

UK higher education in 2023: A contribution to the DIUS higher education debate

Universities UK

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Section 1: Introduction

Our vision is of a sector which is in the first-rank internationally; is diverse, innovative, responsive and sustainably funded from a range of sources; which retains a UK-wide coherence and a well-deserved reputation for high quality.

1. UK universities are a unique national resource. Fostering original thought and critical enquiry, they exist both to create new knowledge, and find applications for it. They are the engines of the knowledge economy, and also creators of cultural wealth and social capital. The central role our universities will play in meeting some of the grand challenges of the 21st century means that ensuring their continued strength should be a national priority.
2. This document offers a vision of the university system we hope to see in 2023, in 15 years' time – a sector which is in the first-rank internationally; is diverse, innovative, responsive and sustainably funded from a range of sources; which retains a UK-wide coherence and a well-deserved reputation for high quality. We identify the policy goals which would create the circumstances for our universities to achieve that vision.
3. We describe the need, not for radical change and restructuring, but for policy informed by an understanding of the factors which have created the conditions for our historic and current success, and of the threats to it. In particular, and despite current economic conditions, we warn that it is simply naive to suppose that UK universities can operate effectively, take the right strategic direction, and compete with emerging global giants whilst funding remains at approximately one third of US levels.
4. The issues raised in this paper will be of interest UK-wide because the impact of changes in one country is felt across our national borders. The future of English higher education cannot, therefore, be considered in isolation from that of Scotland, Wales and Northern Ireland.

1.1 Ten years of rapid change

5. The last 10 years have seen rapid and significant change in higher education. Between 1997 and 2007 the number of students in higher education grew from 1.8 million to 2.4 million. In the same period the number of part-time students grew from 618,000 to 911,000, and the number of students aged 21 or over from 1.2 million to 1.6 million¹. Despite this expansion, completion and post-graduation employment rates for students in the UK remain well above the average for other countries in the OECD.
6. However, during the last 10 years, the impact of devolution has been felt in the growing distance between policy approaches in the different nations of the UK. Structures, priorities and, worryingly, funding levels have diverged considerably. This has created opportunities for policy makers in each of the constituent parts of the UK to learn from each other's experience, but it has also created tensions as policy changes in one part of the UK are introduced with seemingly little thought as to the implications across borders.
7. The divergence of UK higher education is particularly relevant to the way UK universities are perceived internationally. The past decade has marked a rapid internationalisation of UK universities. 14.9% of students are now from overseas, compared to 11.3% in 1997. Our reputation is currently strong, with world rankings placing two UK universities in the top 10, and five in the top 50². But changes in Europe and elsewhere mean we are facing tougher competition than ever in the global trade in higher education.
8. After a period of chronic under-investment, in the last decade universities have benefited from a significant injection of new funds. Variable fees³, alongside much improved financial support for students, are beginning to make a real difference to universities in England. Student demand has increased despite the introduction of new fees⁴.
9. Meanwhile, new research facilities across the UK testify to the impact of the Government's injection of capital funds for research. Great efforts have been made to rebalance the dual support system and ensure the university research base is healthy and sustainable in the long term. As this investment has flowed in, the UK has continued to improve its research performance, increasing its share of the world's most influential papers from 12.9% to 13.4% in two years⁵. The number of patents granted to universities has more than doubled in the last 10 years, and their income from private sources has increased from 29% to 37%. Since 2001, income from business through consultancy contracts has increased by 128%; the number of patents granted by 130%; and the total turnover of all active university spin-outs by 240%⁶. But since 2001 there has also been an increasing concentration of public research funds, with a consequent concentration of capacity.

10. New income, most significantly from home and international student fees and recurrent and capital investment in research, has reversed the sustained erosion of university funding in the previous decade, but increasing cost pressures, including pensions and other staff costs, mean that overall the sector is in deficit by around 7.8% of reported expenditure, or £1.4 billion⁷. The sector also has to cope with rising domestic and international expectations on the part of students and consumers of research and other university services alike. The UK invests 1.3% of its GDP in higher education, compared to 2.9% in the US⁸ and below the EU's 2% goal. Thus rising international standards in higher education increasingly challenge UK universities.

