



**Cynulliad Cenedlaethol Cymru
The National Assembly for Wales**

**Y Pwyllgor Menter a Dysgu
The Enterprise and Learning Committee**

**Dydd Iau, 5 Mehefin 2008
Thursday, 5 June 2008**

Cynnwys
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Cofnodir y trafodion hyn yn yr iaith y llefarwyd hwy ynndi yn y pwyllgor. Yn ogystal,
cynhwysir cyfieithiad Saesneg o gyfraniadau yn y Gymraeg.
These proceedings are reported in the language in which they were spoken in the committee.
In addition, an English translation of Welsh speeches is included.

Aelodau'r pwyllgor yn bresennol
Committee members in attendance

Alun Cairns	Ceidwadwyr Cymreig Welsh Conservatives
Gareth Jones	Plaid Cymru (Cadeirydd y Pwyllgor) The Party of Wales (Committee Chair)
Huw Lewis	Llafur Labour
David Melding	Ceidwadwyr Cymreig Welsh Conservatives
Sandy Mewies	Llafur Labour
Janet Ryder	Plaid Cymru The Party of Wales

Eraill yn bresennol
Others in attendance

Andy Klom	Pennaeth Swyddfa'r Comisiwn Ewropeaidd yng Nghymru Head of the European Commission Office in Wales
Nick Moon	Cyfarwyddwr Strategaeth a Chyfathrebu, Cyllid Cymru Director of Strategy and Communications, Finance Wales
Yr Athro/Professor Nicholas Topley	Is-ddeon (Gweithrediadau Ymchwil), Cadeirydd, Gwasanaethau Biotechnoleg Canolog, Ysgol Feddygaeth Prifysgol Caerdydd Sub-dean (Research Operations), Chair, Central Biotechnology Services, Cardiff University School of Medicine

Swyddogion Gwasanaeth Seneddol y Cynulliad yn bresennol
Assembly Parliamentary Service officials in attendance

Dr Kathryn Jenkins	Clerc Clerk
Mike Lewis	Dirprwy Glerc Deputy Clerk
Alys Thomas	Gwasanaeth Ymchwil yr Aelodau Members' Research Service

Dechreuodd y cyfarfod am 1.30 p.m.
The meeting began at 1.30 p.m.

Cyflwyniad, Ymddiheuriadau a Dirprwyon
Introduction, Apologies and Substitutions

[1] **Gareth Jones:** Prynawn da a chroeso i gyfarfod y Pwyllgor Menter a Dysgu. Yr ydym yn cyfarfod ar amser gwahanol, felly cawn weld sut aiff pethau. **Gareth Jones:** Good afternoon and welcome to the meeting of the Enterprise and Learning Committee. We are meeting at a different time, so we will see how it goes.

[2] Fe'ch atgoffaf i ddiffodd ffonau symudol neu unrhyw ddyfais electronig arall. Nid oes angen i unrhyw un gyffwrdd y meicroffonau. Nid ydym yn disgwyl ymarfer tân felly bydd rhaid inni gael ein tywys o'r I remind you to switch off mobile phones and any other electronic devices. There is no need for anyone to touch the microphones. We do not anticipate a fire drill so we will have to be led out of the building under the guidance of

adeilad dan gyfarwyddiadau'r tywyswyr os bydd larwm. Mae'r cyfarfod yn ddwyieithog ac mae clustffonau ar gael. Mae'r cyfieithiad o'r Gymraeg i'r Saesneg ar sianel 1, ac mae sianel 0 yn chwyddleisio'r sain. Bydd cofnod o'r cyfan a ddywedir yn gyhoeddus.

the ushers if there is an alarm. The meeting is bilingual and headphones are available. The interpretation from Welsh to English on channel 1, and channel 0 will amplify the sound. There will be a record of everything that is said publicly.

[3] Yr wyf wedi derbyn ymddiheuriadau gan Christine Chapman, Jeff Cuthbert a Kirsty Williams. Nid oes dirprwyon, hyd y gwn i.

I have received apologies from Christine Chapman, Jeff Cuthbert and Kirsty Williams. There are no substitutes as far as I am aware.

1.31 p.m.

Tystiolaeth i Ymchwiliad y Pwyllgor i Gyfraniad Economaidd Addysg Uwch Evidence to the Committee Inquiry into the Economic Contribution of Higher Education

[4] **Gareth Jones:** Croesawn Nick Moon, cyfarwyddwr strategaeth a chyfathrebu Cyllid Cymru. Diolchaf i chi ar ran y pwyllgor a'r Aelodau am eich tystiolaeth ysgrifenedig. Yr ydym eisoes wedi derbyn hwnnw ac wedi cael cyfle i'w ddarllen.

Gareth Jones: We welcome Nick Moon, the director of strategy and communications of Finance Wales. I thank you on behalf of the committee and Members for your written evidence. We have already received it and have had an opportunity to read it.

[5] Gofynnaf i chi wneud cyflwyniad byr o bump i 10 munud, fel y mynnoch, ac wedyn cawn gyfle fel Aelodau i ofyn cwestiynau.

I ask you to make a brief presentation of five to 10 minutes, as you wish, and we will then have an opportunity as Members to ask questions.

[6] **Mr Moon:** Thank you for the opportunity to come here to talk about Finance Wales today. I will briefly talk through my paper and then take questions. In the context of your inquiry, Finance Wales has a broad remit, but our core rationale for existing is to support enterprise and start-ups. We were established in 2000 by the Welsh Assembly Government with a remit to address market failure in the provision of risk capital to businesses in Wales. We have been running for eight years and as a wholly owned subsidiary of the Assembly Government we are closely aligned to the overall economic development policy, but, at the same time, because we are managed by an independent board of directors sourced from the financial services, we operate on a commercially independent basis. It is important to stress that all investment decisions and our general activity is done on a commercial and profit-driven basis.

[7] Since 2000, we have made almost 2,000 separate investments. We have invested almost £100 million in small and medium-sized enterprises in Wales and that has resulted in additional leverage of around £300 million to Welsh businesses. So, our impact on the economy now exceeds over £0.25 billion.

[8] We try to operate with a flexible and focused approach whereby we do not promote individual products or funds, but encourage businesses to come to us with their needs and we will then construct the appropriate finance package for them. As you can imagine, some businesses will approach us, adamant that they need a loan, when in fact once we have investigated their accounts, equity might be more suitable to their needs. So, we try to operate in that manner.

[9] With regard to the Objective 1 and 2 regions, we have experienced quite considerable success. Certainly, on Objective 1, demand was huge and we were fully invested a year ahead of target there. In the Objective 2 regions, we have seen a number of successful exits of the businesses that we have invested in. So, a number of businesses have gone on to float our name, such has been their growth, and that has allowed us a profitable exit. We then use that profit to reinvest in further businesses.

[10] More specifically related to your inquiry, we have close links with all of the universities in Wales. We have worked with them since Finance Wales began and we tend to invest in around 30 spin-out businesses a year from Welsh universities. We have recently developed a partnership with Biofusion at Cardiff University, which has allowed a number of co-investments to take place. That partnership is working very well.

[11] We are a public-private initiative. Although we are in the public sector, all our funds have private investor, as well as public sector, support. So, we have a number of partnerships, for example with Barclays Bank plc and the Royal Bank of Scotland. In the longer term, we would seek to increase their involvement. We have an aspiration over the longer term to minimise the public sector support that we need and be fully privately financed.

[12] On the basis of our fund management performance, we have been able to raise further private finance quite recently. Last year, we raised another £15 million from Barclays Bank plc, which went alongside a contribution from the Welsh Assembly Government of another £30 million, which is currently being invested in all parts of Wales.

[13] As for the future, we are currently developing a £150 million fund, which will operate over the next structural funds period. That is in partnership with the European Investment Bank under the guise of the JEREMIE initiative, which is a European Commission initiative. That will invest in all elements of SMEs, from technology transfer around universities to providing basic micro loans to large-scale equity investment. I should also point out that within the Finance Wales group there is the Xénos Wales business angel network, which is a separate company that works to encourage high-net-worth individuals to invest their capital in Welsh businesses, while also bringing their expertise and experience as business people, which, in addition to the capital, can be very helpful to young growing businesses.

[14] I think that covers what is in the paper. I am happy to take any questions.

[15] **David Melding:** What is your approach to risk? It seems to me, when you are trying to address market failure in relation to venture capital, especially at the level of bright graduates who are coming out with ideas, that we need to fund lots of bright graduates, based on the assumption that only a certain number will have an idea that will make it and get an organisation off the ground. How do you approach that? I suppose that, in a naughty way, I am asking whether you have enough failures to justify the role that you are presumably playing.

