

# Australian Universities in a Global Context

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# **Global strategic environment**

# Global transformation in the university sector

1. The expanding role of world-wide systems, integrating nations and largely beyond their control, e.g. the Internet, the global labour market in researchers
2. Tendencies to world-wide convergence and integration that are driven by cross-border flows of people, ideas, knowledge, policies, technologies, and finance - though here nations have some discretion - e.g. increasingly similar approaches to the PhD and other degree structures
3. Parallel reforms by different national governments, largely voluntary and under their control, that over time promote a degree of global convergence, e.g. new public management (NPM) techniques in organization, competition policies, etc

*but despite increasing globalisation, universities remain embedded in nations and continue to be closely affected by national resourcing, policy and regulation*

# Four spaces for policy-making and strategy-making

## SITE OF CHANGE

**global**

*Inter-governmental negotiations on higher education*

*universities as global players*

**AGENT OF CHANGE**

**nation-state**

*National system organization (New Public Management)*

**unis**

*local servicing role of universities*

**national/local**

# Positioned, but also position-taking: the new global opportunities

- Nations and universities are both ‘positioned’ and ‘position-taking’ in the global higher education environment.
- **Position** is a function of the capacity to operate in the global environment, which is unevenly distributed between nations and universities on the basis of system and university size; national investment in universities; quality of resources, especially in research; language of use; etc.
- Nations and universities have a greater range of **position-taking** options in the global than the national setting – there are more permutations; and more scope for securing an advantage via policy, responsiveness, imaginative executive strategies, teaching and research initiatives.
- Smart nations with low/ medium level global position that invest wisely can create long term advantage for themselves through higher education and research, e.g. Singapore

# Global dominance of the United States in higher education

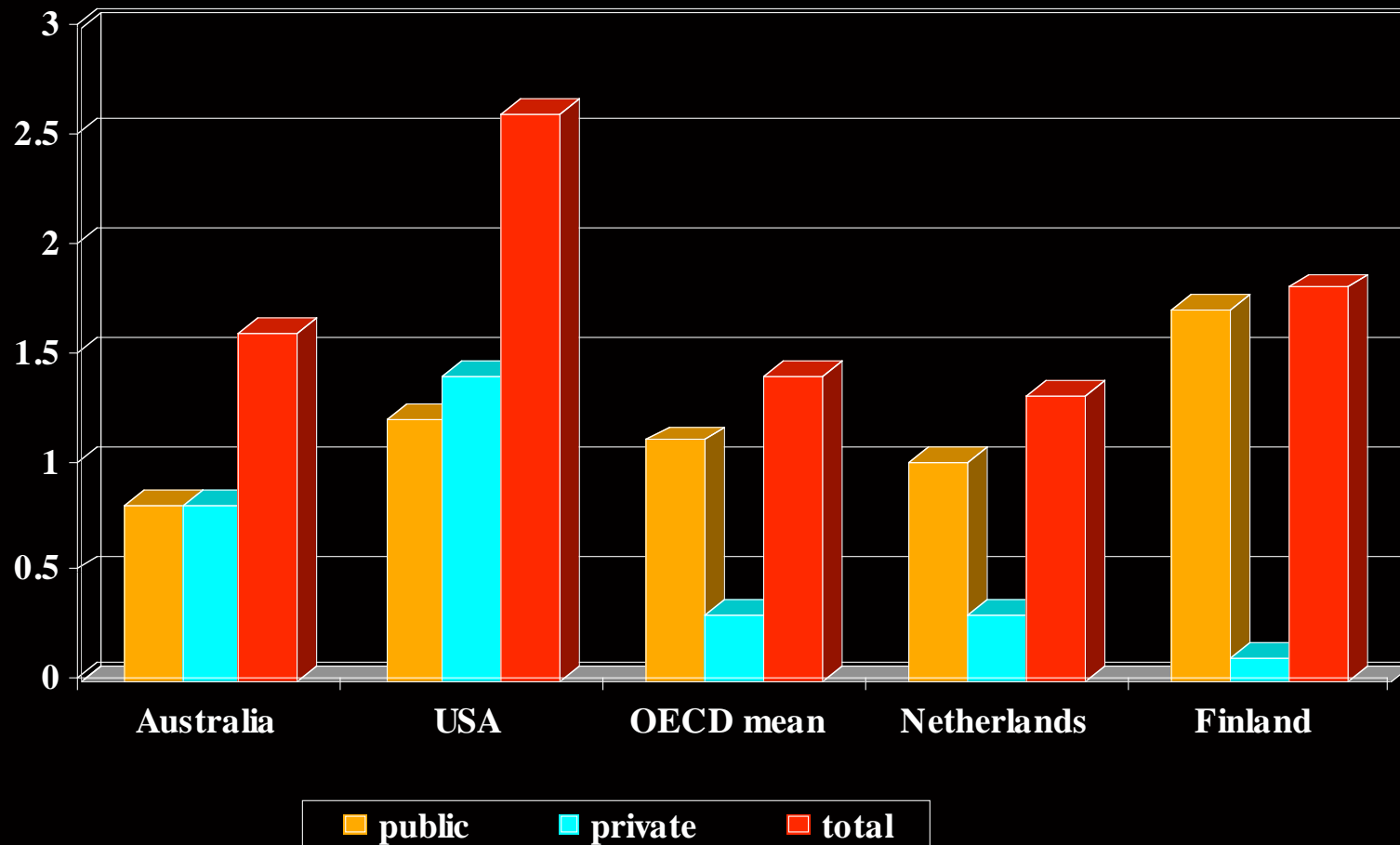
- USA spends 2.6% of GDP (about \$300 billion p.a.) on tertiary education (2002)
- USA has 17 the top 20 research universities, and 53 of the top 100 (Shanghai Jiao Tong, 2005). Note that USA (53) and UK (11) together have almost two thirds of top 100
- There are 3568 ISI 'HighCI' researchers in USA compared to 221 in Germany, 135 France, 97 Australia, 20 China
- USA produces 31% of world scientific papers (2001)
- USA has 102,084 (2004-2005) foreign doctoral students, half the world's cross-border doctoral students
- and 28% of the total cross-border market in degrees (2003)