1.2 The next 15 years

11. Some of the challenges the sector will face in the next 15 years are clear. Demographic change⁹, together with other influences, make it likely that there will be a relative shift away from recruiting full-time 18 year-olds. These trends are not drastic; full-time students aged 18-22 will continue to constitute the largest single group of students. Also, increased immigration, improved staying on rates and changes to post-16 qualifications could mitigate against demographic factors. Nevertheless, changing learning patterns and technological advances make it likely that the current trend towards more adults in work studying part-time, in the workplace, at a distance, or in distributed centres will continue.
12. A more diverse student body, coupled with efforts to diversify funding sources, will drive increasing diversity of mission among institutions. Devolution is likely to continue to increase the differences between the nations in the UK. By 2023, a significant proportion of higher education may be delivered by further education colleges, private and international providers. The difference in mission and focus of the growing number of institutions which hold the university title will test public perceptions about what is meant by the words 'higher education' and 'university', creating divergent student experiences. The challenge for public policy and for institutions will be to ensure that UK retains its reputation for quality and excellence, and that diversity and differentiation do not lead to incoherence within the sector.
13. Higher education, already globalised, may benefit from a liberalisation of the trade in education. While inward mobility may be affected by factors such as improved higher education provision in China and India, and climate change may affect students' ability and willingness to travel, 'internationalisation' in universities is already understood to depend on much more than recruitment of international students. Transnational provision, strategic partnerships and networks are likely to be much more common, with institutions less tied to their traditional geographical bases as boundaries and borders become more porous¹⁰.
14. Greater interest in the Bologna Process from other parts of the world could provide the UK with more opportunities to promote itself as the leading higher education destination in Europe. But there is also a real possibility that our traditional dominance in Europe will be challenged as a result of the European Commission's modernisation agenda. UK higher education will be more exposed, but have greater opportunities than ever before to assert itself in the world.
15. Our clear priority is to preserve what is excellent about UK higher education, but that will itself require change. Financial deficits have historically created a disincentive to take risks in universities¹¹. Leaders in higher education, working in partnership with Government, must ensure the conditions are right for our universities to become more flexible and fleet of foot.

Section 2: The future of the UK's universities

2.1 Enabling the UK to meet a wide range of challenges

16. Public policy has explicitly recognised universities as the engines of the knowledge economy¹². Less weight has been given to their role as a force for good in social, cultural and civic terms, and as guardians of educational and ethical values. In art, music, architecture, entertainment and sport, universities play a pivotal role locally and on a national level. For individuals, higher education not only promotes social mobility; some evidence suggests it produces, better, happier, healthier citizens¹³.
17. Given the right conditions, universities will be central to meeting a range of challenges facing the UK in the medium and long term, not only because they have a proven ability to work with the direction of government policy, but because their interests and national interests are naturally aligned. In driving forward the frontiers of knowledge, they have a leading role in the search for solutions to the challenges of climate change, social cohesion and the health needs of the ageing population. In economic terms they will help workers be more productive for longer. They have the potential to contribute even more than they do currently to evidence-based public policy.
18. Government increasingly sees higher education as a resource to be deployed in tackling a wide range of national challenges. Many universities are already multi-part businesses. They run facilities ranging from museums and sports centres to schools and veterinary hospitals. They could be capable of embracing an even wider variety of roles provided that they have the resources and autonomy to cultivate the core activities on which auxiliary roles depend.
19. For example, universities make a growing contribution to curriculum enhancement in schools¹⁴. The introduction of Academies and Trust schools, and the development of Diplomas have increased encouragement to, and pressures on, universities to involve themselves more fully in pre-entry education. But, while universities can make a valuable contribution to the problem of attainment at 16, they are not likely to offer the solution to it. It is in universities' interests to engage with schools, and it also forms part of their commitment to local communities, but such activities properly remain on the margins of their fundamental mission.

