Competition and public goods in higher education

Public universities in the context of globalization, markets and the New Public Management. A conceptual discussion

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Public and private goods in education and research

- The original distinction was developed by Samuelson (1954)
- Public goods are non-rivalrous and non-excludable.
- 'Non-rivalrous' means consumption by one person does not impair the interests of others
- 'Non-excludable' means persons other than the direct user cannot be excluded from the benefits of the good
- Private goods have neither of these characteristics
- Public goods are spillovers - consumption by one person spills over into benefits for at least one other person - or common, collective goods tghat are jointly consumed, e.g. clean air or national defence. Collective goods are more than 'the sum of the private goods'.

Public and private goods in education and research 2

- Public goods are under-produced in economic markets - Friedman pointed out *some* public goods are so generated - and classically depend on provision by the state or private philanthropy, or donated labour, or people just working too hard for the general good (that's where we come in). Adam Smith's *Theory of Moral Sentiments* talks about the bonds uniting us in civil society, these are a public good
- Education is a part-public good. It is non-rivalrous at lower levels, and some of its benefits are non-excludable, e.g. spillovers from the education of one person to others, through advances in literacy and workplace productivity. Elite 'positional goods' generating high private incomes are primarily private goods.
- Research is almost a pure public good
- Education can advance the production of both public and private goods simultaneously. It is not zero sum. High value private goods can bring high value public goods with them - e.g. some specialist medicine, or research projects that generate both particular commercial IP and widely distributed contributions to knowledge

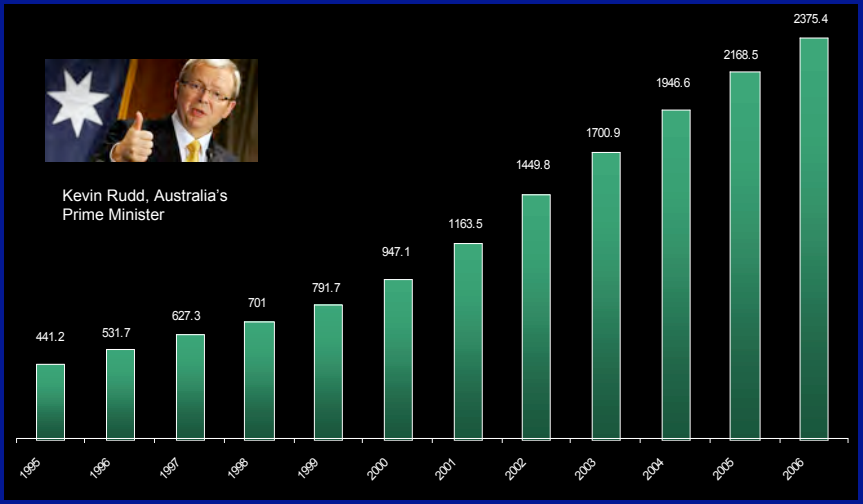
Table 1. **Exports of education services, English-speaking nations excluding Singapore, 2000-2005 (US dollars)**

	2000	2001	2002	2003	2004	2005	growth 2000-05
	$s million	$s million	$s million	$s million	$s million	$s million	%
USA	10,350	11,480	12,630	13,310	13,640	14,120	36.4
UK	3766	3921	3891	4709	5627	6064	61.0
Australia	2259	2528	2897	3925	4872	5563	146.3
Canada	615	699	784	1014	1268	1573	155.8
New Zealand	257	343	632	925	998	1000	289.1
total of above countries	*17,247*	*18,971*	*20,834*	*23,883*	*26,405*	*28,320*	*64.2*

Source: Bashir, 2007, 19

Growth in international student fee revenue, higher education, 1995-2006

(AUD $s million)



Who produces public goods?

