

GD/MMcL

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Lambert review of business – university collaboration

Please find attached the University of Glasgow's response to the above review.

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The University of Glasgow response to the Lambert Review

Introduction

This provides the University of Glasgow response to the Lambert Review. In developing this response we have decided to concentrate on Question 2 given in the consultation letter and to outline our views on management and organisational issues, which we believe are key to improving Business-University interactions. In particular, we have outlined a framework, which seeks to define the different types of relationships between universities and business and to show how these should be supported to maximise benefits to the UK economy.

We, along with many other universities can provide a wide range of examples of excellent Business-University links. However, we believe that many of the best examples have happened as much by accident as design. Serendipity has always played a key role in creating good links, along with personal chemistry. Our view is that we should seek to create an environment within which this serendipity can happen and to create systems which will support these when they happen, rather than adopt a more deterministic approach. This requires the creation of a framework which enables links to be explored easily, for opportunities to be created often and for these to be exploited efficiently to the benefit of all parties. This is not a description which would typically be applied to the current situation.

We appreciate that this review will focus mainly on the demand-side, but believe that our response and our suggestions will contribute to creating an environment in which the demand-side can participate more comfortably, more fully and from which the demand-side can derive more benefit. Key to achieving this is an understanding of the role of universities in Business-University links, as we believe the needs of business are relatively straightforward – access to knowledge (through students, know-how and Intellectual Property) to improve their competitiveness.

There is currently some tension and some confusion regarding the role that a university should play. In some cases universities are expected to act in support of companies, engaging in activities where the company will be the key beneficiary, through increased competitiveness. In others, universities are expected to act like businesses, to take a businesslike approach and to ensure that they benefit financially (to a greater or lesser extent) from the interaction.

In the University of Glasgow, we believe that both of these approaches are appropriate, but at different times and almost never in the same project. We have developed a framework which we believe accommodates both of these approaches and ensures that businesses and universities understand the rules of engagement in any links which are developed. This is entirely focussed on maximising the benefits to the economy as a whole, in a number of different ways. Our response will therefore concentrate on the role of universities in economic development and the ways in which this can be best achieved.

Economic Development - The Role of Universities

Executive Summary

Universities engage in a wide range of activities with business that lead to economic development. In some of these the university's objective is economic development, in others economic development is a beneficial by-product of the activity.

The University of Glasgow believes that these activities can be described as occurring across a spectrum of objectives from outreach to outcome:

Outreach activities: the university acts as an agent of economic development, carrying out activities designed to benefit the economy. The beneficiaries of these activities are business, students and the wider economy. These activities cost money, but the university does not make money from these activities. Economic development is a specific objective.

Funding for these activities should be considered to be the same as those for economic development agencies, effectively, funding is provided, on an ongoing basis, to the university so that it can deliver activities that lead to economic development. Public funding for public good.

Outcome activities: the university acts as a venturer in the same way as a business, entrepreneur or investor, carrying out activities (normally the exploitation of valuable Intellectual Property) designed to make a financial return to the university. The university is a beneficiary and should make money to reinvest in research and teaching. Economic development is a by-product of successful activity.

Funding for these activities should be considered to be the same as those for businesses or other venturers, effectively pump-priming or start-up support, requiring the university to make the activity profitable and self-sustaining.

These different objectives should be at the forefront of thinking on how to maximise the engagement and impact of universities with business and in economic development and are fundamental to ensuring that appropriate activity is encouraged, supported and rewarded. In particular:

- what type of funding should be provided to support university activities?
- how to measure success in university economic development activity?

Economic development agencies are measured in terms of impacts and value-for-money. They are not expected to become self-funding and would not expect to make a financial return from the success of those they support. In outreach activities, universities should be assessed in the same way as economic development agencies.

Venturers such as businesses, entrepreneurs and investors are measured in terms of their own economic success. They are expected to become self-sustaining and profitable and should not need ongoing support. The impacts, such as job creation, are a by-product of this success. In outcome activities, universities should be assessed in the same way as venturers.

1. Universities in Economic Development

The university exists to create and disseminate knowledge and this mission has traditionally been fulfilled through research and teaching. These will always be core to the role of the universities and very significant contributors to economic development. There is a powerful argument that the generation of skilled and educated graduates is the most significant contribution that the universities make to the UK economy.

However there is also a third mission, which could be called 'engaging with or enriching society'. This includes knowledge transfer mechanisms such as student placements, consultancy and company formation. These activities have tended to be developed and operated on a more ad-hoc basis than research and teaching.

In the creation of a Knowledge Economy, more emphasis is being placed on these third mission activities for the transfer of knowledge in order to benefit the UK Economy. There is a general consensus of opinion that the universities could contribute more through more effective engagement with business, the industrial and commercial sectors. However, the means, mechanisms and motivations for this engagement are neither obvious nor agreed.

