



The Save British Science Society

SUPPORTING SCIENCE & THE APPLICATIONS OF SCIENCE

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Key issues for the new Secretary of State to consider as he develops a major policy document on Higher Education

SBS submission to the new Secretary of State for Education, in advance of the Higher Education White Paper

1. As the Government prepares its major policy document on Higher Education, and as a new Secretary of State for Education begins to shape his policies, SBS is pleased to submit thoughts on some of the key policy areas that need to be addressed.
2. SBS is a voluntary organisation campaigning for the health of science and technology throughout UK society, and is supported by 1,500 individual members, and some 70 institutional members, including universities, learned societies, venture capitalists, financiers, industrial companies and publishers.
3. SBS's thoughts are set out in terms of the three broad functions of the Higher Education Sector, namely: teaching and learning; research; and what have come to be known as "third leg" activities.

Teaching & Learning

4. SBS acknowledges that the problems of funding teaching and learning in the modern university system are inherently difficult.
5. The Government's difficulties arise from its firm commitment to four mutually incompatible factors, namely:
 - (i) that participation rates in higher education should be high, and specifically that half of all young people should go to university
 - (ii) that high standards must be maintained
 - (iii) a manifesto pledge that tuition fees will not rise in the current Parliament
 - (iv) an understandable attitude that, among many competing priorities, higher education cannot expect to receive the massive levels of public funding needed to make all of the first three factors simultaneously possible.

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6. Although SBS objects to the language in which the Universities Minister summed up the last of these (by saying that Vice Chancellors were living in “Cloud Cuckoo Land” for calculating the true costs of a modern higher education system), we recognise that the public finances are finite.

7. Because of this, SBS recognises that a case must be made for any increase in public investment in higher education. In doing so, we draw attention to the Government’s own figures.

8. In a speech to the Social Market Foundation in April 2002, the Universities Minister, Margaret Hodge, said that 1.7 million new jobs were being created that required “the sort of skills and qualifications that can only be gained through higher education”. She also said that “the graduate premium - an average of an extra £400,000 earned during your working life - still holds good”. This agrees broadly with the findings of a recent survey by the OECD, which estimates the private rate of return on Higher Education to be of the order of 16%.ⁱ

9. Assuming a working life of 40 years, this premium equates to an average of £10,000 extra year, on which, at current rates, each individual would pay at least an extra £2,200 in income tax alone. For 1.7 million graduate employees, this represents £3.74 billion extra tax revenue per year. Bearing in mind that the “graduate premium” will take the income at least some of the 1.7 million people into the higher rate tax band, this £3.74 billion is a minimum. It is also worth noting that these figures make no attempt to factor in other revenues to the public accounts, such as extra VAT or National Insurance.

10. In other words, if Margaret Hodge’s assumptions are correct, public funding of the teaching element of higher education could almost double without any actual loss to the Government’s current account.

11. If the assumptions will not hold good – if for example, the graduate premium is unlikely to survive at its current rate when 50% of the workforce has a university education - then the Government must be open and honest about the fact.

12. These calculations are obviously highly oversimplified, and we make no claim that they would stand rigorous economic analysis. We include them to give an illustration that the social rate of return on Higher Education is high, and that it is easy to make a case for strong public funding of university tuition.

13. The OECD estimates the overall social return of Higher Education in the UK to be approximately 14%, and this figure is **higher than any of the other countries included in the OECD survey**, including all of the other members of the G7 group of industrialised nations.

14. UK taxpayers get a remarkably good deal for the money they currently invest in university education, and this must be born in mind when any decision is taken to shift the balance of funding students' learning towards liberalisation of tuition fees.

Research

15. SBS has thoroughly welcomed the Government's series of announcements over the summer, relating to the funding and organisation of science policy in the UK.

16. The research base will be bolstered by extra resources targeted at salaries and stipends for the brightest researchers, at renewing the research infrastructure, and at meeting the full on-going costs of research projects.

17. There was one further significant element relating to the science base in the Cross Cutting Review of Science and Research, in the form of a proposed "ring-fenced sum for academic pay focused on supporting market-based pay changes required to attract and retain the best academic talent in an international market".ⁱⁱ

18. The proposal to increase academic pay in line with market forces has yet to be implemented. If it is not, all of the other progress made in the Spending Review will be put in jeopardy. We will have up-dated laboratories, and well-funded research grants but will lack the flow of excellent researchers needed to generate the ideas that will create the future economy.

19. The argument for improved academic pay is, as the Cross-Cutting Review makes explicit, not one of fairness, but one of market forces.

20. In a recent survey, more than 50% of responding universities said that they had either handed back research grants, or left jobs unfilled, because they could not attract candidates of the right calibre on the salaries they could offer.ⁱⁱⁱ For outstanding science and engineering graduates, the universities are competing globally with well-resourced American institutions, with the City and with a host of other potential employers.

'Third Leg' activities

21. 'Third leg' activities are often assumed to be primarily concerned with commercialisation of research, but in fact include a variety of other 'outreach' activities aimed at engaging with the public to explain and debate the findings and direction of research.

22. SBS has long held that such activities are extremely important^{iv}, and should be properly considered part of a university's function. Funding mechanisms and other policy drivers should, therefore, encourage rather than discourage these activities. It is disappointing, for example, that publishers have found examples of young researchers who have "received instructions" not to write books because they are

perceived to be of less value than other outputs in an assessment of a university department's achievements.^v

23. Moreover, even those institutions that do generate income from commercialising their research findings will never be able to rely on this as a major source of funding. The Massachusetts Institute of Technology, a world leader in this field, and other leading players, generate only about 3% of their research income in this way.^{vi}

24. UK universities are already very good at generating spin-out companies, and other vehicles for commercialising research, having increased their efforts rapidly in recent years, and more than matching the efficiency of their counterparts in Canada and the USA.^{vii}

25. Thus, although everyone in the Higher Education sector now recognises the importance of 'Third Leg' activities, we must all accept that at the current time, the first priorities for policy action lie in teaching, learning and research – the core business of the universities.

November, 2002

Notes and References

ⁱ ***Education at a Glance***, OECD, 2002, Table 13.3.

ⁱⁱ ***Cross Cutting Review of Science & Research: Final Report March 2002***, HM Treasury, DfES, DTI and OST, 2002.

ⁱⁱⁱ ***Recruitment of researchers in university science departments***, SBS, 2000. [SBS 00/20]

^{iv} ***From the Laboratory Bench to the Boardroom: Creating wealth from the academic science base***, SBS, 1999 [SBS 99/17].

^v ***Science & Society: Evidence***, House of Lords Select Committee on Science & Technology, Session 1999-2000, p.273 [HL Paper 38-I].

^{vi} ***Technology Transfer: The US experience***, Committee of Vice Chancellors & Principals, 1999, page 8.

^{vii} ***Higher Education – Business Interaction Survey***, Higher Education Funding Council for England, 2001 [Research Report 01/68].