**Higher Education Policy Institute (HEPI) and**
**Joint Information Systems Committee (JISC)**

**House of Commons Seminar: 21st April, 2010**

**Efficiency and Effectiveness**

**Professor Roger Brown (Chair):**
Good morning, ladies and gentlemen; on behalf of HEPI, I welcome you to the fourth and last in the current series of seminars. As you will notice, I'm not Bahram Bekhradnia who is in the reverse diaspora that is due to the volcanic clouds. I'm Roger Brown, Professor of Higher Education, Liverpool Hope University. I'd like to thank our sponsors, JISC, and Lord Alan Howarth for acting as our patron this morning. We appreciate their support.

HEPI always likes to be topical and we think that today's topic is a particularly timely one. In the pre-Budget Report last year, £600m of efficiency savings were announced for Higher Education between 2010 and 2013. Sir Alan Langlands, the Chief Executive of the Funding Council, has said publicly on several occasions that he hasn't the faintest idea where those savings can come from. Well, HEPI this morning has provided two men who, between them, will provide the answers for Sir Alan and other members of the policy fraternity. Professor Sir Tim O'Shea is Principal and Vice Chancellor of the University of Edinburgh, previously the Master of Birkbeck College and, before that, a PVC at the Open University and, speaking personally, I can't think of anyone who is better able to launch this debate. Our second speaker, Carl Lygo, is the Chief Executive of BPP Holdings and Principal of BPP College which obtained its degree-awarding powers quite recently as a private institution. He was previously a Senior Lecturer in Law at London Guildhall University.

**Professor Sir Tim O'Shea:**
Good morning. A great pleasure to be here on this lovely, sunny day. A very nice exam topic to be given – Efficiency and Effectiveness – and I've enjoyed reading up for it. My sources are OECD data, sector data, Scottish data, University of Edinburgh data and, obviously, my own opinion.

Universities are for three things. They are for transmitting knowledge. You can't transmit knowledge unless you've got it so, therefore, curating knowledge is the second thing – museums, libraries, galleries – and, finally, they're for creating knowledge.

I will talk about undergraduate provision, research, commercialisation, economic impact, and then move on to talk a little bit about joint procurement, because that's a positive success story. I have the enormous privilege of being Chair of JISC, whose services are a real example of efficiency and effectiveness at a sector level. British universities are not perfect, so I'll outline the scope for improvement, but I do have an upbeat conclusion.

I have a lot of experience in the UK system, but a lot of experience of the US, continental and Asian systems too. I think the US is the world's best system of higher education, but in many domains the UK is a proud second or somewhere in the top

five. People aren't really aware of the gap between the US and the UK systems and some of the continental European systems, nor of just how strong the Chinese and the Indian systems have become in the last 20 years.

The UK undergraduate position is very good – we've got high overseas demand. But if you look at the OECD data you'll see that the participation rates here aren't massive as they have been. Since the Second World War our participation rates lag the US. A particularly strong part of the UK system is completion. At a university like my own, students come, students finish, students get good jobs; the attrition is only about 5%. If you look at universities that are much stronger on widening participation it is higher, but then there are very good arguments for why that should be different. But still, in the UK system, once the students are in they are much more likely to complete than in our international comparators. We also spend above the average for the OECD, but there's plenty of headroom. The US, Switzerland, Sweden, Norway spend an awful lot more than us. Within the UK we have very comprehensive subject provision as one of our strengths – Humanities, Social Sciences, Science Engineering and very strong across the professions – Law, Medicine, Architecture. The UK is home to the most important innovation in part-time education – the Open University – something we should be very proud of. Our students in the vast majority are very satisfied with the undergraduate education they get, and they move on to good employment. We have quite strong QA processes in this country, and it is very rare that a university is forced to withdraw provision on those grounds. That, at a sector level, can give us a lot of confidence about quality.

The absolutely brilliant thing in the United Kingdom is research. We produce 8% of the world's papers but we get 12% of the world's citations. So, as well as producing about eight times more papers than you would expect for our population, those papers have 50% more impact than you would expect. If you look to the top 1% internationally, we produce almost 15% of those papers. Almost half of the papers that we produce have an author from a non-UK country. We produce 38 papers for each £1 billion of GDP, so whichever way you look at the UK, we are absolutely stellar in producing research that is valued around the world and that has impact.