[16] **Mr Moon:** I can vouch that we have enough failures. The very nature of the organisation means that we take higher risks than the private sector would take; that is why we were set up and that is what we are here to do. So, our default levels are higher than those you would expect in the mainstream private sector. That said, we need to manage businesses on a risk-aware basis, because we have private investors who need to be repaid. We cannot go into these things with a gung-ho attitude and we will not invest in a business that is not viable, but we take higher risks than the private sector. That is why Finance Wales was set up and that is what we continue to do.

[17] One thing that we have worked on in terms of the early-stage investment around the

universities is to try to use our investment to bring in other private investors. Nowadays, we very rarely invest in a university business on our own. We have been able to establish good networks with other UK investors and to draw them in at the first stage so that they share the risk with us. They are then available for future funding as the business grows. That is the right way to approach these types of businesses.

[18] **David Melding:** If a group of postgraduates, PhD students or MSc students comes to you with a business idea, what are the major barriers that they would face? What is your engagement? We are trying to find out where we feel a bit more could be done and perhaps we are not getting as much value as you might get in some of the best-practice areas of North America or other parts of Europe. Do you have any indicators that would be helpful to the committee regarding areas that could be strengthened? We are trying to raise the level of entrepreneurship among younger people—they are usually younger, although I suppose that they do not always have to be.

[19] **Mr Moon:** There is quite a common problem around the strength of the management teams, particularly in the university context, where you might have an academic who has a very exciting piece of technology or intellectual property. It is about how you build a management team around that to make it a viable business that has every chance of growing. It is not just about the product, and we are constantly exposed to that gap. We do our best to bring people in through our networks to bolster management teams and to give these businesses the best chance if we are to invest. That is something that could be supported through other means.

1.40 p.m.

[20] **David Melding:** When you bring these partners in, I can see how the team needs to be put in place, because the students or academics with the bright ideas will not have all the necessary skills—we have had evidence to that effect. Some witnesses have said that, in this sort of partnership approach, one of the problems is that universities tend to put an unrealistic value on intellectual property, and that that can be a bar to exploiting it. Is that your experience?

[21] **Mr Moon:** It can be, and it comes back to people who you may be dealing with who are not necessarily exposed to the business world. They may have one view on commercialisation potential, whereas somebody who has been through the process in that particular business context would have another view. I do not think that that is an obstacle, however; it tends to happen with all valuations in all contexts of our activity—people will start at one end with their view, and we or someone else will perhaps have another view, and we will end up meeting somewhere in the middle.

[22] **Gareth Jones:** I believe that Janet Ryder has a follow-up point.

[23] **Janet Ryder:** It is about the level of risk. Presumably, when you are lending money to a prospective company, you assess the return that you will likely get on it. At what level do you set that?

[24] **Mr Moon:** As an interest rate?

[25] **Janet Ryder:** Do you expect a 100 per cent return? What do you expect?

[26] **Mr Moon:** We operate on a fully commercial basis. If we lend somebody some money, we expect that money to be repaid, plus the interest on the loan.

[27] **Janet Ryder:** Over what period?

- [28] **Mr Moon:** It is usually over a period of five years.
- [29] **Janet Ryder:** So, if a new business comes to you, and you expect a 100 per cent return on the loan, you must therefore screen out a number of ideas.
- [30] **Mr Moon:** It depends on the form of the investment. If we are working with a business in its early stages, when it does not have a cash flow to service a loan, then an equity investment may be more appropriate. That would mean us purchasing part of its share capital or part of the business. That business does not have to pay us back anything annually until the business has grown and we are able to sell our share to recoup our investment.
- [31] **Janet Ryder:** Do you only invest in companies that you think will definitely succeed? Do you allow any margin for risk?
- [32] **Mr Moon:** We hope that every investment that we make will be successful. However, by its very nature, the high risk area that we work in means that a proportion will fail.
- [33] **Janet Ryder:** Have you any idea what the proportion is?
- [34] **Mr Moon:** Probably, across the funds, some 10 to 15 per cent of investments will fail. That is a broad average. With higher risk investments in technology, more will fail, but they will be offset by the one or two that will really grow and provide a return.
- [35] **Janet Ryder:** Does your organisation have a presence on university campuses? When people have an idea and think of starting a business, are they put in touch with you, or do you contact them?
- [36] **Mr Moon:** We have engagement with all the universities in Wales as we co-fund—I cannot remember their titles, but they are almost like technology transfer agents with HEFCW and the universities themselves. It is their job to act as a focal point in the enterprise agenda in universities, and they have a direct line to us. They are our eyes and ears on the ground in the universities.
- [37] **Janet Ryder:** So, every university that is going to do any kind of research has one of these officers, does it?
- [38] **Mr Moon:** Some of them share one, but we have an agreement with all 12 institutions.
- [39] **Janet Ryder:** Will they bring the businesses to you?
- [40] **Mr Moon:** Yes.
- [41] **Gareth Jones:** The crux of the matter as far as we are concerned is the establishment of those links. You mentioned that they could be improved and strengthened. Whereas we respect the fact that your organisation is commercially independent, it is nevertheless a subsidiary of the Welsh Assembly Government. To what extent does the Government provide guidance and direction in this field? Do you feel that that is strong enough to enable it to forge these links with higher education institutions? In what ways, if we act together, can we improve this very important linkage?
- [42] **Mr Moon:** Are you referring to the Assembly Government's role in referring higher education institutions—

[43] **Gareth Jones:** I am not quite sure how it works; that is why I am asking you. It is very much in the interests of the Welsh Assembly Government in terms of economic development. That is what this inquiry is all about.

[44] **Mr Moon:** While we operate on a commercially independent basis, we are very well integrated with Welsh Assembly Government activity. We have very close relationships with the Technium networks and we have people in all of the Welsh universities who work very closely with our technology transfer team in Finance Wales. So, operationally, there is a very close working relationship with the relevant aspects of the Assembly Government.

[45] **Gareth Jones:** Are there any further questions?

[46] **Janet Ryder:** Something that came across strongly when we visited universities in America was that they allow failure, and they see failure as a very positive thing that young people can learn from—especially if you are teaching entrepreneurship. Where can we see examples of that happening in the business support that is offered to start-up business or entrepreneurs through higher education colleges in Wales?

[47] **Mr Moon:** Are you talking about the role of Finance Wales?

[48] **Janet Ryder:** Anywhere; if not through you, where could we look to see an example of where we are positively looking at business failure that will not be seen as an outright failure but as a very strong learning experience? If you take the American examples that we saw as a base, many of the young people there may have failed the first time around, but they had learnt tremendous lessons by the second time around. So, where can we find examples of support being given to young people to allow them that first chance, so that it will not completely condemn them? You said that you were looking to invest in companies that would give you 100 per cent return within the first five years in business, so that does not allow for any failure. There must be businesses that do not go there. Where we can look to see what kind of support is being offered to those young people?

[49] **Mr Moon:** There are a host of other areas of support in the Assembly Government—there are smart grants that operate for technology commercialisation; those businesses might be less developed, so they will be businesses where we may offer a commercial investment. However, a proportion of them may not go on to secure private investment, and they may fall into the category that you referred to. In terms of inspiration, there are a number of case studies that we can offer of successful businesses that have grown from very humble beginnings within Welsh universities. For example, a business called Enfis Ltd springs to mind, from Swansea. It started off with a £20,000 investment from us, which is a very small amount. Over a period of six years, that business has grown and grown, and last year it floated to become a listed company. In Wales, there are only 27 or so listed companies, so for a business like that to grow from such small origins is a very useful tool in inspiring academics to grow their businesses.

[50] **Gareth Jones:** If you would be prepared to share information of these case studies where there has prominent success that might inform us in terms of our recommendations, we would be grateful.

[51] **Mr Moon:** Yes, that would be no problem.

[52] **Janet Ryder:** Conversely, can you tell us how many people have applied a second or third time around who were unsuccessful the first time around but who have subsequently succeeded with different applications? Or, do people only come to you once?

[53] **Mr Moon:** On applying to Finance Wales, I do not have the information to hand as to the proportion of people who have applied and been turned down, and applied again.

[54] **Janet Ryder:** Would the information be available? I would be interested to see what we are doing to encourage young people. I know that you must be very careful with public money, but we have a great deal to learn from the type of support that is offered in America, and the culture there.

1.50 p.m.

[55] **Mr Moon:** To reinforce Finance Wales's role, we just provide investment, so there is a whole other element of the Assembly Government's wider agenda that exists to provide the seeding of ideas and the growth of businesses, from academics upwards. We come in at a specific time and operate in a niche part of this process. So, I might not necessarily be the best person to answer that question.

[56] **David Melding:** You referred earlier to European programmes. How much of your activity is restricted to the areas in receipt of Objective 1 funding, as was? Cardiff, for example, is outside and yet is our largest university and is among the top 100 in the world. Are you still able to engage at a level that meets the likely demand from an institution like that, which will obviously be producing very sparky young graduates every year with, we hope, more business and product ideas? I would just like to know how it works in terms of the funding streams that you get and how restricted they end up being in terms of your work.