Goal

Universities are supported to excel in their core missions, and make their own decisions about how far those missions extend, creating the right conditions for them to compete successfully with other international systems and private providers.

2.2 Supporting excellence in research

20. Research and knowledge generation are central to what universities do. Although it varies in character from institution to institution, and between departments, an environment in which teaching is informed by research is a fundamental characteristic of a university higher education. The UK's research strength is key to our international reputation, and delivers an excellent return on public investment.
21. With 1% of the world's population, the UK produces 9% of the world's scientific papers, and 13% of the most highly cited. It wins 10% of the world's internationally recognised research prizes and has produced 44 Nobel Prize winners in the last 50 years. UK research productivity is superior to that of the US: in the UK academics produce 16 research papers for every £1 million invested compared to 10 in the US and 4 in Japan¹⁵.
22. The contribution made by university research may be most obvious in the sciences, but, as UUK's publication *Eureka UK* demonstrates, research in the social sciences, arts and humanities also has the capacity to bring about significant and positive change. For example, the work of Professor Kevin Bale of Roehampton University on slavery in the modern global economy which inspired changes in policy and law around the world; the work by Michael Rutter and his colleagues from the Institute of Education which has been used by teachers in the UK and beyond to create better learning environments for children. In the creative arts, the Royal College of Arts' Helen Hamlyn Project 'Design for our Future' develops socially responsible design including, for example, prototype products for an ageing population. At the University of the West of England, Bristol, Dr Iain Biggs is leading work using visual and performing arts, interactive technologies and ethnographic research to explore the relationship between older people in rural communities with their environment, including the likely social impacts of climate change.
23. The success of our universities' research has been underpinned by a funding system which provides public funds to institutions in two streams: one as part of their block-grant provided by the devolved funding councils on the basis of excellence; and the other in the form of project-based grants provided by the UK-wide Research Councils. In this funding system, fundamental flexibility allows university leaders the freedom to take strategic decisions about the research activities of their own institutions.
24. The system also means that there are multiple sources of funding for research, with multiple decision points about what research should be supported and where research resources should be concentrated. Some of the most outstanding, world-changing discoveries that have emerged from UK universities over the past 50 years have developed from individuals or groups supported through an institution's own funds and given time to evolve in supportive research cultures¹⁶.

These discoveries underline the value of supporting blue-skies, as well as applied, research. Put simply, if UK universities are going to be able to continue to punch above their weight in an increasingly competitive international environment they need the flex and dynamism that dual support affords them.

25. Both parts of the dual system will need to be well-funded to allow a sustainable financial framework for institutions that can support defined research agendas as well as ensure they can respond to new and emerging challenges. This framework should also allow institutions to plan on the basis of some reasonable assumptions about levels of income. Basic research will continue to underpin the UK's knowledge base, so it will be important to ensure an appropriate balance between supporting basic and applied research.
26. In 2006/07, 69% of Quality Related research funds went to 25 HEIs. 77% of Research Council funding also went to 25 HEIs¹⁷. It is clearly important that we are able to continue to support the very best research wherever it is found at internationally competitive levels, but we would not want to see any further concentration of research funding. This would only undermine the dynamism of the research base, leading to a significant loss of high quality provision, reduce the capability to develop future capacity and substantially limit the flexibility needed to respond to new demands. It would also further exacerbate regional and national disparities in the distribution of research funds, which has an impact on universities' ability to support regional economic competitiveness¹⁸.
27. It is essential for universities to identify and be enabled to support new and developing research areas. This will add to the dynamism of the research system and ensure that the UK can remain at the cutting edge and sustain capability in key areas.

Goals

Through project-based and block-grant funding, through support for both blue-skies and applied research, and for emerging as well as world class research, UK universities remain in the front rank internationally.

