

Policy Briefing

Spending Review 2007: Securing the future

Policy Briefings

This new series of Policy Briefings published by Universities UK will provide authoritative and accessible analyses of current and emerging higher education policy issues. We aim to publish at least six booklets a year on major topics of the day, with an analysis of an issue, identification of policy options and, where relevant, a Universities UK or sector position. The booklets will draw on existing Universities UK policy work as well as new research that it has undertaken or commissioned.

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Foreword

Universities UK's submission to the Government's Spending Review in 2007 explains how additional public investment in higher education will enable the sector to make an even greater contribution to key national policy objectives. These include the major economic challenges for the UK identified by the Treasury. The need to close the productivity gap between the UK and its major competitors is an urgent national priority and an area where the universities can make an important contribution. Just as important, universities are central to the nation's social and cultural well-being.

The sector is committed to further growth in the number of graduates and recognises that much of this will be achieved by offering flexible provision that responds to market needs. It will deliver larger volumes of personalised part-time study and much of this will be delivered in the workplace. The sector's commitment to increasing training in higher level skills geared to the needs of employers will also support the drive to improve the UK's productivity record. Our research strength will continue to stimulate innovation and contribute to our global competitiveness. Universities will be the main support for the further development of a knowledge-based, high-value economy in the UK.

The improvement in funding allocations since the turn of the century demonstrates the Government's recognition of the importance to the UK's socio-economic development of a successful higher education sector. As a result the process of reversing the effects of the underfunded expansion of the 1990s has begun and the sector is now more financially stable than it has been for many years.

The sector has made a substantial contribution of its own to this improved position. It has a strong record in improving efficiency and securing value for money. Full economic costing of research has recently been introduced and the financial benefits are beginning to appear. The sector has been actively seeking to diversify its funding sources and some 40% of its income is now from private sources. The introduction of variable fees will shift the balance further and by 2009 they will produce £1.35bn additional gross income a year.

These improvements in university funding will go a long way to closing the funding gap of £8bn (excluding inflation) that we identified in our submission to the 2004 Spending Review, but a shortfall remains. Our submission to the 2007 Review makes the case for additional public investment in order to maintain progress in closing the gap. It focuses on the continuing need for infrastructure funding, particularly in support of high quality teaching.

Equally important is the need for continuing financial stability, which should be based on maintaining the unit of public funding for teaching. We need to ensure – as the then Secretary of State promised during the passage of the Higher Education Bill in 2004 – that the income from variable fees will be truly additional to funding provided by the taxpayer. The sector believes that funding diversification combined with a commitment to stable public investment is a solid foundation that will ensure that the UK's universities will continue to contribute significantly to national prosperity and well-being.

Professor Drummond Bone President, Universities UK

Spending Review 2007: Securing the future

Executive summary

- · Higher education delivers a very wide range of services and outputs that are in the public interest. It directly benefits individuals, employers, regions, the UK economy and society. Higher education is an essential component of the everyday life of the nation, providing expertise for Government, business, healthcare and the media.
- · Universities and colleges are vital to the economic, social and cultural well-being of their localities - in particular their very existence can be central to local economic prosperity because of their ability to function as cultural hubs and innovation incubators.
- · Higher education is a major economic sector in the UK, with a total annual output of £45bn. It generates 280,000 jobs directly, and a further 300,000 indirectly in the wider economy. The success of the sector in attracting international students generates £3.6bn in export earnings for the UK. Higher education is a bigger sector than, for instance, UK aircraft manufacturing or pharmaceuticals.
- Higher education is essential to the future prosperity and well-being of the UK. It will supply higher-level skills, knowledge and innovation to ensure that the UK economy remains globally competitive. We will extend our achievements in expanding mature part-time learning to take forward the Leitch recommendation that 40% of the workforce should have a Level 4, or higher, qualification by 2020. We will continue to deliver world-class research in all key fields and to enable the transformation of ideas into innovation.
- · We will play a lead role in addressing the major economic and social issues facing the UK over the next 20 years, such as demographic shifts in the working population, increased productivity, the need for social cohesion and healthier communities. We are lead players in ensuring that economic development takes place across all regions of the UK. Universities are also at the forefront of understanding the major phenomena that are shaping our future, such as climate change, globalisation, and international terrorism.
- · Higher education needs continued public investment at an appropriate level in order to continue to deliver its key economic role and wider public benefits.
- Higher education finances have improved since the turn of the century, and will improve further as a result of the introduction of variable tuition fees. However, the financial situation of the sector is still fragile. The sector's operating surplus has only been about 2% in the past and a net deficit is forecast in the period up to 2008. This derives from continuing cost pressures such as the need to ensure competitiveness in staff salaries, the higher costs of widening access and providing flexible learning for adult

learners, and high levels of inflation in areas such as construction and energy.

- · There is a need for further public investment in university buildings and equipment. The infrastructure funding requirement for the sector is currently £5bn. This is a great improvement on the situation in 2000, and is a result of improved capital allocations, full economic costing for research, and better infrastructure management by universities. However, the sector is still some way short of full financial sustainability. We need to invest in state-of-theart teaching infrastructure to support new forms of pedagogy and to ensure that graduates are trained in industry-standard technology. We also need to invest in high-performance, energy-efficient buildings.
- In this context it would be disastrous for the sector if, in future, the beneficial impact of the improved public funding of the last few years - together with the additional income from variable tuition fees - were undermined by reduced levels of public funding. As a minimum, continued growth in student numbers needs to be fully funded - we need a continuation of the guarantee that there will be no reduction in the public unit of funding for teaching. This will ensure that the income from fees will be truly additional, thus both enabling a higher quality learning experience and better institutional sustainability.
- The essential investment needs of the sector for the period 2008-11, from DfES sources, are therefore as follows:

Figure A: Spending Review 2007 - DfES investment needs summary - average additional amounts, per annum

	2008-09	2009-10	2010-11
	£M	£M	£M
Teaching - Recurrent	215	340	425
Teaching - Capital	500	500	500
Research - Recurrent	200	200	200
Research - Capital	250	250	250
Higher Education Innovation Fund	140	140	140
Total per annum (before inflation)	1,305	1,430	1,515
Uplift for inflation	220	230	235
Total cash needs (annual)	1,525	1,660	1,750

· We have also identified a need, which we have not quantified, for additional funding to support university fundraising, both by building capacity and encouraging donors.

1. Introduction

- 1.1 Ever since the Spending Review cycle was established in 1997 it has been a useful opportunity for the higher education sector to review its achievements, to plan for the future and to present the case for continued public investment. The exercise has been more extensive in 2007 because the more fundamental Comprehensive Spending Review process adopted on this occasion has enabled us to assess the ways in which we can help to address the long-term economic challenges identified by the Treasury.
- 1.2 The heart of our argument in this submission is that higher education delivers an exceptionally wide range of services and outputs that are in the public interest and, therefore, deserves continued stable public investment. Higher education directly benefits individuals, employers, regions, the UK economy and society. In the future, higher education will be the essential foundation of an economy based on high-value, high-skill, knowledge-intensive and innovation-intensive sectors.
- 1.3 The structure of this Spending Review submission differs from previous submissions in three ways. Firstly, we feel that it is important to lay out clearly the benefits and achievements of higher education in this publication, before setting out the investment needs of the sector in the period 2008-11. Secondly, whilst we draw on UK-wide evidence on the role of the higher education sector, the focus of this submission is the future investment needs of England and Northern Ireland. Separate Spending Review submissions have been prepared by Universities Scotland and Higher Education Wales, reflecting the specific economic and social agendas in the devolved administrations in Scotland and Wales. Thirdly, we are publishing it in the form of a Policy Briefing, which is Universities UK's new format for analysing issues and presenting the sector's position.

Figure B: Sectoral gross outputs 2003-04

25000 20000 15000 5000 Aircraft and Spacecraft Services Legal Activities UK Higher Education Services Market Research Pharmaceuticals

Industry

2. The economic, social and cultural impacts of higher education

Economic impact

- 2.1 The higher education sector is a substantial industry with a significant impact on the UK economy. It had a total output (direct and secondary) of £45.1bn in 2003-04 according to Universities UK's recent study *The economic impact of higher education institutions*. This represents an increase of £10bn over four years¹. Universities are now a larger part of the economy than either the UK aircraft or pharmaceutical industries.
- 2.2 Higher education institutions directly provide over 280,000 full-time equivalent (FTE) jobs, equivalent to 1.2% of the workforce. A further 300,000 jobs are generated in the wider economy through secondary effects.
- 2.3 Higher education is a major UK exporter, earning £3.6bn from international students, of which £2bn is from fees². UK universities are able to attract large numbers of students because of the continuing international demand for education in English and the reputation of UK universities for high quality teaching and research. International student numbers have continued to grow steadily: between 2001-02 and 2005-06 the number of international (non-EU) students in UK higher education institutions increased from 152,625 to 223,900. International and EU students now comprise 14% of the student population³.
- 2.4 The Chancellor of the Exchequer acknowledged the increasing importance of higher education as an export in his speech at the Academy of Social Sciences in China in 2005: "In just five years the value of British education as an export has almost doubled, from £6.5bn to £10.3bn. Education and education-related services are our fastest growing export earner and have already eclipsed food, tobacco and drink exports, insurance, and ships and aircraft. Indeed, I believe that if we continue to make the right decisions, by 2020 education exports could contribute over £20bn a year to the UK economy"⁴.

