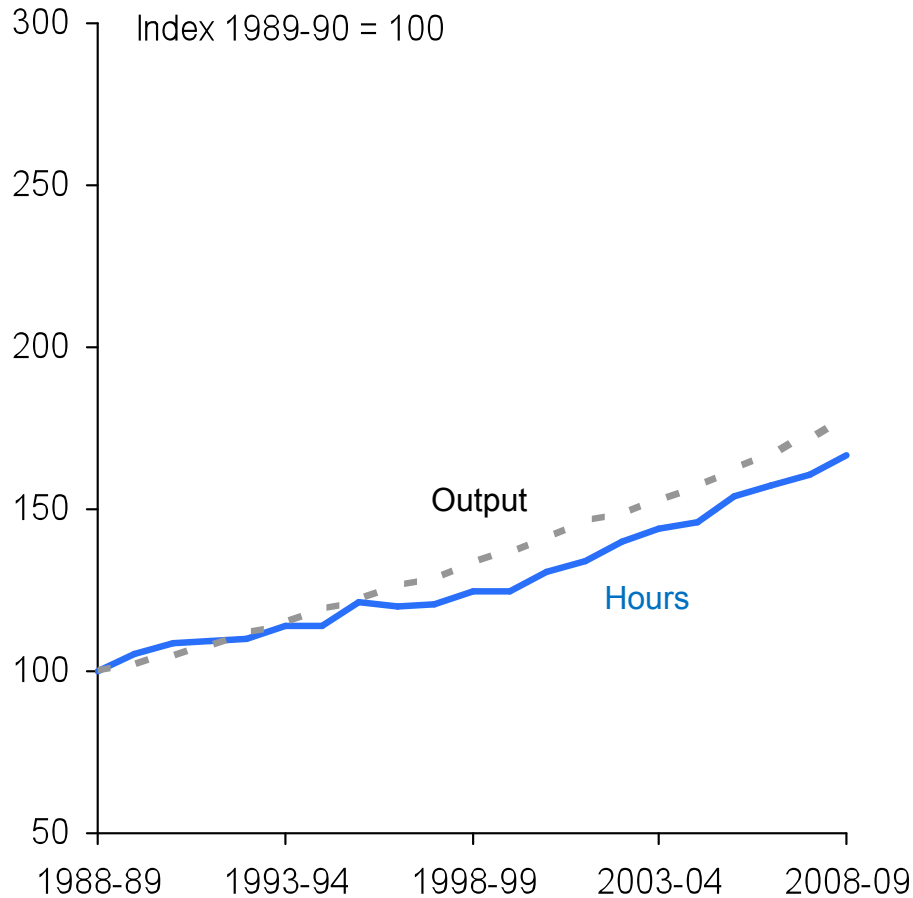
## Productivity Levels of Australian Industries



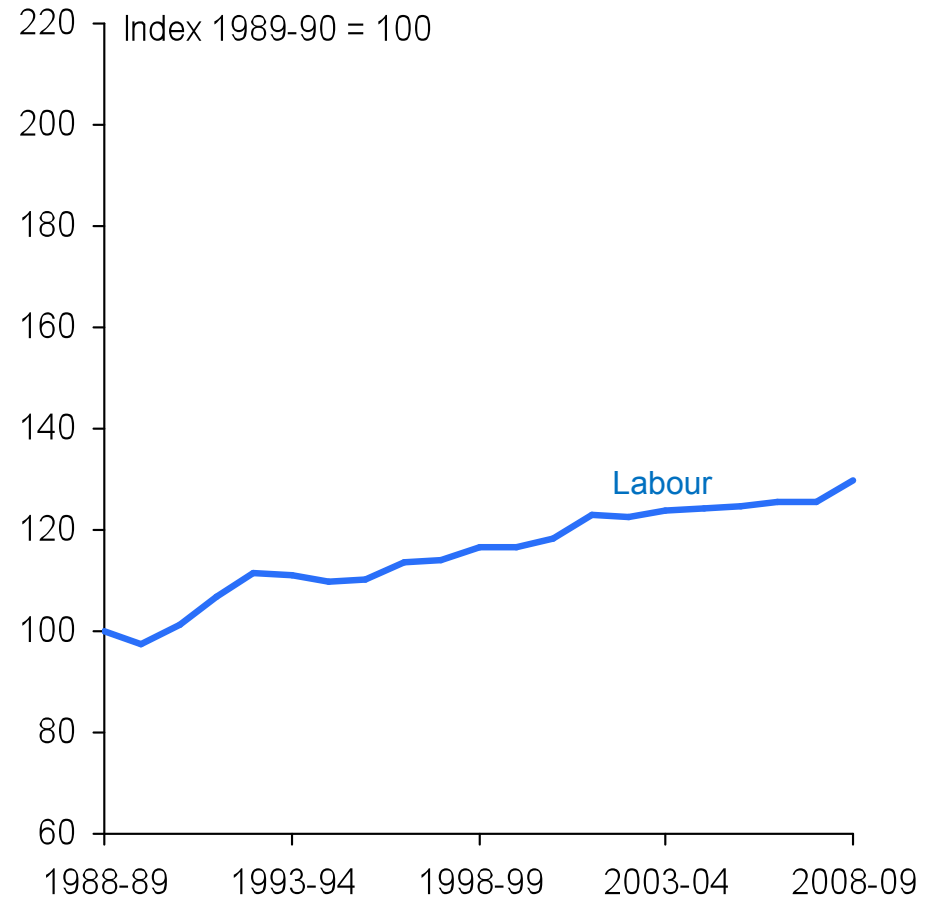
Note: MFP industry levels = GVA per hour of labour and capital, where capital hours equals hours worked times the capital and labour income shares ratio (implicitly assumes equivalence of an hour worked in each industry). This data is not available for some industries.