Research funding is sufficiently stable and sustainable to allow universities to plan for the long term.

2.3 Among the best education in the world

28. The UK 'university' title is widely understood to denote quality. Its reputation has been hard won, but could be easily lost. Protecting our reputation for high quality and standards will be a key strategic priority in the next 15 years as the sector evolves.
29. Higher education delivered by a university offers a unique opportunity to learn in an environment informed by current research. Students may pay fees, but they are far more than simply 'customers'. A student in a university has the opportunity to join an academic community, responsible for its own standards and awards, to learn alongside peers in a wide variety of fields, studying at a range of levels. It is not cheap, but evidence proves that it is excellent value for money – both for the graduate and the state¹⁹.
30. Collaboration and partnership with further education colleges is likely to play an increasing role in the future, particularly at lower levels, and in facilitating progression. But it will remain in the national interest to ensure that there is a clear differentiation of mission between further education colleges and universities. The primary purpose of universities is the provision of higher education and the maintenance of its quality and standards. Universities will therefore continue to offer a valuable service to students studying in further education colleges, and Government should seek to protect the links rather than create the conditions for competition between the sectors.
31. Universities are increasingly responsive to business and other employers, including those in the public sector, as they prepare a growing proportion of the workforce. However, universities are right to continue to put first the interests of the student, who invests most in terms of time, effort and increasingly money. In a fast-changing employment market, a higher education should enable graduates to adapt to changes in circumstances and the demands of employers. It should remain the purpose of universities to prepare graduates for a career and for life, not a single job. Government policy should support that aim.
32. To maintain currently high satisfaction, retention and post-graduation employment rates²⁰, universities will have to work hard to keep pace with rapid developments in the technology and facilities associated with teaching and learning. Despite improved finances, there remains a substantial backlog of investment in the teaching infrastructure – a challenge which universities will struggle to meet without help.
33. Changing student expectations will also make substantial demands on staff, and universities will have to devote substantial resources to staff development. It is also likely that recruitment will become an increasingly pressing issue. Although academic staff turnover rates are currently relatively low, and much progress has been made in the last few years in modernising pay and career structures, the

proportion of full-time academic staff aged over 55 has risen from 11% to 17% in the last decade²¹. Universities are already heavily reliant on international recruitment, but with other competitor countries, notably the US, facing even more pronounced, and earlier retirement bulges, it appears likely that international competition for staff will intensify. Pressure to enhance academic supply routes is likely to increase, and with it the need to increase the number of research students, provide incentives for people to take doctorates, and address the current shortage of funding to train them so that we can be confident that we are providing for the next generation of academics.

34. Above all, our universities will have an even more diverse student body than they do today. Universities are working to improve their means of understanding and responding to different student needs, but we will also need to ensure that policy makers understand the range of ages, stages and modes of learning that characterises our student body. In the future, it will be particularly important for the Government to recognise the needs of part-time students and returning learners in all aspects of higher education policy.
35. Universities already provide highly personalised opportunities for part-time study²². But as part-time fees are unsubsidised, and as students studying part-time do not have access to interest-free loans to cover fees, and receive much lower levels of financial support for living costs, there are clear barriers to the expansion of part-time delivery and part-time study as a choice for students.
36. There is a compelling argument for moving towards a unified, mode-blind, approach to support for fee and living costs, and funding for teaching, based on intensity of study. In particular, policy makers should consider the support available to students who study less than 50% of the full-time equivalent, who are currently excluded from state support. Although we recognise that affordability will be a major issue in considering options for change, the demographic downturn from 2012 could create a natural opportunity to rebalance the system.

Goals

The importance of university higher education informed by current research is recognised.

Universities are able to invest in teaching infrastructure to meet the rapidly changing needs of students.

There is a clear differentiation of mission between further education colleges and universities and coherent incentives for collaboration between the sectors.

Options for moving towards a unified, mode-blind, approach to support for fee and living costs are considered. There is greater equity of treatment for part-time students.