The returns to individuals and the State

2.5 The social and economic impact of the growth in the graduate labour force has been substantial. Recent research undertaken by PricewaterhouseCoopers indicates that the higher lifetime earnings associated with gaining a degree have been maintained through the period of mass higher education since 1990. It calculates that the personal rate of return for a graduate prior to the introduction of variable fees was 12.1%, and that the rate of return on the State's investment on their education was also 12.1%. Following the introduction of the package of measures introduced by the 2004 Higher Education Act the personal rate of return on initial investment has increased to 13.2%, mainly because of the ability to defer payment of the fee by means of an interest-free loan, but the return for the State has fallen to 11%5.

Innovation

- 2.6 The diversity of the higher education sector means that it engages with business and industry in many different ways. These include primary research leading to innovation, contract research, professional development for employees on part-time programmes and continuing professional development (CPD) on non-accredited training programmes.
- 2.7 UK universities have been very successful in collaborating with business and have made excellent progress in developing and exploiting links with small and medium enterprises (SMEs). 90% of higher education institutions now have a dedicated enquiry point for business, and over a third of universities cite SME support as one of their top priorities in terms of economic development6.
- 2.8 Many universities are adopting a regional approach to SME engagement. Knowledge House in the North East, i10 in the East of England and universitytechnology.com in Scotland provide information through a single website on the research strengths, expertise and services offered by the regions' universities. The Knowledge House and the i10 networks engage with the local chambers of commerce and regional development agencies to promote the benefits of university collaboration to local SMEs. A partnership between the University of Ulster and Queen's University has established the Northern Ireland Centre for Entrepreneurship, which works to embed entrepreneurship in science, engineering and technology departments7.

- 2.9 A report by the Council for Industry and Higher Education (CIHE), International Competitiveness: Business Working with UK universities8, emphasises the importance of clusters of excellence with universities at their core that attract brainpower, push out the frontiers of knowledge, attract investment and create wealth. It is to these centres of excellence that multinational businesses go to recruit so many of their graduates and postgraduates, to invest in the fundamental research that they do not undertake themselves and to seek solutions to the business challenges they face.
- 2.10 Consistent and predictable funding is needed to support effectively third-stream activity, and to allow higher education institutions to plan their knowledge transfer activities more confidently over a longer period. The move to formula funding in Spending Review 2004 (SR2004) has been a huge step forward and the Higher Education Innovation Fund (HEIF) has encouraged many higher education institutions to offer career track positions to knowledge transfer staff for the first time. This has made an important contribution to changing the culture in institutions. However, universities are disappointed to note that HEIF funding levels have yet to reach the levels Richard Lambert recommended in his report on businessuniversity collaboration several years ago9.
- 2.11 The Government's flagship knowledge transfer scheme, Knowledge Transfer Partnerships (KTPs), has proven value and effectiveness and should be retained and expanded. The scheme is widely acknowledged to be extremely valuable in supporting collaborative activity but has suffered from a lack of funding. Government should ensure that it is supported with sufficient funding and resources.
- 2.12 The complexity associated with obtaining intellectual property rights remains to be addressed and the sector welcomes the recommendations made in the recent Gowers Report on Intellectual Property¹⁰. The current system is accessible to those with the resource and expertise to satisfy the requirements, but acts as a barrier to others. The removal of these barriers and the provision of incentives for those who have limited expertise and resources available would encourage investment and stimulate economic growth.

- 2.13 Universities continue to improve their performance in transforming research into both innovation and knowledge transfer. Since 2001-02 consultancy income has increased by 73%, the number of patents granted to universities has more than doubled and there has been a 268% increase (to over 2,000) in the number of licences granted. The most recent Higher Education Business and Community Interaction Survey (HE-BCI) highlights how higher education contributes to making the UK a more entrepreneurial nation. For example, UK higher education institutions report over 1,000 active 'spin-off' companies, employing 15,000 people, with a turnover of nearly £450 million in 2003-04. In the same year nearly 600 new companies were established by recent graduates from UK universities. The sector also generated over £38 million from intellectual property exploitation in 2003-04 and held over 5,700 active patents.
- 2.14 Universities are also key suppliers of high quality, high-level continuing professional development for business and industry, delivering more than three million days of training every year. 88% of higher education institutions offer short bespoke courses for business on campus and 80% offer similar bespoke education off campus at companies' premises¹¹.
- 2.15 It is not only continuing professional development where universities deliver products geared specifically to the training needs of business. Business perspectives are increasingly embedded into the mainstream higher education curriculum, with 78% of higher education institutions reporting that employers are actively engaged in the development and regular review of the curriculum at levels 4 or 5.

Regional impact

Economic

2.16 The overall impact of higher education goes beyond its direct expenditure effects or its production of graduates and research. There is a growing recognition that the presence of universities in a region has a direct stimulating effect on the local economy¹². Graduate staying-on rates in regions are high: on average 50% of graduates in England work in the region where the university they graduated from is based¹³. These graduates tend to work in higher-value sectors of the economy.

2.17 A regular supply of graduates – together with the availability of research expertise and facilities – will attract more businesses to locate near universities with the aim of taking advantage of the skilled workforce and expertise and thereby boosting the local economy and generating additional employment. For example three companies from the technology sector have recently located to Bangor in order to be closer to the university¹⁴. A more general form of support for local communities comes through volunteering projects: in 2003, 42,000 student volunteers gave nearly 3.5 million hours to their community, equivalent to contributing £42 million to the economy¹⁵.

Cultural

2.18 Universities play a key role in the cultural life of cities and regions by providing cultural facilities and activities for the wider public, including libraries, museums¹⁶, galleries, film showings, theatres, concert halls and botanic gardens. They also host talks, literature festivals, concerts, exhibitions and attract well-known artists¹⁷. Through these activities universities are helping to create cultural hubs around which professionals and entrepreneurs gather. If these cultural effects are added to the direct activities of universities in stimulating innovation and delivering lifelong learning then it can be seen that all universities are at the core of the 'innovation ecosystems' which are essential in a healthy competitive economy.

Lifelong learning

2.19 Making knowledge and education accessible to people living and working in the region is a key priority for universities. They provide lifelong learning opportunities through continuing education programmes, evening classes, part-time study and public lectures. Over 10,000 academic staff days were dedicated to free public lectures in 2003-04, for over 400,000 attendees¹⁸. In this way universities engage the community in knowledge creation¹⁹.

Sport and sporting facilities

2.20 An important example of universities' wider social role at local, regional and national levels is their involvement in the development, organisation and operation of major sporting events such as the 2002 Commonwealth Games. Universities supported the successful Olympics bid and are now heavily involved in the preparations for London 2012²⁰. They will be using their research and expertise in sports science, sports psychology, sports medicine, coach education, physiology, volunteering, engineering, transport planning, regeneration, cultural studies, media studies and many more areas to ensure the Games are developed and delivered successfully for athletes, spectators, volunteers and local residents. UK universities are already training and preparing our elite performers for London 2012 in a wide variety of sports. On a practical note universities will provide facilities for training camps before the Games, accommodation to visitors, media and volunteers during the Games and other support²¹.

2.21 Higher education institutions contribute significantly to the provision of sports facilities for the local community. They typically offer a variety of facilities to the wider community thus encouraging local participation in sport as well as access for their own staff and students. The sports facilities at English higher education institutions are open to the general public for 71% of the time and 74% of them offer concessions to their community users²². By these means universities contribute to the Government agenda of creating healthier communities and improving the health of the nation.

Contributing to the nation's health

- 2.22 Higher education makes a significant direct contribution to the nation's health through its involvement with the National Health Service (NHS). Universities have a long history of close working relationships with the health service. This was intensified with the publication of the radical proposals in the NHS Plan and the proposed expansion in the health service workforce in 2000. The plan targets have now been achieved: there are more student doctors and nurses than ever before undertaking pre-registration education programmes and more higher education institutions involved in delivering these programmes. In 2004-05 the higher education sector educated more than 356,000 health professionals, including: 55,955 students in medicine and dentistry; 191,425 in nursing; and 26,380 in pharmacy, pharmacology, medical technology and toxicology. This is an increase of 22% in the number of students enrolled in health programmes compared to 2001-0223.
- 2.23 Apart from long-established professions such as medicine, dentistry, nursing, midwifery and the allied health professions, universities are also extending the range of health-related disciplines that they can support. They have worked with the NHS at local levels to develop foundation degrees and new professional programmes for ambulance staff, assistant practitioners, dental therapists, and complementary and alternative practitioners. They educate managers and healthcare scientists who may move in and out of the health service as workforce demands and career opportunities permit. Universities are addressing the challenges raised by the integration of health and social services, devising programmes to prepare managers for the new roles emerging in that part of the service.
- 2.24 The higher education sector delivers continuing professional development through non-credit bearing courses for nurses and other health professionals, reaching more than 118,000 NHS employees in 2003-04. This amounted to 1.8 million contact hours²⁴. Universities also employ approximately 11% of doctors and dentists who work as consultants in the NHS.

