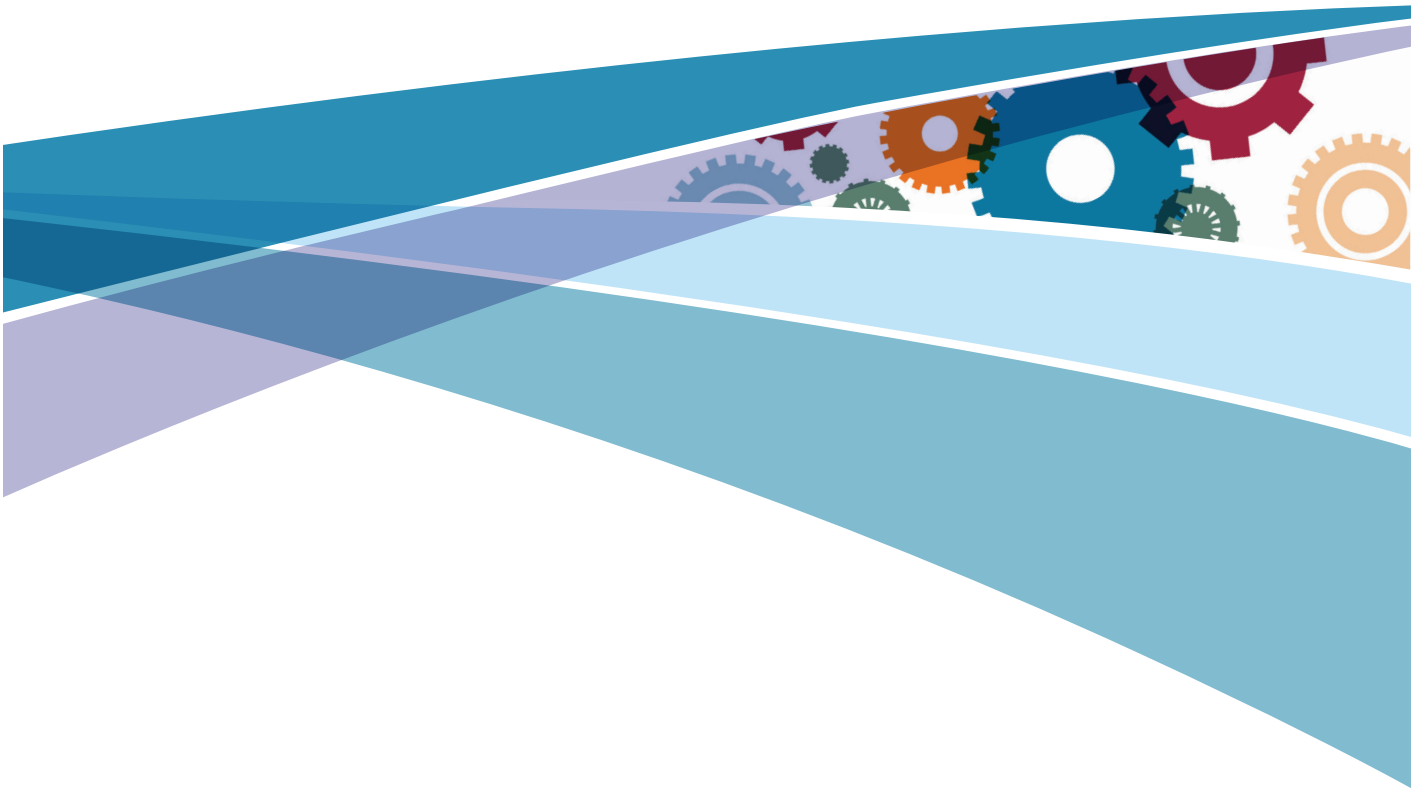
Intellectual Property Office

Collaborative Research between Business and Universities: The Lambert Toolkit 8 Years On



Research commissioned by the Intellectual Property Office, and carried out by IP Pragmatics Limited by:

Elaine Eggington, Rupert Osborn and Claude Kaplan

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2013/26

Collaborative Research between Business and Universities : The Lambert Toolkit 8 Years On

An evaluation of the impacts arising from the development and introduction of the Lambert model agreements and toolkit, conducted by IP Pragmatics Ltd on behalf of the Intellectual Property Office in collaboration with Association of University Resarch and Industry Links (AURIL), the Confederation of British Industry (CBI), PraxisUnico and the Technology Strategy Board (TSB)

May 2013

Elaine Eggington, Rupert Osborn and Claude Kaplan

IP Pragmatics Limited

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ISBN: 978-1-908908-72-8
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Published by The Intellectual Property Office
8th May 2013

1 2 3 4 5 6 7 8 9 10

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Executive Summary

The Lambert toolkit is a set of decision tools and standard agreements designed to improve the process of negotiating collaboration agreements between research establishments and business, which has been in place since 2005. The aim was to produce a compromise approach that was fair and balanced, without favouring either industry or university interests, to:

- facilitate negotiations between potential collaborators
- reduce the time and effort required to secure agreement
- provide examples of best practice

This report examines whether the toolkit has achieved these aims, based on evidence from a wide spectrum of public and private organisations collected through an online survey (256 responses), supplemented by in-depth interviews (48 organisations).

In recent years, research collaboration has intensified. More than half the universities and companies surveyed are doing more one-off collaborations, more strategic relationships and more European projects than in 2005. The Lambert toolkit forms just one part of a much bigger shift in the innovation environment between business and the research base over this period.

Knowledge of the Lambert toolkit is well established in the research and innovation community. Over 80% of the research community, and over 50% of the companies surveyed are aware of it, although SMEs seem much less familiar with the resource. Almost 70% of the organisations that are aware of the Lambert approach have used at least some part of the toolkit to support different activities, but only 3% are using the agreements unmodified. The toolkit is most suitable for a minority of university-business interactions, and we estimate that less than 10 or 15% by value of collaborative research between universities and business in the UK is based on a Lambert-like agreement. We also found that the toolkit is not always used as a coherent whole, but with different parts used to support different activities.

Where the agreements are used, they are often used in practice not as a first choice, but rather as a compromise position. Of those who have used some part of the toolkit, 35% would prefer to use a Lambert (or Lambert-like) agreement and will usually suggest them as their first choice for a starting template, while 55% will use them only in certain circumstances or if they are offered by a partner. Research institutions are most likely to propose the toolkit, as large companies strongly prefer their own agreements but can be willing to accept Lambert as a starting point if it is offered. Although most organisations would rather use their own standard agreements as their first choice, nearly 40% of the SMEs in the survey do not have any templates for research collaborations at all.

The toolkit is valued as a good solid foundation for negotiation, a source of clauses that can help resolve negotiation points, and an independent exemplar of a fair and reasonable approach, and its influence therefore extends much more widely than simply to those who use the agreements unchanged. Almost 80% of those who are aware of the toolkit feel it simplifies the process of constructing contracts, and provides useful information and precedents, whilst 70% see it as independent and neutral, and just over 60% agreed that it saves both time and costs of negotiation. Those who have used the toolkit are much more likely to agree than those who have not. As a training tool, it can be useful to gain insight into the motivations of the other party or to support a negotiating position. Nevertheless, industrial support for the toolkit has been lacking - large companies are more likely to view the Lambert agreements as biased towards universities, and to have a more negative view of the potential benefits of the toolkit.

The Lambert approach can identify workable solutions to the key issues which arise from contrasting university and industry missions and priorities, and which underlie some of the reasons that the agreements are not always chosen as a starting point. Barriers to negotiation that are cited as still important include valuing IP (for almost 80% of the respondents), organisational bureaucracy in both companies and universities, and lack of skills of the negotiators on both sides (about 75% of the respondents). IP ownership is one difficult issue, and is closely linked to the development stage of the technology. In reality, ownership is less important than access rights which give both parties the freedom to achieve their aims. Publication is another area where there are tensions between the timescales of universities and companies. Finally, liabilities, indemnities and warranties are clauses that are often challenging to negotiate, partly because universities and companies have very different approaches to risk management.

Possible improvements have been suggested for both the toolkit and the approach behind it. The most common recommendations for change were to bring the agreements up-to-date, and for increased awareness and uptake. Showing how the agreements can be used to assign more flexible IP ownership, exploitation rights and use of the results could make the toolkit more relevant to current collaborative styles which share ownership, expertise, risk and reward. More than half of those who have used Lambert felt that a model agreement approach could be usefully extended to other types of collaboration, such as Knowledge Transfer Partnerships (KTPs), or government funded research, which is more usually conducted as a procurement exercise and met with considerable frustration by universities. It can also prove useful for agreements with overseas partners, where awareness is currently low. Foreign partners are often receptive when introduced to the agreements, particularly if they are collaborating in research within the UK for the first time.

This research suggests that the Lambert toolkit has had a positive influence on some innovative research partnerships between UK universities and businesses. There is scope to develop these foundations through better communication of the best use of the existing tools, targeting them at the organisations that need them the most with endorsement of their benefit in different situations. The Lambert approach can have value across the range of collaborative partners, while SMEs seem the most likely to benefit but the least likely to know about or use the toolkit. The toolkit can provide effective support not just where both parties already use it, but especially if one partner has no standard agreements, or is new to collaborative research, or if the partners have not collaborated before. Here, the decision tree and outline can help to finalise the important points more easily.

Contents

Chaper 1: Introduction

Origins - the Lambert review

The Lambert toolkit is a set of decision tools and standard agreements designed to improve the process of negotiating collaboration agreements between research establishments and business, which has been in place since 2005. It followed an independent review of Business-University Collaboration[1] carried out in 2003 by Sir Richard Lambert, later Director-General of the Confederation of British Industry (CBI). He was tasked by the UK government's Treasury (HMT) to explore the opportunities arising from changes in business R&D and university attitudes to collaboration, and to highlight successful methods of collaboration between universities and industry, including small- and medium-sized enterprises (SMEs). His review made a number of recommendations to help shape policy in this area, and two of these led directly to the development of the Lambert toolkit and the Lambert model agreements.

Recommendation 4.1 from the Lambert Review of Business-University Collaboration

The Funding Councils and Research Councils, in consultation with universities, the CBI and other industry groups, should agree a protocol for the ownership of IP in research collaborations.

IP protocol main features:

- The common starting point for negotiations on research collaboration terms should be that universities own any resulting IP, with industry free to negotiate licence terms to exploit it.
- But if industry makes a significant contribution it could own the IP.
- Whoever owns the IP, the following conditions need to be met:
  1. The university is not restricted in its future research capability.
  2. All applications of the IP are developed by the company in a timely manner.
  3. The substantive results of the research are published within an agreed period.
- On all other terms the protocol should recommend flexibility where possible to help ensure that the deal is completed.
- The Funding Councils and Research Councils should require universities to apply the protocol in research collaborations involving funding from any of the Councils.

1 Lambert Review of Business-University Collaboration, Final Report. December 2003.

Recommendation 3.5 from the Lambert Review of Business-University Collaboration

The Association for University Research & Industry Links (AURIL), the Confederation of British Industry (CBI) and the Small Business Service (SBS) should produce a small set of model research collaboration contracts, for voluntary use by industry and universities.

- A range of model agreements should be developed, setting out various approaches to IP ownership, management and exploitation rights including, but not limited to, ownership of the IP by the university with non-exclusive licensing or exclusive licensing to industry.

- The model contracts should be agreed by the main representative bodies. They could be distributed through the same means: to universities through AURIL and Universities UK and to industry through the CBI and the SBS.

Development of the toolkit

The timeline below shows how these recommendations gave rise to what has become known as the Lambert toolkit.

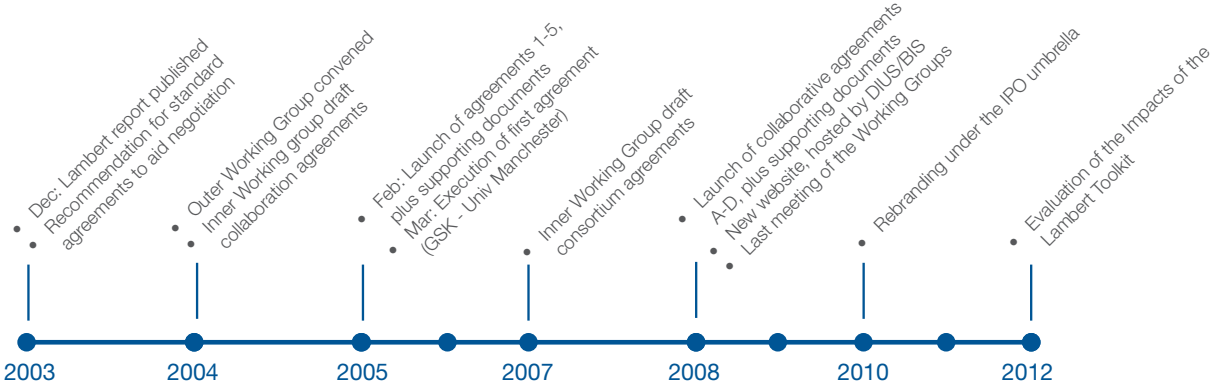


Figure 1.1 Timeline of the development of the Lambert toolkit.

Two working groups were set up – an Outer Working Group with wide representation from over 60 individuals drawn from industry, the research community, government and other relevant groups, and an Inner Working Group with four representatives each from the university and business sectors, plus legal support. This group was tasked with negotiating and drafting an approach and model agreements which were satisfactory for all sides. These were then reviewed and ratified by the Outer Group. The Intellectual Property (IP) principles suggested in Lambert's report were adopted and taken through into the agreements and toolkit.

Components of the toolkit

The toolkit offers a tiered approach to IP ownership based on the levels of investment, both financial and intellectual, by the collaborating partners. It is a voluntary approach and can provide basic principles and guidance for negotiations, or provide suitable model agreements designed to be used in specific circumstances. The key components of the toolkit are:

- a series of **Model Agreements** that are tiered to reflect a varying balance of investment, publication rights and IP control
- a **Decision Guide** that steers users through a series of questions to identify the correct model agreement for a particular collaboration
- two **Outlines** to support users in their negotiations by identifying the principles that need to be established at the outset, to ensure that both sides have similar expectations for the proposed project
- two sets of **Guidance Notes** that help newcomers understand the terms and legal issues and highlight the points that are of importance to each side of the negotiation.