[57] **Mr Moon:** While, historically, that might have been a problem for us and we did not have full coverage of Wales, some of the funds that we have now have no European money in them and are therefore free to invest in any part of Wales. So, we have full geographical coverage. We will be able to invest the new funds that we are raising under the JEREMIE programme anywhere in Wales so that there is full coverage. With Cardiff University, we have an agreement with Biofusion, which has signed a 10-year agreement with Cardiff to have first call on all of Cardiff's intellectual property. It is a big player in terms of investment in the technology emerging from Cardiff University. We have worked with it on a number of deals.

[58] **David Melding:** You said, in relation to the European funds, that this does not necessarily relate directly to the commercialisation of knowledge, but is about small and medium-sized enterprises in general. I think that you said that the funds were oversubscribed within a year—

[59] **Mr Moon:** We invested in a six-year fund over a five-year period.

[60] **David Melding:** What is the unmet demand? I know that we have talked a little about risk, but we all understand that risk has to be managed and you cannot lend willy-nilly, just on the off-chance. However, your lending criteria are different from those of a high street bank, or whatever. Is there a high level of demand for realistic projects that you have just not been able to meet because of a lack of funding?

[61] **Mr Moon:** We do not suffer from a lack of funding, because we are able to have good visibility on our fund, which was invested ahead of target. We knew that that would happen a few years before, based on the investment rate. So, we were able to raise an additional fund of £30 million to plug that gap through to the next European programme. At no point have we been unable to support viable businesses where they are presented to us.

[62] **Gareth Jones:** Thank you, Nick. Once again, for clarification, your response suggests that you are reasonably satisfied in terms of the remit that Finance Wales is currently

working to, but you are working to capacity in that respect. You have established contact with all higher education institutions, but you are very much aware that there is a risk element that could be taken outside the scope of Finance Wales by the knowledge exploitation fund and that type of financing, I should think. I would like to press you further on this. Is there any further scope within Finance Wales to speed up the process of economic development? This is what we are after. We want to make that link. Have you any ideas that you might share with us? In your capacity within Finance Wales, you may be aware of certain areas that can be strengthened and can move the economy along. Finance Wales is an instrument to enable that to happen.

[63] **Mr Moon:** The new fund that I mentioned—the £150 million fund—is based upon extensive market research in Wales that was undertaken by the European investment fund. One of the conclusions of that report was that there needed to be a dedicated fund to support technology transfer activities in Wales. At the moment, we will invest in such businesses through the mainstream funds that we have under management. However, under the new proposal, there will be a separate £10 million-worth fund, dedicated purely to supporting technology transfer across Wales. I would suspect that the majority of that would focus on deals that emerge from Wales's university sector.

[64] **Gareth Jones:** Do you have any questions, Huw or Sandy? I see that you do not. The Federation of Small Businesses told the committee that higher education institutions need a better understanding of the realities faced by businesses. Too often, FSB members report problems with academics who often do not appreciate tight commercial deadlines. The federation was looking for some kind of improved intermediary arrangement. Can Finance Wales act in that role, to enable that better understanding and a better link?

[65] **Mr Moon:** We would agree that we face the same challenges sometimes when dealing with academics; they might not want to be a businessperson, per se, so they are not necessarily the best person to lead the transition from technology to a growing business. So, we also face that challenge, and, informally, we do as much as we can to try to source in people through our networks to build the correct management team around any particular technology that we are looking to work with.

[66] **Gareth Jones:** Finally, I take it that this is about entrepreneurship as well. Have you any views on how that could be presented in our institutions, or improved on, from your experience?

[67] **Mr Moon:** I can speak from personal experience. I undertook an MBA in Imperial College, and a key part of that course was a stand-alone unit, in which you were assigned to work with an academic who had a latent piece of intellectual property or technology, and colleagues and I had to build a business around that technology. Most of those businesses would not get anywhere, but some of them have gone on to be successful, and people have stayed with them. As I understand it, that approach is not largely used in Welsh universities—there does not seem to be the connection between the business school of the faculty and the IP-rich areas of the university. So, my personal view is that more should be done to strengthen that link.

[68] **Gareth Jones:** There are no further questions, so, on behalf of committee members, I thank you very much, Nick, and wish you all the best with Finance Wales.

[69] Symudwn ymlaen at ail ran y sesiwn graffu, ac estyn croeso cynnes i'r Athro Nicholas Topley, yr Is-ddeon (Gweithrediadau Ymchwil) a Chadeirydd Gwasanaethau Biotechnoleg Canolog Ysgol We will move on to the second part of this scrutiny session, and extend a warm welcome to Professor Nicholas Topley, who is the Sub-dean (Research Operations) and Chair of the Central Biotechnology Services at the

Feddygaeth Prifysgol Caerdydd. Diolch am eich tystiolaeth ysgrifenedig. Yr ydym wedi cael cyfle i'w darllen, ac yr oedd yn ddefnyddiol iawn. A fuasech mor garedig â chyflwyno prif bwyntiau eich papur i ni, mewn tua pum neu 10 munud, ac wedyn cawn gyfle i ofyn cwestiynau i chi?

Cardiff University School of Medicine. Thank you for your written evidence. We have had an opportunity to read it, and it was very useful. Would you be so kind as to present the main points in your paper, in about five or 10 minutes, and we will then have an opportunity to ask you questions?

[70] **Professor Topley:** Diolch yn fawr. I will speak in English, primarily because I come from an English family, although I was educated in Welsh, so it is slightly easier for me.

[71] When I was asked to do this, a lot of thinking was required about giving you something different to what you had probably heard from Cardiff University in its submission. Having had some internal discussions, I wanted to give you a brief idea of where the School of Medicine is, post merger. We merged with Cardiff University in 2004, and since then we have gone through a significant restructuring process, designed to make us a leaner and meaner machine. We have used that opportunity to strengthen particular areas, and to be far more strategic in our planning, particularly in relation to sustainability.

2.00 p.m.

[72] In the current economic climate and particularly in the context of full economic costing or full cost recovery, we are very much minded of our reliance on our grant income. One of the documents points out the status of Cardiff University and the status of the School of Medicine within that. We are the largest school and have access to more funds, and so we should be the most successful, but it is gratifying to see that we are maintaining that and that the trajectory is upwards. In fact, the income figures in the document are based on spending and not awards, which are more than twice as much. Last year was our bumper year where we had £46 million in grant income. We are minded of the fact that we need to sustain that trajectory upwards, and it is becoming more difficult in the economic climate where quality-related research funding is not really increasing. There will probably be a ceiling on how much grant income you can obtain, and there are necessarily redundancies within the university system, particularly in the core facilities, for example, which are not used 100 per cent of the time by academics. Those facilities together with the unique scientific and clinical-trial expertise and so on that we have within the medical school give us the opportunity to drive much greater engagement with the business sector in all its guises.

[73] Historically, 20 years ago, the School of Medicine was primarily a teaching medical school but, over the succeeding 10 to 15 years, it has become a research powerhouse. So, the research assessment exercise in 2001 was really the first manifestation of where we were with the strength of our science in Cardiff—in the University of Wales College of Medicine at that time. We have come a long way since then, because we were restructured to focus on the areas in which we can be strong and internationally competitive. Over the next three to five years, strategically and operationally—although my particular remit is operations—we have to be in the position of not only sustaining the quality of our research, treatments and clinical practice, but also of addressing the whole issue of sustainability. If there is to be a shortfall in funding the totality of what we do within Cardiff University, including facilities and expertise, we need to be more creative about increasing our income from other sources.

[74] **Gareth Jones:** Diolch yn fawr. **Gareth Jones:** Thank you very much. We Trown yn awr at yr Aelodau. A oes unrhyw wuestiynau? will now turn to Members. Are there any questions?

[75] **David Melding:** I put this question to the representatives of Cardiff University and so it is not just for you. Now that the School of Medicine is part of the university, which brings

formidable advantages, and given its research profile, which you referred to, and the strong science base at the Welsh School of Pharmacy, why does Cardiff and the surrounding area have next to no pharmaceutical sector? Why do we not see more spin-offs? Am I just being hopelessly naive that this would lead to a larger commercial presence, high-value jobs and a great benefit for the economy?

[76] **Professor Topley:** Simply put, we have not had a completely effective way of engaging with the companies and the small amount of pharmaceuticals that there is in south Wales. For example, GE Healthcare—Amersham plc as was—is situated less than a mile away from the School of Medicine, and I can say, hand on heart, that our interaction with it is absolutely minimal, because we have not fully developed the appropriate channels and mechanism for interacting with it. Traditionally, research in medical schools—and I will talk about this in the context of both the university and the medical school—is done by saying to companies, ‘We have plenty of ideas, so we do not need your outside ideas; we just need your money’. The interaction has very much been that we go to them and say, ‘We have this fantastic thing, and you should invest in it’.