**Where do we sit?**

# Australia

- We are a middle ranking university system. We are stronger in international education, the sale of degrees (especially in East and Southeast Asia) than in research performance
- We spend 1.6% of GDP on tertiary education (2002) USA 2.6%
- Our dependence on private income is relatively high as is USA
- We have none of top 20 research universities, 2 of top 100, 14 of top 500 (Shanghai Jiao Tong, 2005) USA 53 of top 100, 17 of top 20
- There are 97 ISI 'HighCI' researchers in Australia compared to 409 in UK, 161 in Canada, 16 in New Zealand 3568 in the USA
- Australia produces 2% of world scientific papers (2001) USA 31%
- Australia has 8000 foreign doctoral students USA 102,000
- and 9% of the cross-border market in degrees (2003) USA 28%

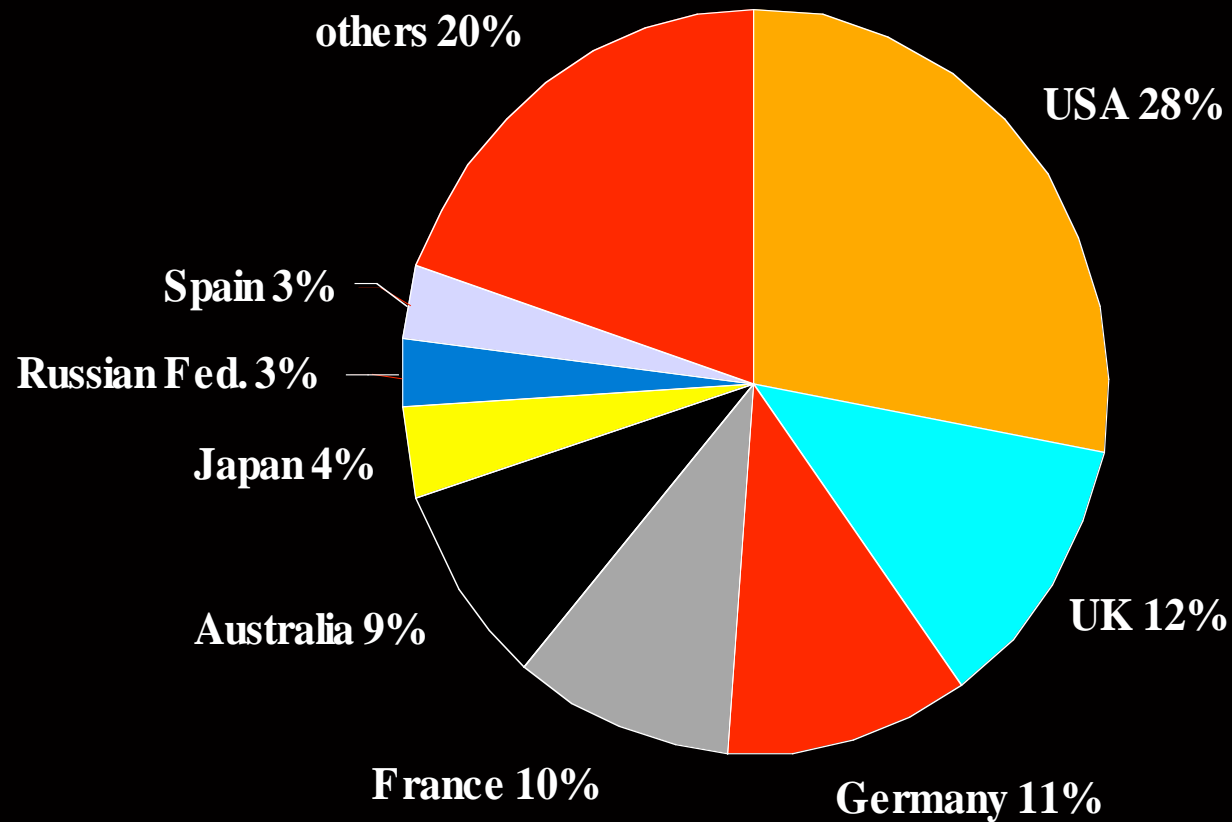
# Investment in tertiary education as a proportion of GDP (2002)