- 2.25 The current financial crisis in the health service has revealed the inadequacies of existing workforce planning mechanisms and the absence of a link with health service financial planning. The university sector's financial stability has been affected by the sudden large-scale reductions in commissions for both pre- and post-registration education that the crisis provoked. A review of these arrangements is now underway, and any changes to funding flows will need to take full account of all resources devoted to education both in the lecture room and in the clinical environment.
- 2.26 A well-prepared workforce is central to the success of a health service that has had to meet increased patient expectation and demand, while also managing complex restructuring. The professional education universities deliver provides the basis for lifelong learning and helps to ensure that practitioners remain safe and competent throughout their careers. It also enables them to engage with researchers and learn how to use evidence to support their practice.
- 2.27 The sector's contribution to the nation's health goes well beyond educating the NHS workforce and includes a major role in health research and patient care. Universities undertake most of the clinical and basic medical research on which the future of UK healthcare depends. More than 50% of research carried out in universities is healthcare related²⁵, and 35% of research grant income to universities is in health-related disciplines²⁶. A recent ranking of the world's top universities in biomedicine shows that the universities ranked first, third and fourth are all in the UK²⁷. Our university research record is critical in attracting and retaining leading pharmaceutical and biomedical companies.
- 2.28 University support for health-related research is not confined to medicine – it encompasses the range of disciplines that contribute to a modern health service whose biggest challenges are supporting an ageing population and managing chronic conditions. The health service needs to draw on research capacity from a range of disciplines: from biomedicine to laboratory-based research; from engineers to health economists; from computer scientists and business managers to sociologists and medical statisticians. Universities are uniquely placed to support health research on a multi-disciplinary basis, and their research also benefits wider society, as they work with other partners too - for example, university pathology departments will work with the police to support their investigations²⁸.

Wider benefits of higher education

- 2.29 Higher education also provides a number of wider benefits to individuals and society. The Bedford Report²⁹ (2003) looked into the non-economic benefits of having a degree. It compared the cohorts of 1958 and 1970 and concluded that the benefits of higher education were sustained across larger cohorts. It showed that there were health benefits to being a graduate: they were less depressed, had a higher sense of well-being, lower levels of obesity and were less likely to smoke. Graduates were better citizens: they displayed more racial tolerance, were less politically cynical, had a higher probability of voting in elections, were more active in the community through attendance of voluntary associations and more actively involved in their children's education. This contributes to social cohesion and healthier communities. There are societal benefits from lower unemployment rates amongst young graduates, and the enhanced social mobility that higher education brings. These benefits mean, amongst other things, that graduates are less likely to rely on social security and will be less burdensome to the NHS.
- 2.30 Finally, it is worth remembering the ubiquity of the contribution made by universities to the fabric of everyday life, much of which is simply taken for granted. As shown in Universities UK's recent *Eureka UK* publication³⁰, universities have been responsible for a huge number of inventions and ideas that are used on an everyday basis and improve the quality of everyone's life. Similarly, it would be hard to conceive of a national media culture that was not informed by the expertise provided, and nurtured, by universities.

3. The achievements of the higher education sector

- 3.1 The UK has a world-class higher education system. *The Times Higher Education Supplement* ranking of the top 200 universities in the world placed three UK universities in the top 10 and eight among the top 50: the UK had the most entries on the list³¹. This shows how UK higher education institutions have performed exceptionally well in a time of intensified international competition. Figure C below gives some indications of how UK universities have succeeded in contributing to Government expansion objectives.
- 3.2 Higher education continues to generate increasing numbers of graduates to meet the needs of a globally competitive, highly-skilled, knowledge-based economy. The sector has grown at a steady rate for nearly 20 years, with student numbers more than doubling from around 1 million in 1990 to over 2 million in 2005-06. In 1995 23% of the UK labour force had a higher education qualification: this proportion had grown to 31% by 2005. During this period the number of students and graduates from lower socio-economic groups has increased at the same rate as the sector. Not only has the sector grown, it has also maintained a high completion rate, currently 78%, which is the fifth highest among the OECD countries³².

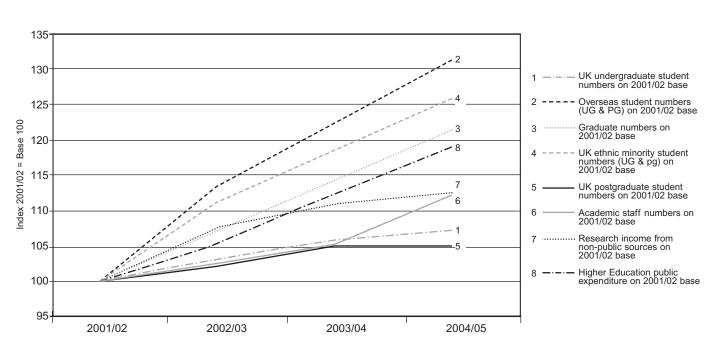


Figure C: Higher education activity and public resources

Sources: HESA (2003) (2004) (2005) and (2006) Student, Staff and Finance datasets, DfES (2006) Departmental annual report.

- 3.3 Whilst much of the impetus for student growth has been the rapid increase in the participation rate for young people, it is worth noting the essential role that higher education plays in up-skilling and re-skilling older workers in the labour market. Between 1995 and 2005 nearly a quarter of the cohort of workers aged 25-44 in 1995 acquired their first higher education qualification³³. In addition nearly half of the students undertaking a part-time undergraduate qualification already had a higher education qualification³⁴. The provision of lifelong learning by higher education is central to ensuring the optimal deployment and productivity of an ageing working population.
- 3.4 Part-time higher education is a significant element in the continuing growth of the sector. There has been rapid growth in part-time numbers since the beginning of the decade and part-time students now represent nearly 40% of all students. Part-time higher education plays a significant role in meeting key Government objectives including the extension of higher-level skills, widening participation, lifelong learning and continuing professional development. Part-time students benefit from a wide range of flexible academic provision that has been developed by higher education institutions in response to their needs. The high level of flexibility and personalisation in this mode of study is a template for the future learning experience in higher education.

Strong research performance

3.5 UK universities are the foundation of the UK's exceptional research performance. The UK is the second most important producer of high quality research in the world. With only 1% of the world's population, it produces 9% of the world's scientific papers with a citation share of 12%, second only to the USA, and has continued to increase its share of the world's most influential papers, from 12.9% to 13.2%. Its share is high relative to its contribution to the total. The UK is second only to the USA on world research rankings in seven of the ten priority research fields. This high level of productivity is a good return on a level of public investment in science that is lower than most of our competitors. The UK spends 1.8% of GDP on R&D compared to an average of 2.25% in a study of 21 comparator nations used in a recent report for the Office of Science and Innovation (OSI): this placed the UK seventeenth, and seventh amongst the G8 nations³⁵.

- 3.6 UK research productivity is superior to that of the US: UK researchers produce 16 research papers per \$1 million of research funding, compared to 9.9 in the USA and 3.6 in Japan, and they are much more effective in getting more citations per paper produced³⁶. UK higher education institutions have also been significantly more successful than any of their competitors in winning framework research contracts funded by the European Union³⁷. Under the fifth Framework Programme the UK received 25% of all funding that went to universities throughout Europe. UK higher education institutions are also increasing their research income from non-public sources. This income was £1.2bn in 2004-05, which is a 13% increase since 2001-0238.
- 3.7 The success of the UK's university research has been underpinned by the dual support system. A key strength of the system is that the funding council grant is unhypothecated, allowing university leaders the freedom to take strategic decisions about the research activities of their own institutions. It 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. This creates a healthy and dynamic research base in the UK. Universities UK strongly supports the dual support system, and welcomes the Government's commitment that this principle will be maintained in the future.
- 3.8 Our research excellence stimulates innovation and is key to the knowledge economy and the UK's global competitiveness. The presence of university research and development departments can play a role in attracting foreign firms - in particular in high-value sectors such as pharmaceuticals³⁹.
- 3.9 Universities UK very much welcomes the Government's 10-year Science and Innovation strategy and the substantial additional funding provided in the last two Spending Reviews to support university research. In particular we have welcomed the additional funds provided to ensure that we can work towards redressing the historic imbalance in the dual support system, making the university research base more sustainable in the long term. However, financial pressures remain as higher education institutions work to ensure that the research base is sustainable across all activities. A key priority for the current and future spending rounds on the research side will therefore be to continue the progress towards redressing the historic under-funding in the dual support system.

- 3.10 Some of the contribution made by UK university research to society in a wide range of fields is documented in Universities UK's publication Eureka UK⁴⁰. It is worth noting that many of the innovations used on a daily basis, and documented in Eureka UK, began as blue-skies research supported by universities own research funds. In this respect we need to be careful that this complex dynamic is taken into account when deciding policy on the distinction between applied and blue-skies research. It is important to remember that applied and other research are interwoven in complex ways. It is also crucial to recognise that not all research has an immediate and obvious impact. In the basic sciences, for example, any impact is likely to be very long term; or with more innovative proposals, the outcomes are likely to be less certain.
- 3.11 We need continued investment from Government and industry in basic research, applied and user-focused research and in supporting knowledge transfer if we are to maintain our high standards and see further groundbreaking discoveries over the next 50 years.