- States are the major producer of the visible public goods such as systems of social protection, free or subsidized benefits in health and education, law and order and defence, etc. Equity policy in education is normally a state function, though private agents may contribute
- All else equal publicly-owned institutions ought to be more amenable to deliberate strategies of increasing public goods production, e.g. public educational institutions are more likely to be used to build social equity in education because they are more readily directed to do so. But states do not necessarily use public institutions this way. It's not automatic or intrinsic.
- Many common collective goods are generated in civil society beyond the state, in civil organizations, institutions and public spaces. Arguably the role of universities falls at least partly in the domain of civil society, in that in most countries the content of their work is not controlled from above by states though it is influenced by them

Knowledge as a global public good and open source of innovation

Joseph Stiglitz,
Nobel Prize 2001

Knowledge as a public good

Stiglitz argues that in economic terms knowledge is primarily a 'spill-over' and a public good. It can sustain a property regime only between the point of creation and initial dissemination, the period in which there is first mover advantage. Once disseminated, knowledge remains useful but it is non-excludable and non rivalrous and its market price is zero. While higher education is the ultimate starting point for much commercializable intellectual property (IP), only a minority is initiated directly by companies which directly use universities as incubators. Sometimes university companies or partnerships capture the value of IP, but this is the exception rather than the rule, and largely confined to sectors such as biotechnology and electronics. The data show that despite strenuous efforts to reorient university research to commercial IP production, even in the USA income for research purposes rarely covers more than 5-6 per cent of the costs of university research.

Open Source global knowledge

- Since the advent of the Internet at the beginning of the 1990s there has been an explosive growth in freely disseminated open source knowledge sourced through research publication or papers posted directly by the creators. Global knowledge feeds into the innovation programs of business and industry everywhere, often if not mostly being used for purposes never envisaged by the original creators.
- While knowledge in the dominant global language, English, is a common global public good in the economic sense, under some circumstances it crowds out knowledge in national cultural and language frameworks, i.e. particular *national* public goods.
- This in turn can be seen as a global public 'bad', as all else being equal the collective interest lies in maximum diversity of strands of knowledge providing all are accessible to each other

OECD shifts policy focus in research from creatng intellectual property to 'open science'

'The idea that stronger intellectual property right (IPR) regimes for universities will strengthen commercialisation of university knowledge and research results has been in focus in OECD countries in recent years… countries have developed national guidelines on licensing, data collection systems and strong incentive structures to promote the commercialisation of public research… Even though the policy issue of stronger IPR for universities is prominent, it contains a number of problems however. The most important of these is that commercialisation requires secrecy in the interests of appropriating the benefits of knowledge, whereas universities may play a stronger role in the economy by diffusing and divulging results. It should be remembered that IPRs raise the cost of knowledge to users, while an important policy objective might be to lower the costs of knowledge use to industry. Open science, such as collaboration, informal contacts between academics and businesses, attending academic conferences and using scientific literature, can also be used to transfer knowledge from the public sector to the private sector.'

Organisation for Economic Cooperation and Development, OECD (2008). *Thematic Review of Tertiary Education*, ' Enhancing the role of tertiary education in research and innovation'

Global public goods - the future?

- One way forward for the public research university in reasserting the 'public' dimension of activity is to build a stronger role in the collaborative production of global public goods
- If necessary this can be done beyond the policy framework of nation-states. Globalization partly 'disembedds' universities from their national cradle and frees up direct communicative relations between them.
- The obvious example is collaborative research on common problems of worldwide human importance but teaching programs are also potential public goods
- Universities in mature systems can make an important global good contribution by helping to build capacity in higher education and research in emerging nations

Distinguish between:

1 public and private *goods*,
2 public and private *modes of delivery* (state or non-state)

- Elite state institutions with free tuition extensively produce private goods (selective and valuable degrees) and also commercial IP, though they do not use economic market forms to do so.
- All private institutions produce at least some public goods - even narrowly vocational programs produced in commercial markets make some general education contribution. They advance economic literacy and productivity without all of the enhanced economic value coming back to the graduate (= spillovers, public goods)

What is the ‘public good’?

- The short answer is ‘whatever you want it to be’. The concept of public good is analytically imprecise and is used in mostly normative fashion. It is the basis for resonant claims to common purposes, commitment and values that are beyond economic interest and beyond the normal pragmatics of nation-state operations (which are often directed by the interests of the state machine and not the public as a whole)
- The concept of public and private goods is open to greater precision
- Habermas developed the notion of the ‘public sphere’ to discuss the role of the networked communicative association of the business, propertied and intellectual and artistic elites in London. It operated through ‘public opinion’, via newspapers, coffee shops and other arenas of discussions. It was as an adjunct to the nation-state and sought to influence it but was not reducible to it. This is a particular historic descriptor for what we call civil society