2.4 Driving a strong economy

37. As the Sainsbury Review makes clear, universities are at the heart of the “innovation ecosystem”. They are “the driving forces behind the formation of clusters. They promote innovation and entrepreneurship, not only by spinning out companies, but also by creating an appropriate microenvironment to attract innovation-based companies and foreign R&D facilities”²³.
38. In an economic downturn, investment in research, development and higher-level education by government and private enterprise cannot be guaranteed. Policy makers should work with business to ensure that the long-term economic strength of the UK is safeguarded, despite the currently tight economic circumstances.
39. We know that as the UK economy continues to shift towards knowledge-based activities it is likely that a greater proportion of the workforce will need higher-level skills²⁴. Moreover, in an ageing population, with a potential support ratio of 2.5 by 2050, down from 4.1 today²⁵, individuals are likely to need to re-skill at several points in their working lives to keep pace with employer expectations, and remain in the workforce for longer. Public policy will therefore need to support, in practical ways, the tendency for people to move in and out of study and work.
40. Universities have a long history of working with employers, and the range of ways in which they interact is growing²⁶. However, the role of employers in contributing to the costs of higher education is the element of the ‘Dearing Compact’²⁷ on which least progress has been made. Recent government thinking has focused on how employers can be more successfully engaged in – and persuaded to make a greater contribution to – higher education. Experience also demonstrates that there are major challenges associated with identifying genuine employer need where there are multiple bodies claiming to represent employer interest. What employers want – even those in the public sector – may change from year to year. In a context in which universities are operating on tight margins, financial sustainability is a major issue.
41. The Higher Education Innovation Fund has given universities practical encouragement and support to develop business interaction. Universities are adopting regional, as well as national and international, approaches to supporting business. The results can be seen in the emergence of clusters of excellence, attracting business and inward investment²⁸. It is to these clusters that many multinational businesses go to recruit many of their graduate employees, to invest in research and seek solutions to the business challenges they face.
42. With more consistent and predictable funding, universities could do even more. They could support third stream activity more effectively, and plan their knowledge transfer activities more confidently over a longer period, including by offering career-track opportunities for staff involved in knowledge transfer activities. A more permeable boundary between universities and industry,

particularly through an exchange of research staff, could deliver significant benefits for both sectors.

43. In addition to the ways in which they support wealth creation in the wider economy through education and knowledge transfer, universities are substantial wealth and employment generators in themselves. As well as generating about £42 billion a year in direct and secondary effects, an increase of £8 billion in the last five years²⁹, universities employ a significant proportion³⁰ of the workforce and are a major export earner, bringing in £3.6 billion from educating international students.
44. There is potential for further significant growth in education-related export earnings. There is also potential to increase the influx of talent and intellectual wealth. UK universities play an important role in attracting some of the brightest minds from around the world to study and potentially work in the UK, but more could be done to retain this talent. Universities, therefore, look to governments for effective cross-departmental action to promote UK education worldwide. This should include maintaining and expanding scholarships and incentives to attract the brightest and the best from around the world, and smoothing their path to study and work in the UK.

Goals

Business invests more in research, development and co-funded education, and the higher education system supports people to move in and out of study in practical ways.

Consistent and predictable third stream funding enables universities to do more to transfer and exchange knowledge with the private sector, encouraging more permeable boundaries between industry and universities.

Governments take a cross-departmental approach to supporting the UK trade in education, providing incentives to attract the brightest from around the world, and smoothing their entry to the UK through a coherent immigration system.