International perspectives

- 3.12 UK universities have been working with international partners for many years and have always been enriched by international students and academics. However, many institutions are now reflecting on what it means to operate in a global environment with increasing numbers of students and staff from around the world together with links with many countries. At its core the internationalisation of UK higher education focuses on the need to ensure that our graduates are 'globally competent' to live and work in an era of complex economic and political challenges. For our research to continue to be world-class in so many areas we need to develop international collaborations.
- 3.13 UK campuses are the second most international campuses among OECD countries. 78 UK higher education institutions have students from 100 or more countries, and three have 150 countries represented in their student intake⁴¹. The sector has been very successful in attracting international students and remains second only to the US as the favourite destination⁴². International (non-EU) student numbers in UK higher education institutions increased from 152,625 to 223,900 between 2001-02 and 2005-06, an increase of 47%. Over the same period EU (non-UK) student numbers have increased from 90.135 in 2001-02 to 106,200 in 2005-06, an increase of 18%43. During this period Government recognition of the importance of UK higher education institutions' international activities led to the first Prime Minister's Initiative (PMI), which aimed to promote UK education internationally and expand the number of international students at UK universities⁴⁴.

- 3.14 The contribution from international students is increasingly important to UK higher education⁴⁵. They help to broaden and internationalise the curriculum. In addition, studying with international peers contributes to the student experience and develops intercultural skills⁴⁶. International postgraduate students are a vital resource for the UK's research base and maintain the viability of a number of key research areas, including several strategic subjects (such as science and modern foreign languages). 43% of postgraduate research students are from overseas⁴⁷. Not only is fee income from international students important for higher education institutions, it also contributes significantly to the UK economy⁴⁸.
- 3.15 Studies demonstrate that UK higher education is providing a high quality experience for international students and that they are satisfied with their higher education experience in the UK. The quality of UK higher education and the enhanced employability that a UK degree brings are the key drivers leading international students to choose to study here⁴⁹. This quality depends on appropriate investment in the unit of resource for teaching and the development of the teaching infrastructure and is crucial if the UK is to maintain its competitive edge in attracting international students. This generates an important and increasing source of funding for UK higher education and the wider economy.
- 3.16 The UK is embarking on an ambitious programme to transform its immigration system⁵⁰. The higher education sector is playing a key role in working with the Home Office to develop the new points-based immigration system through the Joint Education Taskforce⁵¹. The new system has the potential to provide a more efficient and transparent service for people wishing to come to the UK. However, as the experience of the US demonstrates, the consequences of a more restrictive system are potentially very serious. International students, staff and visiting academics make a vital contribution to the higher education sector and their movement must be facilitated and not constrained by the immigration system.

- 3.17 International staff are an important part of the academic workforce, comprising around 18% of the total with increasing numbers in some key subject areas⁵². They contribute significantly to the excellence of the UK research base. The ability to attract the best international staff is also a key factor in maintaining the competitiveness of UK universities. To continue to achieve high research rankings it is important that UK universities attract the best academic staff. This might become increasingly difficult in a global competition for the best talent. Staff from outside the UK help to internationalise higher education institutions in the UK for example by fostering global partnerships and research links. International staff who work in the UK on shortterm contracts and then move on to university jobs in other countries serve as ambassadors for the UK higher education sector, and can play an important indirect role in the recruitment of international students. In addition, such staff increase the opportunities for international research collaboration.
- 3.18 The European Union's (EU) Lisbon strategy promotes the modernisation of European higher education. In January 2006, the European Commission proposed that the EU should aim to devote at least 2% of GDP (including both public and private funding) to a modernised higher education sector by 2016⁵³. This is still considerably less than the 2.9% of GDP from public and private sources that is invested in higher education in the United States. The current UK proportion is 1.1%⁵⁴.
- 3.19 At the core of the Lisbon strategy is an objective to increase investment in research and development from roughly 1.89% of GDP in 2002 to 3% by 2010, of which two thirds should be funded by companies and one third from the public sector. R&D investment in EU countries is currently stagnant. Investment by both private and public sectors is necessary in order to compete with countries such as the US (which invests 2.6% of GDP) Japan (3.2%) and China (where R&D intensity grew at 10% per annum between 1997 and 2002). R&D intensity in the UK is below the EU average⁵⁵.
- 3.20 Other European countries are undertaking dramatic processes of reform and investing in higher education to meet the objectives of the Lisbon and Bologna processes. Some are moving quickly towards the EU's target of devoting 2% of GDP (including public and private funding) to higher education by 2016. Increasing numbers of courses are on offer in English targeted at students both in Europe and beyond. For UK higher education to maintain its competitive advantage as a model for Europe and an attractive destination for students, it is vital that it is properly funded – and this will involve increases in both private and public investment.

4. Addressing the long-term economic challenges

- 4.1 In the 2006 Budget the Government set out some of the long-term trends and challenges that it expects will shape public services over the next decade. These included:
- · demographic and socio-economic change, such as the rapid increase in the old age dependency ratio;
- intensification of cross-border economic competition as the balance of international economic activity shifts to emergent markets;
- acceleration in the pace of innovation and technological diffusion, and a continued increase in the knowledge intensity of goods and services;
- continued global uncertainty and poverty, with ongoing threats of international terrorism and global conflict;
- increasing pressures on natural resources and global climate change.
- 4.2 To these challenges might be added other longterm economic objectives that have been in place for some time:
- the need to improve productivity by, amongst other things, supporting science and innovation and raising skill levels:
- the need for social cohesion, healthier communities and the reduction of poverty;
- regional economic development;
- · financial sustainability of higher education institutions.
- 4.3 The higher education sector is delivering, and will continue to deliver, solutions to many of the long-term challenges for UK economic policy. In summary we will:
- · continue to increase the numbers of students, in line with the Government aim of progressing towards the objective of 50% of young people aged 18 to 30 having some experience of higher education;
- include more mature students, more students from ethnic minorities and more students from lower socio-economic groups;
- expand in part-time markets, particularly in employerled education;
- expand the provision of higher-level education and skills and enter into constructive, strategic engagement with employers in order to achieve this. In particular we will continue to develop high quality provision for the high-value sectors that are essential to the UK's future prosperity: the Universities UK publication Higher Level Learning: Universities and Employers working together illustrates the collaborative work that is taking place in, for instance, software development, financial services, media and fashion and small businesses.
- maintain financially sustainable world-class research;
- increase knowledge transfer and business links in all universities;

- maintain the market position of UK higher education in the global education and research market, where higher education exports currently earn £3.6bn annually;
- play a lead role in local and regional economic strategies, particularly in cities.
- 4.4 The higher education sector has a clear leading role in contributing to the productivity and economic

competitiveness agendas: we are essential to the process of ensuring that the UK economy is driven by high-skill, knowledge-based, high-profit sectors such as pharmaceuticals, software engineering, financial services and creative industries. However, we would argue that we are also central to taking forward other Government priorities. The following table illustrates how the sector contributes to major Treasury objectives:

Figure D: Spending Review 2007: the higher education sector contribution to Treasury objectives

Treasury Objective	Sector Contribution
	Growth in student numbers
Demographic shifts in the working population	Development of higher-level skills
and productivity	Widening participation
	Expansion in part-time provision, particularly employer-led education
	Wider non-economic benefits of higher education as identified in the Bedford report (healthier, more engaged, etc)
Social cohesion, healthier communities, reduction of poverty	Increase in the number of graduates (with graduate salary levels maintained) spreads affluence and stability
	Sector contribution to the health agenda in terms of medical training, research, health education, etc
Financial sustainability	Effective operation of full economic costing
Financial Sustamability	Further increase in non-public income sources
	Higher-level skills agenda
Cross-border economic competition and global economic innovation	Further growth in International student recruitment (export market)
	Maintaining the UK's position as a leader in world-class research
	Increase in knowledge transfer and R&D activity
	Regional implementations of national priorities including higher-level skills agenda, knowledge transfer, R&D, etc
Regional economic development	Direct economic impact of higher education (employers, expenditure)
	Indirect economic impact: higher education institutions as cultural hubs, providers of expertise, generators of ideas, producers of graduates who stay on in the region where they studied
	Relevant research findings
Climate change and pressure on natural	Improvements in university procurement processes
resources	University infrastructure strategy
Global conflict and international terrorism	Relevant research findings
Giodai conflict and international terrorism	International student recruitment and global links

Higher education's role

Cross-border economic competition and global economic innovation

- 4.5 As the Chancellor of the Exchequer emphasised in his statement to Parliament on the Pre-Budget Report 2006 the key to the UK's future economic competitiveness is our ability to "out-innovate and out perform our competitors by the excellence of our science and education"56. The UK's universities play a key role in meeting this economic challenge by continuing to conduct excellent research, fostering innovation through research and improving the skill level of the workforce.
- 4.6 We welcome the Chancellor's recognition that education is a high value-added sector, as mentioned in his speech on the 2006 Budget: "With the right long-term decisions, I believe that Britain can lead in some of the fastest growing and highest value-added sectors - City and business services, education and health, creative industries and science-based industries. Once small, now one third of our whole economy and one third of our exports, soon those industries will have a much higher share of jobs and wealth"57.
- 4.7 Recruitment of international students and staff is essential to meeting the Government objective of increasing cross-border economic competition and global economic innovation.