The economic effects of higher education and research

- Higher education directly creates economic value in its own right, e.g. augmentation of graduate earnings (the rates of return and lifetime earnings to degree credentials), full fee international markets, saleable intellectual property. These outcomes mostly take the form of private goods and are readily measured.
- However much and probably most of its contribution to economic and social development lies *not* in direct value creation, but in its contribution to conditions of production in other sectors, e.g. productivity at work, innovation in industry.
- This follows from the nature of knowledge which is principally a public good.
- The long term effects of research are the classic case but the point also applies to the general education aspect of degree programs. These contributions are indirect and mediated by other factors such as relations between higher education and industry, state policy, social and cultural changes, global developments, etc. These indirect outcomes mostly take the form of public goods in the economic sense. Generally they elude precise measurement though proxies can be devised, such as measures of the quantity and quality of basic research.

Three kinds of competition

	Commercial market	Positional market (classical university competition)	New Public Management quasi market
Form of goods	Product/commodiy format, market defined	Status benefits, knowledge goods	Artificial outputs based on product format
Inter-university relations	Competition between producers	Competition between producers	Competition between producers
Entry and exit	Open contestable system	Tightly closed at the elite level	State regulated. Mostly closed
Tuition prices	Unregulated producer-determined prices	Varies. Public can be free, private high cost	State regulated
Student and system	Free consumer choice of product and producer	Elite institutions select students not vice versa	Mix of merit, student choice, state policy
Student and institution	Buyer-seller producer and consumer relations	Student supplicant and pastoral subject	Little consumer power, less pastoral care
Size of production	Expansionary production	Elite institutions restrain growth, maximize value	State regulated
Autonomy of production	Producers free from constraint by states but shaped by markets	Producers free from constraint by states, but powerful families	Produces closely affected by state regulation

Globalization and the NPM: Two distinct movements coming together in our time

- The New Public Management. The NPM models public administration and higher education in business terms focusing on direct goals, product formats, efficiency, competition and performance management
- Globalization, i.e. global systems and convergence. Driven primarily by communicative technologies and the cheapening of air travel and more people movement. These have sustained the rapid growth of the worldwide system of scientific research and knowledge, the global doctoral 'market', and the cross-border student market in first degrees, and encouraged global referencing and comparisons by national systems. Hence the massive interest in global rankings.
- Globalization includes cross-border policy borrowing in higher education. Globalization has facilitated the more universal adoption of NPM reforms. But arguably NPM would have spread without global convergence and was already spreading prior to the internet which kicked off in 1990

How close is the NPM to the forms of economic markets?

Aspect of markets	NPM in higher education	verdict
Product format	Favours product formats and under-recognizes outcomes that don't fit formats	YES
Competition between producers	Prefers competitive configuration of systems	YES
Open contestable system	Mostly does not support open entry. Entry is by invitation. International entry very limited	NO
Unregulated producer-determined prices	Only in commercial enclaves e.g. in some countries international, vocational programs	NOT MUCH
Free consumer choice of product and producer	Student choice is constrained by scarcity of places, merit, state determination of entry etc	NO
Buyer-seller producer and consumer relations	Many first degree students pay tuition, but in most case states fund institutions only or also	NO
Expansionary production to meet demand	Only happens in the commercial enclaves	NOT MUCH
Producers free from constraint by states	NPM breaches this in many respects, e.g. audit and accountability systems. It is essentially a political control system not an economic market system.	NO

The NPM as a control system

- First impulse is to direct and shape so freedoms are conferred as the exception (e.g. peer decisions in research)
- NPM uses divide and rule, competitive systems are perfect for this
- The terms of competition are set so as to install desired forms of outcomes, e..g. product formats in research
- The strongest forms of external direction are through holistic relations such as contracts and post hoc audit systems - all university behaviours become shaped to optimize performance
- A surprising amount of state influence can be secured by small parcels of funds subject to competitive bidding, the terms of incremental growth monies etc.
- NPM uses both positional competition and selective commercial markets to secure desired outcomes. Positional competition stratifies systems, markets substitute for government spending.
- The NPM is better at focusing on quality and distributing funds on that basis, than focusing on capacity needs and investment paths. It is tied to 'what is' rather than 'what could be'

Neo-liberal New Public Management

Margaret Thatcher

Support for the NPM is common to policy circles everywhere. Support for the neo-liberal version of the NPM developed by the Thatcher government in the UK is strong in the Anglo-Westminster polities but by no means universal throughout the world.