# Slow growth in public sector productivity partly reflects difficulty in measuring output

### Inputs and outputs



### Productivity



**The public sector drives economic and social outcomes, and comprises almost one in four hours worked, yet we still have a limited understanding of productivity performance.**

Source: Australian Bureau of Statistics.

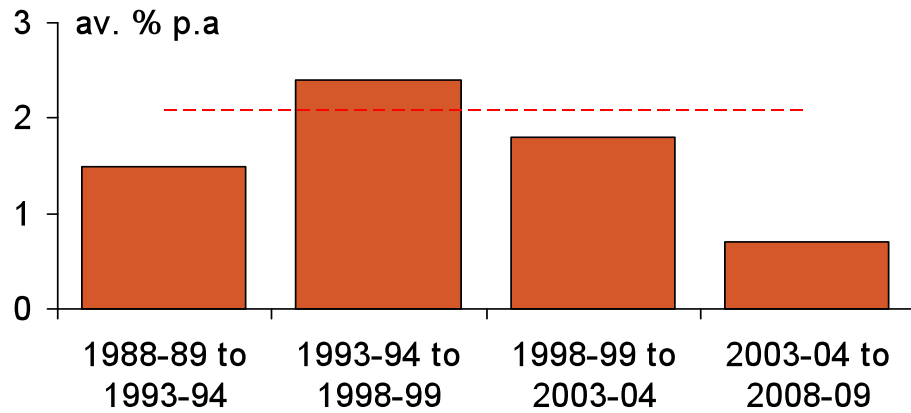
# Labour productivity growth has slowed significantly even after excluding mining, utilities and non-market sectors