The toolkit was developed in two phases, producing two sets of model agreements:

- Five collaborative R&D agreements (Lambert 1 – Lambert 5) for one-to-one collaborations
- Four consortium agreements (Lambert A – Lambert D) for multi-party collaborations.

It is important to recognise that the agreements represent a position that is "pre-negotiated", and reflects a compromise on all sides. The aim was to produce an approach that was fair and balanced, without favouring either industry or university interests. The toolkit is hosted on a neutral website – now at the Intellectual Property Office (IPO)[2] and previously on the DTI, DIUS and BIS websites. This neutrality is an important feature of the toolkit's approach.

2 www.ipo.gov.uk/lambert.htm

Aims of the toolkit

The Lambert review identified that in 2003, some of the barriers to collaboration between the research establishments (universities or public sector research establishments (PSREs)) and industry were:

- No common “ground rules” over ownership of IP in research collaborations, leading to significant difficulties in agreeing IP terms
- Need to determine IP ownership and rights at the outset
- Business and universities both report negotiations can be extremely lengthy and costly
- Model contracts for the LINK scheme are useful but not available to all
- Smaller companies with limited resources may be deterred by high legal costs and time
- Some universities are perceived to overvalue their IP
- Variable quality of university technology transfer offices (TTOs), recruitment & training

The toolkit was intended to address some of these issues, and in particular the objectives of the approach were to:

- facilitate negotiations between potential collaborators
- reduce the time and effort required to secure agreement
- provide examples of best practice

Although it was not made explicit, other less tangible aims for the toolkit were to increase SME collaboration with universities, and to reduce the gap between more and less “IP capable” universities.

Previous evaluations

A comprehensive impact evaluation of the Lambert toolkit has never been undertaken. There have been three previous surveys carried out, two in 2006 by AURIL and CBI, and a third in 2009 by AURIL[3]. These collected evidence of use of the model agreements and toolkit, but the further-reaching outcomes and impacts were not examined. The findings of these previous surveys will be compared with the current evaluation where possible in this report. In 2007, a study[4] into negotiation of business – university research collaborations was led by Peter Saraga, President of the Institute of Physics and chair of the Higher Education Funding Council for England (HEFCE) advisory group for Business and the Community. While not strictly an evaluation of the Lambert toolkit, this study looked closely at the effects of the introduction of the agreements, and aimed to identify what remaining barriers might be influencing university - business negotiations.

Our approach

The Intellectual Property Office has commissioned this comprehensive evaluation of the Lambert toolkit, to inform possible policy developments in relation to improving intellectual property deal-making and knowledge exchange.

The aims of this evaluation are to gain an understanding of:

- The evidence of use of the Lambert toolkit or similar model agreements
- Who is using or not using the Lambert toolkit and why, and what factors determine level of use
- What were the barriers to implementation and what could have been done differently/better with its implementation
- Whether the Lambert process has helped to close the capability gap in IP deal-making highlighted by the Lambert Review
- Whether R&D contracts are more robust as a result of the use of the Lambert toolkit

3 E-Survey on Use of Lambert Model Agreements Toolkit, Summary of Findings, AURIL, 2006
Lambert Toolkit Survey, CBI, 2006.
Lambert +4 Survey Results 2009, AURIL. (www.ipo.gov.uk/lambert-auril-survey.pdf)

4 Streamlining University / Business Collaborative Research Negotiations: An Independent Report to the "Funders' Forum" of the Department for Innovation Universities and Skills, August 2007.

Evidence base

This report builds on the many previous reports on the issues surrounding business-university interactions. We have gathered evidence from a wide spectrum of public and private organisations through an online survey, in-depth interviews and case studies covering 48 organisations, and informal discussions with many more individuals at meetings and conferences throughout the research period. In all, survey responses were collected from 256 participants. Just over half the survey participants came from the research community, with nearly 40% from industry both large and small, and 5% from the IP or legal profession. Further details of the evidence base for the report are given in Appendix 1.

There are some inherent challenges in attempting a retrospective evaluation of an intervention like this. Although we have interviewed several of those involved at the start of the process, and reviewed meeting notes and minutes, we have not been able to identify any official statement of aims for the toolkit, and there was certainly no attempt to measure the status quo at the time. Equally, there has been no systematic follow up of activities, outputs and outcomes, and we have had to rely on proxy measures to gauge whether the toolkit has had an effect. Probably the most difficult aspect is the impossibility of disentangling the effects and impacts of the toolkit from the significant wider changes in the Knowledge Exchange (KE) landscape of the UK over recent years. Other initiatives from government, the influence of HEIF funding, the continued rise of Open Innovation, a growing emphasis on the “Impact Agenda”, an increased willingness to source the best research worldwide rather than close to home, and the effects of the global recession have all had fundamental effects on the ways that universities interact with business. Against this backdrop, the impact of the Lambert toolkit may be influential, but it is just one small cog in a much bigger machine that establishes and drives a successful research collaboration.

Chapter 2: Awareness and adoption

- Knowledge of the Lambert toolkit is well established in the research and innovation community. Over 80% of universities and the wider research community, and over 50% of the companies surveyed are aware of it. SMEs are reported to be much less familiar with the resource.
- Almost 70% of the universities and companies that are aware of the Lambert approach have used at least some part of the toolkit to support different activities, but only 3% are using the agreements unmodified. We estimate that less than 10 or 15% by value of collaborative research in the UK is based on a Lambert-like agreement.
- This is partly through lack of awareness, partly because the agreements are most suitable for a minority of university-business interactions, and partly because they are often used in practice not as a first choice, but rather as a compromise position when the parties cannot agree to use one of their own agreements. When they are suggested as a first choice, this proposal is most likely to come from the research institution.
- Large companies strongly prefer to use their own agreements, but can be willing to use Lambert when this is suggested by the research partner. Nearly 40% of the SMEs in the sample do not have any standard templates for research collaborations at all.

Awareness

As the toolkit has been available for eight years, it would be hoped that knowledge of the resource was well established. **More than two-thirds of the survey respondents were already aware of the Lambert agreements or toolkit.** This awareness was much higher amongst the universities and wider research community (at 81%) than within industry (at 53%). As would be expected, the IP and legal professions are also well aware of the toolkit.

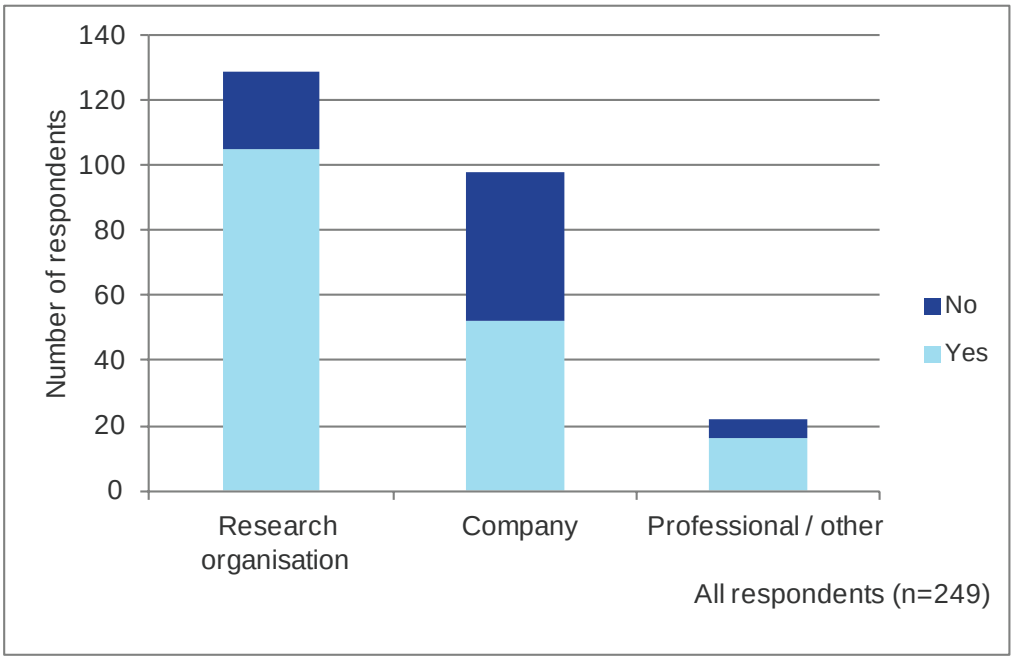


Figure 2.1 - Before starting this survey, were you aware of the Lambert agreements and/or the Lambert toolkit?

This level of awareness suggests that the Lambert toolkit is well established in the research innovation community. However, the association of the Lambert name with the survey means that those who have heard of the Lambert toolkit may have been more likely to complete the questionnaire.

Website usage

The research collaboration agreements on the Lambert website receive approximately 1,500 views each per year, and the consortium agreements about 1,050 views each per year. **On average, each agreement is viewed about 4 or 5 times every day.** Despite minimal advertising, the number of views has grown slightly, although not significantly, each year since their move to the IPO website in 2010, showing that they are a resource which is still widely used and relied upon.

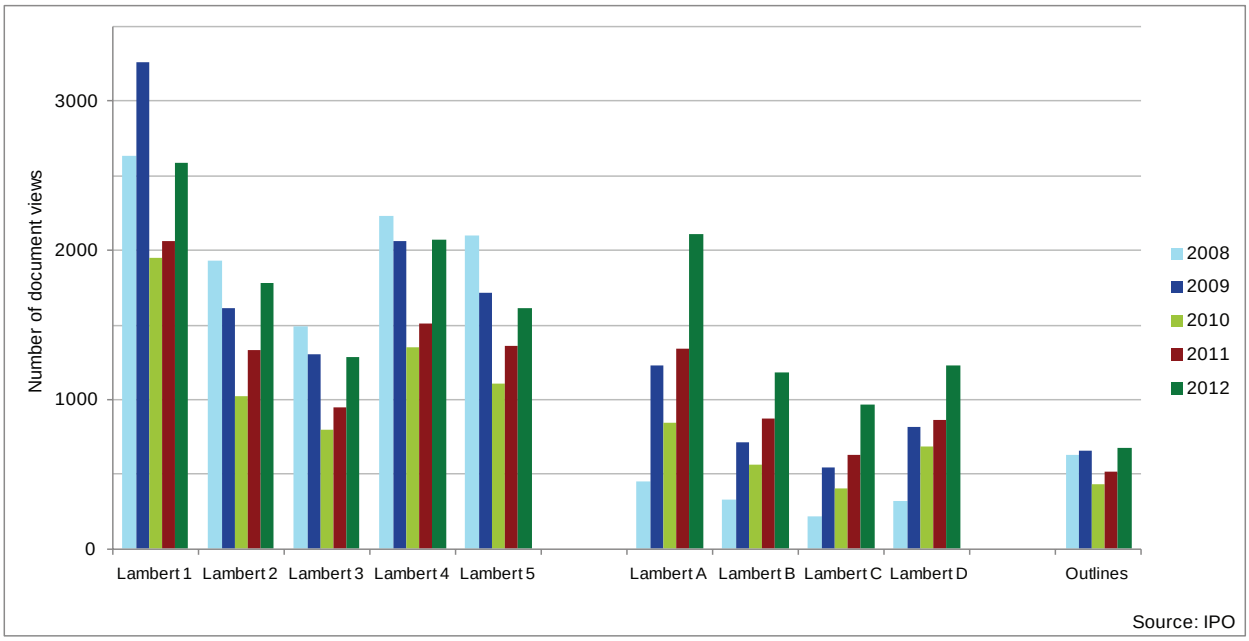


Figure 2.2 - Document views on the Lambert toolkit websites 2008 – 2012. Source: IPO.

University vs industry

We found a strong perception that the sector that was most aware of the Lambert agreements was the university sector, and that the sector with least awareness was the SME sector. The highest awareness rating was within the Russell Group universities, a group of 24 research-intensive universities which are amongst the most active in industry-university research. **Awareness within universities was rated as medium or high by 88% of the respondents who gave an opinion, whilst awareness in SMEs was rated as low by 91%.** This was also borne out in our informal discussions; many of the SMEs contacted did not know about this resource but were keen to explore it once they knew that it existed.

"Never heard of the toolkit until today - sounds helpful & will look it up now" – SME

Even at the recent Innovate 2013 event with an SME-focused audience which was already self-selected as being interested in innovation and IP in university-business collaboration, only a small minority had heard of the Lambert toolkit.

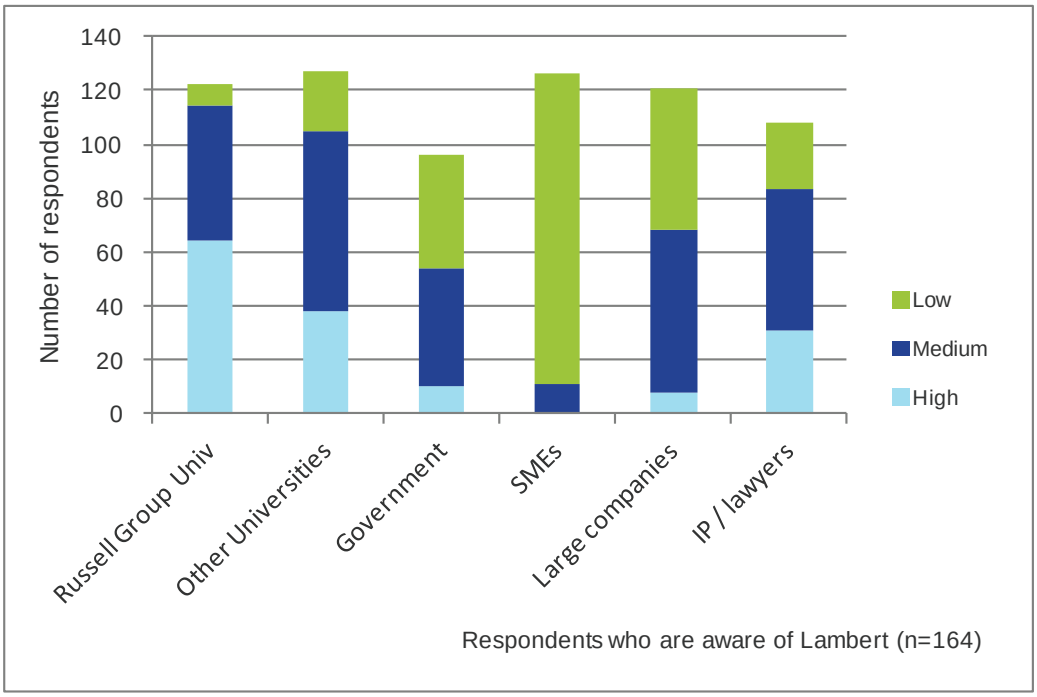


Figure 2.3 - Within the organisations that you interact with, how would you rate awareness of the Lambert toolkit?

