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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 | ▪ Quality of Education | 10% |
| | ▪ Quality of Faculty | |
| | No. Nobel Prize/Field Medal | 20% |
| | No. HiCi Researchers | 20% |
| | ▪ Research Output | |
| | No. Articles in Nature/Science | 20% |
| | No. Articles in Citation Index | 20% |
| | ▪ Size of Institution | 10% |
| Times QS | ▪ Peer Appraisal | 40% |
| | ▪ Graduate Employability | 10% |
| | ▪ Teaching Quality/SSR | 20% |
| | ▪ International Students | 5% |
| | ▪ International Faculty | 5% |
| | ▪ Research Quality/Citations per Faculty | 20% |
| Taiwan | ▪ Research Productivity | |
| | No. Articles in last 11 years | 10% |
| | No. Articles in current year | 10% |
| | ▪ Research Impact | |
| | No. Citations in last 11 years | 10% |
| | No. Citations in last 2 years | 10% |
| | Avr. no Citations in last 11 years | 10% |
| | ▪ Research Excellence | |
| | HiCi index of last 2 years | 20% |
| | No. HiCi Papers, last 10 years | 10% |
| | No. Articles in High-Impact Journals in Current Year | 10% |
| | No. of Subject Fields where University Demonstrates Excellence | 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 1st 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 |

Hendel and Stolz, 2008

# 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 | • Relatively develop/promote bio-sciences rather than arts, humanities & social sciences<br>• Allocate additional faculty to internationally ranked departments<br>• Reward publications in highly-cited journals<br>• Publish in English-language journals<br>• Set individual targets for faculty and departments | SJT = 40%<br>Times = 20% |
| Organisation | • Merge with another institution, or bring together discipline-complementary departments<br>• Incorporate autonomous institutes into host HEI<br>• Establish Centres-of-Excellence & Graduate Schools<br>• Develop/expand English-language facilities, international student facilities, laboratories | SJT = 40%<br>Times = 20% |
| Curriculum | • Harmonise with EU/US models<br>• Discontinue programmes/activities which negatively affect performance<br>• Grow postgraduate activity in preference to undergraduate<br>• Favour science disciplines<br>• Positively affect student/staff ratio (SSR) | SJT = 10%<br>Times = 20% |
| Students | • Target high-achieving students, esp. PhD<br>• Offer attractive merit scholarships and other benefits | Times = 15% |
| Faculty | • Head-hunt international high-achieving/HiCi scholars<br>• Create new contract/tenure arrangements<br>• Set market-based or performance/merit based salaries<br>• Reward high-achievers<br>• Identify weak performers | SJT = 40%<br>Times = 25% |
| Academic Services | • Professionalise Admissions, Marketing and Public Relations<br>• Ensure common brand used on all publications<br>• Advertise in high-focus journals, e.g. *Science* and *Nature* | 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