Productivity level: how far can Australia catch up?

Graeme Davis
23 March 2006
Productivity matters

- Contribution of productivity
- Contribution of labour utilisation

Annual growth in GDP per person

The Treasury
Outline

Catch up

The Australia-US productivity gap

Recent and future trends
Catching up: different possibilities

Identical countries: everyone catches up to the same level
Not very likely

No catch up: AK model, agglomeration Not tractable

Level gap: countries catch up to their own steady states then grow by the same rate Tractable, but is it likely?
Australia’s productivity level relative to the United States
Scope for further catch up

Observe

\[
\frac{y_{Aus}}{y_{US}}
\]

Guess

\[
\frac{y^*_{Aus}}{y^*_{US}}
\]
Explaining the productivity gap (1)
Decomposing the productivity gap with the US, 2002

Due to differences in physical capital per worker

Due to multi-factor productivity

New Zealand  Japan  Australia  Canada  United Kingdom  France

The Treasury
Explaining the productivity gap (2)
At least upper secondary attainment by cohort, 2003

[Bar chart showing the percentage of individuals with at least upper secondary attainment by cohort for both Australia and the United States. The chart compares the five decades: 1940s (55-64), 1950s (45-54), 1960s (35-44), and 1970s (25-34).]
Explaining the productivity gap

Policy

United States
Australia
France
United Kingdom
Poland
Stock take

Capital

Policy

Context

Half the gap

Substantial, but how much?

The rest: catch up????
Productivity growth: international comparison

[Bar chart showing productivity growth for Australia, United States, and Rest of the OECD from 1950-74 to 1999-2004.]

The Treasury
Why did the gap narrow in the 1990s?

Reforms?

\[
\frac{y^*_\text{Aus}}{y^*_\text{US}} \uparrow
\]

New economy?
Productivity growth in...

...retail trade

...wholesale trade

The Treasury
Why did the gap narrow in the 1990s?

Reforms?

\[
\begin{align*}
\frac{y^*_{Aus}}{y^*_{US}} & \uparrow \\
\end{align*}
\]

New economy?

\[
\begin{align*}
y^*_{Aus} & \uparrow y^*_{US} \uparrow \frac{y^*_{Aus}}{y^*_{US}} \\
\end{align*}
\]
US productivity growth (1870-2005)

Average 1870-2005
Average 1975-2005

Per cent

1870-1913: 1.25
1913-1929: 2.25
1929-1950: 2.25
1950-1975: 2.25
1975-1995: 1.25
1995-2005: 2.25

The Treasury
Annualised US productivity growth (years to 2005)
How far can Australia catch up?

US grows by 1.6%pa

Australia grows by 1.75%pa

5ppt by 2040s

or no catch up, or the gap widens,
or the gap narrows by more than 5ppt

Policy implications