This submission seeks to:

1. describe the ways in which universities can and do, engage in activities which lead to economic development;
2. describe a framework within which to understand the roles and motivations of universities in the activities;
3. suggest an approach to funding and assessing these activities to ensure that the right activities are encouraged, supported and recognised in order to optimise this engagement.

2. Universities – What Economic Development Activities?

Apart from research and teaching, universities engage in a wide range of activities, which deliver benefits in terms of economic development. These will typically include direct interaction with business in areas such as:

- Student placements
- Consultancy
- Research with/for industry
- Training for industry
- Licensing of technology
- Spin-out company formation

It is fairly easy to see how each of these activities contributes to economic development, through the direct transfer of knowledge, and to understand why universities are increasingly encouraged to participate in and support these activities. However, to ensure that universities optimise their participation and performance in these activities, it is important to understand why the universities themselves participate.

3. Universities – Why Economic Development Activities?

At the simplest level, there are three key objectives for universities in engaging in these (and any other) activities. These are:

- Public Good – making a contribution to society, community and the economy.
- Academic reasons – in particular, the creation of new knowledge.
- Revenue/Return – contributing to the financial wellbeing of the institution.

Ideally, any activity would achieve all three of these objectives. However, in reality third mission activities will tend to be driven by one or, at most, two of the three as shown below:

	Public Good UK	Academic Objectives	Revenue/Return
Student placements	Yes	?	No
Consultancy	Yes	?	No
Contract research	No	Yes	Yes
Licensing	No	No	Yes
Company formation	No	No	Yes

This table shows the most common reasons for undertaking the activities shown. It is, in fact, more complicated than this, since activities which are nominally the same can, in fact, be undertaken for very different reasons. For example, looking at licensing and company formation:

	Public Good UK	Academic Objectives	Revenue/Return
Licensing			
To Global Pharma	No	No	Yes
To UK SME	Yes	?	No
Company Formation			
Venture Capital	No	No	Yes
Student start-up	Yes	?	No

The key point here is that the motivations for third mission cannot be described in terms of the activities undertaken, but must instead be understood, described and supported in terms of the objectives of the universities undertaking them.

4. The Knowledge Transfer Spectrum – Outreach to Outcome

The University of Glasgow view is that third mission knowledge creation and knowledge transfer of this type occurs across a spectrum where the objectives and motivations as well as activities vary enormously. We believe that understanding, managing and supporting within the context of this spectrum is the key to success in economic development.

At the extremes of the spectrum are outreach-oriented and outcome-oriented activities.

Outreach – Public good is the objective and the university acts as an agent of economic development in the UK. There is no direct economic or financial objective or incentive for the university to engage. At best, the university can seek to cover its costs and hope or expect that the activity will lead to some future benefit or return in the form of student recruitment, additional research or positive publicity. Typical examples of outreach activity include student placements, TCS, consultancy, Connect-Scotland, student companies and SME networks. The university is not a direct beneficiary of this activity. The beneficiaries are business, students and the wider economy.

Outcome – is defined by the objective of making money for the university, to reinvest in research, teaching and infrastructure. The university acts as a venturer or a business. In outcome activity the university will generally seek to invest its resources (usually valuable IP and Human Resource) in activities that will make a financial return to the university. The highest profile outcome activity at the moment is spin-out formation, where the university seeks to profit from capital-growth (equity) and revenue from licences to companies built upon the university's knowledge and IP. The University is a beneficiary of these activities.

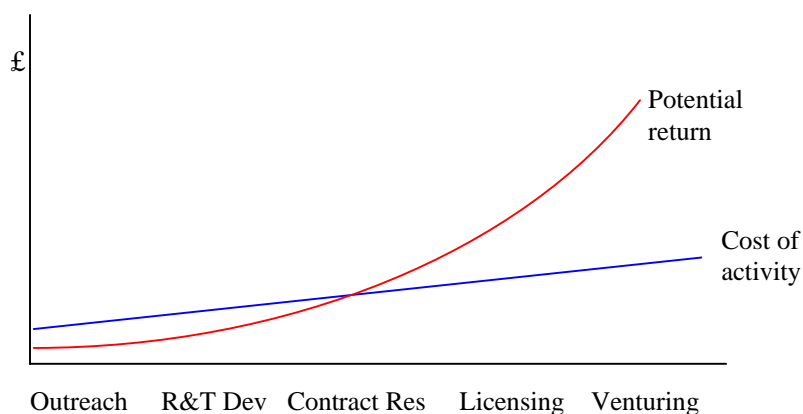
A range of other activities lie in between outreach and outcome on the spectrum.

5. Elements in the Outreach – Outcome Spectrum

In the University of Glasgow, we have defined five distinct areas of activity in the spectrum, each characterised by the objectives of that activity and each specifically involving the development of links with business. These activities are:

- Outreach
- Research and Technology Development
- Contract Research
- Licensing
- Venturing (including company formation)

The key characteristics of each of these areas (reasons for undertaking, costs, returns, etc.) are shown in Attachment 1. The table in Attachment 1 helps to highlight the very different motivations involved in undertaking activity across the spectrum. Perhaps the most critical element is the cost/return profile across the spectrum, as shown in the graph below.



