



The increasing importance of the role of universities in society

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Summary

Talk to cover three themes:

1. **How universities contribute to economic prosperity**
2. **Government investment in HE and the impact agenda**
3. **Global research concentration and international collaboration**



Universities as contributors to national prosperity

- Winning the global race for jobs and wealth – the role of universities
- By 2020, 82% of new jobs in the UK will require a degree
- Top 10 ‘in demand’ jobs in 2010 were in industries that did not exist in 2004
- Two thirds of growth between 2000 and 2007 came from knowledge intensive sectors of the economy (and 2% of job losses)
- Universities are a crucial partner in economic growth



Universities as contributors to national prosperity

- The UK has a leading HE system – 7th largest export industry worth £10.2bn per year
- UK universities on track to generate £17bn annual export earnings by 2025
- Lord Sainsbury's Review, *The Race to the Top* (2007) is the best available analysis of how science and research policy relate to economic growth



Universities as contributors to national prosperity

- Logic of Sainsbury's argument is to fund research *selectively*
- In the UK, out of 110 universities:
 - c.80% research funding focussed on 25 institutions
 - concentration of PhD training in Doctoral Training Centres
- Debate about the 'right' distribution of research resources
- Leading universities must compete in a global market



Global Investment in Higher Education

- Economic recovery has begun, but it will take time
- Massive growth in Indian and Chinese economies
- *Total* investment in higher education as proportion of GDP:
 - UK (1.4%)
 - US (2.8%)
 - Japan (1.5%)
 - OECD average(1.6%)
- UK *public* investment in HE is only 0.7% of GDP



Research and demonstrating impact

- Research Excellence Framework and the impact agenda
- Impact worth 1/5 of grading in new research assessment rules
- New knowledge and innovation has generated at least two-thirds of productivity growth in the UK over the past 10 years
- Public engagement agent
 - *Exeter Catalyst Project*



Global research performance

- Universitas 21 rankings: UK is 24th on resource inputs and 2nd on outputs
- Japan is 25th on inputs and 14th on outputs
- Japan – fourth most successful education superpower (*Learning Curve*)
- Research concentration



Global research concentration

- Concentration is a global trend:
 - **Japan:** 'Leading PhD Initiative'
 - **US:** doctoral degrees offered by only 614 (out of 7018) universities
 - **China:** pursuing world-class status for a maximum of 39 and a minimum of 9 universities (C9) out of 2300 institutions (Project 985)
 - **Germany:** £2bn to create 37 clusters of research excellence and 9 world-class universities
 - **France:** 33 (out of c.160) universities, got 2/3 of the resource in 2010
 - **South Korea:** Brain 21 Programme



International Research Collaboration

- ‘*The Fourth Age of Research*’ (Jonathan Adams, *Nature*)
- Most highly cited work is international (50% increase with papers with authors in more than one country)
- In 2011: 48% of UK papers had no overseas author (down from 85% in the 1980s)
- US: 67% of research is still domestic (1981: 94%)
- China: 75% of research is produced in-country
- Growing divide between international and domestic focussed institutions



International Research Collaboration

- UK & US: international collaboration = adds 20% to average citations
- UK: 2001 publications: 1.21 world average levels of citation
2011 publications: 1.47 world average levels of citation
- Papers with at least one international co-author: rose from 1.48 to 1.72 world average citations (2001-2011)
- 65 UK HEIs with <40% international co-authored papers: 1.1 world average citations; 10% of research funding; 5% research grants; 1% of research council studentships



Concluding Remarks

- **How do we win the global race?**
 1. Need public investment in higher education
 2. Concentration of research funding
 3. Promote international collaboration
 4. Invest sufficiently in R&D
 5. Embrace the marketisation and internationalisation of HE



Thank you for listening

Questions and Answers

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