I would commend very strongly the September 2009 BIS evidence document – it goes into great detail. Unlike the undergraduate area where it is much harder to make international comparisons, bibliometrics make it very easy to make comparisons. I was a little bit sceptical about it, but a June 2009 Research Information Network paper compared the results of seven studies, one being the BIS study, and they all approached the question differently but came up with roughly the same answer. We are clearly massively successful at research at world level and that is a national asset.

How about commercialisation? The issue here is that the data could be improved. I have some University of Edinburgh data, but this sort of thing is not collected by the sector as a whole. The University of Edinburgh last year had research awards totalling £250m and we spun out 25 companies. For about every £10m we get collectively, we produce another company. It compares favourably to the activity of MIT or Stanford. What we want to measure is the efficiency with which research is turned into autonomous companies that contribute to the economy. Edinburgh is amongst the very best, and the top end of the Russell Group has very similar data. One of the reasons this is very hard to measure is that this isn't the only thing to look at - you want also to consider industrial licences, patents, disclosures. We have that

data for the University of Edinburgh – hell of a difficulty to figure out what the commercialisation impact of a disclosure is.

One which is easier to measure is consultancies. At Edinburgh we make £5m in consultancy per year, which represents a little bit less than 1% of our turnover or 2% of our research spend. That's OK, but could obviously be more. One of the difficulties is timing. The most successful spin out from the University of Edinburgh is Wolfson Microelectronics – they design digital to analogue and analogue to digital, and are a company of scale with lots of high quality jobs. The original grant for Wolfson came in 1967; they left the University in the early 1980s and floated as a public company about four years ago. Most companies don't take 37 years!

I'll give you a really positive example. We had a project to bounce electromagnetic radiation off the sea floor to test the density of liquids under the sea floor. If it's very dense it might be oil. If it's not dense it's probably trapped salt water. And if you can tell the difference, you could save yourself billions of pounds in drilling activity. The project was a total failure. They got nowhere. They gave the data to a PhD student and said to the PhD student, "Do what you like with it." After a couple of years, the PhD student came back and said, "I think I've solved the original problem." There was scepticism, but the university took a punt and gave him £10,000 with which he made a business plan. He secured £100,000 from Scottish Enterprise, another £8m from first round investors, bought two wee boats and a bit of wire, went out into the Forth, tried the theory and it worked. At that point PSG, a Norwegian company, offered £138m for it. It took 2¼ years between the university investing £10,000 and the company being sold for £138m. I, of course, was strongly criticised in the Scottish press because the direct financial benefit to the university was only £15m and if I'd put up the first round £8m, then of course we'd have got all of the profit. Clearly, I don't have £8m for every project at the university, and I was jolly pleased to get £15m for a £10,000 investment! The success of that project depended on the university having an entrepreneurial culture of saying, "If you want to stop doing your PhD and think about this, we'll let you and here's a bit of money", and on Scottish Enterprise having a very good commercialisation mechanism and us having incubation facilities.

I would commend the UUK report "The Impact of Universities on the UK Economy". Looking at impact efficiency in terms of output GDP or gross added value, universities are second only to computing. Per capita GDP, we're second to electronic components. If the State spends £1m in the university sector, the result is about £2.5m output, about 28 people employed and a gross value add of about £1.35m. You might say 28 is not that many jobs, but if we were producing lots and lots of jobs for the £1m, as some sectors do, then they would be low value jobs. The things we buy are good because we buy expensive equipment that has lots of scientific or engineering value. And the report shows that there is a wonderful secondary spend. The University of Edinburgh has more than 7,000 overseas students. Two-thirds of those get visited by two supporters, usually their parents, in a year, who spend a hotel night in Edinburgh, take the student out to dinner and buy them trainers and a computer. Adding that up over the sector in the UK shows a £2.5m secondary spend that would not be occurring in our hotels and shops if universities weren't there with their international students. So this is a very, very good document. I commend it for detailed study.

Whichever way you look at it, universities have now become a key business sector in the United Kingdom and, in the same breath that we talk about the UK's finance industry, the UK's computing industry or its electronics industry, we have to talk about the UK's higher education industry.