2.5 Funded to succeed

45. A clear priority is that UK universities should be better, and more sustainably, funded in the next 15 year period than they have been in the last 15 years. Public funding per student fell by 37% between 1989 and 1999. It has now stabilised and, in England, private fee contributions have meant that there has been a real increase in funding for teaching. This has undoubtedly staved off a serious challenge to the quality of UK higher education. But emerging evidence suggests that costs in universities are rising faster than income.
46. Our ambition is to ensure that our university system remains world-class in 15 years' time. However other countries spend a higher proportion of GDP on higher education - 2.9% in the US, 2.6% in Canada, 1.6% in Australia. In the UK, the figure is 1.3%. By this measure we rank 14th out of 28 OECD countries for this indicator³¹. The UK's level of investment is also rising more slowly than our competitors – increasing by just 0.5% from 1995 to 2005 compared to an OECD average of 1.3%.
47. Investment in research and development in the UK, currently 1.8% as a proportion of GDP, is also below the EU average and this raises serious questions about our long-term ability to compete with countries such as the US (which invests 2.6% of GDP), Japan (3.2%), and China where R&D intensity grew by 10% a year between 1997 and 2002³².
48. A sustained commitment to increasing investment is a necessary pre-condition for maintaining our currently outstanding reputation. Within this, funding that is predictable and sustained will ensure universities have the maximum flexibility and freedom to succeed and plan for the long term. Above all, we look to the Government for a commitment to maintain the level of public investment in undergraduate teaching so that, in England, additional fee income really means additional resources for universities to support teaching.

Goals

Universities and policy makers work together to move the UK's expenditure on higher education and R&D towards US levels, through contributions from individuals, employers and the state.

Funding is, as far as possible, flexible, stable and predictable and there is an ongoing commitment to protect the public unit of resource for teaching for the long term.

2.6 Underpinned by sound principles

49. The historic strength of UK universities is founded on their autonomy. Recent research³³ has demonstrated positive correlations between autonomy in budget, hiring and wage-setting with research performance in European universities. Having budget autonomy also “doubles the effect of additional money on university performance”³⁴. The UK’s success contrasts with that of most centrally managed systems, and the European Commission’s modernisation agenda recognises this approach as the only way in which Europe’s universities can remain competitive.
50. While government initiative-funding has undoubtedly brought benefits to the UK, for example, in supporting universities to widen participation and interact with business, it will remain a pressing challenge to ensure the right balance is struck between freeing universities to set their own agenda through block-grant funding and providing the right policy incentives to help the sector develop.
51. Above all, in our view, public policy should be based on hard evidence and informed by consultation with experts in the sector. Success is most likely to be achieved if universities and policy makers see themselves as partners. Universities look to policy makers to create the right circumstances for them to thrive, but also to allow them to make proper judgements about their own strategic direction. Universities recognise the importance of transparency and accountability, but regulation should be enough, and no more than is necessary, to ensure public confidence.
52. Finally, Universities UK believes that the funding councils play a valuable role in helping policy makers to understand the higher education sector, supporting its financial sustainability, and ensuring that it is able to contribute fully to society as well as meeting government goals. The funding councils also play a valuable role in ensuring the transparency of the sector – interpreting what it does, how it makes use of public money and what impact that money has had on performance. They contribute to the sector’s ability to replicate success. Although the relationship is not always easy, and universities would not want the role of the funding councils to creep into the detail of university management, the work they do is appreciated. We hope policy makers will continue to recognise their value.

Goals

Higher education policy is underpinned by minimum intervention by government and block-grant funding, creating the right conditions for universities to be dynamic, flexible, diverse and fleet of foot. Regulation is no more than is necessary to ensure public confidence.

Section 3: The challenge to Government

53. Despite the considerable current diversity of institutions, the clear messages which emerged from our conversations with university leaders in the course of preparing this submission were remarkably consistent. Vice-Chancellors are confident their institutions are well-constituted to deliver in the long term. But they are concerned about three things: that public policy tends to be overly focused on the economic utility of universities; that there is an increasingly blurred understanding of the distinctive contribution that *universities* make within the education landscape, as distinct from other providers of higher education; and that inadequate funding remains the biggest barrier to future success.
54. Together these factors risk encouraging universities to focus activities on areas at the margins of their fundamental mission. In the long term this will prove detrimental to their core purpose.
55. As competition from international and private providers grows, proper strategic decision making by universities will become increasingly important. Government can best help university leaders by ensuring they have the freedom and flexibility to respond to the challenges they face, and play to their own diverse strengths.
56. Above all, and despite the current economic climate, we strongly believe that it is not realistic to expect universities to hold their position in the front-rank internationally while funded at approximately one third of US levels. In the last 10 years, the Government has explicitly recognised the importance, and economic effectiveness, of investing in higher education. We urge policy makers not to give up as the economic going gets tough; to protect and extend their recent investment; and to maintain the necessary political will to ensure that the UK remains an intellectual superpower in the 21st century.

