The global positioning of Australian higher education:

Where to from here?

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Dean’s Lecture, Faculty of Education
University of Melbourne, 16 October 2007
GDP per head, OECD nations, $US Purchasing Power Parity, 2004 [OECD 2007]
research capacity
rising education levels
smart global cities
multiple engagement
Asia-Pacific focus
international education
## In the big league

Australians in the Shanghai Jiao Tong University top 500 research universities, 2007

<table>
<thead>
<tr>
<th>Rank</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>57</td>
<td>Australian National University</td>
</tr>
<tr>
<td>79</td>
<td>Melbourne</td>
</tr>
<tr>
<td>102-150</td>
<td>Sydney, Queensland, Western Australia</td>
</tr>
<tr>
<td>151-202</td>
<td>New South Wales, Adelaide</td>
</tr>
<tr>
<td>203-304</td>
<td>Monash, Macquarie</td>
</tr>
<tr>
<td>305-401</td>
<td>Flinders, Newcastle</td>
</tr>
<tr>
<td>402-508</td>
<td>James Cook, La Trobe, Murdoch, New England, Tasmania, Wollongong</td>
</tr>
</tbody>
</table>
‘I love a research country, a land of buzzing brains’

Universities in the world’s top 100, Shanghai Jiao Tong University data 2007

- USA: 54
- UK: 11
- Japan: 6
- Canada: 4
- France: 4
- Germany: 5
- Switzerland: 3
- Sweden: 4
- Australia: 2
- Netherlands: 2
- Others: Italy, Israel, Denmark, Norway, Finland, Russia each 1.
## Knowledge nodes

Australian discipline groups in the world top 100, Shanghai Jiao Tong University data 2007

<table>
<thead>
<tr>
<th>University</th>
<th>Disciplines</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANU</td>
<td>science (38), life science (44), social science</td>
</tr>
<tr>
<td>U Melbourne</td>
<td>engineering, life science, medicine, social science</td>
</tr>
<tr>
<td>U Queensland</td>
<td>life science, medicine, social science</td>
</tr>
<tr>
<td>U WA</td>
<td>life science (37), medicine</td>
</tr>
<tr>
<td>U Sydney</td>
<td>engineering</td>
</tr>
<tr>
<td>U NSW</td>
<td>engineering</td>
</tr>
<tr>
<td>U Newcastle</td>
<td>engineering</td>
</tr>
</tbody>
</table>
Research: Canada v. Australia

<table>
<thead>
<tr>
<th></th>
<th>Canada</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 2005</td>
<td>32.3 million</td>
<td>20.3 million</td>
</tr>
<tr>
<td>GDP 2005</td>
<td>$US 1061mill</td>
<td>$US 643 mill</td>
</tr>
<tr>
<td>GDP per head p.a. 2004</td>
<td>$US 32,413</td>
<td>$US 30,875</td>
</tr>
<tr>
<td>universities in top 500 2007</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td>universities in top 100 2007</td>
<td>Toronto 23</td>
<td>ANU 57</td>
</tr>
<tr>
<td></td>
<td>UBC 36</td>
<td>Melbourne 79</td>
</tr>
<tr>
<td></td>
<td>McGill 63</td>
<td></td>
</tr>
<tr>
<td></td>
<td>McMaster 87</td>
<td></td>
</tr>
<tr>
<td>world rank in citations 2007</td>
<td>Toronto 3</td>
<td>ANU 112</td>
</tr>
<tr>
<td>disciplines in top 100 2007</td>
<td>Toronto:</td>
<td>ANU:</td>
</tr>
<tr>
<td></td>
<td>engineering 19</td>
<td>science 38</td>
</tr>
<tr>
<td></td>
<td>medicine 26</td>
<td>life science 44</td>
</tr>
<tr>
<td></td>
<td>science 33</td>
<td>social science77-104</td>
</tr>
<tr>
<td></td>
<td>life science 40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>social science51-75</td>
<td></td>
</tr>
</tbody>
</table>

University of Toronto. Data in table from World Bank 2007 and Shanghai Jiao Tong University 2007 research ranking.
15-19 year olds enrolment rate (%) in all education, 2005 [OECD 2007]
Change in enrolment rate of 15-19 year olds (%), 1995-2005 [OECD 2007]

