

# Policy settings and system relations in higher education

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## The presentation

- The disclaimers  
*(about you and me)*
- The problem  
*(domestic difficulties are symptoms, it's all about the global)*
- The system  
*(strengths and weaknesses, incentives and balances)*
- The others  
*(on a good day perhaps)*
- The solution?  
*(politics/depoliticisation, centralisation/decentralisation)*

## Symptoms: weaknesses in Australian ET&R

(in rough order of importance)

1. Early learning prior to primary school
2. Vocational and Technical Education
3. Long term weakening of basic research capacity
  
4. Lack of top research universities
5. Tertiary student financial support
6. Secondary retention and tertiary participation rates
7. Slippage of comprehensive schooling
8. Resourcing of university teaching

## Fed/State 'relations' in education

	legal after HCA 2006	public funding states incl. territories	policy leadership	policy issues
Public early learning	states	states	not much	severe under funding, poor provision & quality
Private early learning	federal (was states)	mixed	not much	poor quality & inadequate regulation
Public schools	states	largely state	states	quality in poorer districts
Private schools	?? (was states)	largely federal	federal	inadequate regulation
TAFE	federal?? (was states)	primarily state	states	severe under funding, relevance, poor quality
Private training	federal (was states)	mixed	mixed, not much	inadequate regulation including export quality
Universities and research	federal? (was states)	federal	federal	under funding, export quality under regulated
Private higher education	federal? (was states)	federal	federal	inadequate regulation including export quality

## Calibre of the engine: R&D 2004

UNESCO (New Zealand data are 2003, USA 2002 for research workers per million)

	R&D spending	R&D spending per inhabitant	research workers per million inhabitants	research workers in higher education
	% of GDP	\$s USD	persons	persons
Finland	3.51 %	\$1075	7832	13,037
Switzerland	2.94 %	\$1024	3508	12,335
USA	2.68 %	\$1058	4605	n.a.
Singapore	2.24%	\$615	4999	7567
Australia	1.77 %	\$542	4099	n.a.
Norway	1.62 %	\$639	4602	7000
Ireland	1.24 %	\$481	2674	4151
New Zealand	1.14 %	\$266	3945	9701

## New Asia-Pacific science powers

Growth in scientific papers 1988-2001

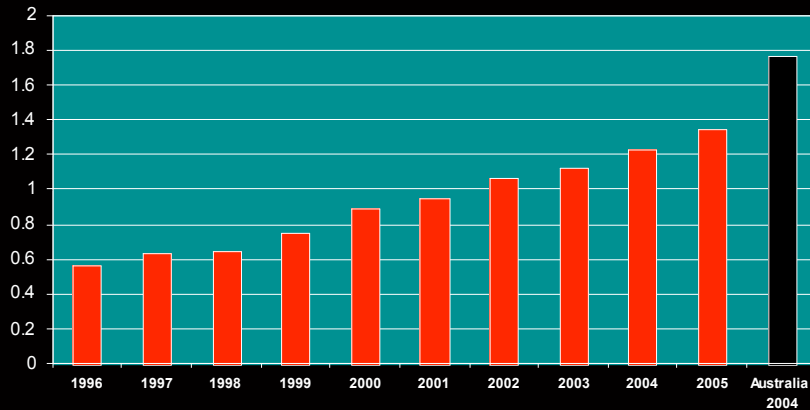
Thomson-ISI data

	number of scientific papers in:		multiplication factor
	1988	2001	1988-2001 (1988 = 1.0)
Korea	771	11,037	14.3
Turkey	507	4098	8.1
Singapore	410	2603	6.3
Taiwan	1414	8082	5.7
Portugal	429	2142	5.0
China	4619	20,978	4.5
Brazil	1766	7205	4.1
Australia	9896	14,788	1.5

## Can we spot a trend here?

### Investment in R&D in China as a % of GDP

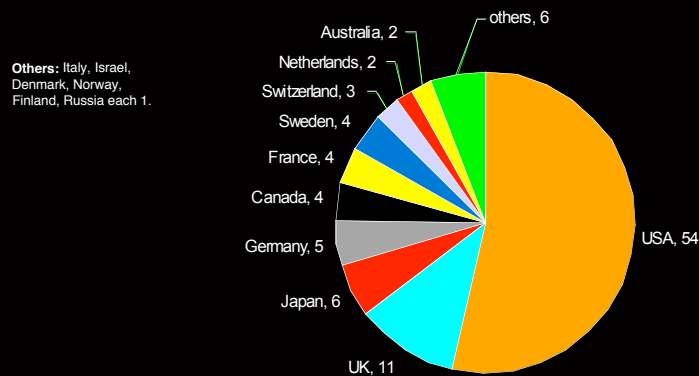
UNESCO data for 1996-2005



## Not enough top enough universities

The world's top 100 universities on the basis of research performance.