[77] As far as I am concerned—and I think that this is a general feeling now—that is not the way forward, because we need to show our wares. We need to say, ‘We do all of these things: we have core facilities, clinical expertise, including clinical-trial, pharmacy and bioscience expertise, and all of these things. This is our entirety; this is our portfolio. What have you got? What do you do?’. I think that GE Healthcare is a good example. I do not think that we know precisely what the company is doing or what many of the businesses in south Wales are doing, or what their needs are. We need to turn that thinking around and say, ‘Well, it is not about what we need; we need to serve what these companies need’. The ‘Lambert Review of Business-University Collaboration’ very clearly says that we need to respond to businesses, and not the other way around. Our thinking has always been, ‘We are in the ivory tower and businesses should just come to us and give us the money to do the things that we think are interesting’. In reality, those things may be of no interest to business at all. We need that level of engagement, not only locally, but nationally. If Cardiff University is to sell itself as an internationally competitive research entity, we should be able to go to SKB or to Pfizer and say, ‘Look, this is what we do; is it of interest to you?’. I do not think that we can go to them and say, ‘We are great at designing drugs for X, so surely you must be interested in that’. We have tried that route and it simply does not work.

[78] **Gareth Jones:** Is that what you mean by ‘translational research’ in the paper? Is that the continuity involved in going into commercialisation, so that you are well placed to take things further, in contrast with the previous situation? Am I right in interpreting it like that?

[79] **Professor Topley:** I think so. The word ‘translational’ is very much over-used now and has meant everything from the bench to the bedside approach. I think that we are now in a better position to identify areas that can be more rapidly translated.

[80] You will be aware that the current Medical Research Council initiatives are designed to address bottlenecks in the system, and there are lots of bottlenecks. For example, if we want to have a protein manufactured for use in pre-clinical testing or up to phase 1, the likelihood of it being done in Wales is virtually nil and the likelihood of it being done in the rest of the UK is slight; it is much more likely to be done in Scandinavia or the Netherlands. So, you have to have all these things in place, and they are not necessarily in place. I think that we are able to make a contribution now, including everything from the basic research idea—high-quality science—to providing services as an add-on. So, we can take basic science and we can go through all the pathways. We can do the clinical testing in Cardiff. We cannot generate the proteins, the peptides or the drugs in Cardiff as yet, but that is an aspiration of the Bristol-Cardiff hub, where there is an economy of scale in doing that. This is about being toolled up to be able to respond appropriately to whatever we are asked to do by outside

contractors, as well as continuing to drive the research agenda. We have a balance to strike. We have to do world-class research—we have to maintain that status—but that will never use 100 per cent of our resources; if it did, we would expand again. I do not think that that is realistic. If you look at research across the whole medical sector, you see that we simply cannot be experts in absolutely everything.

[81] **Janet Ryder:** That was very interesting. The examples that we have seen of universities working successfully with business have involved them opening themselves up to business and businesses, first of all in their locality, have got to know them. As they have got to know them, they have then got to know what they can go to ask them to do. As you said, the School of Medicine has a very strong teaching mission, which has expanded to Swansea and Bangor. Is the research following that? What links are you making and how are you working with Swansea and Bangor to develop the research?

2.10 p.m.

[82] **Professor Topley:** There are some initiatives in particular areas that are across the whole of the principality, and infection immunity is one of them. So, there are already links, but you cannot always drive those links if the expertise does not exist in the other places. For example, if there is no focus on infection immunity in Aberystwyth University, it is difficult to drive a research link with it. However, we are absolutely not inward facing; we have existing strong links with Swansea University, for example, such as the healing foundation initiative. There are fewer links with Bangor, although there are certainly links in terms of more clinically applied projects across the whole of Wales, but, at the moment, there are fewer links with what I would call basic research projects.

[83] In the neurosciences area, more cross-Wales projects are being planned, but that is less the case in some of the other areas, such as cancer. Primary care is one area where there are strong links between Swansea and Cardiff, but, geographically, further north, there are fewer links because with regard to the drive and direction of research in Bangor and Aberystwyth, they are not working in the same fields as us. Collaboration usually works best when you have two equal partners who have agreed to work together; it rarely works when you say, 'You should be doing this', because you have no way of resourcing it.

[84] **Janet Ryder:** So, the links between the Cardiff medical school, Bangor and Swansea are purely teaching links?

[85] **Professor Topley:** They are not purely teaching. We have examples of ongoing research projects, and one that springs to mind in terms of Swansea University is that we are using the microbiology expertise in the Institute of Life Science to complement what we are doing with our microbiology expertise in Cardiff in terms of the burns initiative. So, there is a strong academic link there. The links with Aberystwyth and Bangor are significantly weaker, but that is not because we are precluding such links. The brief of all the interdisciplinary research groups in the medical school is cross-Wales, so if anyone wants to come to any of our annual meetings, they are more than welcome to do so; certainly, in infection immunity, which is my area, we extend invitations to all of our meetings to Swansea, Aberystwyth and Bangor. However, it is difficult to have collaboration where the two sides are not equal to each other. If you have a single individual doing a single thing in Aberystwyth, and a huge group of people in Cardiff, the fit does not always work, unfortunately.

[86] **Janet Ryder:** So, students either follow a purely professional medical degree, which will mean that they will end up as doctors or whatever, or they go into associated medical courses, which are more research-based, and these courses are staying in Cardiff and not reaching out to Bangor and Swansea, where the students are in their third or fourth years. Is that the case?

[87] **Professor Topley:** It is a bit of both. As the medical curriculum develops, there is more need and desire to have medical students and students in the other allied professions who have a strong grounding in research methodology so that they become translationally qualified. At the moment, when the major research strength in the principality is in Cardiff University and the major medical research strength is in the medical school, it is inevitable that the majority of those individuals will want to do their basic research in Cardiff.

[88] Until that is equalised across the other universities, particularly Swansea, if we want to train people who understand not only the medicine that they will end up practising but the research that underpins it, so that they can become truly translational—which means being able to see a patient and ask a scientific question and then go to the laboratory and say, ‘This patient does this, therefore why do we not look at this?’—we will have to do it in Cardiff. We have not, traditionally, trained medical students to do that but as we have more inter-collated systems and more inter-collated BScs within the system—or MRes degrees as they will become—we will be in a position to do that. It would be beneficial if that happened across the principality rather than just in Cardiff, because, although Cardiff is a wonderful place, not everybody wants to spend all their time here.

[89] **Huw Lewis:** You said that we cannot be experts in everything. Has the medical school looked at that profile of research or subject areas that you are going to take forward and lead with? I know that some universities, for instance, have gone out there and identified what they perceive might be a growth area, not just in terms of the inherent worth of the research but because it would be economically important for their sub-region in future if they could lead on that area. I am thinking particularly of Dundee University, where people have gone into scanning technology in a big way and have enormously ambitious plans for miniaturising scanners and so on. Whether or not that will come to pass, they have taken the plunge and have decided that that is their niche. There seems to be a bit of everything in Cardiff’s portfolio, except perhaps on the medical physics side of things, which is not coming through, at least from what I can see here. Are you waiting for the idea to spark so that there will be organic growth of a particular section, or has there not been any thought given to emphasising a specific area of work in Cardiff?

[90] **Professor Topley:** I would like to think that some thought has been put into it. Historically, the organisation of the medical school has been based on a divisional structure, with many of the departments, all of the ‘-ologies’, for example, working separately. In fact, there has been a huge focusing. You may say that we have many research themes, compared with, say, Edinburgh, which we would aspire to be like in a few years’ time in terms of size. Edinburgh has four main themes, and we have six at present. We have a duty of care, in a sense. We have come from having that wider structure to having a much more focused structure over the past three years. We have three topline areas: cancer, neuroscience and mental health, and infection and immunity. Closely following behind those is what is now known as clinical epidemiology, which, primarily, is to do with primary care. So, we have three very strong science-based areas and one community-based area. We then have cardiovascular and matrix, and repair and generation, which, as everyone accepts, do not have the same critical mass as the others. As we move forward and decide on our priorities, we are strengthening the areas that deserve to be strengthened, based on their performance.

[91] **Huw Lewis:** So, it is an evolving situation?

[92] **Professor Topley:** Absolutely. In 2004, post merger, interdisciplinary research groups did not exist; we were working in a very rigorous departmental structure, which probably meant that nephrology did not really talk to endocrinology or to rheumatology, even though they were all in the department of medicine. So, we have made huge strides and there is no question that that has driven our success in terms of organisation. We work much more

closely together across the departments, which still exist, but the IRGs completely cut across those, and our research income has improved dramatically, year on year, over the past few years. However, I agree with you entirely. The difficulty with the Dundee model, as far as we are concerned, is that somebody has to find the money to support the expansion in that particular area.