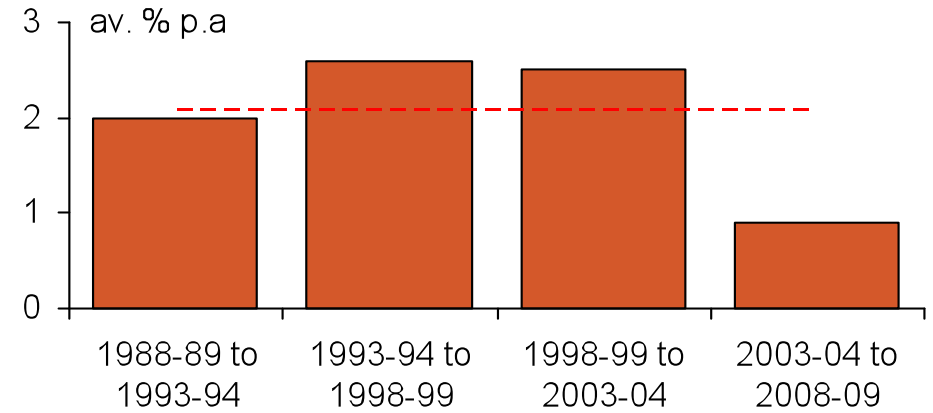
\* GDP per hour worked

# Labour productivity growth has slowed significantly even after excluding mining, utilities and non-market sectors

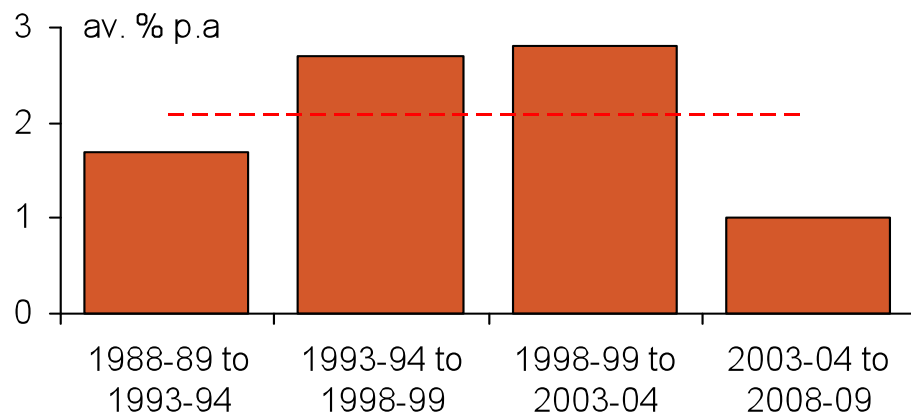
**Total economy**



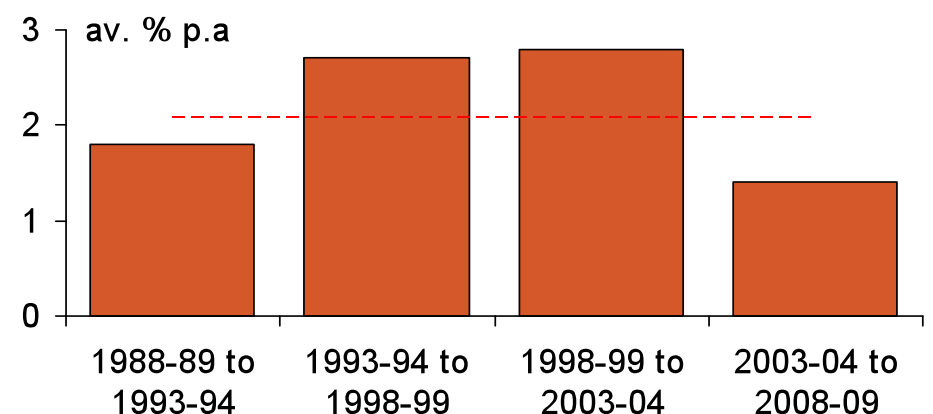
