UTS BUSINESS SCHOOL

Smarter manufacturing for a competitive SEQ

Roy Green
Precarious future

Contributions to average incomes growth: Treasury
Labour Productivity Growth

1960s
1970s
1980s
1990s

OECD 24 Average
Australia

Source: The Conference Board Total Economy Database and Treasury
Labour Productivity Growth

OECD 24 Average

Australia

Source: The Conference Board Total Economy Database and Treasury
# Unit Labour Cost Comparisons

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>CPI % CHANGE</th>
<th>MANUFACTURING HOURLY LABOUR PRODUCTIVITY</th>
<th>UNIT LABOUR COST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average Annual % Change 2000-2009</td>
<td>Average Annual % Change 2000-2010</td>
<td>Average Annual % Change 2000-2010</td>
</tr>
<tr>
<td>UNITED STATES</td>
<td>2.50%</td>
<td>5.18%</td>
<td>-1.41%</td>
</tr>
<tr>
<td>SWEDEN</td>
<td>3.00%</td>
<td>4.42%</td>
<td>-1.01%</td>
</tr>
<tr>
<td>FINLAND</td>
<td>1.82%</td>
<td>4.54%</td>
<td>-0.99%</td>
</tr>
<tr>
<td>GERMANY</td>
<td>1.60%</td>
<td>1.82%</td>
<td>0.23%</td>
</tr>
<tr>
<td>CANADA</td>
<td>2.00%</td>
<td>0.89</td>
<td>1.63%</td>
</tr>
<tr>
<td>AUSTRALIA</td>
<td>3.00%</td>
<td>1.93%</td>
<td>2.48%</td>
</tr>
</tbody>
</table>

Multifactor Productivity (MFP) Growth

Source: The Conference Board Total Economy Database and Treasury.
Multifactor Productivity (MFP) Growth

Per cent

<table>
<thead>
<tr>
<th>Country</th>
<th>1990s</th>
<th>2000s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>1.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Australia</td>
<td>1.3</td>
<td>0.1</td>
</tr>
<tr>
<td>UK</td>
<td>1.2</td>
<td>0.1</td>
</tr>
<tr>
<td>USA</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Italy</td>
<td>0.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Canada</td>
<td>0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>France</td>
<td>0.0</td>
<td>-0.2</td>
</tr>
<tr>
<td>Japan</td>
<td>0.3</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source:
The Conference Board Total Economy Database and Treasury.

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Source: OECD Manufacturing Competitiveness Index: Australia vs USA and Euro Area, 1993-2010 (2005=100); increase in index represents decline
Manufacturing matters

- R&D
- SKILLS
- TRADE
<table>
<thead>
<tr>
<th>Region</th>
<th>Population</th>
<th>Manufacturing*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scandinavia</td>
<td>23 million</td>
<td>5 companies</td>
</tr>
<tr>
<td>Australia</td>
<td>23 million</td>
<td>0 companies</td>
</tr>
</tbody>
</table>

Manufacturing companies in the Fortune Global 500, 2011 annual ranking
“Our greatest responsibility is to invest in our people through skills and education to drive Australia’s productivity performance and ensure that all Australians can participate and contribute.”

Australia in the Asian Century, 2012
<table>
<thead>
<tr>
<th>Country</th>
<th>Investment in Knowledge (%) of GDP 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>6.8%</td>
</tr>
<tr>
<td>Finland</td>
<td>6.1%</td>
</tr>
<tr>
<td>Denmark</td>
<td>5.5%</td>
</tr>
<tr>
<td>Canada</td>
<td>4.7%</td>
</tr>
<tr>
<td>Australia</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

**2004**
Powering Ideas
An Innovation Agenda for the 21st Century
National innovation system

Government and public agencies

Finance and venture capital

Research and education institutions

Enterprises and workplaces
Undergraduates
Graduates
Mid-career
Executive

Educating people

Providing public space

Problem-solving for industry

Adding to the stock of codified knowledge

- Forming/accessing networks and stimulating discussion of industry development pathways.
- Influencing the direction of search processes
  - Meetings and conferences
  - Hosting standard-setting forums
  - Entrepreneurship centers & mentoring programs
  - Alumni networks
  - Personnel exchanges (internships, faculty exchanges, etc.)
  - Industrial liaison programs
  - Visiting committees
  - Curriculum development committees
  - Creating the built environment to support this

Publications
Patents
Prototypes

Contract research
Cooperative research with industry
Technology licensing
Faculty consulting
Providing access to specialized instrumentation and equipment
Incubation services
Business-university interaction contributing to innovation (% firms)

Source: A. Cosh, A. Hughes and R. Lester *UK PLC Just How Innovative Are We?* Cambridge MIT Institute 2005
A Plan for Australian Jobs

The Australian Government’s Industry and Innovation Statement

1. Short-term adjustment
   - Industry participation, retraining
2. Economy-wide measures
   - Infrastructure, ‘clean energy future’
3. ‘Innovation precincts’
   - Industry-led, universities, start-ups
4. SME ‘absorptive capacity’
   - Enterprise Connect, ICN, Austrade
5. Workplace performance
   - Engaging talent and creativity
“Improving management practice is associated with large increases in productivity and output.”
Global management performance

Source: Data collected from interviews conducted by the Australian Management Practices Project Team
Global management performance

Source: Data collected from interviews conducted by the Australian Management Practices Project Team

Not statistically different *
Better management is associated with:

- Large, global companies
- High levels of skill & education
- Significant plant autonomy
Australian management performance gaps

Operations Metrics
Performance Metrics
People Metrics

Australia
Global best
Australian management performance gaps

['Instilling a talent mindset']
High performance organisations

- Responsiveness to customers
- Employee participation in decisions
- Behavioural and skills flexibility
- Use of ICT and high quality people

HPOs are more productive, profitable, innovative and record better employee experiences, higher levels of workplace fairness and stronger leadership capabilities.

Source: SKE, Leadership, Culture and Management Practices of HPOs in Australia, 2011
“Using creativity and design-based thinking to solve complex problems is a distinctive Australian strength that can help to meet the emerging challenges of this century.”

Australia in the Asian Century, 2012
Strategic conversation

What will it mean to be a world class business school in a world leading university of technology in 5 years, 10 years, and how do we get there?

Focusing on the art of dialogue to:
- create compelling arguments
- evoke common purpose
- solve complex problems
- mobilize communities to action
Integrative thinking

from…

Discipline specialisations

Integrated programs

to…

Leading
Communicating
Innovating
Collaborating
Our vision:

“To advance knowledge with impact through integrative thinking for next generation leaders in a globalising world.”
“I like the problem” – Frank Gehry
“Treehouse” sketch
“Thinking of it as a tree house came tripping out of my head on the spur of the moment... But on reflection the metaphor may be apt. A growing learning organism with many branches of thought some robust and some ephemeral and delicate.”

Frank Gehry, Dec 2009
The *outside* will be iconic...
...but the *inside* is where we create next generation leaders
“Open, dynamic and creative societies... are created by the alchemy of artists, entrepreneurs, philanthropists, civic institutions and governments coming together in the right combination at the right moment. And for Australia... this is surely such a moment.”