# The export position

# Exporters of cross-border degrees

2003 OECD data



# Largest Australian providers

Institution <i>* More than 50% of international students off-shore</i>	International students 2004	International fee revenues 2004 \$sm	Proportion of all revenues 2004
1 Monash U	17,077	160.3	19.5%
2 RMIT U *	15,132	122.8	25.2%
3 Curtin UT *	14,319	96.4	23.2%
4 Central Queensland U	10,460	97.1	39.5%
5 U South Australia *	10,257	51.3	16.2%
6 U Sydney	9806	124.3	12.7%
7 U NSW	9481	116.4	15.0%
8 U Melbourne	9215	154.8	14.7%
9 Macquarie U	8725	83.6	24.5%
10 Charles Sturt U *	8429	13.7	6.4%
11 U Southern Queensland *	8333	20.9	16.0%
12 U Wollongong	7940	55.2	20.6%
<b>U Southern California (2004-05)</b>	<b>6846</b>		

# Enrolment shifts 2003-2004

Australia 2004 DEST data

students from	2003	2004	2003 = 1.00
China	27,020	37,106	1.37
Malaysia	27,267	28,862	1.06
Singapore	29,878	28,290	0.95
Hong Kong	29,169	27,461	0.94
India	11,133	16,320	1.47
Indonesia	11,865	11,316	0.95
USA	9418	9522	1.01