**Market economy**



**Market economy (excl. mining & utilities)**



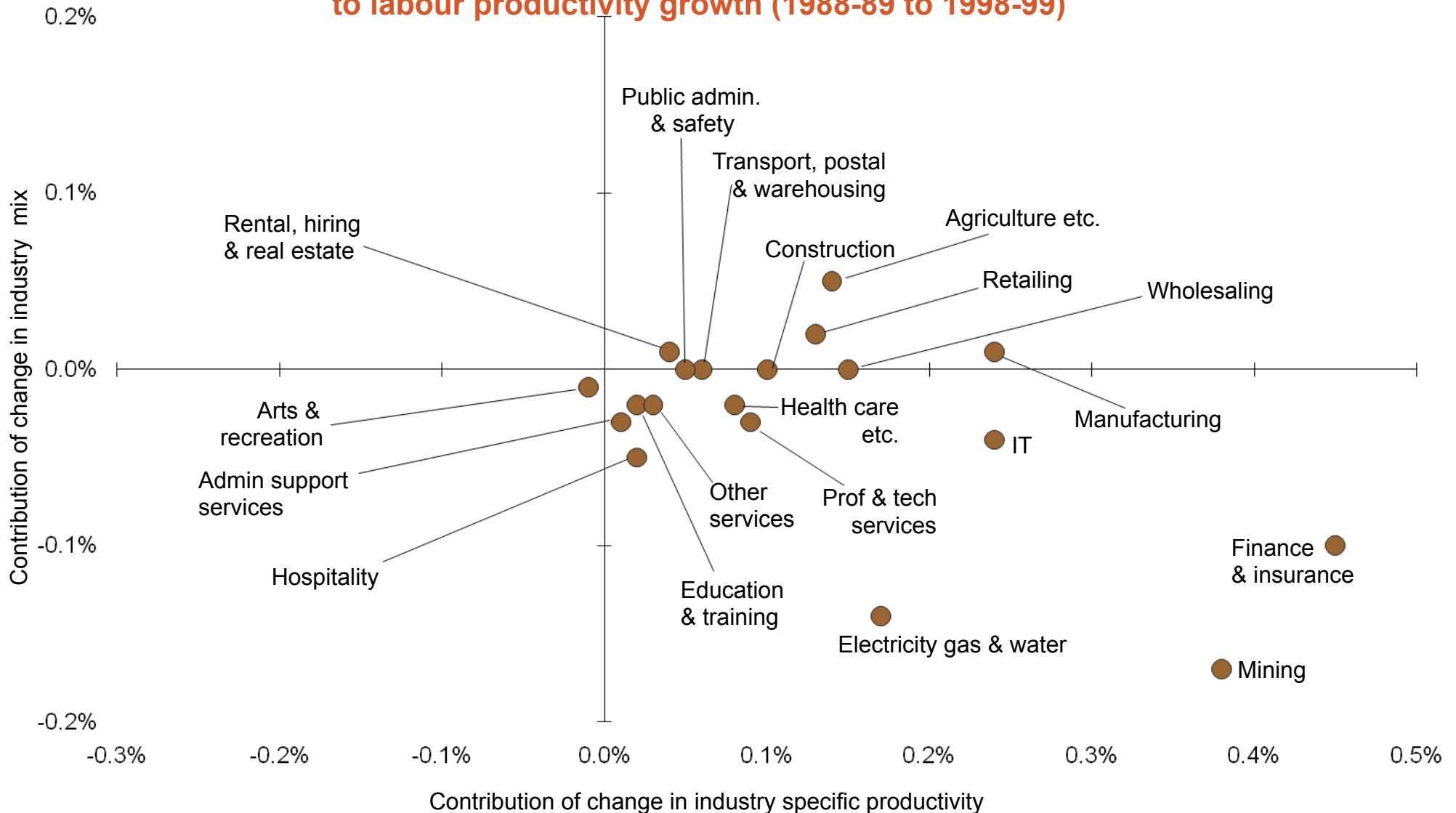
**Services**



----- Av. 1973-74 to 2008-09

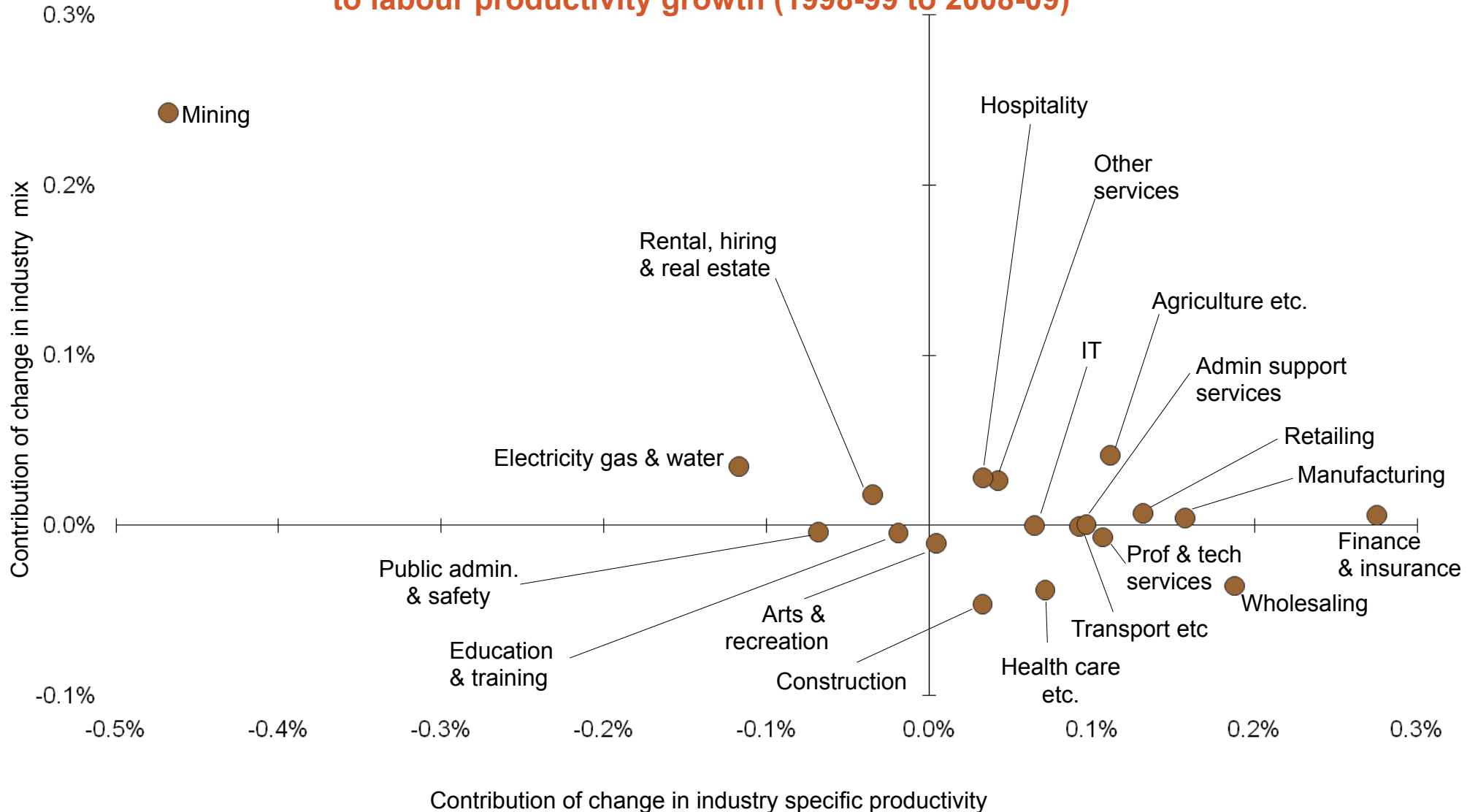
# During the 1990s, industry-specific productivity growth outweighed the impact of structural change