Climate change and pressure on national resources

4.8 Universities play a key role in addressing environmental challenges, including climate change and pressure on our natural resources. For example, UK universities are conducting research into alternatives to carbon fuel sources and identifying causes of climate change⁵⁸. Researchers from UK universities gave scientific evidence for the Stern Review on the Economics of Climate Change⁵⁹.

Contributing to preventing global conflict and international terrorism

4.9 Universities are also at the forefront of efforts to prevent global conflict and international terrorism through research and by enhancing our understanding of the world we live in. For example, the algorithms for iris recognition were developed at the University of Cambridge and are being used in iris scanners at airports and borders around the world⁶⁰. Research in languages, cultural studies, international relations and economics at universities contribute to our understanding of international current affairs⁶¹.

Enhancing social mobility and cohesion

4.10 Universities are central to the efforts to meet a much wider set of challenges to the UK62. Alongside their core mission of delivering world-class teaching and research, UK universities have a key role to play in enhancing social mobility and improving the life-chances of individuals. By extension, universities can also contribute to social cohesion (as outlined above) and this, in turn, may produce additional benefits, including reducing risk to national security by promoting better understanding, tolerance and integration between different sections of society.

Addressing the skills agenda

- 4.11 As Lord Leitch has recently recognised⁶³, there is no doubt that the sector will play an increasingly important role in engaging with employers to deliver the higher level skills essential to meeting the economic challenges facing the UK. To ensure that the UK remains economically competitive we will need both to improve our skills base and equip our ageing population to be more productive for longer. Lord Leitch has recommended that the UK should aim for 40% of the adult population to have at least a level 4 qualification by 2020, an ambitious aspiration that Universities UK has endorsed.
- 4.12 In particular, we consider it desirable to go beyond the Government's current focus on participation in higher education by 18-30 year olds. The UK will require increasingly diverse higher education provision designed to provide for the needs of a more diverse student body. Demographic change means that the number of 18 year olds will decrease after 2012⁶⁴. 70% of those who will be in work in 2020 have already completed their compulsory education. These two factors, taken together with the need to provide opportunities for individuals to update their skills throughout their working lives, indicate that universities will have to continue to widen their student base and increasingly provide for mature and part-time students.
- 4.13 The sector already has an impressive track record in delivering higher education to suit a variety of student needs. Universities UK's recent research on part-time students demonstrates that universities are providing what amounts to personalised higher education for many students. It is also worth noting that universities have been very successful in educating mature students between 1995 and 2005 nearly a quarter of the labour force achieved a higher education qualification when over the age of 2565.

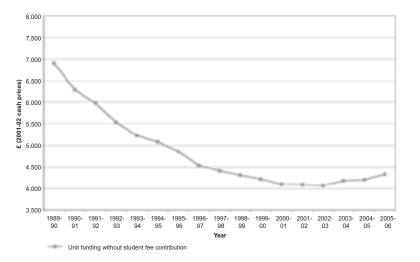
- 4.14 Universities are also becoming increasingly responsive to employers' needs. Universities UK's publication on *Higher level learning* demonstrates some of the ways in which our universities are developing and delivering courses tailored for individual business needs. Universities have developed tailored, flexible part-time provision to meet the needs of individuals and employers. Alongside the efforts of individual institutions, HEFCE is currently funding three higher level skills pathfinder projects, supporting direct links between higher education providers and employers, and is consulting on a strategy to enhance higher education employer engagement.
- 4.15 There are some major issues that universities, employers and Government will need to address if we are to achieve substantial growth in provision developed in collaboration with employers. For example, the sector's recent experience of working with the NHS highlights the financial risk involved in developing provision for a big single employer. Cuts in training budgets have led to substantial reductions in the number of nursing places funded in 200666, creating significant difficulties for some institutions. Government and the funding council will need to work together over the next Spending Review period to help to identify and address this and other barriers to collaboration between universities and employers in the delivery of higher education.
- 4.16 By intensifying efforts to recruit students already in work, universities are also widening the social mix of their student body. However, it remains the case that the key to both widening and increasing participation in higher education lies in increasing staying-on rates post-16 by improving school performance. Whilst 90% of students with two A-levels already go on to higher education, the UK has one of the worst staying on rates for education at post-16 in the developed world, with only seven other OECD countries reporting lower enrolment figures for 15-19 year olds⁶⁷.

5. The financial health of the higher education sector

Public funding of higher education since 2000

- 5.1 During the 1990s the higher education sector expanded rapidly. The rate of growth in student numbers was faster than increases in funding, with the result that the public unit of resource per student fell by around 37% between 1989 and 1999. In real terms, the unit of resource reduced from nearly £7,000 per student in 1989-90 to £4,300 per student in 1998-99⁶⁸.
- 5.2 The long-term impact of this structural under-funding was highlighted by Universities UK in its Spending Review submissions in the late 1990s and early 2000s. In particular there was a lack of investment in infrastructure, the long-term results of which were very evident by the late 1990s.
- 5.3 Since the turn of the century increased investment has stabilised the unit of public funding, as shown in Figure E. This stability in funding, combined with improved capital allocations and the introduction of full economic costing for research, has enabled the sector to move closer to financial sustainability, although the historical financial surplus in the sector is only 2%, some way short of the 3-5% recommended by the funding councils⁶⁹.
- 5.4 There were two major reasons for the improved funding position from 2002 onwards. One was the increase in research allocations, particularly in the wake of the 10-year Science and Innovation Framework in 2004. The other was the introduction, in the 2004 Spending Review, of a stable real terms unit of funding for teaching, which has been maintained since then. This has been crucial in ensuring greater stability across the whole sector, and must be continued in the next Spending Review period.

Figure E: Unit funding in real terms (£, 2001-02 prices, whole year count) DfES (not including private fees) per FTE from 1989-2006



Methodological comments: Student FTEs have been recalibrated to reflect a whole year count, rather than 1 December snapshot. Funding does not reflect private fee contributions.

5.5 It is worth noting, however, that the funding received in the 2004 Spending Review fell short of the requirements identified by the sector. We identified a need for an additional £4bn in recurrent funding, and received £1.1bn. The allocation was enough to support growth in student numbers, but did not fully meet the additional costs of widening participation, the introduction of a progressive pay framework or the recurrent costs of infrastructure maintenance. The introduction of variable fees from 2006 will make a major contribution to meeting the sector's investment needs but there is still a significant funding gap, for which additional public investment is needed. The underlying financial position of the sector is fragile, and it will take time to overcome the legacy of more than a decade's under-investment. It is worth reiterating the point made by the Chancellor of the Exchequer in June 2006, that "spending in the order of 1.1% [of GDP] on higher education, given the significance that we attach to universities and university research for the future of our economy as a whole, is not a figure that can stay at that level"70.

Investment in buildings and equipment

- 5.6 The main casualty of under-funding was insufficient long-term investment in estates or equipment. In 2001 JM Consulting was commissioned by Universities UK, OSI (then OST) and the funding councils to evaluate the infrastructure investment needs of the sector. It identified a remedial investment need of approximately £10.4bn (at 2006 prices) to address backlogs of maintenance, fitness for purpose and legislative compliance in the buildings, plant, services and equipment needed to support teaching and research. The findings of the JM Consulting reports were incorporated into our 2002 and 2004 Spending Review submissions: the scale of the required investment meant that we had to split it across two periods.
- 5.7 Government responded to this significant investment need by giving earmarked capital allocations in both the 2002 and 2004 Spending Review periods. In SR2002 the focus of these allocations was on research infrastructure, with the bulk of the monies allocated through the Science Research Investment Fund (SRIF). This funding was continued in SR2004, but there were also higher allocations for teaching and IT capital. Consequently, since 2001 there has been a total of £3.5bn allocated for capital in the sector, of which £2bn has been for research capital and £1.5bn for teaching and IT.

- 5.8 This funding has been welcome and has had a significant impact on the sector, but it still falls some way short of the original funding gap of £10.4bn. It is possible, however, that the backlog maintenance needs of the sector may have been further reduced by, for instance, borrowing to finance capital projects⁷¹, and by some judicious use of recurrent funds. On the other hand, with surpluses for investment remaining low and the delayed capital injection (particularly for teaching) it is possible that there could have been an increase in the investment need in some institutions. JM Consulting was therefore asked by the funding councils to reassess the infrastructure funding needs of the sector in 200672. Its report began by focusing on progress in addressing research backlogs following the SRIF allocations and the introduction of full economic costing for publicly funded research, and then looked more widely at the current infrastructure deficit and the extent of the remaining funding gap. Its conclusions were as follows:
- SRIF has been a very successful investment which has led to great improvements in the research infrastructure. The maintenance backlog in research has been reduced to manageable levels in most institutions. However, there is a need for continued SRIF funding after 2008 both to cover projected funding gaps and to continue to make inroads into remaining backlogs. JM Consulting has calculated that the remaining backlog amounts to £1 to 2bn.
- Progress in improving the learning and teaching infrastructure is not as well advanced as that for research, and there is a backlog in the range of £2 to 4bn. There are a number of reasons for this:
 - the infrastructure funding need is greater, capital allocations have been smaller and started later;
 - there are fewer other sources of funding for this form of capital;
 - a large proportion of learning and teaching infrastructure is in post-92 universities with a lowvalue asset base and poor quality inherited infrastructures;
 - the infrastructure needs of the post-92 sector are compounded by the fact that many institutions in this part of the sector have pioneered new forms of pedagogy and flexible modes of delivery in order to support the education of a more diverse student body.
- · As a result, JM Consulting has advised that formulaic funding for learning and teaching capital will need to continue at current levels for longer than SRIF.