A growing success story in the UK university system is joint procurement, which has been encouraged by the government. A couple of days ago a £45m contract was let for all Scotland's colleges and universities with Scottish Water for the next three years, which also brought in piggy-backing 56 Scottish Government agencies. We've got a Scottish entity doing advanced procurement for universities and colleges, and it is going around buying different services, in this case something that all universities and colleges need – water – but also other utility services, all sorts of services, and it is very effective at that. In 2006-07 between 73 HEIs at the UK level there were efficiency gains of about £83m - that is the saving as compared to each university buying it separately. There are gains associated with e-procurements (having less staff because you're doing it electronically) of the order of £12m, and regional consortia were getting purchasing gains of the order of £69m. So already four years ago the sector was saving about £152m in procurement and about £12m in efficiency. I know the numbers have improved dramatically in Scotland over the last four years, but the English data is not so good, so I don't know about the UK as a whole.

When thinking about efficiency and effectiveness, we shouldn't just be thinking about the universities, we should be thinking about the universities working together. The most stunning example of success in the United Kingdom is, of course, JISC. We're second to the United States in most things but in terms of information services and networks, we are first, there's no question. I've lived with versions of JANET all my career, because I'm a computer scientist. In the UK we have high connectivity, high speed, incredibly reliable, connecting all the universities and colleges. Including schools, there are about 80 million people using JANET in the United Kingdom. Including people who come in through federated access, the single sign-on, it's 8 million. Another very nice thing that we do at JISC is Digimap. If you want an OS map or data in any British university, then you get it digitally from this JISC service. This was done 250,000 times last year, and, costed, it saved £17m. JISC also negotiates such things as large-scale journal subscriptions, saving the sector about £43m.

The advice savings are much harder to estimate. We estimate that JISC saves through its advisory services about £42m, but that is a soft estimate. We're particularly intensive providers of advice to the further education and the college sector. If a small institution is trying to do something complicated with IT, they can ring up JISC and JISC says, "Don't do that, do this", saving time. "Don't try and build one yourself, there's a free one on the University of Edinburgh website, just download it."

We also have an archives hub – and this sort of thing is very important for specialist institutions like SOAS – with 23,000 digital collections such as newspapers and census data, which is very important support for the humanities and social sciences. These assets would be extremely hard to get if they weren't digitised, because they're hidden in the Rylands Library, the University of Edinburgh Special Collection or wherever. There are about 6½ million special things of high intellectual importance - usually to some very specialised academic sub-disciplines, maybe somebody studying Islam in the 12th Century in a particular country - but we have got them. JISC is a

massive, massive success. Given our modest budget we clearly are incredibly efficient and are paying for ourselves by what we save the universities.

Looking to the future, an important thing to JISC is cloud computing – the idea of software as a service, saving universities the trouble of having expensive electricity-consuming and heat-producing computers, particularly in urban settings. JISC is placed to make a new contribution at least as important as JANET. It means that small institutions will no longer need to buy servers, they will simply be able to trust JISC and cloud computing and buy their computing services by the yard, reliably and in as green a form as possible.

We have with HESA, UCAS, The Leadership Foundation and HEA other good UK-wide services, but JISC is stellar. I see the way that your chests are swelling with pride, like mine. How wonderful to be part of the country that produced the JISC.

Where have we got scope for improvement? Participation rate. I don't think 50% participation is a high enough target. And I'm pretty clear that three years is too short for a degree. The Scottish degree - two years general, two years specialised - is obviously superior to the English degree and has been copied in countries like the United States, Canada, New Zealand and Australia. And that is why in England, with people realising the error of their ways, they have introduced undergraduate Masters courses like the M Math and the M Eng. People guffing about two year degrees are off their rockers. A four year degree gives breadth plus specialisation in a way that is very much harder to do with a three year degree.

We could also improve credit transfer. Again, Scotland is in better shape than England, but still nothing compared with California - the ease with which a student can transfer credit from a community college to a state university to an elite university. We can make efficiency savings on collaboration between universities. In the Scottish universities we have pooled our research in Physics, in Chemistry, in Engineering, and that's good because only one expensive machine needs to be bought in the whole of Scotland. Essentially now we have got a graduate school for each subject for the whole of Scotland, which means somebody doing a PhD at Edinburgh has access to the facilities in St Andrews, in Glasgow, in Aberdeen as well. I think we should continue to move to that model.