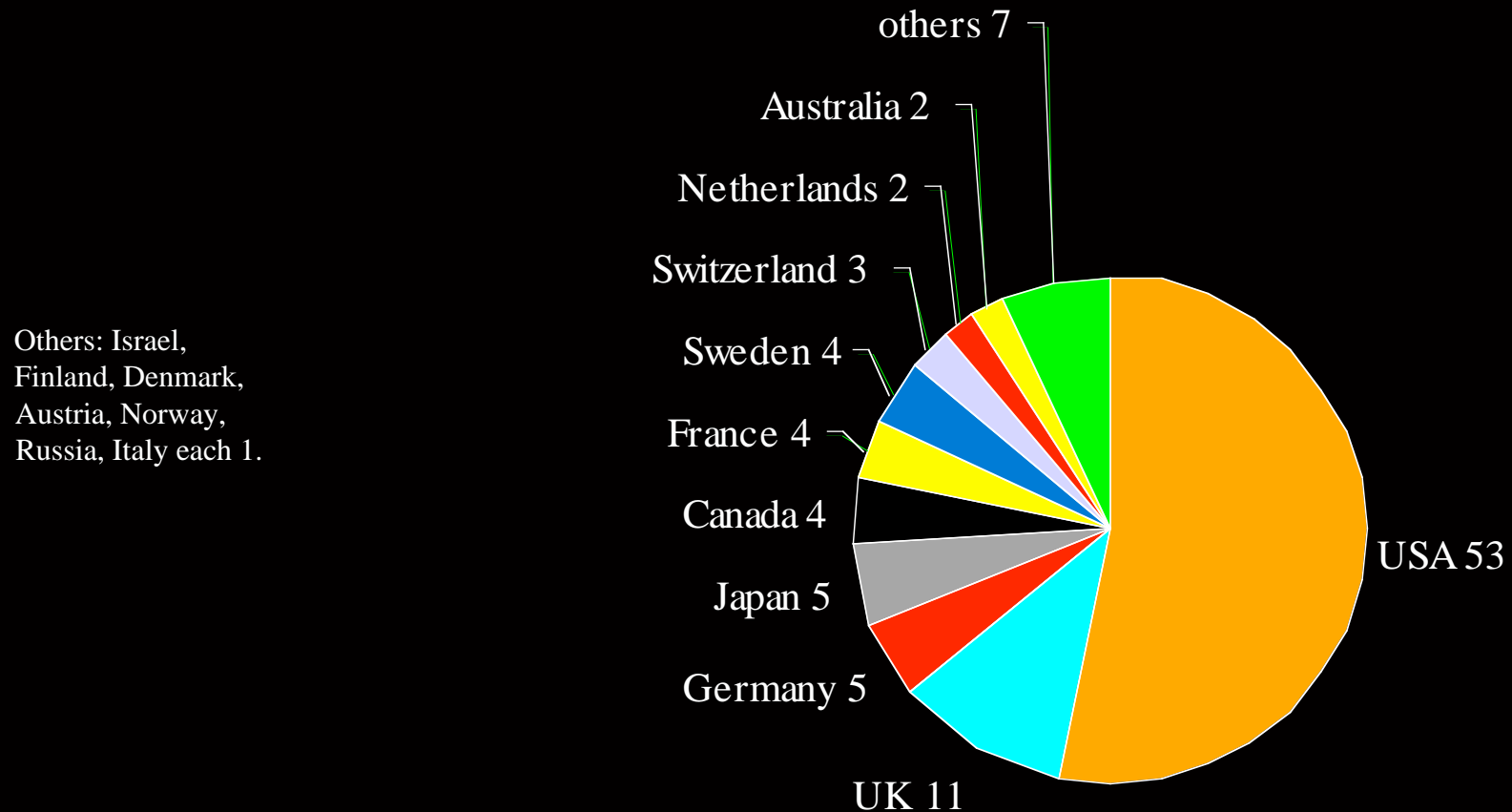
# Education export: pluses & minuses

<b>PLUS</b>	<ul style="list-style-type: none"><li>•\$5 billion export industry with 230,000 students built in 15 years – thanks to university entrepreneurship and business models (and the strength of revenue incentives)</li><li>•Market share in university sector 3<sup>rd</sup> in world</li><li>•Sustains a major national engagement in Asia</li><li>•Provides 15% of university revenues: fiscal savings</li><li>•National quality assurance (though needs strengthening)</li></ul>
<b>MINUS</b>	<ul style="list-style-type: none"><li>•Too dependent on high volume medium quality standard cost training in business and IT – lack of diversity of product</li><li>•Not enough top quality students, including PhD students</li><li>•‘Franchising’ operations weaken quality and reputation</li><li>•Growth over-dependent on incentives created by public funding cuts, creating downward pressures on standards</li><li>•Market position vulnerable to price effects, declining research reputation, import replacement, new languages</li></ul>

# **The research position**

# Top 100 research universities

2005 data from Shanghai Jiao Tong University Institute of Higher Education



# The top 20 in 2005

from Shanghai Jiao Tong University data

1	HARVARD USA	11	Yale USA
2	Cambridge UK	12	Cornell USA
3	Stanford USA	13	UC San Diego USA
4	UC Berkeley USA	14	UC Los Angeles USA
5	MIT USA	15	Pennsylvania USA
6	Caltech USA	16	Wisconsin-Madison USA
7	Columbia USA	17	Washington (Seattle) USA
8	Princeton USA	18	UC San Francisco USA
9	Chicago USA	19	Johns Hopkins USA
10	Oxford UK	20	Tokyo Japan

# Australians in top 500, 2005

from Shanghai Jiao Tong University data

top 100	ANU (56), Melbourne (82)
top 150	Queensland, Sydney
top 200	NSW, WA
top 300	Monash, Adelaide, Macquarie
top 400	Newcastle
top 500	Tasmania, Flinders, La Trobe, Murdoch