2.20 p.m.

[93] In making the strategic decision, we looked across the whole of the UK at all universities of similar sizes or larger—so we went outside the golden triangle—with which we would aspire to compete at some point in future. For example, there are the Manchesters, DundeEs and Birminghams—and Bristol to some extent. We looked at the themes that they were focusing on, but internally we reviewed what we were good at and, inevitably, these cycles are unfortunately driven by research assessment exercises because you cannot afford to gamble when your quality-related research funding is potentially at stake. So, within a cycle, now would be a good time to make an investment because we know that although matrix will be more of a continuous process when they finally decide which system they will adopt, it is better to do it now than it would have been in 2007 or 2006 immediately post merger when we knew that we would have to be successful in research assessment exercises in 2008.

[94] In fact, we significantly strengthened at least five of those six areas with the strategic recruitment of individuals to complement ongoing research teams that were already internationally competitive. So, we have made a significant and strategic sweep across the whole of our research portfolio and have clearly identified areas. The success of that is judged by, for example, the aspiration of a research group. The first aspiration is to retain critical mass and become internationally competitive. The next aspiration is to become a centre and this year, cancer will certainly become a centre—the CRUK centre—and neuroscience and mental health is being invited by the MRC Translational Medicines Initiative and the application has just been submitted for centre status. The aspiration of infection and immunity is not far behind that. So, in terms of that growth and cycle, we are reasonably well on track.

[95] You have to have a broad portfolio because it is difficult to pluck the idea out of the air. You have your main themes and a few others that are bubbling under. For example, we are strong on imaging in Cardiff, but it is disparate at the moment. So, we have the Cardiff University Brain Research Imaging Centre, CUBRIC; the experimental MRI centre, EMRIC; fMRI or functional magnetic resonance imaging and we have PET, positron emission tomography. They are currently serving their own interests, but we could be unbelievably competitive in terms of imaging in future because nowhere on this side of the country has our potential in those terms. However, it requires a huge strategic investment to go out and do that because, to buy critical mass, you are talking about 10 to 15 positions. So, you are talking about an investment for each professor of several million pounds.

[96] **Huw Lewis:** On imaging, it would be hard to imagine a future without it.

[97] **Professor Topley:** Yes, there is no question about that. On the Bristol and Cardiff bid, one of the complementarities is that our imaging system is so far in advance of theirs but that they have the better defined patient cohorts, although with the closure of the MRC epidemiology unit, the Barry and Caerphilly cohorts are being run from Bristol. That is one of those unfortunate things. However, a strength of the bid is that they have fantastic cohorts of patients who could come to Cardiff to be imaged, particularly in neuroscience and mental health, but also in other areas. That was part of the discussion. Once PET is online—we will have pre-clinical PET next year and clinical PET within 18 months—we will be in a very strong competitive situation. Certainly, having already made the investment, we will not be walking away from that without giving it a seriously good go.

[98] **Gareth Jones:** I would like to pursue the commercialisation aspect. Having listened with great interest to the progress being made through research and the expertise in the school, am I right to assume that Central Biotechnology Services is an interface? The ideas and research come from within, but the needs are outside, as are the ideas sometimes. Am I right in thinking that the CBS will receive those ideas from businesses on the outside so that there is then a mix that is of mutual benefit to take things forward in a commercial field, which would make a contribution to economic development? If that is the case, and if I am reading it correctly, it is important for us to identify that model. Where does entrepreneurship lie within that model for future development, which will enhance the economic development that we are seeking? I know that this is in the context of the medical school, but is it a model that can be applied in a different context?

[99] **Professor Topley:** Absolutely. When we created the CBS around five years ago, it was simply to serve the needs of the academic community in terms of economies of scale, with an internal sustainability remit. At that time, it was not strongly thought out, and over the past three years we have done a significant degree of rationalisation and targeted the technology, because we cannot cover everything and we have not accommodated everything. For example, you might ask, ‘Well, why is the Experimental MRI Centre or the Cardiff University Brain and Repair Imaging Centre not within the CBS?’, or ‘Why are biomedical services not within the CBS?’. Eventually they will be, because as Cardiff University and the medical school completely integrate, they see the CBS as a model of best practice in terms of sustainability.

[100] We have taken away from the principal investigators the problem of replacing equipment and the bigger problem of paying service contracts on that equipment, which, year on year, is a huge amount of money within our budget. So, the idea is that we have a series of cutting-edge core technologies and expertise in those technologies. At the same time as we have developed the actual nuts and bolts, we have trained a cadre of people whom we call technologists. One of the problems in academia is that we train many people to PhD level but it is a very sharp pyramid. Not everyone can become a PI and not everyone wants to spend his or her winter evenings writing for grants. Some do not want to do that and some are not capable of doing that, but that does not mean that we should just throw them on the scrapheap. So, some of those individuals choose to become technologists and experts on a particular platform. We have harnessed those two things to create a service system within the university that takes a lot of the drudgery and pain away from the PIs so that they procure our services, and we provide them with a managed service and allow them to use our machines, although we maintain them. We have persuaded the charities to fund that. Even though they are not funding the full economic costs, they are funding an access charge within the economic model, so we are getting slightly more from the charities in that respect than we would if they were presuming that it was the full economic costs.

[101] The next stage is that, within those technologies, we have spare capacity. At the moment, the drive for those technologies, to take your point, has come from an internal research point of view—we need FACS or Flow or this or that to drive a particular research area. However, those same technologies are hugely applicable to the business sector. The most obvious example is that of an SME or small business that does not have the financial wherewithal to buy the kit, because some of it can cost £1 million, £2 million or £2.5 million a throw. So, the proteomics set-up has cost us £3 million in total, but it is the best example of how we have interacted with a business to grow it for us and the academic sector. That totally underpins everything that it does.

2.30 p.m.

[102] So, Ovasort would not exist and would not be doing business in Wales were it not for the CBS, because we provide it with the core technology, which it cannot get anywhere

else—it certainly cannot afford to buy it itself and it cannot persuade you as the Assembly to fund it. We also provide it with the intellectual expertise to help it with its experimental design. So, there is that synergy between us. That works on an academic level, because we do not have the constraints of GLP. In order to go to the higher level, CBS markets itself, some might say very aggressively, and we even market ourselves internally—we have customers in the School of Medicine and in the rest of Cardiff University paying the same, because it is within the university. However, we still have to market ourselves, and so we go to Buyer Wales and these engagement events, and we have huge numbers of hits with small businesses, large businesses and with pharmaceutical companies, and the first question that they always ask us is, ‘Are you GLP accredited?’. We have aspirations to get to that level, but that will cost money. At the moment, we are making that judgment step by step and, probably through KTC, we will apply to go down that process, because we have a sustainable business model. We are on the cusp of that engagement with a lot of industry and small businesses, but we have not put our foot down on the accelerator because something is missing from the equation, and that missing something is GLP or GCLP-accredited use of facilities. For academic purposes, primarily, we do not need that. Although we run those services in a very businesslike manner, we do not have the ISO certificate, which businesses would dearly love to have if we started to run samples of diagnostic value or regulatory value. If we decide to go down that route, which I think is the way to go, then we will put our foot on the gas, because there is a huge amount of business out there and huge synergistic possibilities in providing business with technology and expertise, in that a company that works in cancer could come to us and we could say, Yes, we can do your sequencing, your flow cytometry and your proteomics, but as well as that, we can introduce you to this guy, the world expert in colorectal cancer, and this other guy, the world expert in cancer trials’. That would mean joined-up thinking between all those things. That is the aspiration.

[103] The aspiration from the business point of view is for them to come to us and say, ‘Well, wouldn’t it be great if you had such-and-such a technology?’, or, ‘Can you use your existing technology to do something different?’, which would require development, but which would provide benefit for both.

[104] **Gareth Jones:** That is the trigger that we are looking for.

[105] **Professor Topley:** Absolutely. Well, there are two things, one of which is to decide how regulated we become in our operation—and we are a fair way down that road, as we run it completely like a business in the medical school. It is self-sustaining. We get core support from our administration, and the rest of the business is completely sustainable within a full economic cost operation. The next stage is to decide whether we properly commercialise this and make the investment to get to GLP level and then invest to maintain that through quality control, so that we can engage with external business more and provide it with an accredited service. That is very much the aspiration because, at the moment, we have a lot of external customers at CBS, but because it is research driven, they do not need regulatory-level output.

[106] **Gareth Jones:** The GLP is, presumably, something to do with licensing, is it?

[107] **Professor Topley:** It stands for good laboratory practice, or there is GCLP and GCP, which stand for good clinical laboratory practice and good clinical practice. They are ISO accreditations, in fact. Simply put, it means external accreditation that you can measure something 100 times and get the same results.