We certainly need more collaboration on e-learning. I think the Online Task Force is promising, and I think an area that we need to go into quite urgently is effectively using IT to support university administration. Universities are like police forces or NHS Trusts, believing that they are individual. But a student is a student, a lecturer is a lecturer and matriculation is matriculation – there is much more commonality than there is diversity and we really should bite the bullet and work very hard at having collective IT systems.

In terms of government investment, the thing that worries me the most is our investment in PhD students, who are the future research base. I told you of the company that went from not existing to being a major petroleum exploration company in 2¼ years, and that could not have happened without the PhD student who was at the heart of it. The thing that worries me enormously about the financial pressures on the research councils is what will we do if it's our PhD provision that feels the squeeze? China last year had 75,000 people graduating at the postgraduate level just

in Engineering and in Computer Science. To compete economically, we don't just need STEM undergraduates, we need a very healthy flow at doctoral level.

I shall conclude. UK higher education over the last period has become more efficient and more effective and, by any international comparators, it looks pretty good. Research really is a national treasure and vital to the UK's business base. We've got a capability for working together in the UK which other countries do not have. JANET was built by suppressing a lot of local networks, persuading places like UCL and Imperial and Manchester and Cambridge to give up perceived bits of technical leadership and all work together for the common good. We got the best computer scientists in the UK to stop fussing on their local specialised network and build a national one. It wasn't easy, it does require discipline and commitment, but we have shown that we can do something and once we've got it, it can more than pay for itself.

My final observation is that clearly we are in a good place. I'm on the governing body of the Chinese equivalent of the British Council. The Chinese are very open-minded and often ask how the UK does this or that to investigate if they could do it better themselves. I came back to the British Council, where I was also a trustee, and said, "Gosh, we should have foreigners here to get an international perspective." And they said, "Don't be stupid, we couldn't possibly trust a foreigner with all the special confidential information we have." We can't be that complacent. There is no question that we will be overtaken by China in an absolute sense, but if we are not careful, they will also overtake us in a proportional sense.

Thank you very much.

**Mr Carl Lygo:**
I'm the Chief Executive of the BPP Education Group and Principal of BPP College of Professional Studies. You've probably never heard of BPP – the previous Chief Executives have never spoken publicly. Since my appointment last year, I've decided to change that. I don't want BPP to be insular any more, I want you to understand what we do. We're often spoken about in the specialist education press in an extraordinarily negative way and I was delighted when Bahram, who believes so passionately in evidence-based opinions, asked me to speak, because I hope to be able to tell you a little more about what we do and the evidence base for that.

My experience is very traditional – first class law degree, postgraduate research, went into teaching in both new and old universities before deciding that a research career was not for me and qualified as a barrister nearly 20 years ago.

I broke away from the public sector because there was a lack of investment. I was a senior lecturer at London Guildhall University, so saw the lack of investment at the front line. I joined BPP to set up and establish their Law School. It has 6,500 current students, a third of the entire legal profession in England trains with BPP, and it's well respected internationally. In a recent competition for world law schools in Chicago, BPP finished fourth and was the top UK entrant.

I'm here to give a non-traditional perspective of higher education and show you how the private sector differs from the publicly maintained university sector. BPP itself was formed in 1976 by three Accountancy faculty, Brierley, Price and Prior, to

provide home study, flexible study materials for the finance sector. It floated in 1986 and up until last year it was in the FTSE 250. In 2007, the bit of BPP that I led at that time became the first proprietary, that is for-profit, company to gain UK degree-awarding powers. We also exercise degree powers through HETAC in Ireland and in Holland through Markus Verbeek Praehep, which is one of the oldest accounting training bodies in Holland. About 140,000 clients study with BPP annually through BPP College, which is BPP Law School, BPP Business School, BPP Professional Education, and Manda Portman Woodward, our private high school for those aged 14-18. We were acquired by Apollo, the world's largest private higher education company, at the end of July last year for £306m. The turnover of BPP at that time was £165m, 99.8% of which was paid for by the private purse – only 0.2% from public sources, in this case Learning and Skills Council money.