# University rankings: intensification of global competition

- Universities are widely judged by research performance which is foundational to reputation, and operates as a proxy for degree power and even teaching quality. Now Shanghai Jiao Tong has provided a credible set of data on research performance.
- Marketing ('we are world-class', 'we are a research university' etc.) is no longer enough - the data must confirm the claim
- Governments/nations now want super-league universities. Implies greater concentration of research activity, greater stratification of universities, selective investment increases
- Every university (except Harvard) wants to lift its rankings, every university in the top 500 wants to hire more high citation (HiCi) researchers. This competition generates price effects

# Jiao Tong rankings: weightings

criterion	weighting
Alumni of institution: Nobel Prizes and field medals	10%
Staff of institution: Nobel Prizes and field medals	20%
High citation (HiCi) researchers	20%
Articles in <i>Nature</i> and <i>Science</i>	20%
Articles in citation indexes in science, social science, humanities	20%
Research performance (compiled as above) per head of staff	10%
<i>total</i>	100%

# HiCi researchers

selected universities, 2005

Stanford USA	91
UC Berkeley USA	81
Harvard USA	72
MIT USA	72
<i>all USA combined</i>	<i>3568</i>
Cambridge UK	42
Oxford UK	29
<i>All Australia combined</i>	<i>97</i>
<i>all China combined</i>	<i>20</i>

# HiCi researchers

Australia 2005

(Stanford)	(91)
<b>Australia combined</b>	<b>97</b>
ANU	25
Melbourne	9
WA	7
Sydney	6
UNSW	6
Macquarie	3
Newcastle	3
Murdoch	2
Southern Cross	2
others include Queensland, Adelaide, Monash, Tasmania, La Trobe, Flinders, UTS, UWS each 1, CSIRO 9, personnel in industry laboratories and medical research institutes, etc.	

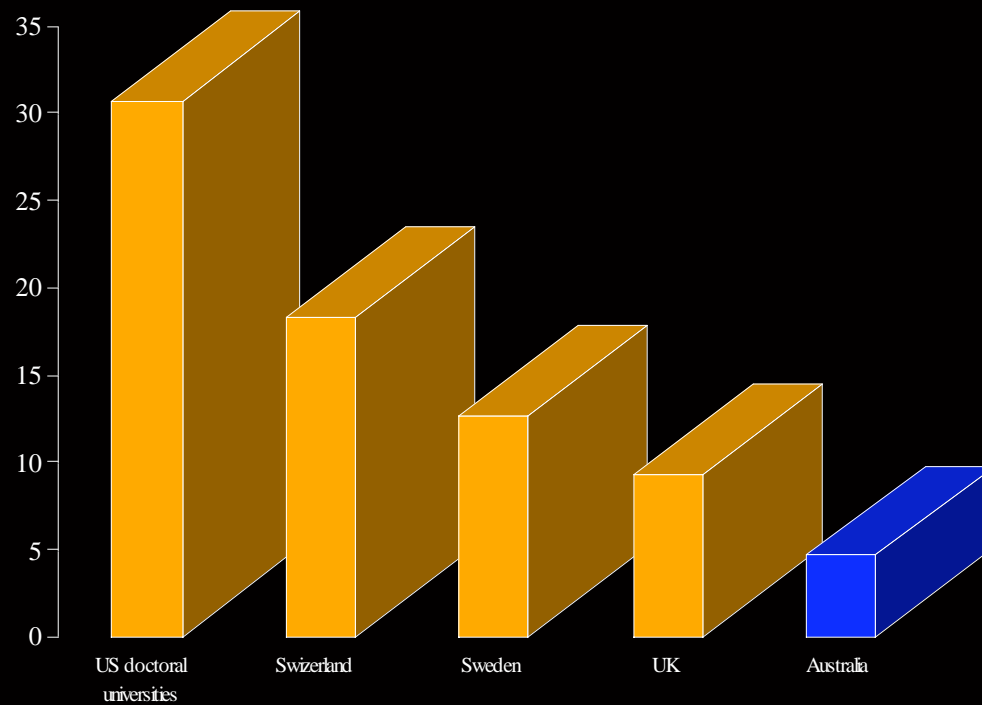
# Global labour markets 1: salary competition