This shows that whilst the cost of the activity increases from outreach to outcome, so too do the potential returns to the university from undertaking that activity. From the university perspective, only contract research, licensing and company development can be expected to show a financial return. It is interesting to note that outreach activity ‘costs’ the university more than research does.

It is also important to note that the more traditional research functions of the universities, where the objectives, funding and outputs are well understood, lie towards the middle of the spectrum. As activities move from the centre to the left and right, the role of the university changes from research institution to agent of economic development and venturer respectively. These roles are less well understood and lie at the heart of the debate around universities and economic development.

6. Funding for Economic Development Activities

It is essential that the distinction between outreach and outcome is recognised in the initiatives, support and funding put in place to engage the universities in linking with business. The graph above shows:

Outreach – the activity costs the university money. In order for the activity to be sustainable it is essential that an ongoing stream of public funding is provided. This should

be considered as exactly analogous to the funding provided to the parts of the Economic Development Network.

Outcome – successful outcome activity will make money. Public funding should be available to kick-start these activities, in the same way as this is available to businesses engaging in the development of new products/businesses. However, the funding should be project-focused and time-limited and probably available on a competitive basis.

7. Local versus Global Focus

We believe that this analysis also helps to explain and address the tensions that are sometimes apparent in the expectations placed upon the universities in terms of economic development. There has been a sense of “helping UK SMEs good: international licensing bad”. When viewed in terms of the outreach/outcome spectrum, many of these tensions disappear.

Outreach – as an agent of economic development, the focus is local. The universities seek to work with local, regional and national business in the UK in order to make them more competitive. The universities do not generally engage in outreach activity internationally. An objective would be to help UK SMEs to internationalise and the universities can use their international networks to support this.

Outcome – as a venturer, the focus is global. The universities will seek to develop business opportunities wherever the financial returns are greatest. If the best deal is available in The UK, universities will naturally do the deal in The UK. If not, the universities will deal internationally. Universities should be encouraged in this in the same way that UK companies are encouraged to engage in international markets to maximise the potential of their business.

8. Key Issues to be Addressed at the Policy Level

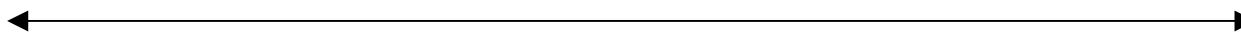
1. Are universities considered to be key agents of economic development and is there scope to provide core and ongoing funding to support this activity along the same lines as the funding provided to the Economic Development Network? Note that SHEFC's Knowledge Transfer Grant is a fundamental and very welcome first step in this area and this 'core' funding is preferable to the initiative or project-based funding currently being applied in other parts of the UK.
2. Are universities supported in their role as venturers? If a university creates highly valuable intellectual property, is it expected to and supported to exploit this intellectual property, to obtain the greatest economic value for it, in the expectation that this wealth creation will lead to local economic impacts through the trickle-down effect? This can be a cause of tension when the route for exploitation is outwith The UK. Note that the Scottish Executive/Scottish Enterprise Proof of Concept scheme is a very welcome and useful tool in this area, another initiative which is not available on the same basis in the rest of the UK.

9. In Conclusion

The view of the University of Glasgow is that both outreach and outcome activities are important, appropriate and beneficial to the University and the UK economy. Both should be encouraged and supported, but through different mechanisms. Universities should be supported in their role as agents of economic development, creating links with business which may bear fruit in the future, through an ongoing funding stream. Universities should also be encouraged to create wealth and to maximise the value of the intellectual property they create through outcome activity. This should be supported through pump-priming, exactly analogous to the support provided to business.

Attachment 1

Outreach Objectives



Outcome Objectives

	Outreach Activities	Research & Technology Development	Contract Research	Licensing	Venturing Activities
Reasons for doing	Public good, economic development, business development, marketing, engagement with the community	Knowledge creation, infrastructure-building	Knowledge creation, IP creation, development of technology for markets	Development of channels to market for technologies, financial returns	Development of vehicles to take technology to markets, financial returns.
Types of Costs	People, events, travel	Research costs	Marketing costs, Research costs, legal costs (contracts/IP)	IP protection costs, marketing costs, legal costs (licenses)	IP protection costs, business planning, legal costs (licenses, mem & arts), marketing costs
Financial Returns	None	Funding for research, RAE (indirect and longer term)	Funding for research, overhead recovery (profit)	License income, upfront payments, milestone payments	Equity gains, dividends, royalties
Scale of returns	None (cover costs at most)	Cover costs at most	Breakeven to Modest	Often modest, can be significant	Can be significant
Financial Risks	Negligible	Low	Modest	Modest/significant	Significant
Examples	Student placements, SME networks, student companies	Charity funded research, collaborative research	Company funded research	Licenses with companies	Spin-out companies, start-up companies