

CBI SUBMISSION TO THE RCUK/UUK REVIEW PANEL ON THE IMPACT OF FULL ECONOMIC COSTING

Summary

A thriving innovation ecosystem is essential to maintaining and increasing the competitiveness of the UK economy. It is particularly important in the current global climate of economic uncertainty. The CBI supports the aims of sustainability in the HE sector and improved links between business and universities which help to underpin our competitiveness. However, for many companies the impact of full economic costing (FEC) has been to raise the cost of university research, and this has constrained growth or caused a decline in their research engagement with UK universities. The UK is now seen as the most expensive place in the world to fund a post-doctoral researcher. There is a need for transparency in how university costs are calculated, as the costs which some universities seek to attribute to a single researcher often bear little relationship to the value. In determining the level of overhead to be charged, universities should take account of the non-financial contributions from the industrial partner. There is also a need for more awareness within universities that pricing need not be 100% FEC on each project (but that costs should be calculated over a spectrum of activities), and that the main objectives of government support for university-business interaction are improvement of the knowledge base and increased economic impact.

Introduction

The CBI and its members, including those represented on the Inter-Company Academic Relations Group (ICARG) as well as over 60 university members, have a strong interest in both a sustainable higher education sector in the UK and enhanced, mutually beneficial, links between business and universities. Members recognise business-university links as a critical component of the UK's innovation ecosystem – providing our economy with a major competitive edge.

We recognise also that the introduction of FEC has contributed to the sustainability objective, both by encouraging universities to monitor their costs more effectively and by permitting them to recover a larger portion of those costs in order to maintain necessary levels of investment in infrastructure. However, **we are concerned that the transmission of higher costs to business funders of research as a result of FEC has had a negative impact on the development and maintenance of business-university research relationships in the UK.**



Evidence

It has not been possible to obtain extensive quantitative evidence of FEC's impact. Companies tend to be reluctant to discuss or disclose what may be commercially sensitive information. It is certainly the perception of many companies that the level of their involvement with UK universities has stagnated or declined in recent years, and that cost has been the prime reason. In part this is because of increasing access to the research base in countries where costs are lower and quality is high and rising. But it is also due to sharply increased costs at UK universities – for which the often inflexible imposition of FEC is partly if not largely to blame.

In the case of the pharmaceutical sector, which funds about 30 % of all UK business R&D, there is some quantitative evidence for this. A recent ABPI report¹ (December 2007) found that numbers of PhD studentships and postdoctoral grants supported in collaboration with UK universities had fallen by 14 % and 25 % respectively over the 4 previous years. The ABPI attributed the declining level of collaboration to factors “including escalating costs, and the increasing difficulty in negotiating contracts, including the issue of intellectual property ownership”². Detailed figures from one ICARG member confirm the underlying trend.

This has happened against a background of increased R&D outsourcing in the pharmaceutical sector, which we would normally expect to lead to an increase, not a downturn, in academic collaboration.

Value for money

There is a general consensus among ICARG members that the UK is now the most expensive place in the world to fund a post-doctoral researcher. The costs which some universities seek to attribute to a single researcher often bear little relationship to the value which companies can expect from the work or the costs they would expect to incur in directly employing a similar person.

The **lack of external transparency** in the calculation and allocation of indirect costs and ‘directly allocated costs’ makes it hard to judge the validity of the process. In at least some cases, it seems that these costs are derived in a manner which makes them much higher than would be expected in a business environment, where business pressures impose a tighter discipline on overheads and other costs.

One of the universities surveyed by Universities UK in 2006 conceded that university research may not offer very good value for money, though it took a different view of the precise balance of costs:

One institution gave the following example: ‘an industry in house researcher fully loaded cost is approx £100K p.a. An independent consultant is £120K whilst a typical RA with FEC is approx £90K on average. Despite the lower costs the VFM of university research is not so obvious.’

As one ICARG member put it:

“The overheads are very high compared to, say, our costs in terms of percentage. It’s hard to see how they are justified. It would be good to compare the overhead calculations of a university versus a cost-constrained industrial research centre. Do they do such benchmarking

¹ www.abpi.org.uk/press/IndustrySupport_CollaborativeResearchUK.pdf

² See www.abpi.org.uk/press/press_releases_08/220408.asp

or are they only cross-comparing universities? Also our data show London FEC to be much higher than non-London". [NOTE: This perception of a discrepancy between London and non-London FEC is not shared by all ICARG members].

The Lambert Review noted that:

"In many ways, businesses and universities do not make easy bedfellows. They have different values and different missions. They work on different time-scales towards different objectives under different management systems. Building a culture that allows the two to come together in a creative fashion requires a considerable commitment from both sides, and an infrastructure that can sustain the relationship."

