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Ellen Hazelkorn

Dublin Institute of Technology, ellen.hazelkorn@dit.ie

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The Impact of Global Rankings on Higher Education Research and the Production of Knowledge

Professor Ellen Hazelkorn

Director of Research and Enterprise & Dean of the Graduate
Research School

Dublin Institute of Technology, Ireland

Global Research Seminar: Sharing Research Agendas
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Themes

1. How Rankings Measure Research
2. Institutional Responses to Rankings
3. Policy Responses to Rankings
4. Some Implications for the Production of
Knowledge

1. How Rankings Measure Research

The Policy Context

- Globalisation and Knowledge Society,
- 'Battle for Brainpower' (Economist, 2006), 'Scramble for students' (Matsumoto and Ono, 2008, p1) or 'Skilled Migration' (OECD, 2008),
- 'New Public Management',
- Student is savvy participant/consumer/customer as link between HE and career/salary grows.

Rankings and the K-economy

- If HE is the engine of the economy, then productivity, quality and status of HE/HE research is vital indicator;
- Global competition reflected in the rising significance and popularity of rankings
 - Provide a framework or lens through which the global economy and national (and supra-national) positioning can be understood by giving a 'plausible' explanation of world excellence;
 - Measure national competitiveness as expressed by number of HEIs in top 20, 50 or 100...
 - Attempt to measure knowledge-producing and talent-catching capacity of HEIs;
 - Appear to (re)order global knowledge by giving weight and prominence to particular disciplines/fields of investigation.

Comparing What Rankings Measure

SJT ARWU	<ul style="list-style-type: none"> ■ Quality of Education ■ Quality of Faculty <ul style="list-style-type: none"> No. Nobel Prize/Field Medal No. HiCi Researchers ■ Research Output <ul style="list-style-type: none"> No. Articles in Nature/Science No. Articles in Citation Index ■ Size of Institution 	10% 20% 20% 20% 20% 10%
Times QS	<ul style="list-style-type: none"> ■ Peer Appraisal ■ Graduate Employability ■ Teaching Quality/SSR ■ International Students ■ International Faculty ■ Research Quality/Citations per Faculty 	40% 10% 20% 5% 5% 20%
Taiwan	<ul style="list-style-type: none"> ■ Research Productivity <ul style="list-style-type: none"> No. Articles in last 11 years No. Articles in current year ■ Research Impact <ul style="list-style-type: none"> No. Citations in last 11 years No. Citations in last 2 years Avr. no Citations in last 11 years ■ Research Excellence <ul style="list-style-type: none"> HiCi index of last 2 years No. HiCi Papers, last 10 years No. Articles in High-Impact Journals in Current Year No. of Subject Fields where University Demonstrates Excellence 	10% 10% 10% 10% 10% 20% 10% 10% 10%

Indicators used for Research	Ranking System (Country)
Overall grants (money amount)	Slovakia
Grants per faculty (money amount)	Austria, Germany, Italy
Grants per faculty (absolute numbers)	Italy
Research projects funded by EU	Italy
Participation in int'l research programmes	Poland
No. of publications	Sweden
Publications per researcher	Germany, Slovakia, Switzerland
Citations per faculty	UK
Citations per publication	Germany, Slovakia, Switzerland
No. of int'l publications	Poland
% articles cited within 1 st two years after publication	Sweden
No. of publications with 5+ citations	Slovakia
% articles belonging to top 5% most cited articles (HiCi)	Sweden
No. of patents (absolute number)	Germany
Patents per faculty	Germany
Ratio of pg research students	UK
Research quality	Germany, UK
Reputation for research	Austria, Germany

2. Institutional Responses to Rankings

How Institutions are Responding

63% HE leaders have taken strategic, organisational, managerial or academic actions in response to the results

Of those,

- Overwhelming majority took either strategic or academic decisions and actions,
- Only 8% respondents indicated they had taken no action.

Translating Rankings into Action (1)

- Identify indicators easiest to influence, and set targets for different units and levels of organisation.
- Simplest, most cost-neutral actions affect brand, institutional data, and choice of publication or language:
 - Ensure 'best' data presentation,
 - Publish in English language highly cited/international journals,
 - Ensure common institutional brand used on all academic publications.
- Because size matters, organisation of research important:
 - Aggregate departments and abolish weak performing departments,
 - Focus on research institutes and graduate schools,
 - Separate undergraduate and postgraduate activity.
- Direct resources (physical & human) to particular units, build new dedicated labs and other facilities, reward productive & successful departments.

Translating Rankings into Action (2)

■ Education

- Develop/expand English-language facilities and capacity through specialist language centres, new programmes esp. at pg level, recruitment of international scholars and students,
- Preference postgraduate over undergraduate activity.

■ Research

- Bio-sciences best represented in international data bases
- Focus resource allocation towards fields which are more productive, better performers, and indicator sensitive/responsive,
- Arts, humanities and social sciences feel vulnerable, but also professional disciplines without strong tradition of peer-reviewed publications.

■ Faculty and Students

- Head-hunt and reward Hi-Ci faculty,
- Positively affect staff-student ratio,
- Recruit more high-achieving student, preferably at PhD level.