[108] **Gareth Jones:** We listened very carefully, and I think that we are on the verge of fully understanding what it might take to make a real, significant change for your school, which could also have economic dividends.

[109] **Professor Topley:** In our high-level discussions, we are an academic institution that

wants to be a business but has a fear of the dark side. At the moment, there is a 50:50 split between those who think that we should and those who think that we are taking a risk if we do. I am certainly on the 'should' side, but I am not the boss of the institution so I cannot decide, ultimately.

[110] **Gareth Jones:** We are ideally looking for a recommendation to the Welsh Assembly Government that would enable this to happen somehow or another. It may be difficult; I do not know.

[111] **Alun Cairns:** Thank you; that was fascinating. To take you back to just after the question that the Chair raised about the commercialisation and so on, and how you run yourself as a business and the expertise that you draw in from outside for those commercial reasons, we have heard evidence from a range of sources for this review, and one of the most powerful pieces of evidence was from Simon Gibson, who set up a task and finish group for the former Minister for enterprise on commercialisation, which talked about establishing panels of experts—with world-class individuals rather than local business people, although local business people may also be world-class experts. There was a view that there was an awful lot of expertise within universities—and medicine well may be by the dotted line—that could be commercialised with the right type of approach, perhaps because the group thinks that it might be going on with those working on it, but there is another application that may well be fantastically profitable, and so on. That was powerful evidence in terms of the examples that they talked about and the evidence that they presented. If those panels were to be set up, or if there was encouragement to do that, would that cross with the existing operations that you are doing to commercialise—would it hinder or would it support?

[112] **Professor Topley:** No, it would be complementary. We are talking about a system that does everything from contract research to consultancy to clinical trials, and within those three areas of the third way we would be looking to try to exploit all of them, particularly if we could do it in a joined-up way. They could be developed in an exclusive way, so what that report is suggesting is that there are huge opportunities and a huge untapped resource of intellectual expertise and process expertise—you talk about engineering, or whatever—within the university sector, but that it is not co-ordinated in any way. The School of Medicine is a good place to start the discussion about that, because, historically, you have all of these different specialties, and if you have a kidney problem you do not go to a rheumatologist. That is almost a microcosm of the amount of communication between centres—they have a patient and they pass it on to another one. It is the same in terms of their interaction with their own pet industrial sector, as it were, because they will be interacting with people who provide drugs in that area. So, there has not been a lot of joined-up thinking about the fact that there is much complementary expertise, and that it should all be managed under one portfolio, so that there is one point of entry; if someone comes in and says, 'I want to work with this particular type of cancer, but I have this problem', someone can then direct them.

[113] It goes back to a point that I made earlier about the mechanism that we have in terms of interaction with companies. It has never been done well from the medical side, because it has been specialty-led in a very blinkered way—nephrologists may not be interested in other areas unless it relates to the kidney. We now have an opportunity, because we can take a top-down approach, to say that we have expertise in all of these areas, and particularly strong expertise in the areas in which we are strong, because we have not only driven the basic research in those areas, but we have also driven the whole translational agenda in those areas. Cancer is probably the best example at the moment. We have hugely strong basic science in cancer, we have hugely strong clinical trials in cancer, we have a very strong therapy-based group and we have the Wales Cancer Bank. So, you have expertise from the bench to the bedside.

2.40 p.m.

[114] If someone came in and said, 'I need this particular part of the pathway', which may be drug discovery, therapy, or clinical trial, we could provide it. I agree with you entirely that it needs a co-ordinated approach, where the expertise is under one umbrella rather than being disparate. I suppose that you will quote me on this, but I will say it nevertheless: it all comes down to a question of how consultancy is managed in universities. At the moment, there are some very loose guidelines for individuals who work in the university sector, which are purely guidelines. We do not sell our consultancy services in a joined-up way at the moment. It is a free-for-all, with individuals approaching individuals. They may or may not say, 'I cannot do it; he can do it', but the likelihood is that that is where the trail goes cold.

[115] **Alun Cairns:** Are you suggesting that those guidelines are restrictive rather than allowing the free flow of information, protecting the interests of the organisation?

[116] **Professor Topley:** I would say they should be both, because it is hugely beneficial to the institution if we do more consultancy work. It should be actively encouraged rather than seen as something that we do not talk about. As part of being an expert, someone will approach you to ask for your opinion; you may do that for free, or you may make them pay for it.

[117] **Alun Cairns:** Are we different from England in that regard?

[118] **Professor Topley:** No, it is the same free-for-all in all universities. There are guidelines on consultancy, and each university interprets them as it sees fit. Different models are used by various universities.

[119] **Alun Cairns:** If we encourage the liberation of this area, could it lead to attracting greater expertise to Cardiff, because people would know that they were free to do that consultancy?

[120] **Professor Topley:** Simply put—and I like to think that I am straightforward—would you prefer to give 40 per cent of your consultancy income to the Inland Revenue, or would you prefer to give 15 per cent of it to your institution, whose badge you used to get the work? Everyone who does consultancy work in the university or the medical school is using the badge. You are the expert. I am a professor at Cardiff University. My business card carries the badge of the university. Everyone who does consultancy while using that badge or logo should be paying money to the university. That may not be everyone's opinion. Many individuals think that it cannot be regulated, but I think that you can incentivise it. This is partly deregulation, but the institution should benefit from something that it helped to create.

[121] **Alun Cairns:** We went to North America, and, in some of the universities in and around Boston, there was a policy that the lecturers were employed for only four days because, on the fifth day, they were expected to make up their income through consultancy. That gave them the chance to earn an awful lot of money, which meant that they would stay with those universities. Is that the sort of thing that you are talking about?

[122] **Professor Topley:** That is one model. What is attractive is the idea of central co-ordination. Virtually everyone doing consultancy work has an accountant, because the Inland Revenue wants its 40 per cent—and everyone doing it is a high earner. So, there is a huge economy of scale if you organise this centrally and create an umbrella organisation that can promote it and incentivise it. I do consultancy work, and I have always said that there is an opportunity, within institutions, to bring in more revenue but also to incentivise at the same time, so that it is not something that people do but do not talk about. I have a lot of experience in industry, and so I guarantee that, if you do it as an individual, you will spend a lot of time protecting your source of income and therefore not disseminating that to other people who

might also benefit from it. That is based on reality; it is not just what I think. The reality is that, if you are working with a company, and it is paying you whatever the rate is, you have a vested interest in protecting that relationship. However, if that relationship is with an umbrella body, which gives the protection, you have less fear because you could be working for several companies. There is always a fear with those relationships that you need to learn how to work the system, but I cannot see why we do not have a more open system that benefits both the individual—otherwise, no-one would do it—and the institution that they work for and have been educated by, in most cases.

[123] **Gareth Jones:** Ar y nodyn hwnnw, diolchaf i chi, ar ran aelodau'r pwyllgor, am eich amser ac am ymuno â ni. Diolch o galon i chi am rannu eich arbenigedd a'ch syniadau gyda ni hefyd. Hyderaf fy mod yn siarad ar ran yr holl Aelodau drwy ddweud y bu'r sesiwn hon yn hynod ddifyr. Bydd yr hyn yr ydym wedi'i ddysgu gennych yn bwysig wrth inni drafod ymhellach, a gobeithio y medrwn ei gynnwys yn yr adroddiad sydd i ddod. Yr ydym yn ddiolchgar i chi, ac yr ydym yn dymuno'r gorau i chi ac i'r Ysgol Feddygaeth yn y gwaith da yr ydych yn ymgymryd ag ef. Dymunwn bob llwyddiant ichi i'r dyfodol. Yr wyf yn siŵr y bydd y syniadau yr ydych wedi'u rhannu â ni yn werthfawr iawn wrth inni symud ymlaen at roi pethau ar bapur. Gobeithiaf y bydd pob argymhelliad yn creu mwy o lwyddiant yn y maes hwn o ddatblygu'r economi. Gyda'r geiriau hynny o ddiolch, yr wyf yn dymuno'r gorau i chi.

Gareth Jones: On that final note, I thank you, on behalf of committee members, for your time and for joining us. Thank you very much for sharing your expertise and your ideas with us. I am sure that I speak on behalf of all Members when I say that this session has been exceptionally interesting. What we have learned from you will be fed into our further deliberations, and we hope to be able to include it in the forthcoming report. We are grateful to you, and we wish you and the School of Medicine all the best in the good work that you are undertaking. We wish you every success for the future. I am sure that the ideas that you have shared with us will be extremely valuable to us as we progress toward putting our ideas on paper. We hope that every recommendation will generate more success in this field of developing the economy. With those words of thanks, I wish you all the best.

[124] **Professor Topley:** Thank you very much for your time. Diolch yn fawr.