One component of the construction of such a culture may be the creation of greater awareness within universities of the extent to which costs – particularly overheads – can be reduced by increasing efficiency and productivity. And for universities to increase the prices they charge, this should be matched with delivery on time-scales more appropriate to business, and with work done to the quality assurance standards businesses use.

One ICARG member has told us:

"It must be noted that while universities were still relatively good value for money then we would accept some poorer performance (in terms of delivery of precisely what was expected) amongst the broader set of activities that we funded. When we have to pay what is described as FULL cost then we expect FULL delivery. This means that we intend to negotiate and impose much more strictly the terms of the contract. Universities typically do not have the capacity or experience, and are certainly not accustomed to such ways of working. They certainly seem to have little flexibility to negotiate more complex deals that balance the value on both sides."

Another ICARG member said:

"paying high costs is ultimately not such a huge issue if the service delivery as well as the content continue to be excellent. This is . . . arguably the most important point for us to make – rapid start-up times and delivery to agreed schedules are critical to our being able to dedicate budget to external collaboration."

Given the rise in costs which has occurred with FEC, it is testimony to the excellence of much of the research in UK universities that levels of business funding have apparently remained as high as they are. However, the appearance may, in part at least, be misleading. For example:

- a) For many companies with extensive and long-standing research relationships with universities, it is too early to measure the impact of FEC. In many cases negotiations over contracts began before the introduction of FEC.
- b) In some cases companies and universities have – so far, at least – been able to arrive at agreements which take account of the overall benefits to the university and the true costs to the company. This has typically involved strategic judgments on pricing, and methods of funding which shield the participants from rigid application of FEC, narrowly interpreted.
- c) A number of companies and universities have been able to find ways of minimising the impact, for example by cross-subsidising from other sources or by using additional external sources of

funds such as Regional Development Agency support. It is possible that some of these ways are not sustainable in the long term.

- d) Some firms engaging predominantly with PhD students for research have been relatively immune from the effects of FEC.

Investment decision-making: relevant factors

For any business, the costs of investment in research (as opposed to development) are always difficult to justify. The results, and the time it may take to obtain them, are intrinsically unpredictable. The benefits – if any – cannot be quantified and may require substantial further investment before they can be realised.

As one ICARG member put it:

“The projects we do with Universities typically [involve a] much higher risk of [not succeeding] than ones we do in house-either because it’s a PhD and the student is learning as they progress, or because it’s something very novel.”

Successful justification of research depends heavily on cost, as does the justification of the choice of research partner. For some firms the rise in costs of research in UK universities is shifting the balance in how justifications are made. **Previously, UK companies might have had to justify doing work with overseas universities. Now those making research decisions have to justify why they should stay in the UK.**

Costs to the business partner in collaborative research with universities include both direct and indirect components (notably staff time), which are not usually taken into account by university partners in the course of negotiation. There are also a number of valuable non-pecuniary benefits which the university partner may gain from collaboration. These include: access to data, equipment and facilities; corporate intelligence including market knowledge; engagement with new and challenging research topics; work placements and recruitment opportunities for students (both undergraduate and postgraduate); advice and information based on general and sectoral business experience; and opportunities to introduce more relevant content into the curriculum. These benefits, as well as the benefits of possible future collaboration which may flow from the development of a continuing relationship, need to be considered by universities in making strategic judgments on pricing. In some universities this is accepted practice, but in other cases it appears those responsible for conducting negotiations are narrow and inflexible in their approach – to the ultimate detriment of both parties.

The recent (August 2007) report to the Funders’ Forum on ‘*Streamlining University / Business Collaborative Research Negotiation*’ (<http://www.dius.gov.uk/publications/streamlining-august07.pdf>) expressed similar concerns and highlighted a perceived – and possibly undesirable – change in the pattern of business-university interactions:

“There was some concern that the implementation of FEC is making UK research less competitive in comparison with foreign universities, and has led to a shift from collaborative research towards consultancy (which has helped to avoid problems with FEC, but was not necessarily in the best interests of UK plc). The Group felt that further investigation of this issue would be useful.”

This concern is corroborated by the comment of one ICARG member:

“One approach [to the problem] is the use of shorter, phased, stage-gated consultancy contracts, with specific academics, rather than the longer-term sponsored studentships and post-docs. This approach also fits well with the need currently for prompt results and higher probabilities of the right outcomes – all difficult, for example, with sponsored 4 year PhD studentships.”

University pricing policy

The CBI agrees with the recommendation made by the report to the Funders’ Forum that:

“**Government and public funders should make a statement of clarification**, reminding Universities that the advent of Full Economic Costing does not require them to charge 100% FEC on individual contracts with business – rather the price charged is their own strategic decision, so long as overall sustainability of research is appropriately factored in.” [Emphasis added]

The report also recommended, and we agree, that:

“**Government should make a clear statement of policy** that the primary objective of their support for university / business interaction is to improve the knowledge base and increase the economic impact of research, rather than generating extra funding for universities.”