Mapping Institutional Actions

	Specific Actions	Weightings
Research	<ul style="list-style-type: none"> • Relatively develop/promote bio-sciences rather than arts, humanities & social sciences • Allocate additional faculty to internationally ranked departments • Reward publications in highly-cited journals • Publish in English-language journals • Set individual targets for faculty and departments 	SJT = 40% Times = 20%
Organisation	<ul style="list-style-type: none"> • Merge with another institution, or bring together discipline-complementary departments • Incorporate autonomous institutes into host HEI • Establish Centres-of-Excellence & Graduate Schools • Develop/expand English-language facilities, international student facilities, laboratories 	SJT = 40% Times = 20%
Curriculum	<ul style="list-style-type: none"> • Harmonise with EU/US models • Discontinue programmes/activities which negatively affect performance • Grow postgraduate activity in preference to undergraduate • Favour science disciplines • Positively affect student/staff ratio (SSR) 	SJT = 10% Times = 20%
Students	<ul style="list-style-type: none"> • Target high-achieving students, esp. PhD • Offer attractive merit scholarships and other benefits 	Times = 15%
Faculty	<ul style="list-style-type: none"> • Head-hunt international high-achieving/HiCi scholars • Create new contract/tenure arrangements • Set market-based or performance/merit based salaries • Reward high-achievers • Identify weak performers 	SJT = 40% Times = 25%
Academic Services	<ul style="list-style-type: none"> • Professionalise Admissions, Marketing and Public Relations • Ensure common brand used on all publications • Advertise in high-focus journals, e.g. <i>Science</i> and <i>Nature</i> 	Times = 40%

3. Policy Responses to Rankings

National Competitiveness

If rankings measure national competitiveness, then gap between ambition and global positioning of national HEIs.

- Only 10 European universities featured in top 50 compared with 35 for the US in 2004 SJT,
 - Europe 'behind not just the US but other economies' (Dempsey, 2004).
- Many OECD countries face sharp demographic shifts evidenced by the greying of population and a decline in PhD graduates.

Translating Rankings into Action (1)

- Using Rankings to restructure HE system;
- Devising Appropriate Indicators to Influence/Incentivize Behaviour Vs. Use Global Rankings;
- Allocating Resources According to Mission, Performance or Rankings;
 - Will intensify as economies/financial situation tightens
- Concentrating Resources in Few 'Centres of Excellence' Vs. Support Excellence Wherever it Exists;
- Using Rankings to Foster Differentiation Vs. Mission Profiling.

How are governments responding?

2 main policy regimes

1. Create greater vertical (reputational) differentiation [neo-liberal model] (e.g. German, Japan, France):

- 'excellence initiatives' to concentrate research in 10/30 world-class universities;
- *'to compete globally, the government will close down some regional and private universities and direct money to the major universities'*

2. Create greater horizontal (mission) differentiation [social-democratic] (e.g. Australia, Norway):

- 'Create diverse set of high performing, globally-focused HEIs'
- *'Move towards self-declaration of mission, setting own metrics and a corresponding funding model'*
 - Link 'compacts' to mission and performance

Translating Rankings into Action (2)

- EU Classification Project.
- EU Expert Group: Assessment of University-Based Research.
- Declaration on Ranking of European Higher Education Institutions.
- EU Tender for a European Ranking of HE.

4. Some Implications for the Production of Knowledge

Redefining Knowledge? (1)

SJT rankings provide a 'plausible' measurement of research and knowledge creation (Marginson and van der Wende, 2007).

- Trend of simple to complex knowledge reflected in
 - Rise of new disciplines, methodologies and ways of thinking;
 - Shift from Mode 1 to Mode 2.
- Focus on traditional indicators threatens these developments:
 - Over-reliance on research that is easily measured;
 - Over-emphasis on bio-sciences, with limited social science accuracy, and no humanities and arts;
 - Use of peer-publication & citations narrowly defines 'impact';
 - Difficulty measuring interdisciplinary research;
 - Ranking journals attempts hierarchically order theoretical and conceptual knowledge;
 - Values some disciplines and research as more valuable than other work.

Redefining Knowledge? (2)

Concentrating research in a few elite institutions or scientific disciplines will maximize involvement in world science (Chubb, 2008).

- Emphasis on S&T as only form of innovation disregards social innovation and threatens return to Mode 1 (NESTA, <http://www.nesta.org.uk/>),
- But equally, not obvious that this kind of investment will create breadth of patentable knowledge that can be exploited,
- Concentration could reduce national research capacity with 'knock-on consequences for regional economic performance and the capacity for technology innovation' (Lambert, 2003, p6),
- Misunderstands the research/innovation process (Rothwell, 1994).

To summarise...

- Rankings are a manifestation of globalization,
- They have gained popularity because they (appear to) gauge world class status, provide accountability and measure national competitiveness,
- Because of linear assumptions linking HE research and economic growth, rankings induce governments and HE to adopt simplistic solutions and skew research agendas/policies,
- Rankings value some research more highly than other research, and influence how performance is measured and evaluated – especially in periods of economic crisis,
- At the extreme, rankings provoke
 - Return to classical conceptions of knowledge conducted by elites in selected institutions and
 - Retreat from new ways of thinking, Mode 2 knowledge and interdisciplinary solutions to global problems.

ellen.hazelkorn@dit.ie

<http://www.oecd.org/edu/imhe/rankings>