[125] **Gareth Jones:** Symudwn ymlaen yn awr at drydedd rhan y sesiwn graffu, sef y rhan olaf. Yr wyf yn falch iawn o groesawu Andy Klom, pennaeth swyddfa Comisiwn Ewrop yng Nghymru. Andy, gofynnaf i chi wneud cyflwyniad byr o ryw bump i 10 munud, ac wedyn cawn gyfle i ofyn cwestiynau i chi.

Gareth Jones: We now move to the third and final part of the scrutiny session. I am pleased to welcome Andy Klom, head of the European Commission office in Wales. Andy, I ask you to make a brief introduction of about five to 10 minutes, and then we will have a chance to ask you some questions.

[126] **Mr Klom:** Thank you for the opportunity to speak to you today about this topical subject. I will be brief in my presentation and I will speak about three main points: the work of our office in Wales; the EU in education; and the EU in Wales. I thought that it would be useful to introduce to you the activities that we do here first, to give you the right perspective.

[127] The commission's representation here in Wales is one of 35 representations in the 27 member states of the EU. They are mostly in national capitals, with some also in regional capitals, such as Barcelona, Milano and Munich. Our role is very much related to public affairs, public diplomacy, politics, the press and the general public. In that sense, we are here to reach out to stakeholders and the general public to inform them and explain to them all about the EU. Part of our brief is also to be the voice of Europe and to be the eyes and ears of Europe, to gather intelligence and report back to Brussels on topics that are of relevance to discussions in the EU. That is very much what my office and our small team of people do,

and that has brought us, on many occasions, into contact with the field of higher education in Wales, so let me now switch over to that topic.

[128] Education is very much a responsibility of member states. The EU as a whole does not have much competence in that area; it is very much a national responsibility and, in those countries that have a federal or a devolved constitutional set-up, it is also a sub-national matter. The EU engages in best practice and benchmarking activities, facilitating contacts and co-ordination, all very much from the points of view of the single market, which is the main brief of the EU.

2.50 p.m.

[129] In 2004, the 27 EU countries spent roughly 1.13 per cent of their total gross domestic product on higher education. In comparison, the United States spent 2.8 per cent. In 2003, the EU countries, together, spent 1.9 per cent of their GDP on research. In comparison, the United States spent 2.6 per cent, and Japan, 3.2 per cent. Nevertheless, even with this comparative underspend on higher education, the EU has enormous potential. It has more than 4,000 institutions of higher education, 17 million students, 1.5 million staff, of which close to 0.5 million are researchers, and all kinds of EU programmes to support them, such as the Erasmus lifelong learning programme, Erasmus Mundus, university business initiatives, and other mobility programmes.

[130] This brings me to the core and key priority of the EU, because, in the field of the single market, that is where the EU has strong competencies. Under the mandate of the current president of the European Commission—Barroso, since the end of 2004—we have made the Lisbon agenda the key priority for the EU. That is not just a project that is pursued by the European Commission; it is shared by the 27 Governments of the EU member states.

[131] The Lisbon agenda is all about creating a knowledge-based economy, which provides high-quality jobs, through innovation, research, and a competitive business sector. That focuses on quality rather than low wages—a field in which we can no longer compete with other countries throughout the world. It also provides a link to issues such as innovation, research, the generation of knowledge, and the generation of knowledge for economic benefit. That is where there is a linkage to education.

[132] The Bologna programme tries to provide a single market for education: a mutual recognition of credits, diplomas and degrees. That is based on the single market idea of one big market of 500 million consumer-citizens, who can live, work, study and retire wherever they want to throughout the EU. However, it also assumes that students, during their formative years, engage and enjoy in mobility. For instance, the Erasmus programme provides them, financially, with the opportunity to spend part of their studies and part of their life in another member state, working in another language, and being productive in a different culture. That is not just for the sake of it; it assumes that these people, once they graduate, will be looking for jobs, and not just in a Welsh jobs market, or a British jobs market, but throughout the EU, because that is their opportunity if they have not just the right degrees, but also the right abilities, linguistically and culturally.

[133] The Erasmus programme provides that opportunity. Just this morning, I met the managers of the Erasmus programme in the United Kingdom, the British Council, which established its Erasmus team in Cardiff last year but is running the programme for the whole of the UK, to try to identify areas in which we could work together and collaborate. There are many areas where we could do that, not just in higher education, but also in schools, at the secondary and primary level.

[134] In the past 20 years, Erasmus has involved 1.7 million students, Europe-wide, and

around 160,000 students are participating in the programme this year. The take-up in the UK has been declining over many years, disappointingly, and that has only recently come to a halt, but it has not improved yet. The reasons for that are very particular and very clear: there has been a decline in second-language learning, and a decline in interest, or awareness, of the EU opportunities out there for young people to participate in.

[135] That brings me to the third and final point that I wanted to address: the EU and Wales. Exceptionally, Wales will be benefiting from EU structural funds up until the end of 2013; after that, the structural funds coverage in Wales will come to an end. That represents a one-off, unique opportunity for Wales to catch up and to innovate, but that opportunity will soon run out and will not be coming back again. Through my contacts with Welsh higher education—at the management and vice-chancellor level, as well as with students—and in different events in which I have participated, I have seen that there is a low awareness of EU opportunities during students' formative years, as well as once they have graduated. That also means a low take-up of the Erasmus programme, as well as low mobility during and after graduation.

[136] I have already mentioned the reasons for that. However, a key reason why it should be on anybody's curriculum vitae is because it reveals not just linguistic knowledge but also the cultural skills to be efficient and productive in a foreign culture. That is useful during your study years, but even more useful when you are pursuing a career with a big multinational company. Much of that, of course, relates to the years spent in the Welsh education system before students reach university and that is very much within the competence of the Welsh Assembly Government. A survey on employment trends prepared by the Confederation of British Industry in 2007 indicates that employers have one key complaint about graduates and that is the lack of foreign-language skills. That was cited as the No. 1 complaint by 54 per cent of employers in the UK. For school leavers, that number is even higher. The No. 2 complaint from employers is that 72 per cent think that school leavers should have foreign-language skills—and not just for the sake of it, but very much for economic gain.

[137] The economic contribution of higher education in Wales will be a key issue for the regeneration of Wales up to 2014, given the limited presence of large business and commercial companies in Wales, particularly in the more rural areas where higher education is often the only large organisation for employment and for the generation of knowledge. Competing in the single market that I mentioned means that Welsh graduates need not only a Bologna-proof degree but also the right mentality, the right language skills and the right cultural awareness to meet the challenge of participating in the European job market and of realising the Lisbon agenda, which is the key priority for the EU. In many other EU countries, Governments and citizens are aware of that and engage in higher education especially for that purpose. In that respect, it is very wrong to assume that the only EU citizens who are coming to Wales nowadays are, for instance, Polish tradesmen or unskilled workers; there is a large presence of highly qualified EU citizens from France, Germany, Holland, Scandinavia, and even beyond that, in highly paid and high-quality jobs in Wales, underpinning the international operations of many large organisations like Corus and Bosch.

[138] Generating more economic activity in Wales after 2014, when structural funds come to an end, is the main challenge. For us, in the EU, it is very much the challenge of meeting the Lisbon agenda and fulfilling its goals by 2010. So, there is a serious need for investment in higher education and a serious challenge for Welsh higher education institutions to produce and provide the right sort of input, mentality wise. I have spoken with the vice-chancellors of higher education institutions in Wales about this many times and offered my services and advice, within the limits of my mandate here, as I described at the beginning. I also offered that to the Welsh Assembly Government, two years ago, in discussions based on debates in the Assembly's Committee on European and External Affairs. However, that offer was turned down. I repeat that offer again here. For your discussions, the office of the European

Commission in Wales is at your disposal to provide advice and input where necessary. In the end, education is a member-state competence and, in Wales, a devolved competence, so it is up to you to decide where to head on this matter. The only thing that we can conclude is that the economic contribution of higher education to the realisation of the Lisbon agenda is not only essential but crucial and even pivotal. How else can we transform the European economy, including that of Wales, into one based on knowledge and innovation?

[139] **Gareth Jones:** Thank you, Andy, for a very succinct presentation that was also clearly presented, if I may say so. Are there any questions from Members?

[140] **Alun Cairns:** Yes. Let me be a little bit provocative to kick-start the discussion. You talked about the Erasmus programme, which offers great opportunities and I am a big supporter of it, but you also seemed to offer reasons why you felt that there had been a decline in its use. You gave reasons for the decline, but is there an additional reason, namely that the growth in the UK economy over the period that we are talking about has been greater and therefore the incentives to spend some time overseas in Europe have declined somewhat? Therefore, if there is a reversal—and I am not saying that there is one—is that when we could expect the Erasmus programme to grow again? More importantly, what analysis has been conducted of the economic impact of programmes such as Erasmus? What measures of the economic output will have been placed—and let us not forget that this review is about the economic impact that we can have? Instinctively, I am a fan of Erasmus, but can you prove to me why I should be?