Neo-liberal NPM imagines all teaching and research as private goods and higher education as a capitalist economic market of competing firms.

Amartya Sen
Nobel Prize 1998

Assessing the pros and cons of the NPM:

Sen's three aspects of freedom

Assessing the pros and cons of the NPM: Sen's three aspects of freedom

- Agency freedom: identity and will
- Control freedom ('negative freedom'): freedom from constraint by others
- Effective freedom ('positive freedom'): freedom to act and accomplish goals

A primary concern in universities is the effect of the NPM on the freedom to imagine and execute breakthroughs in fields of knowledge.

A second concern is the consequences for the social agenda, for example equity in participation and the public good benefits of research. In general public goods are unrecognised or under-recognized by the NPM

Ambiguities of the NPM and freedoms in universities

University reform may enhance one freedom and diminish another. For example

(1) corporate university presidents may enjoy greater control freedom in financial matters while losing some of their effective freedom in academic matters due to reduced resources for research and teaching;

(2) closer state or managerial control over research activity may enhance the effective freedom of state policy or university policy by increasing the productivity of knowledge, while causing loss of agency freedom within academic disciplines that impairs creativity

Table 1. **Implications of NPM techniques of government and management in higher education for agency freedom**

NPM technique	**Implications for agency freedom:** person acts willingly in terms of *her/ his notion of the good*
economisation/ accounting:	
competition for funding	freedom reduced as hostage to funding/competition
university rankings	reduced, unless 'good' lies in competition itself
user-driven production	reduced, becomes hostage to external user
performance pay	slight reduction; vocational incentives diminished
favour university entrepreneurs	freedom enhanced for entrepreneurs only
subsidise commercial research	much reduced, 'good' is more externally-determined
output measures of research	reduced, 'good' is manager- or externally-determined
performance management	reduced, 'good' is more manager-determined
budget-driven priorities	reduced, 'good' is more manager-determined
economisation/ audit:	
contracts with government	reduced, 'good' is more externally-determined
output driven funding	reduced, 'good' is more externally-determined
self-managed quality assurance	reduced only if 'good' is manager-determined
external audit	freedom is over-determined, tending to elimination

Table 2. **Implications of NPM techniques of government and management in higher education for freedom as power ('positive freedom')**

NPM technique	**Implications for freedom as power:** person has the *potential to achieve own outcomes*
economisation/ accounting:	
competition for funding	freedom reduced: hostage to funding/competition
university rankings	eliminated unless competitive success is end in itself
user-driven production	sharply reduced, outcomes become hostage to user
performance pay	freedom is enhanced for some, reduced for others
favour university entrepreneurs	enhanced only for successful entrepreneurs
subsidise commercial research	entrepreneurial researchers gain but others lose
output measures of research	reduced except for some high achievers
performance management	reduced except for some high achievers
budget-driven priorities	enhanced for some reduced for others
economisation/ audit:	
contracts with government	reduced by external determination
output driven funding	reduced by external determination
self-managed quality assurance	can be positive, reduced if manager-determined
external audit	eliminated

Table 3. **Implications of NPM techniques of government and management in higher education for freedom as control ('negative freedom')**

NPM technique	**Implications for freedom as control:** person located in safe zone with *autonomy in choice-making*
economisation/ accounting:	
competition for funding	freedom can be enhanced within quasi markets
university rankings	ambiguous, externalises grounds of choice making
user-driven production	reduced: tends to impose new constraints
performance pay	minor effects, cuts both ways
favour university entrepreneurs	enhanced for successful academic entrepreneurs
subsidise commercial research	can enhance freedom of quasi-market subjects
output measures of research	can enhance freedom of quasi-market subjects
performance management	can enhance freedom of quasi-market subjects
budget-driven priorities	cuts both ways, determined by other elements
economisation/ audit:	
contracts with government	ambiguous, externalisation can reduce freedom
output driven funding	ambiguous, externalisation can reduce freedom
self-managed quality assurance	possible enhancement of freedom
external audit	freedom reduced