In the survey sample, more than 50% of the SME respondents had heard of the toolkit, which again suggests that the Lambert branding associated with the survey is likely to encourage participation from those who have come across the agreements.

Case Study - Small entrepreneurial company

ACAL Energy Ltd (www.acalenergy.co.uk) is developing innovative chemical catalysts for the next generation of affordable fuel cells. From small beginnings with just two people and a business plan 8 years ago, the company now employs 32 people and has raised £16m in venture capital.

Their product development has been supported by a number of collaborative projects in chemistry and materials research with leading UK universities including Manchester, Liverpool, Birmingham and Newcastle. As a start-up, with no standard agreements of their own, ACAL turned to the Lambert toolkit, and has used the model agreements as the basis for their research collaborations since their launch. Amanda Lyne, VP of Strategic Business Development and Marketing, explains “The structure of the deals is an excellent starting point, which we have used for Knowledge Transfer Partnerships (KTPs), CASE PhD studentships, and post-doctoral research projects. Using these model agreements has accelerated several partnerships, which had previously taken ages to negotiate.”

Raising awareness

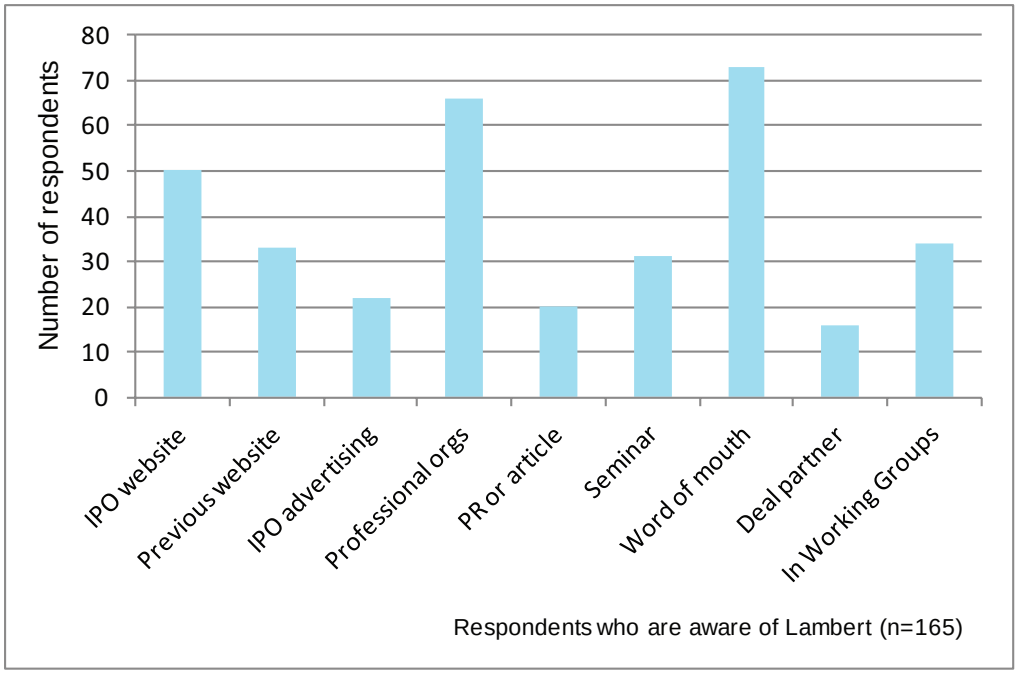


Figure 2.4 - How did you become aware of the Lambert model agreements?

The main routes to awareness of the toolkit are by word of mouth (20%), through professional organisations (18%) and via the website (14%). When the toolkit was first launched, and then re-launched with the consortium agreements, there was considerable publicity particularly in the university sector through newsletters, seminars, articles, and training. In recent years, this has dropped as the knowledge of the toolkit has passed into "received wisdom". As will be shown in Figure 5.1, 64% of those who expressed an opinion felt that the toolkit could be improved by increasing awareness and uptake of the resource. The IPO has never undertaken a formal awareness campaign around the toolkit, and much of the advertising has been carried out by supporters of the toolkit, and by partner organisations like AURIL and CBI or through training courses run by PraxisUnico and others. Much of this promotion has been targeted more strongly at the university sector, particularly at those in the technology transfer or research contract offices. Awareness is lower amongst academic researchers, who will often be the individuals who negotiate the initial outline structure of the research collaboration, and more could be done to educate this group about the IP principles and decision tree approach, if not the model agreements themselves.

"I heard about the Lambert toolkit just today 5 minutes before filling in this survey. Ridiculous! MUCH better publicity is needed if the toolkit is good" – University Professor

In the SME sector, there is a need to target awareness effectively at companies which might be able to gain from university research collaboration, rather than at all of the estimated 4.8 million SMEs in the UK today. Building on the success of peer group influence and professional

organisations to date, the innovation support schemes such as those run by IPO, Technology Strategy Board (TSB), Growth Accelerator, and the Devolved Authorities would be good routes to use. Other useful organisations would be networking groups including the Knowledge Transfer Networks (KTNs), professional groups such as the Licensing Executives Society, and trade organisations.

The adoption of other types of model agreement, such as the Russell Group CASE studentship agreement, has been driven by the university sector but this has not happened with the Lambert agreements. The role of funders in recommending and promoting the use of particular agreements can also be a key driver of awareness and uptake, and this aspect is examined in more detail in Chapter 5.

Adoption

How many are using the Lambert toolkit?

Overall, less than half (45%) of the overall survey sample have used any part of the toolkit, whether the complete agreements, certain clauses, or the supporting tools. **For those who are already aware of Lambert, 69% of the respondents have used at least some part of the toolkit**. This response is very similar to the AURIL survey of 2009, which found that 41% of their sample had used the toolkit, down from 54% in the smaller AURIL survey of 2006. The sample profile of these previous surveys was largely from the research community, and had a smaller sample size, so it is hard to draw direct comparisons with this data, but it suggests that usage of the toolkit has remained fairly constant since its introduction. Adoption levels of the toolkit are variable, and this is not changing significantly.

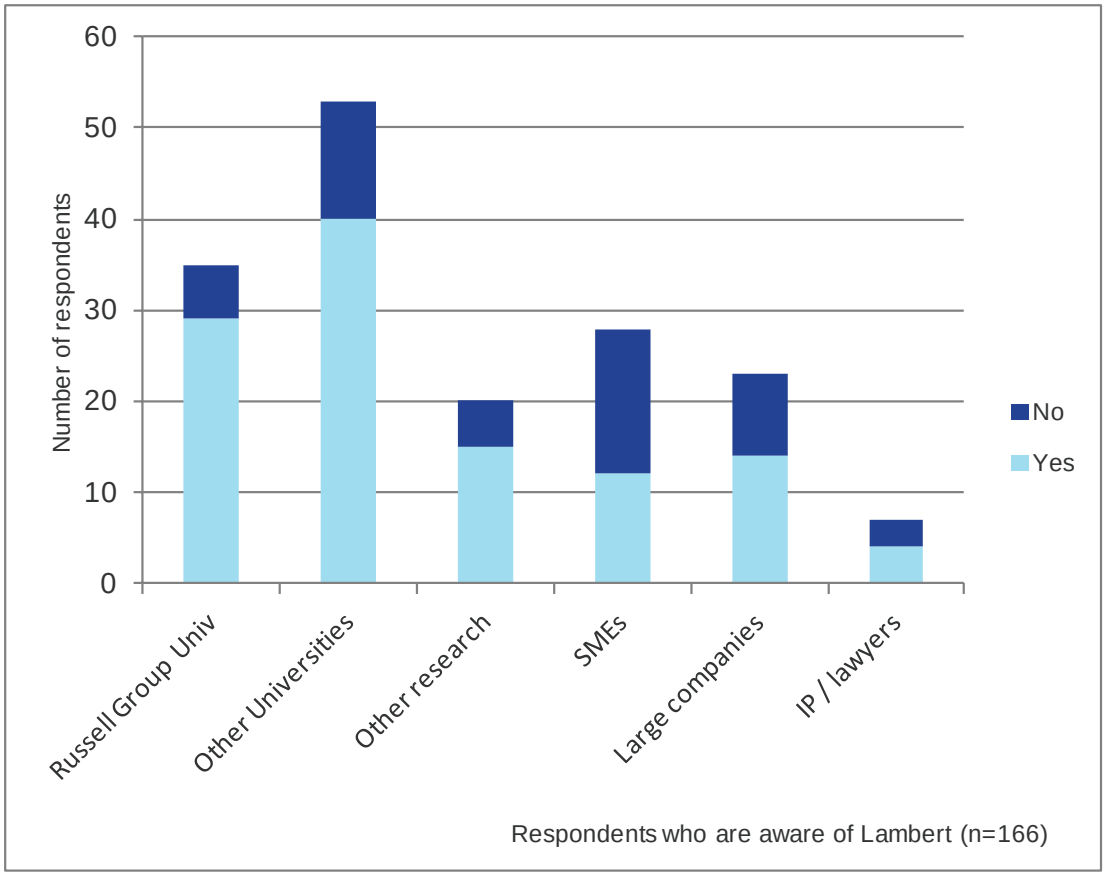


Figure 2.5 - Have you used any of the Lambert agreements (including individual clauses), or the other components of the toolkit (Outline document, Decision tree, Guidance notes)?

In percentage terms, there is little difference between the different types of research organisation, where 75-80% have used the toolkit. For SMEs, the percentage is much lower at around 40%, underlining the lower level of awareness and uptake in this sector.

According to the members of the Inner Working Group who were interviewed, the original intention was that the agreements should be used "as is" with no modification, but in practice only 3% of those who are aware of Lambert are using them in this way. Within the survey group who have used some part of the toolkit, 35% would prefer to use a Lambert (or Lambert-like) agreement and will usually suggest them as their first choice for a starting template, while 55% will use them only in certain circumstances or if they are offered by a partner.

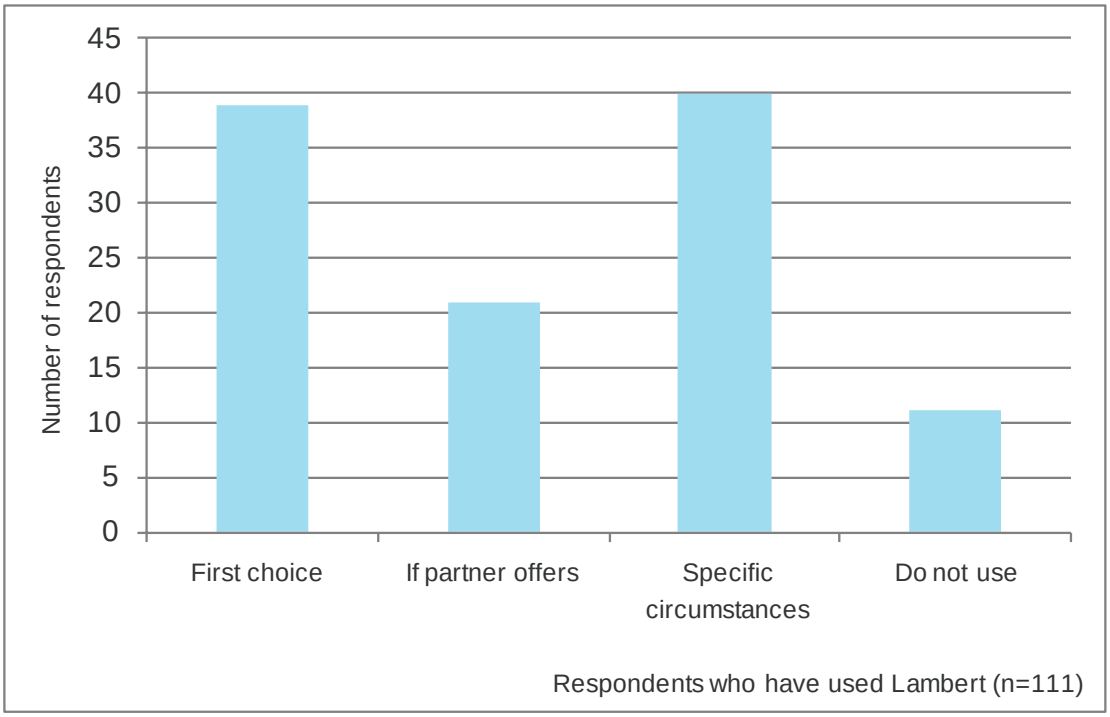


Figure 2.6 - Which of these options best describes your use of the Lambert agreements?

Most organisations in both the research and industry sectors have their own agreements (some of which have been derived from Lambert), and will prefer to use these as their first choice. From the interviews and comments, it seems that **many of these however will accept the use of the Lambert agreements as a second choice or compromise position when the parties are not able to agree to use one of their own agreements**. Some of the reasons and attitudes behind these decisions are explored further in Chapter 4. For some the agreements came too late, once many organisations were already locked into their own way of working and familiarity with their own terms and conditions. All the Russell Group universities in the sample, for example, have some form of standard agreement, and for over 60% of these, this agreement was developed independently or pre-dates the Lambert agreements (though it may use similar principles). For others the very nature of the "compromise" inherent in the negotiated agreements means that many organisations will always prefer to start their negotiations from a more favourable position when they can.

