Productivity by the numbers: the New Zealand experience

Productivity hub symposium:
Unpicking New Zealand’s productivity paradox

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Outline

1. Long-run productivity performance

2. Industry-level productivity

3. NZ’s productivity performance in international context

4. Some open questions
New Zealand’s long-run productivity dynamics

<table>
<thead>
<tr>
<th>Period</th>
<th>Description</th>
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<tr>
<td>Mid to late-1980s</td>
<td>Labour shedding</td>
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<tr>
<td>Early-1990s</td>
<td>Strong employment growth</td>
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<tr>
<td>Late-1990s</td>
<td>Strong MFP growth, modest capital deepening</td>
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<td>During 2000s</td>
<td>Labour productivity growth slowdown, given weaker MFP growth</td>
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New Zealand’s productivity performance by industry
Productivity growth by industry

1990-2011

1996-2011

-3 -2 -1 0 1 2 3 4 5 6 7

Percent per year

Ag, forestry, fishing
Mining
Manufacturing
EGWWS
Construction
Wholesale
Retail trade
Accom & food
Transp, post, warehng
Info media & telecomms
Finance & insurance
Rental, hire, real est.
Prof, scientific, technical
Admin & support
Arts & rec
Other services

- Capital deepening
- Labour productivity growth
- MFP growth
- Aggregate labour productivity growth
Industry contributions to aggregate growth 1996-2011

- Capital deepening
- MFP
- Labour productivity
Industry contributions by GDP share

Labour productivity growth: 1996-2011

Aggregate labour productivity growth

Industry share of GDP (%)
Industry contributions vs. GDP share

MFP growth: 1996-2011

- Agg. MFP growth
- Contribution to growth (ppt)
- Industry share of GDP

- Mining
- Admin & support
- EGWW
- Arts & rec
- Prof, Scientific & Technical
- Accom & food
- Construction
- Manufacturing
- Transport
- Ag, forestry & fishing
- Retail trade
- Rental, hire, real est
- Finance & insurance
- Wholesale trade
- Info, media, telecoms
- Other Services
Change in productivity growth 1990s vs. 2000s

- Capital deepening
- MFP growth
- Labour productivity growth
Industry contributions to the 2000s slowdown

Percentage point difference – 1990s vs. the 2000s

- Ag., forestry, fishing
- Mining
- Manufacturing
- EGWWS
- Construction
- Wholesale
- Retail
- Accom & food
- Transp., post, warehsg
- Info media & telecoms
- Finance & insurance

- MFP growth
- Capital deepening
- Labour productivity growth
Summary of industry results

Outperformed: Information, media & telecoms; Finance & insurance

ICT-intensive industries: some have performed well, but NZ’s overall ICT story is unclear

Underperformed: Construction; some Service industries (including Professional, scientific & technical)

Weaker MFP growth in the 2000s: cause broad-based, but particularly Agriculture; Transport; Manufacturing
New Zealand’s productivity performance in international comparison
NZ’s aggregate performance compared
NZ’s industry performance compared - growth

Distance to which frontier?

Frontier country – the US

Advanced/low competition country – NZ?

Lagging country

Firm productivity
Open questions

The link between **input use and productivity**

A **deeper understanding** of industries that have contributed to lower MFP growth.

**ICT:** What is the New Zealand story?

The paradox - which is bigger:

- low diffusion of technology **into** NZ?
- low diffusion of technology **within** NZ?
Decomposition of measured sector output
Decomposition of measured sector labour productivity
SYMPOSIUM:
UNPICKING
NEW ZEALAND’S
PRODUCTIVITY PARADOX

2 July 2013, Oceania, Te Papa Tongarewa