Endnotes

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- ¹ Higher Education Statistics Agency (HESA) figures (www.hesa.ac.uk)
- ² Shanghai Jiao Tong University ranking (<http://www.arwu.org/>)
- ³ For full-time home and EU undergraduate students in England and for non-Welsh domiciled students in Wales. Fees for part-time, international and postgraduate students are not regulated.
- ⁴ *Variable tuition fees in England: Assessing their impact on students and HEIs – part 3* Universities UK, 2008
- ⁵ In the period 2004-2006: *International comparative performance of the UK research base*, Evidence Ltd. for DIUS (2008)
- ⁶ *The race to the top: A review of Government's science and innovation policies* (The Sainsbury Review), HM Treasury (2007)
- ⁷ Overall deficit, adjusted for full economic costs, of HEFCE funded HEIs for 2006/07 as a proportion of total expenditure, HEFCE circular letter 14/2008
- ⁸ *Education at a glance*, Organisation for Economic Co-operation and Development (OECD) (2008)
- ⁹ *The future size and shape of the higher education sector in the UK*, UUK (2008)
- ¹⁰ *The research university in transition: The emerging global model*, Mohrman et al (2008)
- ¹¹ *Sustaining change in universities*, Burton Clarke (2004)
- ¹² See the Leitch and Sainsbury Reviews
- ¹³ *Revisiting the benefits of higher education*, HEFCE (2003)
- ¹⁴ UUK unpublished submission to the National Council for Educational Excellence (2008)
- ¹⁵ *International comparative performance of the UK research base*, Evidence Ltd. for DIUS (2008)
- ¹⁶ *Eureka UK*, UUK 2006
- ¹⁷ HESA
- ¹⁸ UUK has an ongoing programme of research on the impact of funding policies on the level of concentration in the research system. See *Funding research diversity*, and *Monitoring research diversity* UUK (2003 and 2007)
- ¹⁹ *The economic benefits of a degree*, UUK (2007)
- ²⁰ National Student Survey (HEFCE), Performance Indicators in higher education in the UK (HESA) and the 'Destinations of Leavers from Higher Education Institutions' (HESA)
- ²¹ *Talent wars*, UUK (2007)
- ²² *Part-time study in higher education*, UUK (2006)
- ²³ The Sainsbury Review
- ²⁴ The Leitch Review
- ²⁵ *Replacement migration: Is it a solution to declining and ageing populations?* United Nations Department of Economic and Social Affairs Population Division (2001)
- ²⁶ According to the HEFCE Higher Education Business Interaction Survey, 88% of HEIs offer short bespoke courses for business on campus, and 78% of HEIs report that employers are actively engaged in the development of content and regular reviewing of curriculum at levels 4 or 5 on a 5 point scale (ie the highest level).
- ²⁷ *Higher Education in the learning society*, National Committee of Inquiry into Higher Education (the Dearing Report), (2007)

²⁸ *International competitiveness: business working with UK universities*, Council for Industry and Higher Education (2006)

²⁹ *The economic impact of UK higher education institutions*, UUK (2007)

³⁰ 1.2% of total UK employment in 2003/2004. Ibid.

³¹ OECD (2008)

³² *Gross domestic expenditure on R&D*, EUROSTAT

³³ Bruegel policy brief 2007/04 *Why reform Europe's Universities?* (2007)

³⁴ Ibid