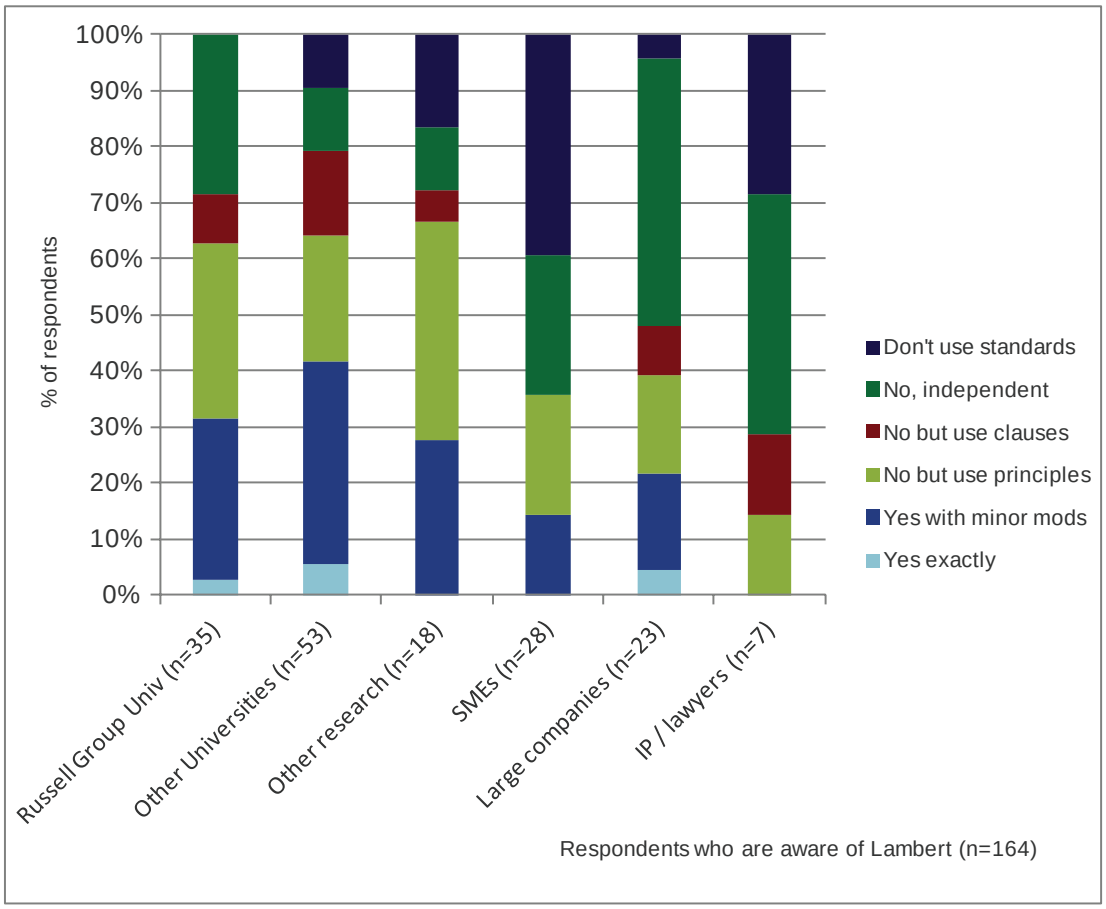


Figure 2.7 - Are your standard in-house agreements based on the Lambert agreements?

Instead of using the Lambert agreements exactly as written, 51% of the sample who are aware of Lambert will use a modified Lambert agreement, or follow the same principles. And a further 9% will use clauses from the agreements in specific circumstances**. The influence of the agreements is therefore much wider than just those who follow the templates exactly**.

The legal profession in our sample does not use the Lambert agreements, preferring to use their own agreements, or bespoke contracts for every situation. This is unsurprising, as the documents were intended to be used with minimal support for the more straightforward collaborations where legal advice is less important. In other sectors of the legal profession, however, the use of standard agreements is commonplace (for example in the construction or conveyancing sectors it is very unusual not to use a standard contract). The Practical Law Company (PLC) provides a subscription service delivering regularly updated precedent documents to the legal profession, and some of the lawyers interviewed mentioned that they would use these as a starting point for research collaborations. Where standards are used by the legal profession an important requirement is that the agreements are regularly updated and seen to be kept current (as with the PLC precedent documents). This was highlighted as one of the concerns with the Lambert agreements.

Nearly 40% of the SMEs in the sample do not have any standard templates for research collaborations at all. This could represent an ideal opportunity to use the Lambert agreements, to avoid the legal time and expense of drawing up an individual contract for a research collaboration. On the other hand, large companies are the most likely to have their own independent agreements, a position that is reflected in the many comments from both sides that **large companies prefer to use their own agreements**.

"*Our experience is that, with the obvious exception of GSK, most companies are not keen to use the Lambert, preferring to use their own agreements*" – Russell Group University

"*Most companies insist on using their own model agreements (which have IP and other terms that differ significantly from Lambert model)*" – SME

How much are they using the Lambert toolkit?

We attempted to quantify the extent to which the Lambert agreements are being used, but found that most of the organisations we spoke to do not gather this data, and often would not know if a particular agreement was based on the Lambert template where it is offered by the partner. This suggests that organisations are not relying on the Lambert "brand" to support their IP principles, even if they have incorporated these into their own approach. The agreements are primarily intended for one-off research collaborations (although, as will be discussed later, they may also be used successfully for other types of interaction), and form just part of the full spectrum of potential interactions between industry and the research community illustrated below.

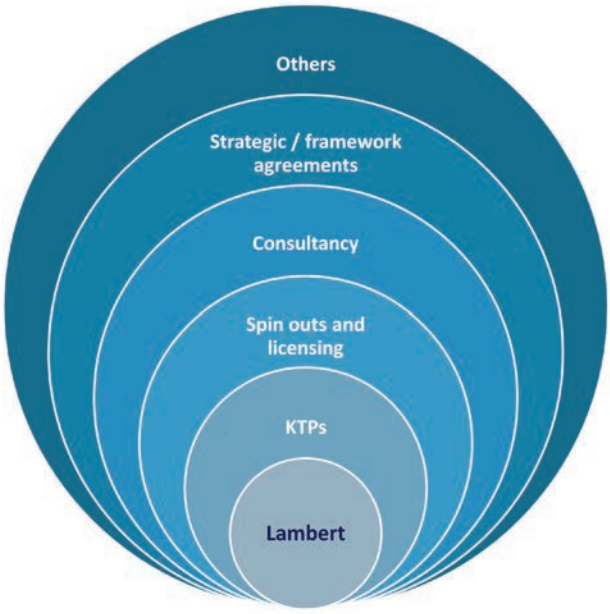


Figure 2.8 - Spectrum of industry – research interactions.

Of these potential interactions, only a proportion will be suitable or appropriate for a Lambert agreement. Where the survey participants were able to estimate how much of their spend/revenue would be amenable to use of a Lambert agreement, the most popular selection was 0-10%, and the median was 11-25% (estimated at 14%), showing that **Lambert agreements are only appropriate for a relatively minor number of university-business interactions**. When asked about the proportion of their spend/revenue for which they actually did use a Lambert agreement, both the most popular and the median selection was 0-10% (median estimated at 6%). In the figure below, the horizontal axis shows the proportion of spend/revenue on industry-university interactions, and the vertical axis plots the cumulative percentages of respondents who chose a range that was higher than each particular value of percentage of interactions. This graph illustrates that the survey sample are not actually using Lambert for all the situations where it they think that it may be appropriate, and that Lambert is not considered appropriate for a large proportion of these interactions. Despite this finding, there is a small group of people who have completely adopted the Lambert approach, and use it for more than 75% of their collaborative work. This group contains all sectors – one Russell Group university, two other universities, one research institute, one SME and one multinational company, so for these respondents at least the toolkit is suitable for all their needs.

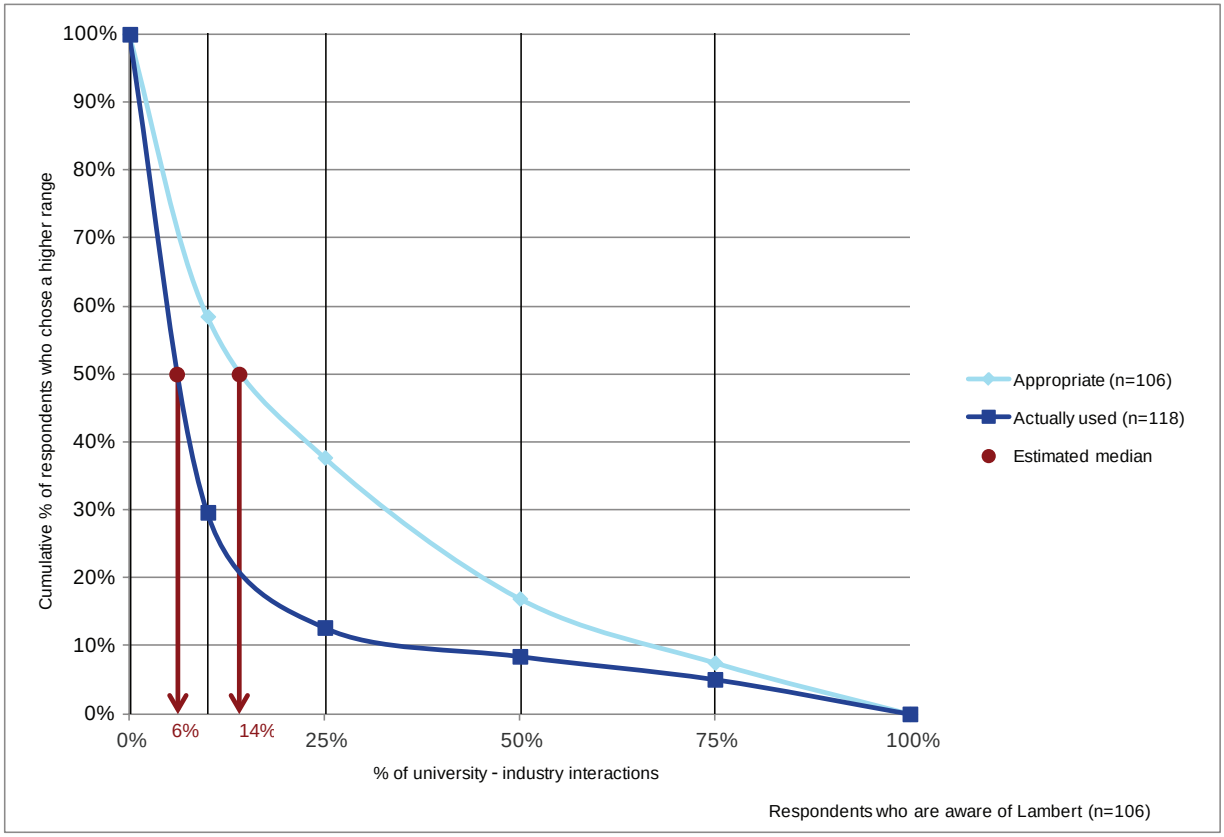


Figure 2.9 - For what proportion of your Business - Research Organisation spend/revenue is the use of a Lambert agreement or approach appropriate; and for what proportion do you actually use a Lambert agreement or approach?

We also asked the in-depth interviewees to provide quantitative information about the numbers and values of deals that they have done either with or without a Lambert agreement. Again, accurate figures were not available, but we did get a sense of the orders of magnitude involved. Over the past year, more than 1,000 deals worth a total of >£160 million were done by our in-depth sample, and of these only about 50 deals worth ~£15 million used a Lambert template. Even where the interviewee was a firm supporter of the Lambert toolkit and agreement, they were usually only able to use the templates in a small proportion of their deals, generally because the deal partner prefers to use their own agreement. Extrapolating from these different figures, **we estimate that less than 10 or 15% by value of collaborative research in the UK is based on a Lambert-like agreement.**

As before, the toolkit is seen as being most useful for deals with the universities, but surprisingly, it was reported as nearly as useful for deals with both SMEs and large companies. Research organisations report that the toolkit is most useful or quite useful with about 75% of both sizes of company. Where the use of the Lambert toolkit is proposed by one or other partner, the response is predominantly positive or neutral, especially in the research sector and SMEs, but even amongst large companies. **The toolkit therefore can be useful when it is accepted, but it is not being proposed or used as widely as may be expected. When its use is proposed, this is almost always from the university/research side of the deal.** In this respect, little has changed since the AURIL survey in 2006, which reported that there had been a better than expected take-up of the agreements by universities in the first year, but whilst industry partners were generally willing to use the agreements when suggested by research partner institutions, only 22% had suggested their use themselves.

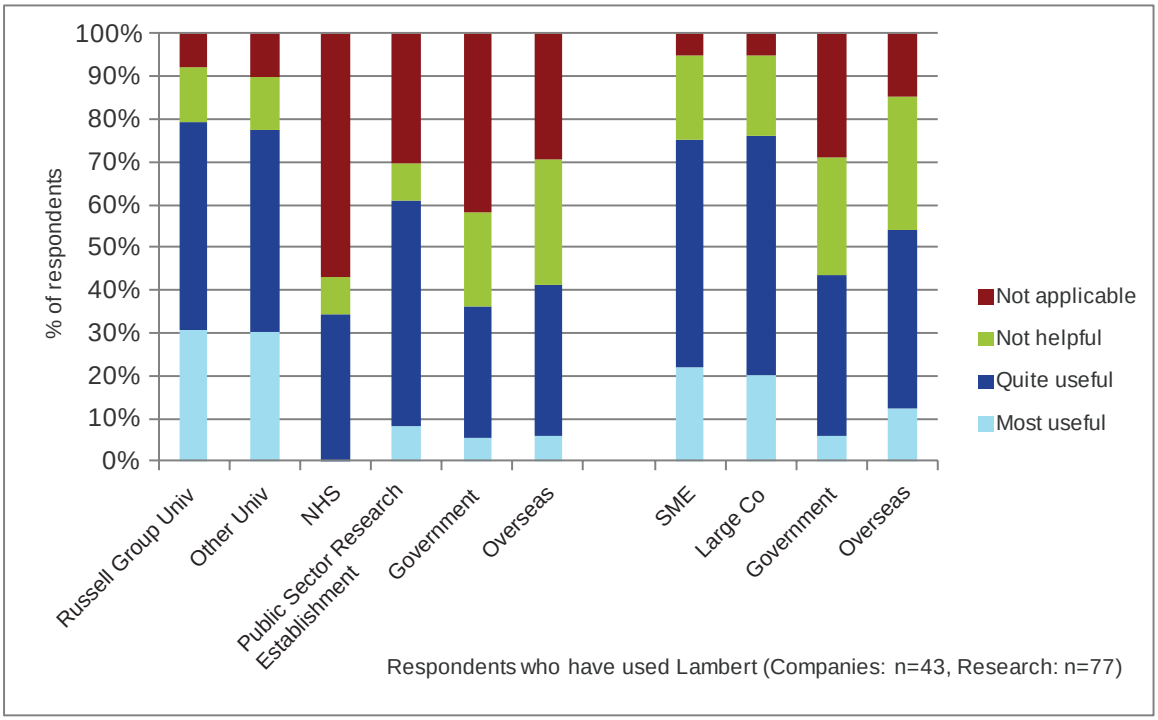


Figure 2.10 - Please rank the usefulness of the toolkit and agreements for the following negotiations. Left hand side shows company responses, right hand side shows research organisation responses.