Table 4. **Implications of NPM techniques of government and management in higher education for freedom as the capacity for the radical-critical break in knowledge**

NPM technique	**Implications for freedom as the capacity for the radical-critical break:** person has potential for creating *non path-dependent innovations in knowledge*
economisation/ accounting:	
competition for funding	freedom reduced, markets value what they know
university rankings	reduced: hierarchies value low risk behaviours
user-driven production	eliminated, unless the user is making the break
performance pay	minor effects, cuts both ways
favour university entrepreneurs	reduced: entrepreneurship is hostage to markets
subsidise commercial research	reduced: commercial research is hostage to markets
output measures of research	reduced: 'break' is unimagined, convention rewarded
performance management	reduced: 'break' is unimagined, convention rewarded
budget-driven priorities	reduced: 'break' is unimagined, convention rewarded
economisation/ audit:	
contracts with government	reduced: 'break' is unimagined, convention rewarded
output driven funding	eliminated: only the imaginable is fundable
self-managed quality assurance	reduced: professional isomorphism values convention
external audit	ambiguous: post hoc valuation may enable free space

The OECD is becoming concerned about the NPM in research

'The shift to project-based research funding in TEIs raises a number of issues that need to be considered in relation to the long-term development of the research and innovation system. Competitive funding may promote more ad hoc and short-term research in cases where evaluation mechanisms and incentive structures focus on quantifiable and immediate outputs'. As a result, researchers may be reluctant to engage in research that will not produce results that can be demonstrated over short time-spans. In addition, precisely because project-based funding is competitive, sustained funding is not guaranteed, which may impede the autonomy of researchers working in controversial fields. If project-based funding has a short duration, it may also mean that researchers need to spend time preparing applications to secure funding on a more frequent basis. Atkinson (2007: p. 19) remarks that young faculty in particular spend an excessive amount of time preparing project proposals. Liefner (2003) found that competitive or performance-based funding could have an impact on the type and field of research because some academics avoided research with riskier outcomes. Likewise, Geuna (2001: p. 623) notes that short-term research and less risky research may reduce the likelihood of scientific novelty'. Furthermore, Geuna and Martin (2003: p. 296) argue that research may become homogenized' because safer' research is rewarded. Morris and Rip (2006) point out that the stage of a researcher's career needs to be considered in relation to the type of research undertaken. Some of the questions raised are: —does the researcher need quick results to bolster his or her next job application? Is he or she senior enough to get a five-year rather than a three-year grant? (Morris and Rip, 2006: p. 256), and these questions are pertinent in the context of project-based funding'.

- OECD 2008, p. 176

The NPM has pros and cons but needs to be reconstructed

The NPM in higher education needs to be remade so as to incorporate the specific character of the products and particularly the indirect/public good aspects sustained by knowledge

- Transparency, openness, continuous efficiency and the fostering of external links and responsibilities are all positive values
- So is global engagement, associated with most NPM systems
- Performance cultures and management and measurement of outcomes and outputs (e.g. research publications and citations) are also positive - though some measures are problematic, and non-measured outcomes need to be brought forward
- Rankings and other comparisons are inevitable tools of policy and have a foundation in the positional competition inherent in research universities. We need to enrich and improve them - e.g. by including teaching and the social agenda - rather than refusing them. We should eliminate bad ranking systems like the *Times*