2000-2004 data, various sources, Purchasing Power Parity

nation	data year	Professorial salary USD p.a.
USA (salary only, 9-10 months)	2003-04	\$101,000 average
Singapore	2001	\$92,000-130,000
Australia	2003	\$75,000
Korea (private sector only)	2000	\$71,000 average
Germany, Netherlands	2002-03	\$60,000-70,000
France, Spain, Finland	2002-03	\$40,000-70,000

# Global labour markets 2: mobile doctoral students

Percentage (%) of all international students enrolled in research degrees  
OECD data for 2003 except USA is 2003-2004



**Summing up**

# National research performance compared to economic capacity

<b>Nations with research capacity greater than their economic wealth suggests</b> <i>(in order of performance)</i>	Israel, Sweden, Switzerland, UK, Netherlands, Canada, Finland, Denmark, Australia, <i>USA</i>
<b>Nations with research capacity about on par with economic wealth</b>	Germany, New Zealand, Hungary, Belgium, Austria, Norway, <i>Chile</i> , France, Hong Kong, South Africa
<b>Nations with research capacity less than their economic wealth suggests</b>	Ireland, <i>Brazil</i> , <i>Japan</i> , India, <i>Portugal</i> , Czech Republic, Russia, Italy, <i>Korea</i> , Spain, <i>Poland</i> , Greece, <i>China</i> , Argentina, <i>Mexico</i> <i>Italics: over 20% of students in independent private sector</i>

# Some worrying signs

- We have lived off a strong research reputation accumulated on the basis of public investment in the 1960-1985 period, but
- Jiao Tong rankings now make research reputation a function of measured performance, not history or marketing
- They also emphasise the need for top 40 universities
- Downward pressures on quality of teaching (doubling of staff student ratios) and research (funding cuts hurt basic research)
- We are weaker in comparisons with the UK and Canada
- Our international market share and revenues are vulnerable
- We lack a national approach to standards
- Fiscal policy is locked up. Downward flexibility only
- Global capacity? National policy is 'leave it to the universities'

- *Australian investment in tertiary education is high relative to the OECD norm but the composition of investment has changed dramatically. In the last two decades the public share of funding has fallen from 85% to 40%. Incentives have been transformed. The pattern of activity has altered.*
- ‘It is notable that the rises in private educational expenditure have not generally been accompanied by cuts in public expenditure on tertiary education. On the contrary, public investment has increased in most of the OECD countries for which 1995-2002 data are available, regardless of changes in private spending. In fact, many OECD countries with the highest growth in private spending have also shown the highest increase in public funding... The main exception is Australia, where the shift towards private expenditure at tertiary level has been accompanied by a fall in the level of public expenditure in real terms’.

- OECD, *Education at a Glance*, 2005, p. 193. The decline in public spending 1995-2002 is 8 per cent in total (p. 187) and about 30 per cent on a per student basis (p. 175)

- Total university revenues have not declined. Public funding per student is down, private funding per student is up, the effects seem to cancel out. But on the private income side, what matters is not total income but *surplus*. In many universities international student marketing provides additional cash flow but does not generate net surplus. The new revenues have been largely or wholly absorbed by the new functions needed to raise them: marketing, off-shore activity, special services, etc. The old public income, the gift of government that cost little to ‘raise’, is not replaced.
- And in some cases where international marketing does generate significant surplus, quality is suffering.
- This is why in the midst of the export bonanza, universities are impoverished, and quality and value are in question.
- In sum, with the shift to market-based incomes, universities spend more on revenue raising functions and less on the ‘core businesses’ of teaching and research. Yet it is these core businesses from which business draws value. The incentives are wrong. *Universities are spending more on reproducing themselves, and less on producing valuable products.*

# Australia and Canada compared

	Canada	Australia
population (2004)	31.9 million	20.4 million
GDP (2004)	\$905.6 billion	\$541.2 billion
GDP per head (2004)	\$28,390	\$26,900
universities in Jiao Tong top 100 (2005)	4 UT 24 UBC 37 McG 67 McM 90	2 ANU 56 Melbourne 82
universities in Jiao Tong top 500 (2005)	23	14
universities in <i>Times</i> top 100 (2005)	3	12
world share of foreign students (2002)	1%	9%
GDP for tertiary education (C2001 A2002)	2.5%	1.5%
public share of funding (C2001 A2002)	67%	50%
public funding source	provinces/national	national