Shanghai Jiao Tong University Institute of Higher Education



## Australian universities in the Jiao Tong top 500

57	Australian National University
79	Melbourne
102-150	Sydney, Queensland, Western Australia
151-202	New South Wales, Adelaide
203-304	Monash, Macquarie
305-401	Flinders, Newcastle
402-508	James Cook, La Trobe, Murdoch, New England, Tasmania, Wollongong

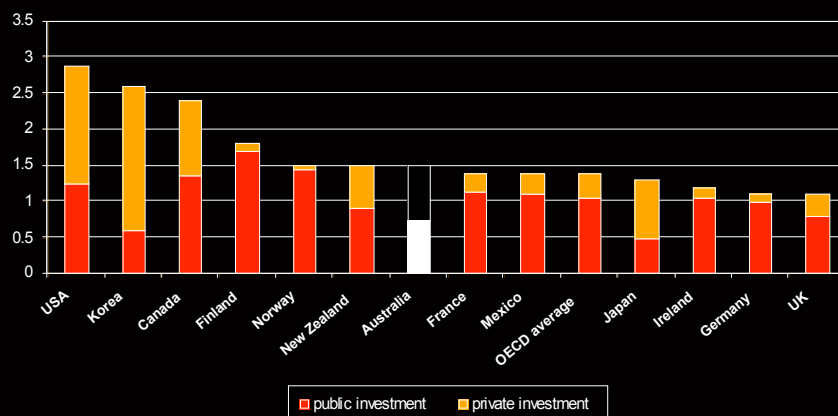
## Discipline groups in world top 100

Jiao Tong data 2007

ANU	science (38), life science (44), social science
Melbourne	engineering, life science, medicine, social science
Queensland	life science, medicine, social science
WA	life science (37), medicine
Sydney	engineering
NSW	engineering
Newcastle	engineering

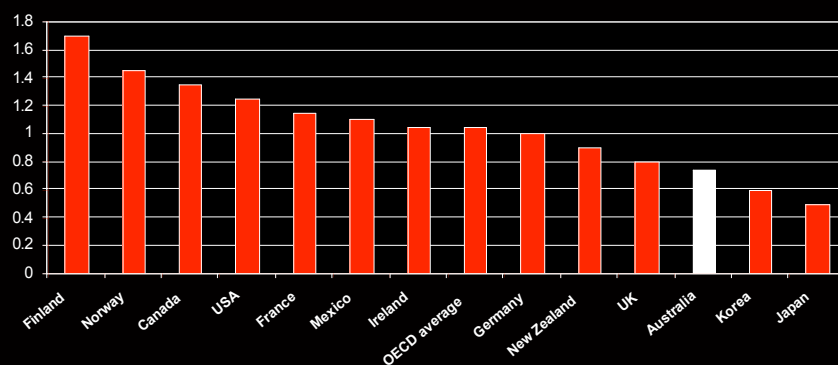
## Public and private investment in tertiary education as % of GDP

OECD 2004



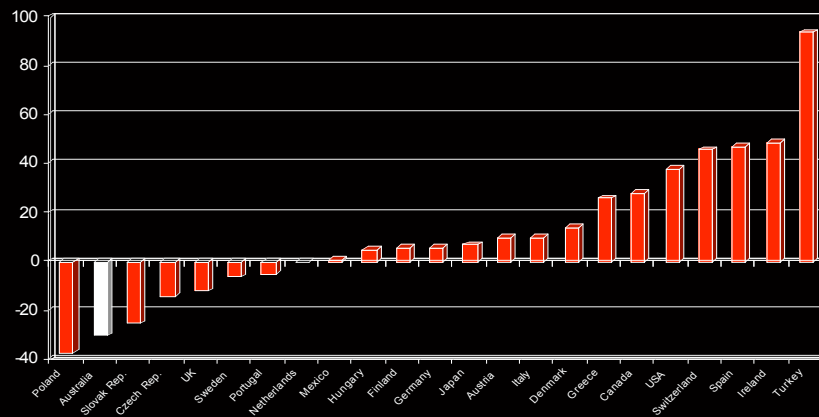
## Source of basic research capacity public funding only as % GDP