- JM Consulting has also identified positive signs that the
 recent investment in infrastructure has enabled some
 institutions to move into genuinely sustainable
 infrastructure management. A crucial component of this
 change has been improved management practices in
 institutions: full economic costing; condition surveys;
 strategic 10-year capital plans; and sustainable
 management of physical assets, including some use of
 recurrent funds to fund ongoing investment in
 infrastructure.
- JM Consulting has concluded that, in aggregate, the sector has taken a step towards sustainability. However, it considers this improvement to be fragile and based on a relatively optimistic set of assumptions. For instance, higher than forecast energy and building costs, or a falloff in public funding, could rapidly return the sector to previous levels of under-investment.
- In assessing the current backlog maintenance or infrastructure funding gap for the sector, JM Consulting has noted that there will be a permanent backlog caused by the inevitable deterioration of physical assets and the inbuilt levels of obsolescence in, for instance, information technology. It estimates that this "manageable backlog" is in the region of £3bn for the sector.
- 5.9 The upshot of the above is that the current infrastructure backlog in the higher education sector is approximately £5bn, of which around two-thirds is for learning and teaching infrastructure.

Cost pressures in the sector

Pay and pensions

5.10 There has been a higher rate of cost inflation in higher education in recent years compared to the rest of the economy. Pay expenditure, which constitutes around 60% of all expenditure in the sector, has on average risen by slightly more than the national average. In addition, as noted in previous Spending Review submissions, and acknowledged by the current Prime Minister in 200373, there is a need for the higher education sector to compete with other sectors in order to optimise recruitment. The introduction of a single pay spine and recent pay settlements, whilst reaching a prudent conclusion, have reflected a sector-wide desire to address this issue. Pay competitiveness is an issue in specific subject areas: the 2005 survey of recruitment and retention⁷⁴ reported that academic recruitment shortages exist in law, business and management, economics, accounting, computing/IT and health subjects. Universities have been reluctant to address this problem by upgrading posts, although there has been some use of market supplements. However, as universities expand employer-led provision in leading edge economic sectors they will need to be able to recruit practising professionals from those sectors.

- 5.11 There are specific issues associated with staff recruitment in teacher education departments in higher education institutions. Analysis of HESA data indicates that:
- the age structure in education departments is older when compared to other departments – there is a very high proportion of staff over 50;
- trend data shows that the age structure is developing in a way that means that the situation may become unsustainable over time;
- an older workforce could become a problem due to the retirement over the next five years or so of the very large numbers of teachers recruited in the late 1960s and 1970s;
- improvements in remuneration levels for teachers mean that it is difficult to persuade senior schools staff to move into higher education unless financial incentives are provided.
- 5.12 The Teacher Development Agency (TDA) is aware of this issue and has proposed the creation of a 'new blood' scheme to attract new recruits into initial teacher training.
- 5.13 In 2003 the sector introduced a new framework agreement that tackled equal pay issues, helped to deal with recruitment problems and provided better rewards for staff contributions. The framework agreement is currently being introduced across the sector and is leading to greater flexibility and cost-effectiveness in pay. However, as predicted in SR2004, whilst in the longer term the framework agreement will have a progressive impact, its initial introduction is in itself expensive (Universities UK estimated that it would cost approximately £0.5bn in the SR2004 period). There are a number of reasons for this, the main one being that improvements in pay will be needed for some staff to reflect market pressures, tackle continuing recruitment and retention difficulties, and reward those who contribute most. Consequently whilst the pay framework is a key element in generating significant cost and productivity benefits in the longer run, it is currently a significant cost pressure in higher education and will remain so for some time.
- 5.14 A significant element in the remuneration package is the increasing cost of pension schemes in the sector. In recent years there has been a considerable increase in employer contributions, particularly in local government schemes. A report by the British Universities Finance Directors Group⁷⁵ notes that employers' contributions in these schemes increased by 9% between 2003-04 and 2004-05, from £902 million to £983 million.

Non-staff costs

5.15 The most recent edition of the Higher Education Pay and Prices Index (HEPPI)⁷⁶ shows a number of areas where universities are having to deal with price increases well in excess of the Treasury deflator on which public finance increases are based. For instance between 1 July 2005 and 1 July 2006 there were the following increases:

Library costs	6.9%
Advertising	4.0%
Energy, water and sewerage	39.4%
Repairs and maintenance	4.9%

5.16 It can be seen that higher education institutions have been hit particularly hard by increases in energy costs. The increases in gas and electricity costs have often coincided with the point at which institutions have been renegotiating long-term fixed price agreements. leading to a substantial price hike. Whilst institutions have been at the forefront of exploring how to reduce their energy requirements, high performance buildings require significant investment and are often new build. Advances in learning technology, changes in student expectations, better space utilisation and the development of new forms of flexible learning mean that large parts of the university estate are open for much longer - up to 24/7 for most of the year in some cases. This is a positive development – but it causes energy usage to increase.

The costs of delivering part-time provision

5.17 As noted earlier, part-time students constitute over 40% of the total student population and universities have developed a wide range of flexible academic provision in response to their needs. This flexibility and personalisation is almost certain to lead to higher costs than in more mainstream areas of provision. However, until the results of a fully-developed costing method for teaching⁷⁷ are available it will be difficult to know exactly how substantial the part-time premium for teaching actually is. Some evidence is provided by a study undertaken for HEFCE by JM Consulting in 200378 which noted a range of fixed administrative costs that were incurred regardless of a student's intensity of study. The proportion of funding that this fixed cost represents is, on average, 10%, but there is considerable variation according to the amount of study a student is undertaking and the subject weight. The 10% figure is the basis for a premium in the current HEFCE funding method and there are proposals for it to become a separate allocation.

5.18 In addition Universities UK's research into part-time students showed evidence of price sensitivity amongst part-time students that reinforces the case for a significant public contribution to this mode of study. The optimum price that students in the sample might be willing to pay for part-time study was around £600 (£1,200 per FTE), which is a long way short of the new maximum full-time variable fee of £3,000. There is considerable scepticism in the sector as to whether part-time fees can be raised in line with full-time fees without a significant drop in numbers. If this scepticism proves to be well-founded then enhancements in public funding will be required in order to ensure that this vital area continues to contribute to Government agendas such as higher level skills, increased participation and lifelong learning.

The costs of widening participation

5.19 Universities UK has consistently argued that further expansion of the sector will depend specifically on the recruitment and retention of non-traditional students. The additional costs to institutions of the activities and services targeted at such students has been shown to be 31% above the cost to institutions of recruiting and retaining traditional students79.

Meeting the cost pressures - shared services

5.20 The higher education sector has been creative and resourceful in dealing with the cost pressures that it faces. For instance, most institutions are actively exploring e-recruitment as an alternative to the print media in order to reduce the advertising and administrative costs associated with staff recruitment80. Another example is the way in which the sector is developing new methods to publish and access research outputs in order to reduce costs in this area.

5.21 Historically the sector's preferred way to generate collective cost savings has been by establishing shared services. The sector, often through initiatives of its representative organisations, has been very effective in identifying genuine needs and opportunities for shared services and then establishing the necessary organisations. There are shared services for admissions (UCAS), statistics (HESA), pay bargaining (UCEA), pensions (USS), information networks (JISC and JANET), staff development (the Leadership Foundation and the Higher Education Academy) and e-recruitment (jobs.ac.uk). The sector has established regional purchasing consortia and the Energy Consortium as a central point for negotiating energy contracts. Shared services have been established at regional and local as well as national level. For instance the Yorkshire and Humberside Metropolitan Area Network provides high bandwidth connectivity to the education and research community throughout the Yorkshire and Humberside region.

5.22 Most recently the sector established the Higher Education Bursaries and Scholarships Scheme (HEBSS), in partnership with the Student Loans Company. This administers bursaries and scholarships on behalf of over 120 institutions and enables synergies between the provision of Government student support and the provision of institutional student support.

5.23 Given this track record there is no doubt that the sector will continue to identify areas where significant operational benefits and cost savings can be achieved through the establishment of shared services. There is, however, a major barrier to further progress in this area: organisations which provide shared services are required by HM Revenue and Customs (HMRC) to charge VAT. This means that, for instance, universities have to pay VAT on every bursary paid out through the HEBSS scheme. This is a significant disincentive - it is unreasonable to expect to see cost savings when a 17.5% levy is being applied. The existence of a VAT barrier is inconsistent with the Government's advocacy of shared services. We urge the Government to amend the tax laws in this area in order to encourage further activity.