The NPM has pros and cons but needs to be reconstructed 2

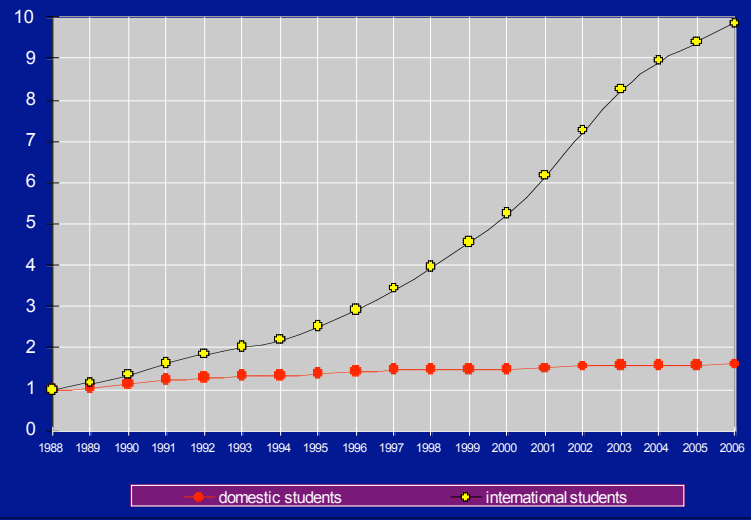
- Professionalization of executive strategy and management are essential. There are strategic advantages in devising synergies between institutions/ executives, and disciplines/ professors
- The tendency to imitation (mimetic behaviour) in NPM competitive systems is a serious weakness. Diversity of institutional type and mission need to be factored back in
- Academic autonomy and creativity must be sustained by means other than putting professors in charge of governance [HOW?]
- VERY good executive leaders understand this, realizing that the best way to drive academic performance is to open it to global competition. Too often the impulse of managers and especially states is to closely steer by defining products narrowly, setting incentives for particular outcomes, make predictable research etc
- There will be strategic advantages gained by national systems that (1) more completely free academic creativity in disciplines, (2) sustain high performance regimes in which most people work hard, (3) focus on capacity building not just funding to existing quality

NPM-ed Australian higher education

- Mix of subsidized local student places (not a market) and commercial markets in international and postgraduate education
- Annual cuts in public funding and 70% research cost funding drive continuous expansion of international education, now at the highest level in the OECD at 26% of students
- National research grants agency, incentives for collaboration with industry, product formats, funding rewards research outputs.
- Marked shift from basic research activity to commercializable research programs; but no evidence that venture capital or industry innovation enhanced
- Tight, inflexible supervision of government funding for teaching
- Use of competitive bidding mechanisms, compliance funding and data requirements to drive conformity and homogeneity across national system, though light touch quality assurance
- Modernized systems, strong institutional executive and steering
- Budget-driven control of academic units and initiatives, universal use of competition, output measures, performance management
- Trend to more corporate governing bodies but not uniform

Growth of international students in Australian higher education since 1988

International and domestic student growth 1988-2006 (1988 = 1.00) [DEST 2007]



Australian NPM: Intended and unintended

- Australia is a model NPM system in many ways though failure to create first degree tuition market frustrates neo-liberals
- Transparent, accountable, strong efficiency drivers, marketing-heavy, (nominally) customer-focused.
- Entrepreneurial and strategically competent especially at global level. Innovative in business sense, less in academic product
- Narrower policy agenda, less political pressure on government
- Weakening of academic cultures in some institutions with consequences for academic capacity especially in research
- New commercial revenues have been absorbed by marketing, services, facilities and buildings. Blow out in student-staff ratios, weakening of teaching resources and longer-term research capacity
- Australia stronger in global degree market than research and not a player in the world doctoral market which is one key to k-economy competition. Narrow commercial goals offshore, declining foreign aid for education
- Unbalanced development: weakening of primary science and humanities disciplines, weakening of newer institutions dependent on public funding
- Reduced attention to public good objectives such as social equity

Australian NPM in the larger context

- Narrow policy agenda driven by legal and financial mechanisms leaves government less equipped to handle bigger and long term policy issues.
- Australia has abstained from 'the arms race in innovation'. It has a chronic inability to invest in k-economy capacity to match trends in China, Singapore and EU. Ideology of teaching and research as private goods creates policy barrier.
- Market competition does not necessarily produce optimum outcomes when public goods are at stake (e.g. distorting effects of international student revenues in Australia on the balance between disciplines, failure of commercial international education to encompass doctoral students, decline of basic research).
- NPM (especially but not only neo-liberal NPM) is consistent with control freedom and enhances control freedom and effective freedom for some managers, academic entrepreneurs and leading researchers. Cuts in state support weaken capacity, i.e. effective freedom, of others. Reduced agency freedom (academic identity) among many staff is a crucial weakness as it weakens intellectual creativity.
- A large part of the economic contribution of higher education, especially research, is indirect not direct and consists in the creation of conditions favourable for productivity and innovation, e.g. student learning and open source science. NPM systems emphasize direct, visible outcomes and model education in of product formats. They neglect fundamentally important aspects like open source knowledge dissemination.

http://www.cshe.unimelb.edu.au/people/staff_pages/Marginson/Marginson.html

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