For some countries 1995 data are not available. Change is since 2000 in Iceland and Italy, and since 2001 in the Slovak Republic.
Throughput from year 12 straight to higher education and VTE, Victoria 1997-2004
[Ministerial response to Question 1171 by Senator Wong, Senate Hansard, 8 August 2006]

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Victorian higher education</td>
<td>46.6</td>
<td>45.5</td>
<td>45.1</td>
<td>43.0</td>
<td>41.2</td>
<td>39.3</td>
<td>36.6</td>
<td>35.6</td>
<td>-11.0%</td>
</tr>
<tr>
<td>Victorian VTE</td>
<td>43.7</td>
<td>40.0</td>
<td>45.6</td>
<td>46.0</td>
<td>40.5</td>
<td>47.3</td>
<td>44.5</td>
<td>45.3</td>
<td>+1.6%</td>
</tr>
<tr>
<td>all Victorian tertiary</td>
<td>90.3</td>
<td>85.5</td>
<td>90.7</td>
<td>89.0</td>
<td>81.7</td>
<td>86.6</td>
<td>81.5</td>
<td>80.9</td>
<td>-9.4%</td>
</tr>
<tr>
<td>all Australia tertiary</td>
<td>76.4</td>
<td>77.9</td>
<td>74.8</td>
<td>79.4</td>
<td>74.8</td>
<td>76.4</td>
<td>72.8</td>
<td>69.7</td>
<td>-6.7%</td>
</tr>
</tbody>
</table>
Like a slice of pie?

Distribution of education exports by export nation, 2005 [OECD 2007]

- USA 22%
- UK 12%
- Germany 10%
- France 9%
- Australia 6%
- Japan 5%
- Russia Federation 3%
- New Zealand 3%
- Canada 3%
- South Africa 2%
- Spain 2%
- Belgium 2%
- Italy 2%
- others 19%

In 2006-2007 in Australia education ($11.3 billion) was fourth largest export sector after coal, iron ore and tourism.
‘A tale of two growth rates’

International and domestic student growth 1988-2006 (1988 = 1.00) [DEST 2007]
John’s building blocks

Student enrolments in the Howard years, 1996 and 2006 [DEST 2007]
The public/private funding carve up

Funding of tertiary education by source, Australia, 1995 and 2004 [OECD 2007]

1995
- Public source funding: 64.8%
- Private source funding: 35.2%

2004
- Public source funding: 52.8%
- Private source funding: 47.2%
(loss) leading the world

‘Public investment in tertiary education has increased in all OECD countries and partner economies (except Australia) for which 1995 to 2004 data are available, regardless of changes in private spending’.


Between 1995 and 2004 total public funding of tertiary education in Australia fell by 4 per cent in real terms and public funding per tertiary student fell by 27 per cent (total public and private funding per student rose by 1 per cent). Australia invested 0.8 per cent of GDP in public funding of tertiary education in 2004, and on this measure was 25th of the 29 OECD countries for which data are available.
Better to be average

Public funding of tertiary education as a proportion (%) of GDP, 2004 [OECD 2007]
Cross-border mobile students: proportion (%) of degree level students, 2005 [OECD 2007]
Public funding per subsidized place in higher education 1996-2005

[base data from DEST, NTEU calculation 2007]
‘Cash cow students take a stand’ – The Age 14 March 2006, reporting a student rally and hunger strike at the shop-front Central Queensland University campus in the Melbourne central business district
International students in Australian higher education: main source nations, 2005

[DEST 2007]
research capacity  
rising education levels  
smart global cities

multiple engagement  
Asia-Pacific focus  
international education
Not just ‘one of our markets’

Investment in R&D in China as a % of GDP [UNESCO 2007]

Australia 2004
Singapore 2003
research capacity  

rising education levels  

smart global cities  

multiple engagement  

Asia-Pacific focus  

international education
Thanks to –
- The databases of OECD and DEST
- Google Images (35) and Nikon (2)
- My colleagues at CSHE

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research and policy papers at:
http://www.cshe.unimelb.edu.au/people/staff_pages/Marginson/Marginson.html