Variable tuition fees and other sources of non-public finance

5.24 HESA data shows that universities currently derive around 40% of their income from sources other than the UK or EU governments. This figure will increase to around 50% in England once variable tuition fees reach steady state in 2008. Universities are actively seeking to increase non-public income from other sources. These include recruiting more international students, increased services for employers, diversification of research income and enhancing their fundraising activities. By expanding income sources the sector can move, over time, to a more sustainable position and operate in more flexible ways: for instance, banks may be more willing to lend money to institutions for capital projects when they have evidence of plural income streams. However universities continue to be hampered in their attempts to operate in a more commercial manner by the fact that they have to work within both public and private sector regulatory regimes. In addition there is a continuing lack of joined-up thinking in relation to taxation issues, where incentives created elsewhere in Government (for instance in relation to thirdstream funding) are directly undermined by the policies and actions of HMRC.

5.25 In order to succeed in commercial markets universities continue to invest in business functions such as market research, costing, and pricing. Universities are also ahead of most of the public sector in using and developing cost-control processes such as procurement, energy management, space management and the utilisation of shared services. These activities cut across all university business areas, leading to more effective service delivery and greater financial sustainability.

5.26 It is, however, important to stress the complex interrelation between public investment and expansion of private sources of income. Some private sources of income (eg international student fees, income from SMEs) are highly sensitive to the effects of international developments or economic fluctuations and can, therefore, undermine institutional stability. Others, such as institutional fundraising and knowledge transfer, require considerable upfront investment by institutions before they translate into a significant income stream - in the case of fundraising it may be many years before an investment pays off. It is also the case that the quality of activities that generate private income often depends on public funding and that a stable base of public funding is, therefore, essential to maintaining commercial viability. Examples here include international students (where the perceived high quality of teaching is essential to our international competitiveness) and commercial research (where the staff base and the capacity to generate innovation are underpinned by Quality Research (QR) funding).

5.27 The additional gross income from variable fees will amount to approximately £1.35bn per annum when the system reaches "steady state" in 2008-09. This is welcome additional income for the sector and will significantly enhance the quality of the student experience. However, in assessing the contribution that fees will make to reducing the funding gap it should be noted that a significant proportion of the income will be used to fund the new student bursaries introduced from 2006. It is likely that as the system develops the bursary component will increase. Much of the remaining income from variable fees will be used for additional investment in infrastructure. improved library facilities and improved student services: elements that have a direct impact on the student experience. However, fees on their own cannot deal with the underlying structural financial fragilities in the sector or with other inflationary pressures as outlined above. Moreover the impact of variable fees on total income is highly differential across the sector – in some institutions they will have proportionately less effect than in others. These factors - together with the possibility of a downturn in demand from both home and international students led most institutions to adopt a cautious approach in their 2005 financial forecasts: the sector predicted a small operating deficit in 2005-06, with annual increases thereafter leading to an annual operating deficit of £427 million (2.3%) in 2008-0981. During the same period net liquidity was forecast to fall.

6. Conclusion - investment needs 2008-2011

6.1 If universities are to contribute towards Government objectives and the public good over the longer term then they need to operate on a stable funding foundation: continued, predictable levels of public funding will be vital to underpin this stability and to ensure that institutions can respond to public needs. It is also important that the Government continues to accept that initial public investment is required in order to move towards a more sustainable, diversified income stream in the longer term. Any reduction in public funding in the short term would have a negative effect on the achievement of long-term objectives.

Maintaining the unit of funding for teaching and the growth trajectory

- 6.2 It is essential that the additional income from variable fees is protected through the Spending Review period. It is vital that the Secretary of State's commitment to maintain the value of the unit of funding for teaching in real terms is honoured in the period 2008-11 (and beyond). We welcome the introduction by DfES of a new measure of the unit of funding for teaching which provides a clear basis for monitoring the achievement of this commitment. The absolute minimum additional funding requirement for the sector would be maintenance of the unit of funding with no growth (beyond the need to maintain current participation levels as the number of 18-year olds continues to grow up to 2011). We estimate this as an average of £33 million per annum through the Spending Review period.
- 6.3 However, the sector needs and wants to continue growing. We do not accept that the down-turn in the numbers of 18-year olds after 2011 needs to affect participation, particularly if participation is measured in terms of the percentage of the workforce with a higher education qualification. The sector has grown hugely in non-traditional areas, particularly part-time. History shows that if universities and colleges are given the opportunity to expand then they will find ways to do so.
- 6.4 We therefore propose that the sector should be fully funded to grow at around 1% per annum during the Spending Review period. This is at the top end of the projection in the HEPI report 82 and would involve around 22,000 additional FTEs per annum at a total cost of £90 million per cohort per annum (this figure includes the nogrowth estimate given above). This would give a cumulative total over the Spending Review period of £540 million.

Funding to support part-time, access, teacher education

- 6.5 It would be beneficial if the existing 10% premium for part-time students in the funding method were replaced with a "real money" allocation, reflecting the fixed costs of administering and teaching these students and also giving some compensation for the lower fee levels involved. However, this allocation should not result in a redistribution of funds across the sector and, therefore, requires additional money to support it. We estimate that £75 million per annum is needed, based on the current unweighted FTE of fundable part-time students in England.
- 6.6 As noted earlier, research has shown that the recruitment and retention of non-traditional students involves significant additional costs. Research commissioned for the last Spending Review calculated these costs at 30%. We recommend that a 30% access premium be introduced for new places, at a cost of £30 million per cohort per annum, giving a cumulative total additional cost of £150 million over the period.
- 6.7 We have pointed out the problems faced in initial teacher education departments which need to replace an ageing workforce. We support the TDA's proposal to establish a "new blood" scheme. This involves a 50:50 funding split between the TDA and the sector but in the context of the Spending Review the scheme needs to be fully funded with new public money. The sums proposed are £18 million in 2008-09, £27 million in 2009-10, £18 million in 2010-11, giving a cumulative total of £63 million over the Spending Review period.

Investing in infrastructure

- 6.8 We accept the recommendations of the JM Consulting report on the residual infrastructure requirements of the higher education sector. Investment in infrastructure, particularly research infrastructure, has halved the maintenance backlog. However, there is still a considerable way to go, particularly in teaching. In addition to the continuing need to address the maintenance backlog in teaching infrastructure, it is essential that universities are able to invest in leading edge pedagogy and to configure space optimally for modern teaching and learning approaches. By making this investment we can also ensure that universities produce graduates who go into the workplace trained on industry-standard technology.
- 6.9 The JM Consulting report recommends that the current levels of capital investment for both teaching and research should be maintained through the Spending Review period. This amounts to around £750 million per annum, of which £500 million is for teaching and £250 million for research.

6.10 We would also concur with JM Consulting's view that whilst some recognition should be given to the teaching/research split when calculating aggregate capital needs, this does not need to be reflected in specific allocations to universities. In this respect we would urge the Government to support the approach to capital investment proposed by HEFCE in a recent consultation⁸³. This involves institutions' capital allocations being released over a much longer timeframe in line with approved infrastructure strategies. This approach would have multiple benefits including: better infrastructure planning; better control of expenditure for both HEFCE and institutions; and less waste. In short, it is a further movement towards greater financial sustainability.

Research

- 6.11 The sector has welcomed the stability and growth in research funding generated by the 10-year Science and Innovation Strategy and the introduction of full economic costing for publicly funded research projects. The growth in research funding from all sources needs to continue at the same rate as in the 2004 Spending Review period this equates to additional funding of £125 million per annum in QR, or £375 million over the Spending Review period. In order for these resources to have optimum impact (both direct and indirect) there needs to be no further selectivity introduced into the research allocation methodology. In addition to supporting research exellence, resource should be devoted to building capacity, particularly in support of institutions' regional partnerships.
- 6.12 We also welcome the creation by the funding council of new support elements for charities and business research income. There is an established convention that research grants paid by charities cover only a proportion of the work done, with institutions finding the remainder from other funding sources. This has caused problems as the amount of income from charities has increased. The funding stream introduced by HEFCE in 2005 enabled this area of research to become more sustainable. The funding has thus far been split between an element in the block grant and an additional element. The additional element needs to be continued during the SR2007 period. We estimate the sum involved to be around £75 million per annum, giving a total of £225 million over the Spending Review period.

Higher Education Innovation Fund

6.13 The Higher Education Innovation Fund (HEIF) has been extremely successful in stimulating knowledge transfer, business links and other forms of employer engagement such as continuing professional education. HEIF has also played an important role in enabling better engagement between universities and the community. As such HEIF has become a vital part of local and regional economic regeneration strategies. The current funding runs out at the end of the SR2004 period and it is essential that it is maintained and enhanced in SR2007. We recommend that HEIF should now be funded at the levels suggested in the Lambert Report ie £140 million per annum. This gives a total of £420 million over the Spending Review period.

University fundraising

- 6.14 During the last few years universities have made considerable advances in developing their fundraising function. For instance, 78 institutions applied to the £7.5 million pilot project which offered matched funding for capacity building in development offices. Most of these institutions were actively seeking to develop fundraising capacity and many had begun to generate modest funds. At the wider level, the total amount of philanthropic giving reported in the annual Ross Group survey (an informal, voluntary survey of development offices) has progressively increased, to around £500 million a year.
- 6.15 The time is therefore right to move to the next stage of the agenda set out in the Thomas Report, by establishing a sector-wide scheme that offers matched funding for donations as well as capacity building. The sector would welcome such a scheme but with one major proviso: the monies involved must be truly additional to other allocations. If there were any suggestion that core funding in the sector was being top-sliced in order to fund a scheme of this nature it would undermine the initiative and be a disincentive to donors. We, therefore, urge the Government to provide new money for this funding stream.