## Contributions of industry-mix and industry-specific productivity performance to labour productivity growth (1988-89 to 1998-99)



# During the 2000s, a broadly-based slowing in productivity growth has offset the impact of changes in industry mix

## Contributions of industry-mix and industry-specific productivity performance to labour productivity growth (1998-99 to 2008-09)



Sources: Australian Bureau of Statistics and Grattan Institute calculations.

# Why has Australia's productivity performance been so poor this decade – some plausible hypotheses

- Sector-specific developments which have materially detracted from aggregate productivity
  - in particular in the mining, and electricity gas & water sectors
- Exhaustion of the productivity dividends from the 'big bang' micro-economic reforms of the 1980s and 1990s, and the diffusion of new ITC technologies
  - and the absence of any new productivity-enhancing economic reforms
- Strong growth in corporate profits (pre-GFC) including as a result of rapid rise in commodity prices
  - reducing the need and incentive to seek out productivity gains at the individual firm level
- Declining real unit labour costs may have encouraged some substitution of labour for capital prices
  - although that seems to be contradicted by rising capital-labour ratios
- As the economy moved closer to 'full employment' of labour and capital prior to the global financial crisis, productivity growth likely deteriorated at the margin
  - as 'lower quality' labour (eg less well trained, or unemployed for longer periods) and older or less efficient plant & equipment were used in production
  - and as more infrastructure 'bottlenecks' were encountered
- Some 'labour hoarding' during the global financial crisis and associated downturn
- Enhanced focus on issues such as 'security' and 'corporate governance'
  - accompanied by legislation and regulation which almost inevitably detracts from productivity

- The financial services sector is itself a high-productivity sector
  - labour and multi-factor productivity are more than double the market-sector average
  - other things being equal, growth in the financial services sector contributes positively to productivity growth
  - although that contribution could be offset by other consequences of financial sector activity (eg inappropriate risk-taking)
- Financial markets and financial institutions play a crucial role in allocating capital among firms and (implicitly) industry sectors
  - by allocating capital towards high-productivity firms or sectors, financial intermediaries can contribute to raising overall productivity growth

# How can improved statistical services help financial markets contribute to better productivity growth?

---

- Richer data on corporate profits
  - for example, going deeper than 'gross operating surplus' in the quarterly national accounts (as the US Bureau of Economic Analysis does)
  - or more comprehensively than the quarterly Business Indicators survey of pre-tax profits
- Productivity data that allows productivity comparisons across sectors as well as over time
  - requires richer data on aggregate hours worked (although progress being made in that direction)
- Quarterly data on productivity by industry sector
  - similar to what is provided by the BEA in the US