This would help to address the point made by one ICARG member:

“The time course of supporting a post-doc is not the same as undertaking contract work with a CRO [Contract Research Organisation]. We would often place work with a CRO that may take several weeks and we would pay the CRO overhead plus a profit element in their price. This is far cheaper than supporting a post-doc with FEC for 2 years where the post-doc will work on the company business for part of the time but will then spend time on their own research-related activities. There is value in the post-doc working on their own activities, this often leads to new ideas, but we should not be expected to pay FEC on this.

Universities need to make their minds up as to whether they wish to be treated like businesses and only take on short-term contracts with full FEC or concede that industry brings far more to the party than cash, and share the costs of some of the longer academic-industrial collaborations. This is an important point as is not possible to attract good post-docs into very short term contracts.”

We also believe it is necessary for the basis of calculation to be more transparent. For example, there is a big difference between marginal and average overhead costs, and it is unclear why universities should use what seems to be an average figure when the much lower marginal one seems more appropriate. **The rationale for the choice of average versus marginal costs must be made clear and open to discussion** where appropriate.

It is also unclear why companies should be expected to pay 100% or more of FEC when Research Councils do not aim to pay more than 80% and some government departments pay even less. As the UUK report referred to above puts it:

“The problem of FEC recovery from B&I [Business and Industry] partners is also complicated by the fact that publicly supported research is not paying 100% in all instances, so most will align themselves with Research Councils’ 80% recovery.”

This situation gives rise to understandable concern that businesses are being expected to make up the presumed shortfall arising from underpayment by government departments, Research Councils, and other funders including some charities – and as a result, possibly paying 120% or more. This perception is reinforced by observations such as that made in the report of the UUK survey:

“A common policy is to seek to recover 100% FEC where possible plus a margin above this (examples ranged from 3-15%), or [what] the market will bear.”

Other factors

The Lambert Review noted that: “A number of businesses also comment that some universities overvalue their IP. This has stopped several businesses agreeing deals with universities.”

Universities sometimes overestimate the value of their research to their business partners, as the Lambert review pointed out, and this can lead to negotiations which are often protracted and may ultimately be futile – and therefore expensive and wasteful for both sides. It is mistaken and harmful for those in universities who conduct negotiations with businesses to believe that UK universities are an irreplaceable source of cheap golden eggs for UK businesses: they are neither cheap nor irreplaceable. The vitality of the UK innovation ecosystem, including thriving business-university links, benefits all parties, and its decline would be deplorable. Such links cannot thrive if firms are driven by cost considerations to find partners elsewhere.

An additional concern has been raised from within CBI university membership: FEC puts pressure on the relationship between university business teams (which have the promotion of links with business as their prime *raison d'être*) and the academics with whom they deal. Business teams which aim to be supportive and fulfil a facilitation role find that they are also required to police the application of FEC, which creates tension over prices and is not welcomed by academics. The contradictions between these roles jeopardise the environment for encouraging more business-university collaboration.

There is also the question of the impact on research groups which are particularly successful in attracting business funding for research: where firms give a fixed sum in 'sponsorship' to a university, department or research group then it is almost inevitable that the amount of research that can be done will decrease as the overhead rate on this sponsorship charged by the university increases. Since business budgets are finite, it follows that if the university imposes impossible overhead rates on the group to cover costs elsewhere then the research group itself will suffer.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 1) It is still too early for many firms to measure the full impact of FEC.
- 2) We are concerned however that the transmission of higher costs to business funders of research as a result of FEC has had a negative impact on the development and maintenance of business-university research relationships in the UK.
- 3) There is a general consensus among ICARG members that the UK is now the most expensive place in the world to fund a post-doctoral researcher.

- 4) The costs which some universities seek to attribute to a single researcher often bear little relationship to the value which companies can expect from the work or the costs they would expect to incur in directly employing a similar person.
- 5) The lack of external transparency in the calculation and allocation of indirect costs and 'directly allocated costs' makes it hard to judge the validity of the process, but in at least some cases it seems that these costs are derived in a manner which makes them much higher than would be expected in a business environment.

Recommendations

- 1) **The government must ensure the climate for business-university engagement remains competitive on an international basis.**
- 2) **Government should make a clear statement of policy**, that the main objectives of government support for university-business interaction are improvement of the knowledge base and increased economic impact, rather than generating extra funding for universities.
- 3) Government and public funders should make a statement of clarification, reminding Universities that **pricing need not be on a basis of 100% of FEC**, but is a matter for strategic decision.
- 4) The basis of calculation should be more transparent. For example, the rationale for the choice of average versus marginal costs must be made clear and open to discussion where appropriate.