

European ResponseS to Global Competition

Does Size Matter?
Universities Competing in a Global Market
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European ResponseS

- No single European response to global competition
- Rather a multitude of more or less related responses
- Raises questions on:
 - Synergies or potential interference of policies
 - Steering levels and their (horizontal and vertical) coordination
 - Overall performance, convergence and diversity
 - Geographic concentrations and their consequences
- *The race to the top: a reputation race and/or an academic arms race?*

Responses at Various Levels

European:

- Europe: the Bologna Process
- The European Union: The Lisbon Process

Other levels and examples:

- Regional: NORIA
- National: Germany, France, Denmark, Ireland, the NL
- Local: Manchester, Helsinki, Dublin, Amsterdam
- Institutional / networks: LERU / ERA-NET

The Lisbon Strategy

Europe: “the most dynamic competitive knowledge-based economy in the world”.

- Investments in higher education are limited (EU 1.3% GDP; US 2,9%; South Korea 2,3; Nordic countries 1,8)
- HE qualifications among the EU working-age population: 21% (38% in the US, 43% in Canada, 36% in Japan and 26% in South Korea)
- EU produces more higher education graduates and doctors in science and technology (25.7 per cent) than the US (17.2 per cent) and Japan (21.9 per cent)
- But the percentage of them at work as researchers is much lower in the EU (5.4 per 1000 population), than in the US (9.0) and Japan (10.1).
- Shortage of 700.000 researchers by the end of 2010

Europe: “the most dynamic competitive knowledge-based economy in the world”.

- EU's R&D intensity vis-à-vis US and Japan is stagnating (EU 1.93% GDP; US 2.59%; Japan 3.15%; China 1.31%)
- The 3% research intensity target only met in Sweden (4.27%) and Finland (3.5%)
- Soon China will spend same percentage GDP as the EU (prediction: 2.2% in 2010)
- Proportion of Nobel Prize winners in EU is declining (1901–1950: 73%; 1951-2000: 33%; 1995-2004: 19%)
- EU's share in registered patents is small (EU 12%; US 52%; Japan 35%)
- EU universities hardly have patents (EU 0.10 per 100,000 population; US 2.02; China 0.50)
- European academic incentive schemes primarily based on publications
- European interfaces industry/academia are weak (too little open innovation)
- Knowledge transfer of EU universities under-developed and fragmented (primarily regional; no patent pools)
- Venture capital lacking in pre-seed phase

Europe: “the most dynamic competitive knowledge-based economy in the world”.

- Europe is viewed as a union in an economic and political respect, but not in terms of higher education.
- When it comes to higher education, the perception focuses on the continent’s individual countries, and mostly on the larger ones.
- Europe’s higher education institutions received good marks. But on a number of issues, such as prestige of institutions, labour-market acceptance of qualifications, and dynamism and innovation force, it came out second to the US.
- European HE is associated with: culture, tradition and history. US HE with quality, reputation and innovation
- The most important factors influencing the decision for a destination were quality of education, reputation and prestige of the institution and of the degrees earned, as well as affordability, and safety.
- Respondents saw a clear lack of information on study opportunities in Europe.

Main Lines of Action

- The 'knowledge triangle': **research, education and innovation**
- European Research Area
- European Higher Education Area

- Hold on to 3% GDP target for R&D expenditure
- Accept 2% GDP target for higher education expenditure

More on Better Knowledge Production in Europe

- Increase **competition** between universities with similar missions
- **Concentrate R&D funding** in limited number of European 'research universities'
- Develop European Research Council (**ERC**)
- Develop European Institute of Technology (**EIT**) with a strong emphasis on technology transfer
- Stimulate **clusters/innovation poles of industry & academia**, especially joint facilities and infra-structure (incubators, accelerators, joint research labs)
- Encourage incentives in European universities for exploitation of research results
- A European 'Bayh-Dole Act': make 'research universities' patent research results and license to business & industry (especially SMEs)
- Harmonise European IPR-systems and ensure legal certainty
- Create European Community Patent
- Professionalize knowledge transfer in European 'research universities' (introduce patent pooling)
- Increase number of researchers in private sector

Investments

- Total EU budget for competitiveness, growth, and employment: 72 B€ (planned: 132)
 - FP 7: 50.5 B€ (for 7 yrs) (2 x FP6)
 - ERC: 7.5 B€ (7 yrs)
 - EIT: + KICs projected budget for 2008-2013 was 2.4 B€.
- So far: 308 M€ from EC.

Progress Lisbon: mixed messages and mid term concerns

- Graduates in MS&T increased since 2000 by > 25%. The EU has thus already achieved the benchmark of 15% increase before 2010.
- The overall proportion of employees with tertiary education: up from 25% in 2000 to 29% in 2006.
- For research, however, progress is still unsatisfactory; GDP spent on R&D remains stuck obstinately at 1.9%
- Also for the share of private investment (now 55%) in R&D the Lisbon objectives (66%) have not yet been met.
- The 'brain drain' from the EU to the United States is still a significant phenomenon. The Lisbon agenda's aim of reversing this trend has not materialised.
- The cost of patenting in Europe is still about five times the cost of patenting in the United States.

Note: variation related to the number of countries taken into account: 9, 15. 27

Sources: LSE, 2006; Lisbon Council. 2007; European Innovation Scoreboard, 2008; European Commission, DG EAC, 2007

To Conclude: Some Reflections

- *On the race to the top*
- *a reputation race and/or an academic arms race?*

Global Competition, Rankings and Diversity

- Globalization leads to increasing competitive pressures on institutions, in particular related to their position on global university rankings (“reputation race”), for which their research performance is almost exclusively the measure.
- Global rankings suggest that there is in fact only one model that can have global standing: the large comprehensive research university.
- This has an adverse affect on diversity since academic and mission drift (isomorphism) can be expected to intensify as a result.
- One-sided competition also jeopardizes the status of activities that universities undertake in other areas, such as undergraduate teaching, innovation, their contribution to regional development, to lifelong learning, etc. and of institutions with different missions and profiles.
- As a result: vertical stratification rather than horizontal diversification. Hierarchy rather than to diversity; specialization and diversification are not generated unless the incentive structure favors this.

Recommendations for Counterbalancing Policies

- As rankings systems reinforce the status of the comprehensive research intensive university model, there is no reason to assume that competition in itself will generate specialization unless the incentive structure favors this.
- Measures seem particularly necessary to avoid a situation where some higher education institutions build research strength only through the weakening of others, which would seem to constitute little gain in national capacity overall.
- Policy should strive to correct the perverse effects arising from league tables, and to advance horizontal institutional diversity and informed student choice.
- Higher education institutions should be stimulated and enabled to excel in different missions and to develop distinct profiles.
- Therefore more sophisticated indicators for measuring performance in areas other than basic research, such as undergraduate teaching, lifelong learning, knowledge transfer, innovation, regional development, need to be developed.
- Besides a wider range of indicators, also the development of a good classification of institutions is needed. Classification is a prerequisite for sensible rankings.