Which agreements are used?

As in the 2009 AURIL survey, our survey looked at the relative use of the different research collaboration and consortium agreements.

The Lambert research collaboration agreements (one to one)

- *Collaboration Agreement 1:* Sponsor has non-exclusive rights to use in specified field/ territory; no sublicences; University owns IP
- *Collaboration Agreement 2:* Sponsor may negotiate further licence to some or all University IP; University owns IP
- *Collaboration Agreement 3:* Sponsor may negotiate for an assignment of some University IP; University owns IP
- *Collaboration Agreement 4:* University has right to use for non-commercial purposes; Sponsor owns IP
- *Collaboration Agreement 5:* Contract research: no publication by University without Sponsor's permission; Sponsor owns IP

The Lambert consortium agreements (multi-party)

- *Consortium Agreement A:* Each member of the Consortium owns the IP in the Results that it creates and grants each of the other parties a non-exclusive licence to use those Results for the purposes of the Project and for any other purpose
- *Consortium Agreement B:* The other parties assign their IP in the Results to the lead Exploitation Party who undertakes to exploit the Results. (Alternatively the Lead Exploitation Party is granted an exclusive licence)
- *Consortium Agreement C:* Each party takes an assignment of IP in the Results that are germane to its core business and undertakes to exploit those Results
- *Consortium Agreement D:* Each member of the Consortium owns the IP in the Results that it creates and grants each of the other parties a non-exclusive licence to use those Results for the purposes of the Project only. If any member of the Consortium wishes to negotiate a licence to allow it to exploit the IP of another member or to take an assignment of that IP, the owner of that IP undertakes to negotiate a licence or assignment

In 2009, the consortium agreements had only just been introduced and were being used much less than the collaboration agreements. Only 5 of the 38 respondents in 2009 had used one or more of the consortium agreements. This has now evened out, with the consortium agreements now used only slightly less than the collaboration agreements. **All the different agreement options are used, with Lamberts 2, 4, A and D each used by over 60% of those who**

have used the agreements, whilst Lambert 5 and Lambert C are used the least. Lambert 4 was also the most popular agreement in both the 2006 and 2009 AURIL surveys, but there has been a gradual shift since then away from Lambert 1 and Lambert 3, with a growth in use of Lambert 2 and Lambert 4.

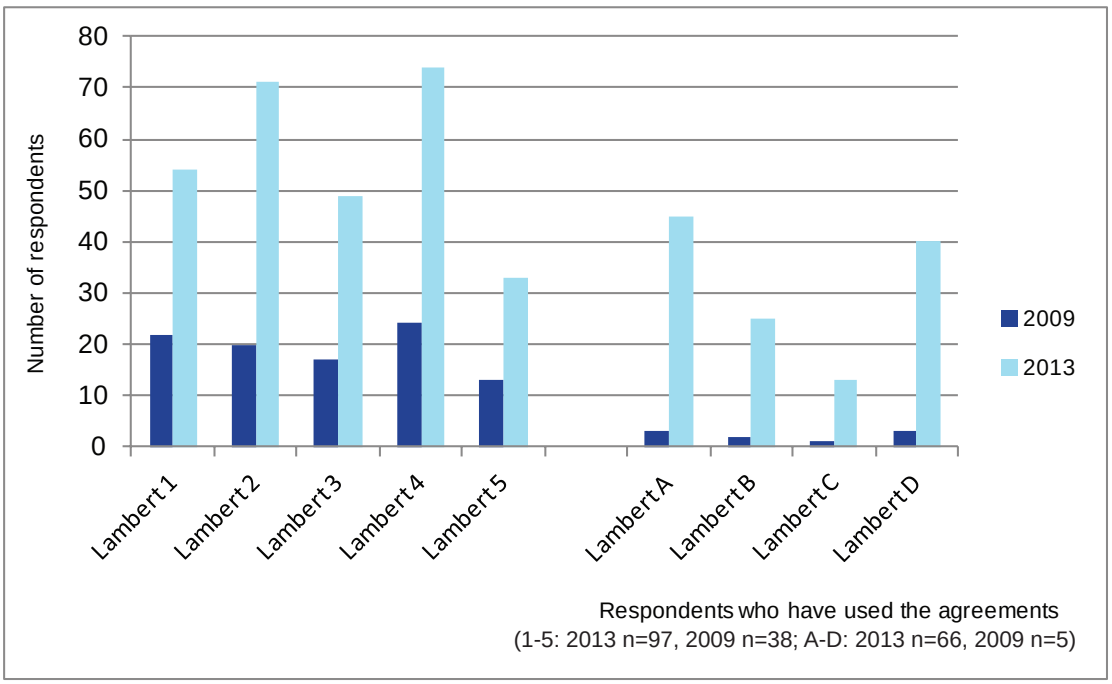


Figure 2.11 - Which of the agreements have you used (pick all that apply)?

We also looked at which agreements are used most often by each organisation. Again, for the collaboration agreements this is Lambert 2 and Lambert 4, with use of Lambert 2 in particular increasing since 2009. These are the two agreements which represent the most flexible options for university or company ownership of the IP respectively. Lambert 5, which is not very widely used, most closely resembles a traditional "fee-for-service" research contract, and has conditions on limitation of publication in particular which are difficult for many universities to accept as they stand. The decline in the use of Lambert 3 may represent a move towards earlier decisions over who will own the IP arising from the work, as this is the agreement which gives ownership of the IP to the university, with industry rights to negotiate for assignment.

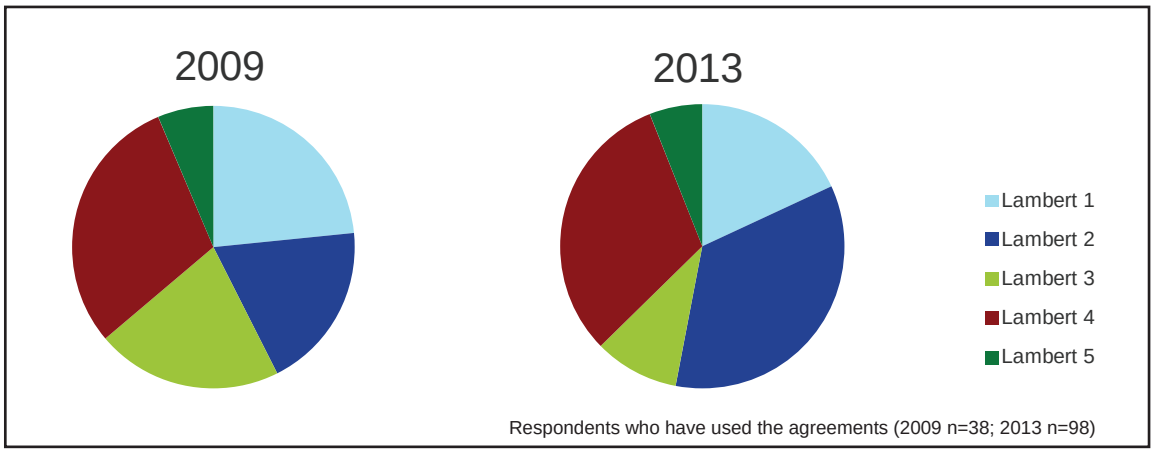


Figure 2.12 - Which research collaboration agreement (one-to-one) do you use most often?

For the consortium agreements, the 2009 sample is too small to infer any trends, but both Lambert A and D are popular in 2013. These are the two options which allow the party which invents to retain the IP in their own inventions and in the results that they create, with different options for dividing and allowing access to this IP for the other members of the consortium. This mechanism is much more commonly used in our survey than the alternatives of nominating one party to lead on the exploitation or trying to divide the IP according to which parties are best placed to exploit it.

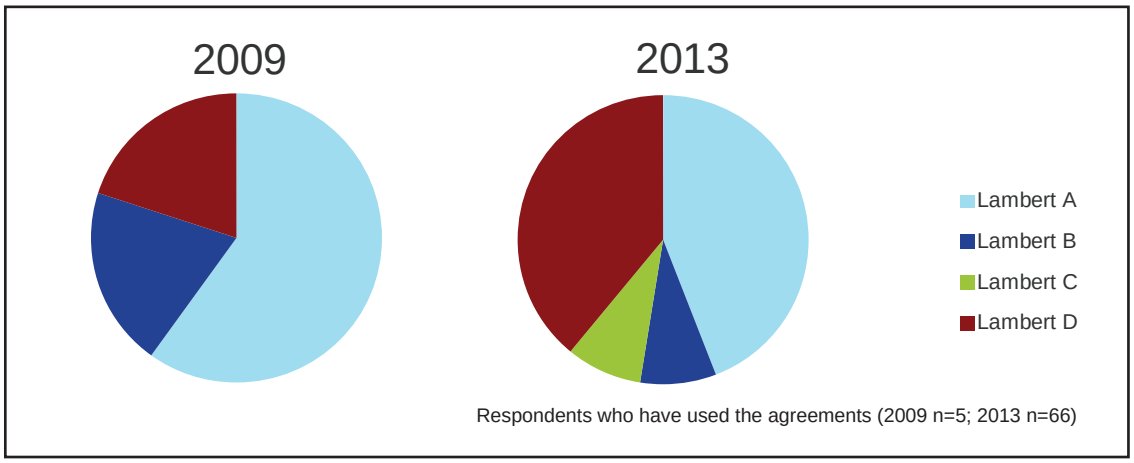


Figure 2.13 - Which consortium agreement (multi-party) do you use most often?

Case study – Multi-way collaboration

The University of South Wales was awarded funding from the Welsh Government's Academic Expertise for Business (A4B) scheme. By combining the expertise and resources available from Welsh Higher Education Institutions and industry in Wales, this Collaborative Industrial Research Project (CIRP) aims to accelerate the development of new processes and services, ultimately creating exciting new technologies which are of strategic importance to the Welsh economy.

The Tuneable Laser project brought together the Optoelectronics expertise of the Faculty of Advanced Technology at the university with the commercial input from a multinational company and support from two SMEs based in Wales, to work on a metrology application. The project needed an agreement to balance the requirements of the sponsors, the university and to protect the commercial needs of the large and small companies involved. The Lambert Consortium agreement has allowed the participants to deal equitably with the IP that has arisen during the work. One of the smaller companies unfortunately had to withdraw from the project part way through, but under the terms of the agreement, this transition could be handled seamlessly.

The project has been very successful, and has developed novel intellectual property for the team. The project partners are currently agreeing the commercial terms for the future exploitation of this work.

The supporting tools are used by fewer people than the agreements themselves, with the Guidance Notes proving popular for each category. **It seems that the toolkit is not always used as a coherent whole, but with different parts used to support different activities.** This is also reflected in the document views on the Lambert website, where the supporting documents are again viewed less often than the agreements themselves. The decision tree is not used as often as the agreements themselves, although it should be the first step to deciding which is the correct agreement to use. In some cases, this will be because the users are already familiar with the different options, but it may also reflect a lack of awareness of how more value can be obtained by using the toolkit as an integrated whole, and by agreeing the important issues up-front before starting to draft an agreement.

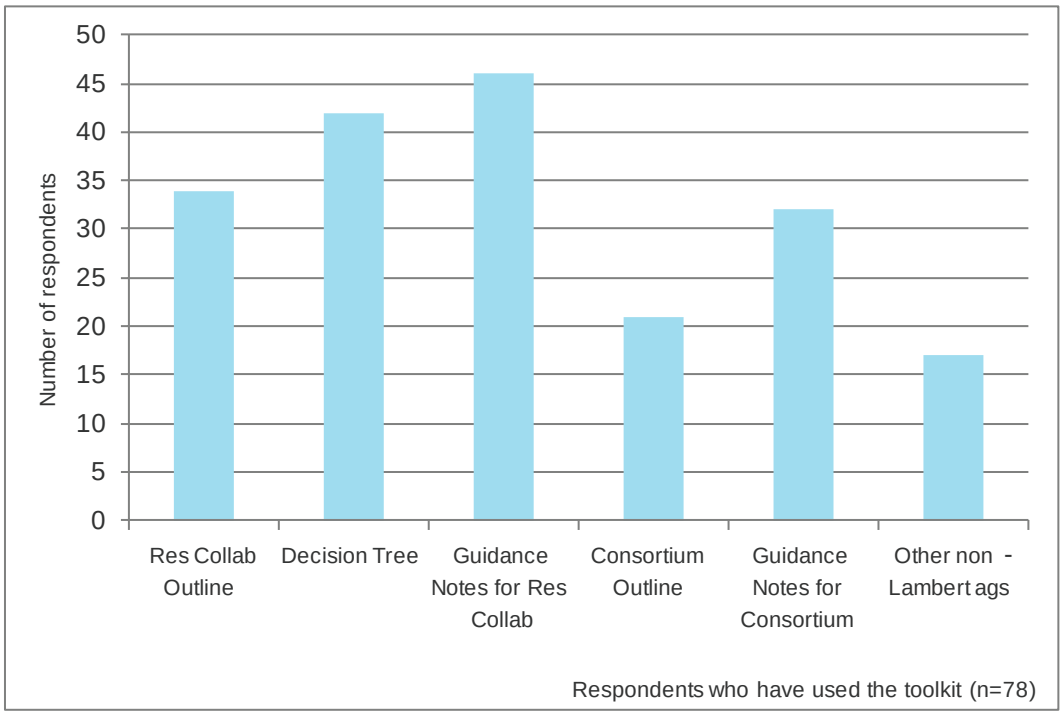


Figure 2.14 - Which supporting tools have you used?