Figure F: Spending Review 2007 – DfES Investment Needs – Additional Amounts against 2007-08 base (2007-08 prices)

Total cash needs (annual)	1,525	1,660	1,750
Uplift for inflation (at the deflator rate of 2.7% pa)	220	230	235
Total Capital (2007-08 prices)	750	750	750
Total Recurrent (2007-08 prices)	555	680	765
Total per annum (2007-08 prices)	1,305	1,430	1,515
Research Capital	250	250	250
Teaching Capital	500	500	500
Higher Education Innovation Fund	140	140	140
Charity Research Support	75	75	75
Research within 10-year Framework	125	125	125
Teacher Training New Blood	20	25	20
Widening Access Premium	30	60	60
Part-Time Provision	75	75	75
Fully-funded growth in student numbers	90	180	270
	M3	£M	£M
	2008-09	2009-10	2010-11

Notes

- 1 Universities UK (2002) The impact of higher education institutions on the UK economy, London and (2006) The economic impact of UK higher education institutions, London.
- 2 Universities UK (2006) The economic impact of UK higher education institutions, London.
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- 4 Speech by the Rt Hon Gordon Brown MP, Chancellor of the Exchequer, at the Academy of Social Sciences, Beijing, China, 21 February 2005, available: http://www.hmtreasury.gov.uk/newsroom_and_speeches/press/2005/pr ess_20_05.cfm
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- 6 HEFCE (2006) Higher education-business and community interaction survey 2003-04, Bristol.
- 7 More information on the networks and their services is available on http://www.knowledgehouse.ac.uk, http://www.i10.org.uk and http://www.universitytechnology.com
- 8 CIHE (2006) *International Competitiveness: Business Working with UK Universities*, Richard Brown and Philip Ternouth, London.
- 9 HM Treasury (2003) Lambert Review of Business-University Collaboration, London.
- 10 HM Treasury (2006) *Gowers Report on Intellectual Property*, London.
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- 12 HM Treasury (2006) Devolved decision making: 3 Meeting the regional economic challenge: The importance of cities to regional growth, London.
- 13 Based on Universities UK (2004) Patterns of higher education institutions in the UK: Fourth Report, table 14, London.
- 14 *IcWales* (9 November 2006) 'Universities key role in helping small businesses'.
- 15 Universities UK (2007) Universities engaging with local communities, London (forthcoming), quoting Student Volunteering England (2004) Student Volunteering: The National Survey 2003.
- 16 The university museums attract more than two million visitors a year.
- 17 These activities help to provide a colourful and lively environment for local residents and attract visitors from other regions as well as tourists.

- 18 HEFCE (2006) Higher education-business and community interaction survey, 2003-04, Bristol, and Universities UK (2007): Universities engaging with local communities, London (forthcoming).
- 19 European University Association (EUA) (2006) The Rise of Knowledge Regions, p21, Brussels. Open doors science exhibitions and festivals, universities/schools projects and public discussions are other key elements of universities' contribution to knowledge creation in the wider society.
- 20 When the Commonwealth Games was held in Manchester in 2002 the local universities (University of Manchester, UMIST and Manchester Metropolitan University) played a key role and in partnership with Manchester City Council built the Manchester Aquatics Centre used for the swimming events at the Games. On a visit to the University of Hertfordshire in November 2006 Lord Coe, Chairman of the London Organising Committee of the Olympic Games (LOCOG) highlighted the contribution of UK universities to the Olympics and Paralympics. *The Guardian* (21 November 2006) 'Universities vital to Olympic success' at http://education.guardian.co.uk/higher/news/story/0,,195 3611,00.html
- 21 Higher education institutions are also supporting the London Organising Committee to design and organise the four-year Cultural Olympiad starting in 2008. *The Times Higher Education Supplement* (9 November 2006) London.
- 22 Universities UK (2004) Participating and performing: sport in higher education in the UK, London.
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- 24 Based on Higher Education Statistics Agency (HESA) (2006) Students in Higher Education Institutions 2004/05, Tables 20 and 21, Cheltenham.
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- 26 Presentation by Professor Janet Finch (2006): A UUK perspective on health research based on Higher Education Statistics Agency data 2004/05, available: http://www.universitiesuk.ac.uk/health
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- 35 Office of Science and Innovation (2005) PSI target metrics for the UK research base, by Evidence Limited, Leeds.
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- 39 Institute for Fiscal Studies (2007) 'University research and the location of business and R&D', IFS Working Paper, W07/02.
- 40 Universities UK (2006) Eureka UK 100 discoveries and developments in UK universities that have changed the world, London.
- 41 OECD (2006) Education at a Glance, Chart C3.1, Paris, and presentation by Professor Brian Ramsden to the Longer Term Strategy Group on 29 March 2006, based on 2004/05 data from the Higher Education Statistics Agency (unpublished).
- 42 11% of foreign students worldwide are enrolled at UK HEIs. OECD (2006) Education at a Glance, p.288, Paris.

- 43 Higher Education Statistics Agency (2003) (2004) (2005) and (2006) Students in Institutions in Higher Education 2001/02, 2002/03, 2003/04 and 2004/05, Table 2e, Cheltenham and (2007) Statistical First Release.
- 44 The target was to increase non-EU international student numbers in higher education in the UK by 50,000 by the year 2005. This was exceeded ahead of schedule, with an extra 93,000 international students in higher education, and a second phase is now underway, http://www.dfes.gov.uk/pns/DisplayPN.cqi?pn_id=2006_0 058
- 45 Universities UK (2006) Higher education in facts & figures. International Perspectives, Summer 2006, London. Based on HESA (2006) Students in Institutions in Higher Education 2004/05, Tables 2a-d and 6a, Cheltenham.
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- 48 International students attending UK universities in 2003/04 spent £1.5bn in personal off-campus expenditure, equivalent to 9% of all UK receipts from overseas visitors to the UK in 2004. Higher education also contributes to business tourism as international business visitors to UK HEIs from overseas spent approximately over £106 million off-campus in 2004, around 1% of all income from all overseas visitors to UK in 2004. Universities UK (2006) The economic impact of UK higher education institutions, London.
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51 The aim of the JET is to support partnership working across Government and with all the key stakeholder groups on immigration issues affecting international students. Available: http://www.ind.homeoffice.gov.uk/lawandpolicy/jointeduc

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- 52 Universities UK (2006) Higher education in facts & figures. International Perspectives, Summer 2006, London. Based on HESA (2006) Students in Institutions in Higher Education 2004/05, Cheltenham. For a detailed analysis please see Higher Education Policy Institute (2005) Migration of academic staff to and from the UK Migration of academic staff to and from the UK an analysis of HESA data, Oxford, paragraph 23 "Academic mobility is concentrated in certain disciplines: 37 per cent of immigrants and 41 per cent of emigrants in 2002-03 were in biological, mathematical and physical sciences".
- 53 http://eur-lex.europa.eu/LexUriServ/site/en/com/2006/com2006_0 208en01.pdf
- 54 OECD (2006) *Education at a Glance*, Table B2.1c, Paris.
- 55 OECD (2005) Research and Development Statistics, Paris.
- 56 See full transcript, available:
 http://www.hm treasury.gov.uk/pre_budget_report/prebud_pbr06/prebud
 _pbr06_speech.cfm
- 57 The Chancellor of the Exchequer, statement on Budget 2006, 22 March 2006, in the *House of Commons Hansard Debates for 22 Mar 2006 (pt 5)*, available: http://www.publications.parliament.uk/pa/cm200506/cmh ansrd/cm060322/debtext/60322-05.htm
- 58 Some examples of research centres and projects addressing environmental issues are: The Climatic Research Unit at University of East Anglia, the sustainable energy team at University of Bath and the Tyndall Centre for Climate Change Research. This centre is a network of more than 200 UK researchers who are working together to develop sustainable responses to climate change through trans-disciplinary research and dialogue on a national and international level. See http://www.tyndall.ac.uk/index.shtml. Higher education institutions also offer a variety of programmes in environmental fields of study, and they are constantly developing new programmes and curricula to provide graduates with the most recent skills for employers.

- 59 Not only did many UK academics respond to the initial Stern Review consultation, but specific research projects were commissioned as part of the review, and a large amount of the work was done by researchers in UK universities. HM Treasury; Stern Review Consultation Responses (online). Available: http://www.hm
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 - treasury.gov.uk/independent_reviews/stern_review_econ omics_climate_change/stern_review_supporting_docum ents.cfm
- 60 http://www.cl.cam.ac.uk/~jgd1000/iris_recognition.html
- 61 The new Centre for the Advanced Study of the Arab World (CASAW) will be based at the Universities of Durham, Edinburgh and Manchester. CASAW is being funded by a £5 million grant from the Language-Bases Area Studies Initiative which brings together the Higher Education Funding Council for England (HEFCE), the Economic and Social Research Council (ESRC), the Arts and Humanities Research Council (AHRC) and the Scottish Funding Council (SFC) in a joint venture to support collaborative Centres of Excellence.
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- 65 Higher Education Statistics Agency (2006) *Higher Education Statistics for the United Kingdom*, Table 20a, Cheltenham.
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