Apollo Education Network's main university is the University of Phoenix, though they also have other institutions, notably in Chile, Mexico, Canada and the US. John Sperling, the founder, describes himself as a socialist and he set up the University of Phoenix in 1973 on the basis of trying to widen participation. Sperling was a professor from California who thought that he could do better. He was forced into Arizona to establish the university, because he didn't get any support from California. It was a college set up for students who wanted to study part time in the evenings (a bit like Birkbeck) – usually working adults who already had some credit but needed a flexible method to finish off their study. Phoenix is well known as a pioneer of online learning, although that represents only 60% of their total student enrolments - 40% are what they call "ground campus" students. At the last earnings announcement, they had 458,600 students including 7,500 doctoral students, and they enrol a student every 20 seconds. 66% of students are female and the average age is usually early 30s – a working adult.

The UK private sector is quite diverse. There are private providers who exercise the degree-awarding powers of publicly maintained universities, and I guess you know them well – places like Caplan international colleges. There are also private providers who support the publicly maintained universities by providing induction courses for overseas students – for example, Cambridge Education Group – but don't have degree-awarding powers. There are also those providers who define themselves as charities but they operate very thinly when it comes to that public benefit test. They enjoy all the tax breaks that a charity gets, but none of the controls of the university sector. What's left after all of those is BPP - the only for-profit body with degree-awarding powers. So I speak as a sector of one, which is not a good place to be.

BPP's governance is a diarchical structure. We've got an Academic Council and a commercial Board of Directors. The Academic Council is the education authority. It's chaired by Martin Jones who is a PVC at Kingston University, and the balance of voting power is weighted in favour of independent members. There are six – two from industry including a QC and a CEO of a consultancy business and four from the higher education sector including a dean of a law school and a dean of a business school. And of course we have external examiners and we are in compliance with all of the usual things that you would expect in the UK HE arena. The Board of Directors is a faculty led board - we have academic faculty on our commercial Board of Directors including the Deans of the schools. We also have only one non-executive director now, following the takeover. We have a Ceremonial President, Baroness Cohen, and on our executive management team we have a split between the

academic officers and the commercial leaders (who we call Chief Officers) in operating roles, some of whom are academics, some not. It's probably not that dissimilar to a university environment.

BPP's got learning centres, as we call them, in 14 UK cities and in 13 other European countries. A learning centre typically has classrooms, an internet cafe, and some kind of library/study area. No pubs, clubs or sporting facilities - I plug into the local communities for all of that. BPP has got a tremendous reputation for its face-to-face learning; we also provide blended learning, and we're relatively new to online learning. Class sizes are typically between 12 and 18, contact hours are typically 12-16 hours a week during a study week.

Our programme development is centralised. What that means is our speed from concept of a programme to delivery of it is much quicker, because we've got a central process by which the curriculum is designed. That's usually the point at which most traditional academics start to baulk, that somehow you could industrialise that process and make it happen quickly. Well you can, and we do.

The UoP model is slightly different. They've got learning centres in 40+ states, 200 campuses, they do what they call ground campus learning face to face and around 60% of their intake study purely online. They've got a bespoke e-learning platform, one they created themselves, and they spent a lot of money on it and continue to do so. They allow students to move between modes of study, from face-to-face to online. They have an average class size of 15. Nearly all of their faculty are freelance, self-employed people - there's a small spine of full-time employees and a much larger freelance model. We have three standard start dates for our degree programmes, so students can start at any of three points during a year, while UOP has weekly start dates, so they could be talking to a student today and have them started on their degree programme on Monday.

95% of my faculty are permanent employees. People claim my staff have to work 52 weeks of the year and are in the classroom for 30-40 hours a week. It's pure nonsense, they do around 16 hours of teaching per week maximum for two semesters a year. They have a 37½ hr contract, they get 30 days' holiday plus the usual statutory holidays, plus some discretionary days that I can give for closures around Christmas and Easter, plus they can flex their holidays and buy and sell up to an additional ten days. That's not bad for the private sector. We have the same career levels as you typically see in a new university with Lecturer, Senior Lecturer, Principal Lecturer grades all linked to the HE Academy scale. Our salaries are usually higher than the publicly maintained sector. However, we're not part of the university pension fund (although the Teachers' Superannuation Fund is the owner of some of the properties that we lease and were also a major shareholder in BPP at the time we were sold to Apollo, so we do contribute!).