Alternatives

As has been discussed earlier, **if the Lambert agreements are not used, the most common alternative is to use the organisation's own agreements (76%), followed by agreements suggested by the partner (56%)**.

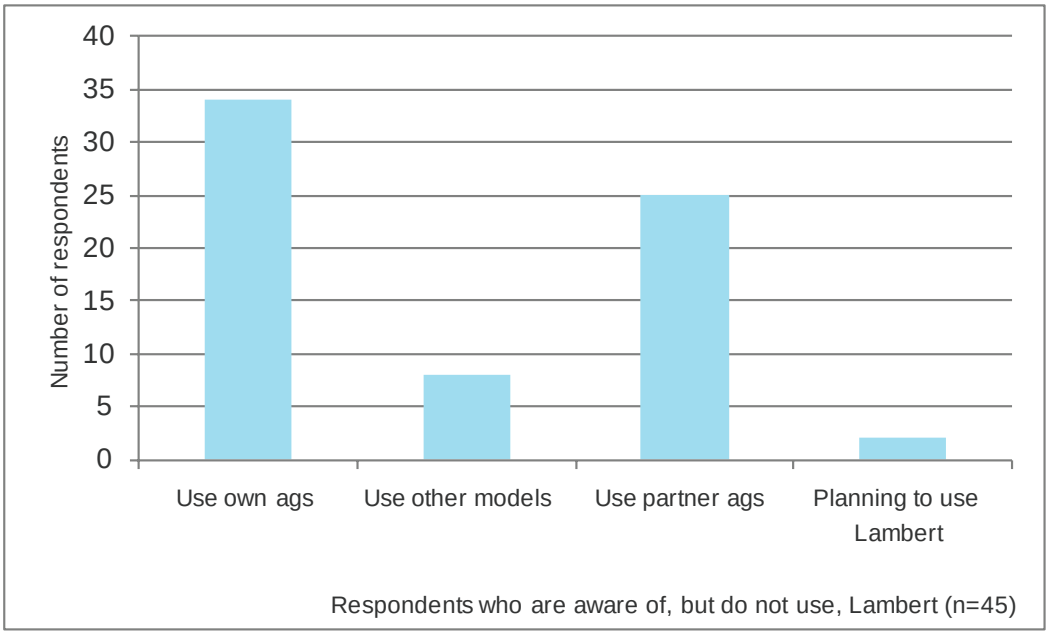


Figure 2.15 - What agreements do you use for research collaborations?

The main issues cited for not using the Lambert toolkit were that certain clauses were not acceptable, or the general approach did not cover their requirements. Some of the other issues raised were that the toolkit does not work well in an international environment, that each situation requires a bespoke approach, or that they prefer to use a term-sheet approach.

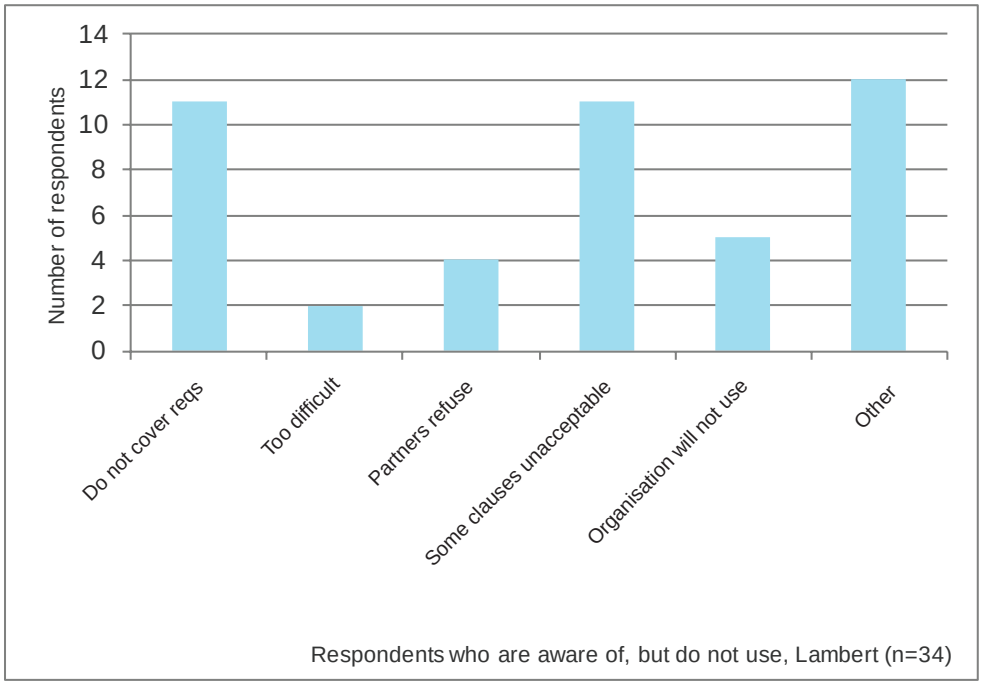


Figure 2.16 - Do you have any problems with use of the Lambert agreements and toolkit?

We also investigated the use of other model agreements, and found that the most commonly used were the TSB standard model consortium agreement, and the DESCA agreement used for EU funded projects. In clinical situations, the model Clinical Trial Agreement (mCTA), model Clinical Investigation Agreement (mCIA) and model Industry Collaborative Research Agreement (mICRA) from the National Institute for Health Research (NIHR) are used and were developed initially from the Lambert principles. More university-specific agreements are the Russell Group CASE PhD studentship, and the Brunswick MTA and agreements for inter-university research, which are also fairly widely known and used. Some industry-specific agreements are used in particular industry sectors, for example the Framework Agreement for Technical Support (FATS) in defence or the Integrated Projects Consortium Agreement (IPCA) in ICT.

The Lambert website currently includes some examples of other model agreements which were not developed by the working groups, but it does not link to these other standards which have subsequently been developed and are becoming known and supported in the community.

The DESCA agreement for EU-funded research is an interesting example. Although many people said they do not particularly like it, they will nevertheless use it because the alternative of negotiating a bespoke agreement each time would be far too onerous to consider, particularly with the additional complication of different practices and laws in different countries. The FP7 funding competitions also include some fundamental IP rules in their funding conditions, the most basic of which being that the default position is that foreground IP generated during a collaborative project should belong to the party which generates it (although there are provisions for joint ownership in some circumstances). There is also a requirement to ensure that the

foreground IP is used, either in further research activities (development or improvement of the generated results) or in commercial activities (production and marketing of new products and services). This type of IP provision attached as a condition of funding can sometimes reduce the potential areas for negotiation between the partners, although in this case there is enough flexibility to allow for a range of IP ownership outcomes.

Chapter 3: Achievements and influence

- In recent years, research collaboration has intensified. More than half the universities and companies surveyed are doing more one-off collaborations, more strategic relationships and more European projects than in 2005.
- Almost 80% of those who are aware of the toolkit say that it simplifies the process of constructing contracts, and provides useful information and precedents. It is perceived by over 70% of respondents as being independent and neutral. Just over 60% agreed that it saves both time and costs of negotiation.
- It is valued as a good solid foundation for negotiation, a source of clauses that can help resolve negotiation points, and an independent exemplar of a fair and reasonable approach.
- The Lambert toolkit is most helpful where both parties already use it, or if one partner has no standard agreements, or is new to collaborative research, or if the partners have not collaborated before.
- Organisations that have used the toolkit as a training tool found it useful, especially to gain insight into the motivations of the other party or to support their own position.
- However, industrial support for the toolkit has been lacking. Large companies are more likely to view the agreements as biased towards universities, and have a more negative view of the potential benefits of the toolkit. SMEs are still deterred by the costs and time required for negotiation.

The landscape for research collaboration between industry and the research base and for KE more widely has certainly evolved since the toolkit was introduced in 2005. Data collected by the annual Higher Education-Business and Community Interaction Survey (HE-BCI)[5] show a steady increase in research and contract income received by UK universities. The combined total for contract and collaborative research was £1.9 billion in 2010-11 (the latest year for which figures are available).

5 http://www.hefce.ac.uk/whatwedo/kes/measureke/hebci/

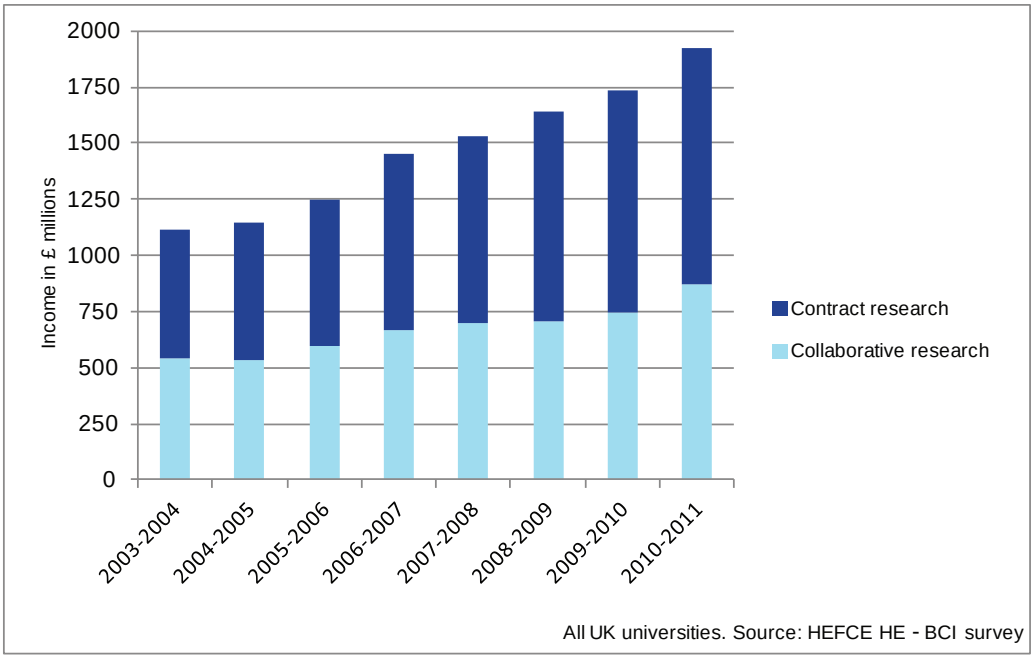


Figure 3.1 - Total value of collaborative and contract research income received by UK universities. Source: HEFCE.

This has been matched by a continued government commitment to funding for "third-stream" and knowledge exchange activities within English universities which is supported by Higher Education Innovation Funding (HEIF). At the time of the Lambert report in 2002-3, HEIF had only just been introduced (although it was building on previous schemes) and was a competitive scheme for specific projects often bringing together groups of universities. HEIF funding has now evolved into a performance-based funding for individual universities, with the total levels for 2011-2015 ring fenced at £150 million pa. Some universities receive no HEIF funding, but those that achieve a certain threshold of weighted external income receive an amount based on a sliding scale starting at £250k pa and capped at £2.85 million pa for the 23 highest performing universities.

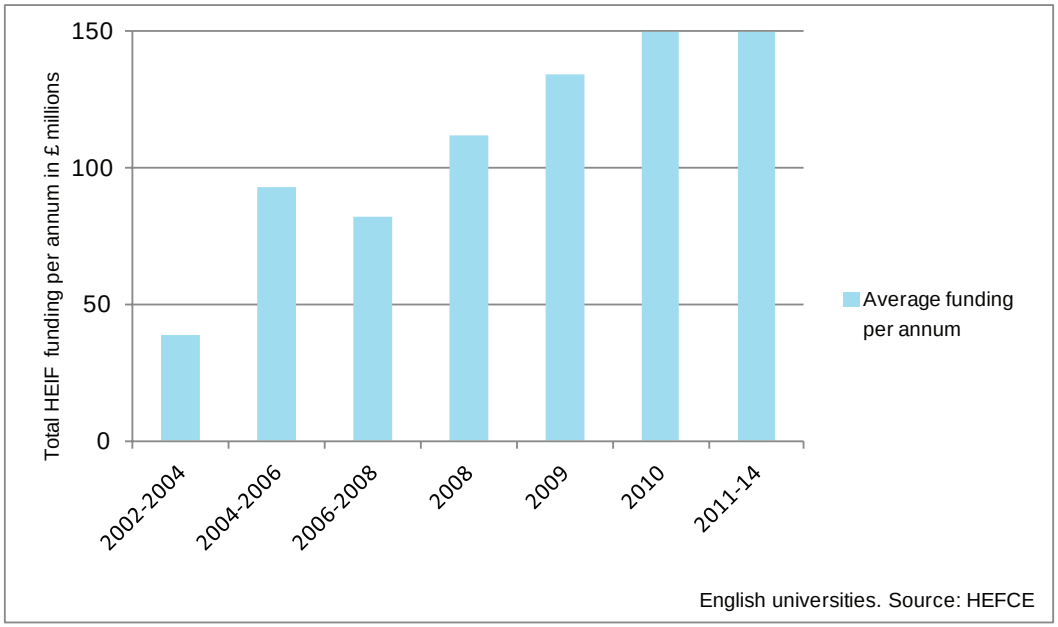


Figure 3.2 - Levels of total HEIF funding across all English universities.

This increase in activity was reflected amongst our survey sample, where the levels of interaction between business and university have generally increased or stayed about level since 2005. In particular, **levels of one-off research collaboration, longer term strategic relationships, and European projects are higher than in 2005,** with more than 50% of those answering this question doing more of these interactions in each case.