OECD 2004 data



## Playing to lose

% change in public investment per tertiary student  
1995-2003, OECD nations  
OECD

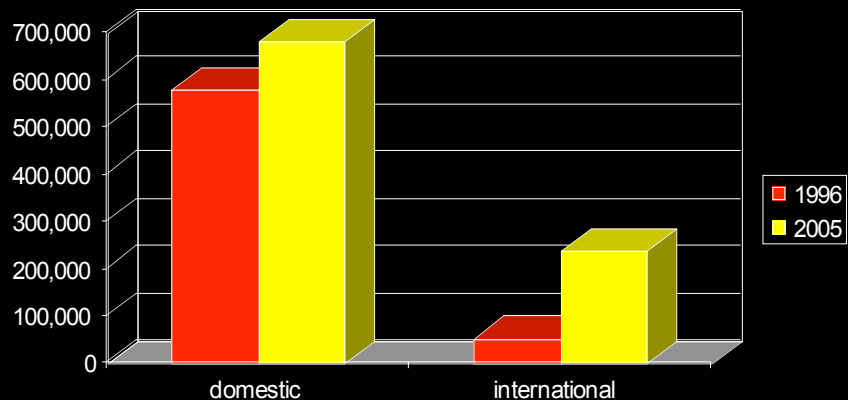


## The system

- Federal control, street smart, effective and economical steering, transparency, good data BUT
- Government owned, politicised, no long term
- Can't use expert judgement, can't plan, can't diversify, can't invest = can't be strategic
- Public/private and freedom/control balances??
- Financial incentives dominated by exports
- But status reference points are national not global (RQF) so the bar is too low

## It's where the dollars are

Student enrolments 1996 and 2005



## You know, I know: we're hooked

(notwithstanding the campaign against drugs)

Institution	International students 2005	International student fee revenues 2005 \$s million	Proportion of total university revenues 2005
1 Monash U	17,168	174.3	19.0%
2 U Melbourne	8936	168.1	15.5%
3 U Sydney	9003	136.8	13.2%
4 Central Queensland U	13,837	132.1	45.7%
5 RMIT U	15,017	129.8	25.4%
6 U NSW	9481	124.7	16.1%
7 Curtin UT	16,092	108.2	24.5%
8 U Queensland	6330	104.1	12.0%
9 Macquarie U	9556	97.9	26.5%

## Domestic de-participation

Throughput from year 12 to university, Australia 1997-2004

Hansard

Year 12 leavers entering	1997	1998	1999	2000	2001	2002	2003	2004
	%	%	%	%	%	%	%	%
higher education	39.9	40.4	37.6	37.5	36.3	36.9	33.4	31.8
VET	36.5	37.5	37.2	41.9	38.5	39.5	39.6	37.9
all tertiary education	76.4	77.9	74.8	79.4	74.8	76.4	72.8	69.7

## Successful systems

- Synchronised long term capacity building (Singapore, China)
- Political leadership via 'big picture' cross-portfolio initiatives (Dutch Innovation Council, former EPU in Malaysia)
- Use of experts in priority setting (Netherlands, Switzerland)
- Semi-independent bodies (Dutch NWO, UK, U California)
- Shared initiatives and responsibility = joint ownership (USA)
- Consensus on importance of k-economy (Finland, Singapore)

## 'A serious tilt at the Jiao Tong'

'The perception has grown, both within the system and among some nations of our region, that Australia is content with a second rate or even third rate higher education system'.

'Higher education policy – unlike national schools policy - has never been driven by agreed national goals. The first step is to articulate these goals. The next is to calibrate the policy to the goals. Thus armed we need to take a serious tilt at the Jiao Tong, and aim for four top-100 places, and two in the top 50: Mac Burnett and Howard Florey would expect nothing less'.

~ Luke Slattery, 'Policy for excellence needed', *The Australian Financial Review*, 6 August 2007, responding to the 2007 Jiao Tong rankings.



Thank you for the opportunity to speak with you

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