We've got everything else you'd expect – an academic registry, quality assurance and enhancement, continuing curriculum development. We've got a pro bono service that's award-winning in four years out of the last six, a career service which is quite extensive, a library, both physical and online, and I'm told by our Law Librarian that our Law Library is the largest specialist Law Library in the UK. Our student accommodation is typically provided by third parties and we have the usual student societies.

How have we done all this? First of all, we have an uncomplicated management structure. My experience at the universities that I taught at is that management structures were complicated, they held things up, there was no accountability or responsibility – I'm sure you're familiar with the complaints. Within BPP I've built a structure that gets things moving quickly so that we don't waste money.

We're very much learning and teaching led. I'm not going to pretend that we're a research lab. We have a service culture. It's a total focus on the client, supporting their career development. It has to be practical, professional and relevant. We're constantly re-evaluating and testing what the client needs. So if I said to a member of my faculty, "We're the best", they'd be totally astonished, because I never look at it like that. We always need to prove ourselves, change, fight and establish things.

Employer engagement is where we invest a lot of money. It's very difficult dragging out of employers what exactly it is they want. You can read all the reports you want, but you don't necessarily get the right answer. The approach that we've adopted is to employ professionals from that employer base to truly understand what it is they want - we buy in faculty who have worked with that employer.

We have high professional standards and we expect students to turn up, to be appropriately dressed, to participate in class – it's old-fashioned, but it works for us.

We focus our degrees on areas of professional qualification, memberships of professional institutes. We focus on what's going to get you a job. The CBI Employability Skills report in 2009 said that all degrees should have this in. I've worked in universities which have tried to add on employability as something separate rather than embedding it in every part of the degree. I don't think you can do it as an add on – students shouldn't be able to say "It's Monday today, so I'm doing Employability Skills." The CBI collected data on how well the university sector is doing at meeting those employability skills, and there's clearly room for improvement because 33% of graduating students wish they'd chosen a different degree subject. BPP doesn't have any pretensions. We're all about getting you a job. This data adds more power to the way that we think.

Change is inevitable because this country no longer has the money to fund higher education in the way in which we have in the past. A further £1.6bn in cuts is expected by 2013, so how's the country going to fund the HE sector? I'm sure you heard on Radio 4 this week that there's one university already spending next year's HEFCE grant just to pay this month's salary bill. Things have got to change - we can't carry on as we are. There are some elite universities that are doing incredibly well, but that's not the story of the vast majority.

The publicly-funded universities have got a full-time job just servicing others because you're tied in to their money. I don't have all that, so I don't care what the ministerial team think, or the 58 educational quangos, 7 research councils, 23 sector skill councils and 30 lifelong learning networks – the only person I'm interested in is the client, whether that's an employer, a professional body, or the student. That's what my focus is on. You haven't got enough private money coming in. You're not taking enough from the students to be able to fund what you're doing.

I agree that abandoning the 50% participation target is madness. The reason I say this is twofold. Our economy is not going to survive with lower skilled people, we need higher skilled people. And I myself am a product of widening participation. I come from a poor single parent family in a South Yorkshire mining village, nobody ever went into university in the world to which I belonged, and so to aspire to go to university and to have that opportunity is something I don't think we should be denying other people. The OECD data shows we're not doing very well at all. University graduation rates for young people is below the OECD average. Only 30% of our total workforce have graduate level qualifications. It's not good enough. We might be great at the top level – having 17 universities in the top 100 in the world is great, but we've got to provide something for the masses as well. John Sperling, who founded Apollo, was working very much in that vein.

So what does the future offer? There are two CBI proposals that I picked up on. Subsidies should go to those most in need – BPP strongly believes that, that's why we're never going to ask for a government handout to fund our higher education provision. Secondly, government needs to welcome greater private sector involvement in the sector, provided it delivers high quality. I believe BPP does deliver high quality. The top law firms and the top accounting firms wouldn't be queuing up to come to BPP if we didn't.

Tim mentioned that he thinks the US is the best. I don't believe that, and I can give you one example from personal experience. US law firms come to BPP and ask us to provide an intense, short programme for their newly qualified attorneys, because they're not as good as the UK equivalents. I think the UK is better, on that count, so there you go. Thank you.