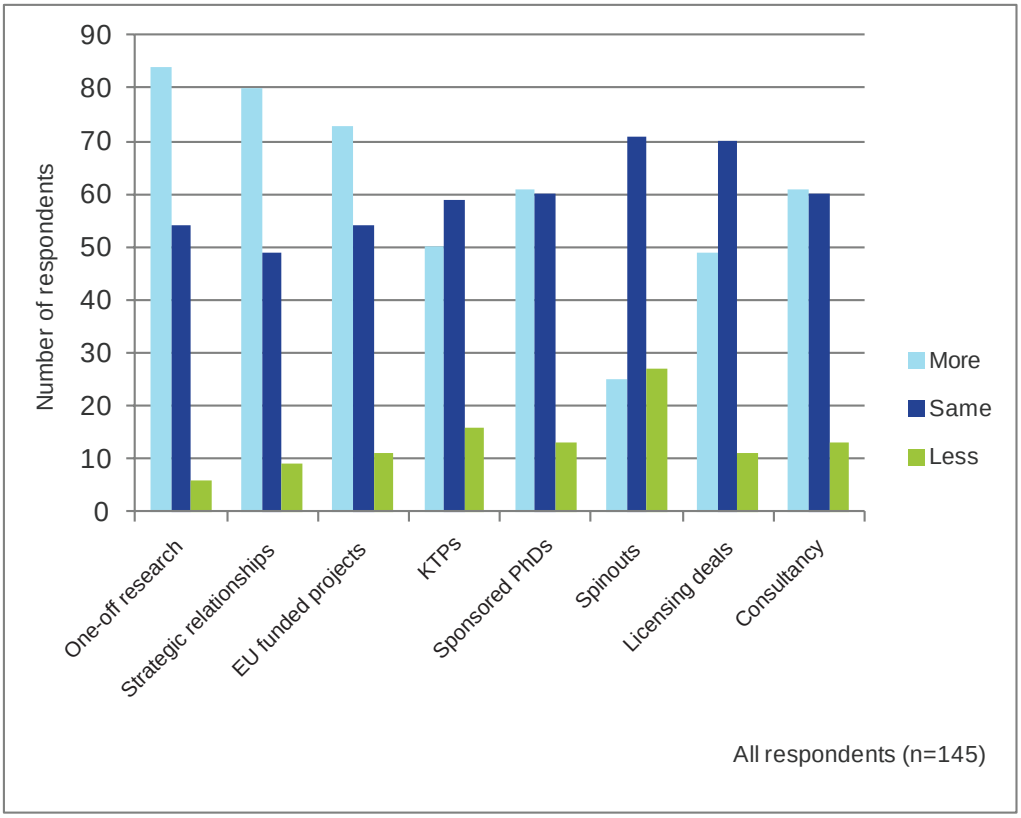


Figure 3.3 - Since the introduction of the toolkit in 2005, are you doing more, about the same or less of the following types of business – university interactions?

Data from the Office of National Statistics[6] on UK Gross Domestic Expenditure on R&D also broadly supports this trend, with the amount of R&D funded by business and performed by higher education rising steadily from £256 million in 2005 to £312 million in 2008, although this has dropped back during the recession, standing at £284 million in 2011 (the latest year for which figures are available).

The Lambert toolkit is just one part of a much bigger shift in the relationships between business and the research base. The presence of the toolkit has certainly helped some interactions, and perhaps hindered others, for example by causing one side to become entrenched in a particular position. The negotiation of an agreement is only one small part of the overall relationship, and cannot on its own have a significant effect on the amount, speed or ease of collaboration, nor on the involvement of SMEs in the process.

6 http://www.ons.gov.uk/ons/rel/rdit1/gross-domestic-expenditure-on-research-and-development/2011/tsd-gerd-2011.html

We have examined how the Lambert toolkit has performed with respect to each of the specific objectives that it was designed for:

- to reduce the time and effort required to secure agreement
- to facilitate negotiations between potential collaborators
- to provide examples of best practice

Time, cost and effort

Previous surveys have gauged the attitudes of the participants to the potential time and cost benefits of using the toolkit.

- *AURIL survey, 2006:* 40 replies
    - 61% said it saved time
    - 55% financial/resource savings
- *CBI survey, 2006:* 39 replies, 11 of whom were aware of the toolkit. Of these,
    - 6 said it saved time
    - 5 said it saved money or other resources
- *AURIL survey, 2009:* 109 replies
    - 57% said it saved time
    - 33% financial/resource saving

In this survey, we asked a series of attitudinal questions designed to explore how the participants felt about specific aspects of the Lambert toolkit and negotiation of research collaborations more generally.

Attitude ratings

The survey offered a series of statements with a rating scale of "strongly agree", "agree", "disagree" or "strongly disagree". These were scored on a scale of -2 (strongly disagree) to +2 (strongly agree). The results are given in terms of a rating average, to allow for easy comparison between different sub-sets of the sample with different sample sizes. In the graphs which follow, a positive rating average indicates agreement with the statement, and a negative rating average indicates disagreement, with maximum possible average scores of -2 (all respondents strongly disagree with the statement) or +2 (all respondents strongly agree with the statement).

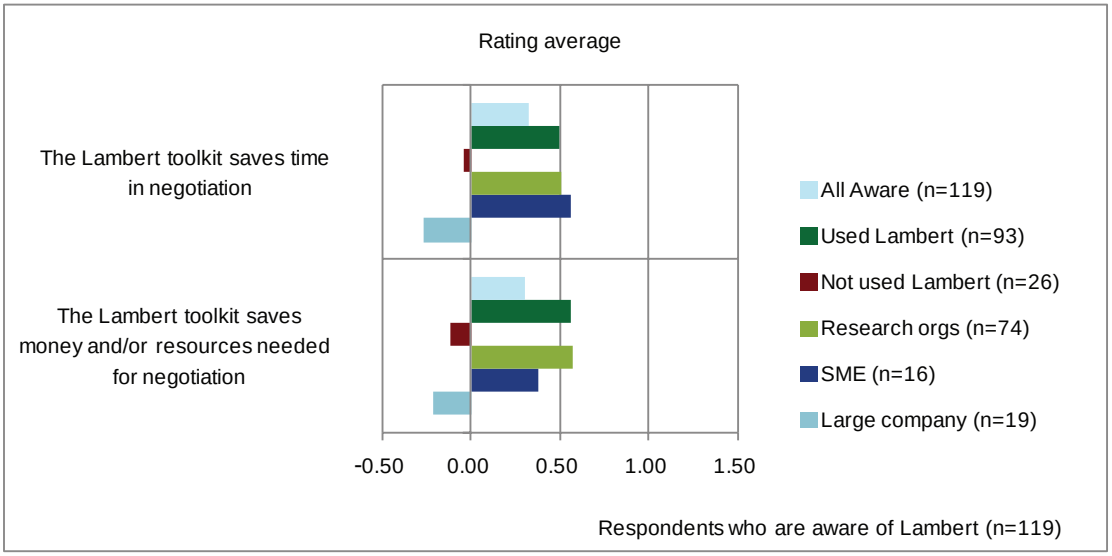


Figure 3.4 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

Overall, those in the survey sample who are aware of the toolkit agree that it saves both time and money. **62% agreed that it saves time and 63% that it saves money, a slight increase from the earlier surveys** (figures shown above). Respondents who use the toolkit are much more likely to agree than those who do not. Similarly, both SMEs and universities are much more likely to be positive than those in large companies.

Case Study - Multiple agreements with minimal time and effort

In October 2012, the Medical Research Council (MRC) announced the successful applicants in a groundbreaking collaboration with innovative pharmaceutical company AstraZeneca under which £7 million of funding was made available for 15 research projects. Under the "Mechanisms of Disease" funding call, AstraZeneca made 22 of its chemical compounds available free-of-charge to scientists. AstraZeneca had conducted early trials of these compounds and validated their use for future research, but had put them on hold for further development. The MRC funding aimed to extend the possible application of these compounds for use in a broad range of conditions from common diseases like Alzheimer's, cancer and lung disease through to rarer conditions such as motor neurone disease and muscular dystrophies with the ultimate aim of benefitting patients. Eight of the projects involve clinical (human) trials of potential new therapies, and seven are focusing on earlier preclinical work. These projects are led by 10 different universities, and one PSRE.

To support all these different projects in a consistent way, MRC and AstraZeneca agreed to base the collaboration contracts on the Lambert 2 agreement for the preclinical projects, or the model Industry Collaborative Research Agreement (mICRA) for the clinical projects. The mICRA agreements take their approach to IP rights from the Lambert agreements, so there was a consistent approach to IP ownership throughout: AstraZeneca retains its existing rights relating to the compounds and any new research findings by the academic institution are owned by the academic institution. AstraZeneca has a non-exclusive right to use the findings for internal R&D only, and the right to negotiate an exclusive licence under suitable terms. By using these pre-negotiated agreements as a starting point, AstraZeneca was able to process all the contracts in record time and using only minimal support from their internal lawyers and IP team. The main negotiation points that arose were around the practical terms of who would do what under the contracts, rather than any substantive issues.

Chris Wilks, the project manager for the collaboration within AstraZeneca, commented "Overall we completed 15 separate contracts within the three month deadline, which is unprecedented in my experience. The only way that this was possible was by using the Lambert and mICRA agreements, which are well known and largely accepted within the university community. From an AstraZeneca perspective, this was a great success, and I hope to employ this approach more widely in the company as we move towards a greater use of this type of Open Innovation to support our internal research and development."

Data gathered from the in-depth interviews suggests that there was a tendency for deals using Lambert to be quicker on average, and for most of the longest deals to be completed in under six months, compared with over a year for deals not using the toolkit. Where there is a desire to complete a deal quickly, however, this can be achieved no matter which starting agreement is used.

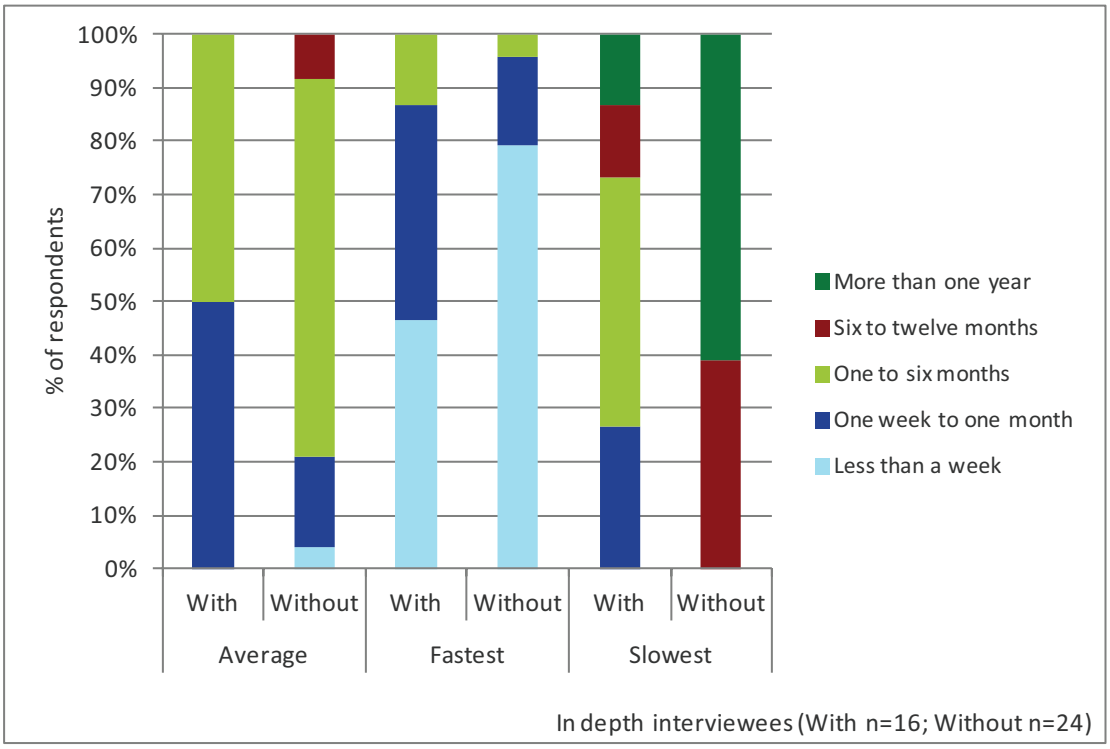
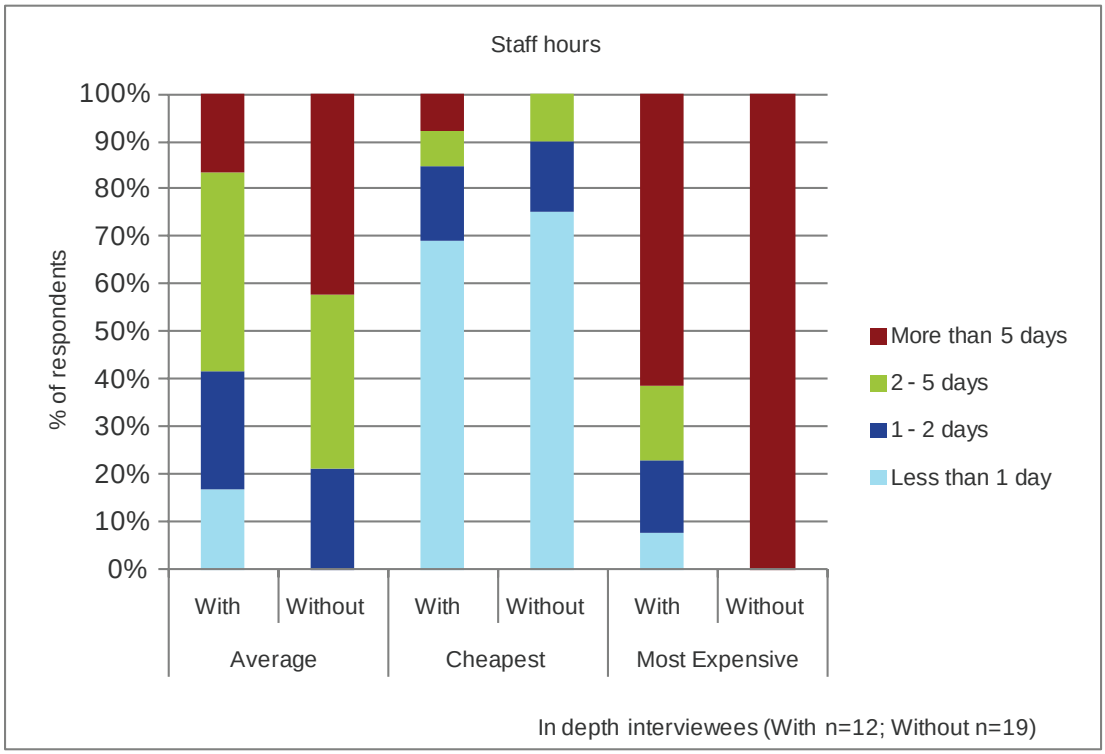


Figure 3.5 - How long did an average, the fastest and the slowest negotiations you have done take (in elapsed time) either with the Lambert toolkit (if appropriate), or without it?