3.00 p.m.

[141] **Mr Klom:** There are many replies that I could give to different aspects of your question. I will start off by explaining that the European Commission, as the Executive of the EU, is not a think-tank or a research institute. In that respect, the Organisation for Economic Co-Operation and Development has produced many more profound reports, also on the education sector. This is very much linked to the single-market aspect, namely that all citizens of the EU have an equal and fair chance to benefit from and have access to the single market, as well as jobs. I can imagine that it is difficult for a student who has a job on the side during their years of study to forgo that income because they have to spend six months or a year abroad, but that is when Erasmus provides funding to spend that time abroad and to invest in that experience, which will pay off later in a much larger way. For employers, including the EU institutions, the Erasmus experience of a different culture and language is much more valuable than not having had it. In itself, it is an asset for the person.

[142] Then there is the element of the obstacles in the United Kingdom, and particularly in Wales. One is foreign language learning, which is still in decline all over the UK. Many young people just do not have the ability to be effective in a different culture and linguistic environment, and therefore skip the opportunity. In addition, many people in the formative phase of having an interest in other cultures and countries do not get the right motivation to reach out and see Europe as something positive and therefore an asset in their package of job skills, life skills and the education that they need. That is not just about language, because more and more universities in other EU countries are offering courses and whole degrees in English; it is about having worked and been effective in a different culture. Surviving in a French university is probably just as much of a challenge as surviving in a big multinational company, and so having that on your CV is of tremendous value.

[143] Although I cannot give you any figures, facts or statistics, the Erasmus programme is a key feature that people should be focusing on, and higher education has a key role in helping people from here to benefit from that single market. It means motivation, stimulation and showing that that outward-looking approach is positive, not just from university level onwards, but much earlier, even at primary school. From a selfish point of view, it also has a

great economic value, because what a person picks up will be reflected in their economic activity once they have achieved all their education and are back in the job market.

[144] **Huw Lewis:** This may be a naive question. You are right to point to the final round of convergence funding as being critical for us all, not just for the HE sector. However, to focus on the HE sector, what would be the role of the European Commission in Wales, as universities look to get the best value that they can out of the final round of EU funding? There are universities that are based inside the Objective 1 area, so how do you fit into that and how will you be assisting with that?

[145] **Mr Klom:** The structural funds, currently under the name of the convergence programme, are not run centrally by the European Commission. They are provided to the national Government and, through that, to devolved Governments for their use, so it is a delegated authority. We check the accounts and the management, and, beforehand, we agree and negotiate a whole set of programme objectives and guidelines that the delegated authority must stick to. In Wales, it is delegated to the Welsh Assembly Government and its agency is mostly the Welsh European Funding Office.

[146] A large part of the current round in Wales—and this is not just in Wales but Europe-wide—is tied to the Lisbon agenda and to types of programmes and projects that should produce competitiveness, innovation, research and, in that respect, high-quality jobs. The EU budget has limits. There is only one pot of money and one pot of structural funds, so most of that, including our research funding, for instance, is focused on the Lisbon agenda. On the translation, take-up and implementation of programmes in Wales, which organisations are best placed to realise innovative programmes that will have not just a short-term effect but a long-term spin-off after the programmes have come to an end? A few multinational companies and a few large businesses but many universities. So, higher education, under the authority of the competent Government, has a role to play there.

[147] Not all regions or nations of Europe benefit from structural funds. In fact, in many developed countries, most do not, and, in that respect, higher education does not benefit from that type of extra funding. We have other types of programmes available, and the key one that is also well known to Welsh higher education is the framework programme for research. Various Welsh universities are deeply involved in that; others are still trying to explore it for what it is worth. That is another big pot of funding that is not tied to the economic status of a particular region or nation and is always available for those who have the right competence and research facilities. It is extremely focused, in this current phase, on the Lisbon agenda.

[148] **Gareth Jones:** Thank you, Andy. The single most important message that I am hearing from you is that this low awareness of the EU is costing us, and economically so, in some respects. There is a role for us with this inquiry, which is about higher education and economic development. If we raise that profile linguistically and culturally—and you have reminded us continually in your presentation about the population of Europe, which is currently 500 million—do you feel that we are being denied access to what is, in some respects, a key market area?

[149] When we had the CBI here some weeks or months ago, I referred from the Chair to other languages and key economic areas such as China and Japan and so on, but I did not pick up a great enthusiasm for the teaching of languages. It was as though there was an acceptance that the English language prevails, which I am sure it does. From listening to your presentation and your responses this afternoon, it seems that you would say that we need to look again at this, through our higher education systems, and possibly to raise our game.

[150] **Mr Klom:** Most people in the global market nowadays already speak English or are studying intensively to learn fluent English, and so having English will never be an advantage

if you have it only on a monolingual basis, because all those other competitors, be it business-wise or in the job market, will have a second or third language that they can bring to their interview and job and use in a practical way. Many other EU countries have understood that. The learning of English starts in the upper years of primary school and then continues during secondary school, so it not learned just at university level. People often learn a second and third foreign language on top of that. I come from a nation that has been well known for centuries for its traders and for being involved in commerce, and we have always understood that nobody will understand our language and so we have to sell our products in the language of the customer. English is an advantage at a superficial level but, to understand your customer and your market and to have a marketing perspective, you need to have some knowledge and understanding of the language and, therefore, the culture that you are working in.

3.10 p.m.

[151] There is, in some of the business newspapers in Britain, a famous bank that has an advertisement on that. The same product is shown three times, but it is placed in a different culture, showing that that product has a totally different significance and acceptance, despite being the same product. So, how would you understand that if you were a Welsh business and were trying to sell footballs to the United States, for example, when football over there is a small sport and not a big thing like it is over here? That is a crude and simple example, but most European countries have understood that, and multilingualism is one of the policies that the EC promotes through a dedicated European commissioner who is trying to convey the message Europe-wide that the acquisition of a second or third language is an advantage.

[152] That is why I am saying that neither Erasmus nor Bologna are enough on their own. A high quality higher education sector is not enough on its own; it needs to be founded on and embedded in secondary and primary school learning that already motivates and stimulates in a more outward-looking way. Language and cultural learning very much form the basis of what comes later during Erasmus, for example, as a key job experience for the future.

[153] **Gareth Jones:** What are your views in the EC office on the networking that you have in Wales with universities or higher education institutions? Are you satisfied or is there room for improvement? Is there a two-way communication? Do you have any views on that?

[154] **Andy Klom:** It differs greatly per institution. If we take the university sector first, we try to be fair and open and accessible to all of them. There are those with which we have many dealings regularly and with which I meet every week and there are those institutions that I have not seen during my three and a half years in Wales and which, apparently, are not engaged in European affairs or are not interested in engaging with us on European affairs. So, it varies greatly. Those that have an implication in the research programmes are mostly interested and well aware of the opportunities. Those that are more focused on structural funds, such as Objective 1 previously and convergence funding now, seem to be a little more blindsided by the fact that money is available and that they need to access it. Therefore, they do not look beyond that to the other opportunities that might be available. We have good examples, not just of research funding, but of environment, energy, educational and cultural programmes being taken up by Welsh universities and developed into projects that have Europe-wide implications and are based on European networks. So, it differs between institutions.

[155] Below the university level, at the college level, networking is piecemeal, ad hoc and anecdotal, not so much in a structured way with management, but more in terms of our being asked to do a seminar workshop or to make a speech. That has a limited impact, of course.

[156] **Gareth Jones:** Finally, you referred to the 1.3 per cent of gross domestic product

against 3.3 per cent of expenditure in the US. Could you outline any examples from any member states of good practice from, for example, a higher education institution, that encourages and drives national and regional economies?

[157] **Andy Klom:** Unfortunately, I do not have any specific data or statistics that break down that figure, which is an EU average. However, I can speak from my experience and knowledge of other small economies. For example, Finland's Government is investing heavily in education and research and innovation. Being an isolated country with few natural resources, it has generated a number of world products based on the knowledge that it has been able to create, and it has continued to do that, being a participant in a global market and using the benefits of being part of the European single market. That is one example.

[158] The other example that is closer to home is Ireland. Part of the Irish economic development over the past two decades was underpinned by investment in education. Outside Europe, there are other examples.

[159] **Gareth Jones:** I do not think that there are any further questions. Thank you, Andy, on behalf of committee members for your time and for sharing with us your expertise and experience in this important area. We understand that there are areas that we can look to improve. I think that you have made that point clearly to us this afternoon and we will take note of it. It has been a useful and informative session for us, and we wish you all the best with the important work that you undertake in Wales.

[160] Dyna ddiwedd y cyfarfod. That is the end of our meeting.

*Daeth y cyfarfod i ben am 3.15 p.m.
The meeting ended at 3.15 p.m.*