The agreement used is only one factor which determines the speed of the agreement. The factor which is most likely to result in a quick agreement is where two parties have collaborated before, and so have previously agreed on the significant points of the structure of the agreement. This can be particularly quick if the previous interactions were based on the Lambert toolkit. Otherwise, **the Lambert agreements are more likely to be helpful for new collaborations between organisations which haven't worked together before, when the decision tree and outline structure can help to finalise these points more easily.** It will be less helpful if the parties have a pre-existing agreement that is not based on Lambert. Also important are the skills and attitudes of the negotiating parties, as well as external factors such as funding deadlines. Similar trends were seen for both the staff costs, and the external legal costs associated with these deals, where again the most expensive and average costs were improved by using Lambert, but little difference could be discerned for the cheapest deals.



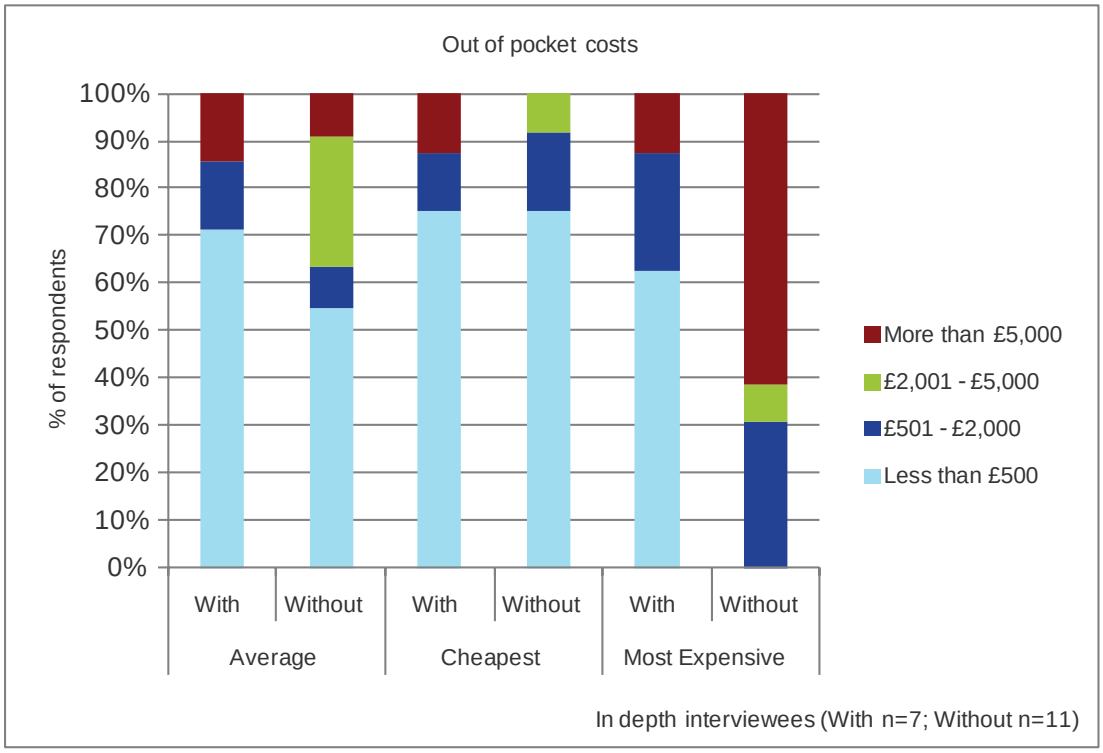


Figure 3.6 - What is the cost in actual staff hours and external legal costs for an average, the fastest and the slowest negotiations you have done either with the Lambert toolkit (if appropriate), or without it?

Within the wider survey, **70% of the participants agreed that negotiations are often extremely lengthy and costly** – mirroring the attitudes found by the original Lambert review.

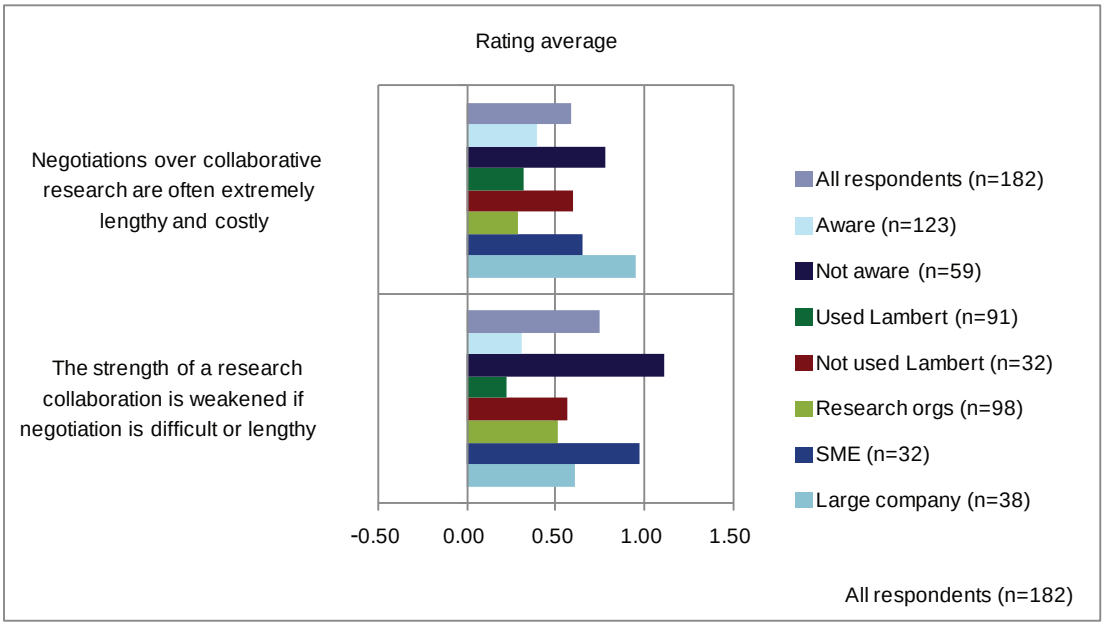


Figure 3.7 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

However, only 65% of those who were aware of Lambert agreed, compared with 80% of those who are not aware, and there was also a positive difference between those who do and those who do not use the toolkit. This suggests that **the toolkit has had some positive effect on the time and cost of negotiations.** There was also agreement within the sample that a collaboration can be weakened by lengthy and difficult negotiations. In some circumstances, though the opposite can be the case, with a protracted negotiation enabling all parties to become comfortable with the issues that are important to the other side, and strengthening the basis of the work. In other cases, the negotiation is carried out by contracts staff, and any difficulties do not affect the researchers themselves and so do not influence the collaborative work. Where the negotiation gives insight into the motivations of the collaborating parties and into what is important to them, this can only enhance the relationship. This point has little effect on the success or otherwise of a negotiation or the following collaborative relationship.

The implication of reducing the costs and time involved with deal negotiation was that it would feed through into a higher capacity for deal making, to more deals being concluded, and to a reduction in the lost opportunity costs from delays in starting the research. In our survey sample, **37% of the sample who are aware of the toolkit agree that the capacity for deal-making has increased since its introduction.** Again, those who have used Lambert are less likely to disagree with the statements.

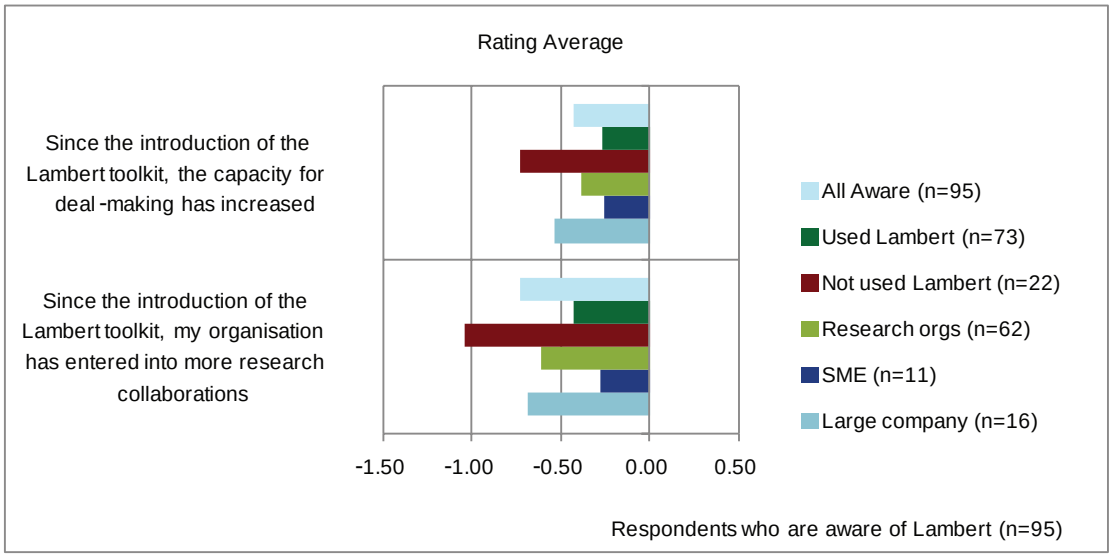


Figure 3.8 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

The level of disagreement with these statements is probably also because the participants do not recognise a significant causal effect between the toolkit and these measures, even though elsewhere in the survey they report that they are doing more of many categories of research collaboration (see Figure 3.3), and so are not actually answering the question as written. Other factors, including the external economic environment, have a much larger effect. It is also likely to reflect the fact that Lambert is not used for a high proportion of deals, and so has not had a significant overall effect on deal-making capacity.

Improved negotiation

In the previous surveys,

- *AURIL survey, 2006:* 40 replies
    - 72% said it simplified processes
- *CBI survey, 2006:* 39 replies, 11 of whom were aware of the toolkit. Of these,
    - 6 said it simplified processes
- *AURIL survey, 2009:* 109 replies
    - 62% said it simplified processes

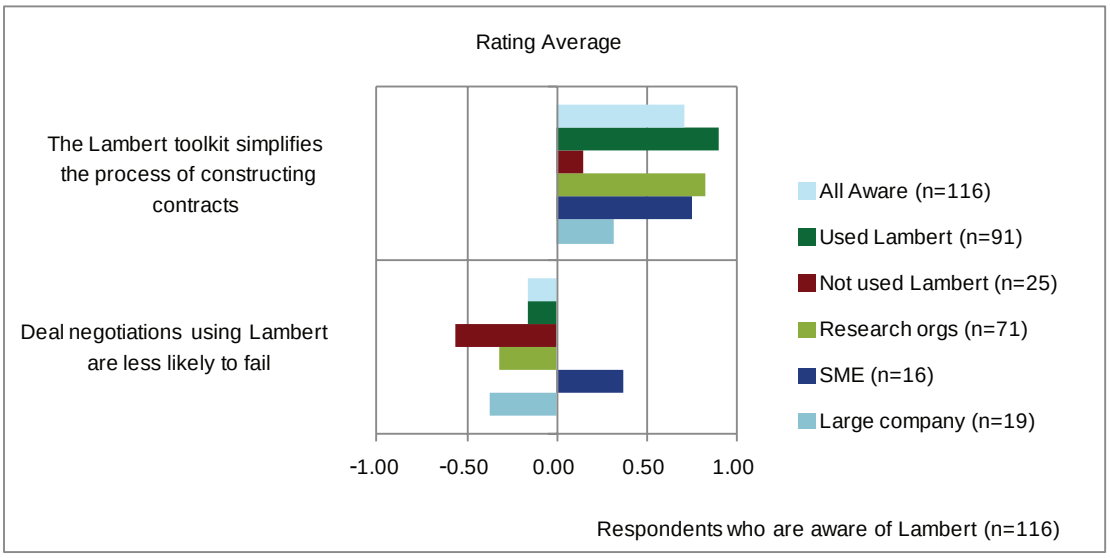


Figure 3.9 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

On average, **79% of our sample who were aware of the toolkit agreed that it simplifies the process of constructing contracts.** Again, those who use the toolkit are much more likely to agree than those who do not. Large companies also agree less strongly, but even here they do agree that the toolkit can simplify the process, one of the benefits of the toolkit that receives across the board support.

"It works so well when both sides want to use it" – University

"We're thankful for this resource. It takes away administrative barriers to engaging with universities and spurs us to collaborate and innovate with partners" - SME

On the other hand, most of the respondents disagree that the use of the Lambert approach will make a deal less likely to fail. In practice, very few deals actually fall through and where this does happen, it is through external factors such as the loss of funding, or failure to find a suitable researcher rather than through disagreement over the contract negotiations. Where two parties wish to conclude a deal, then a solution will be found to any of the contract issues that arise.

Only one respondent reported that they were aware of any disputes, legal challenges or case law arising from deals based on any of the Lambert agreements, and did not leave any further details or contact details for follow up. Several people also mentioned that they were not aware of any based on other agreements either. At the research stage, disputes are unlikely to have serious consequences, and will most often result in the termination of the collaboration, rather than any more far-reaching financial effects. Before the introduction of the toolkit, there had been at least two disputes over ownership of IP in a business-university research collaboration that reached the courts (IDA Ltd v University of Southampton[7], and Cyprotex Discovery Ltd v University of Sheffield[8]). Whilst we have not done a thorough search, we are not aware of any evidence of later court proceedings, which suggests that both sides of these negotiations are now much more aware of the issues involved and will ensure that IP ownership provisions are agreed beforehand and made explicit within the contract, whether this is a Lambert template or an alternative. The explicit nature of the IP principles behind the Lambert approach will have helped to catalyse this understanding.

Best practice

In the 2009 AURIL survey, 33% said the toolkit resulted in better contracts, and 60% that it provided useful information.

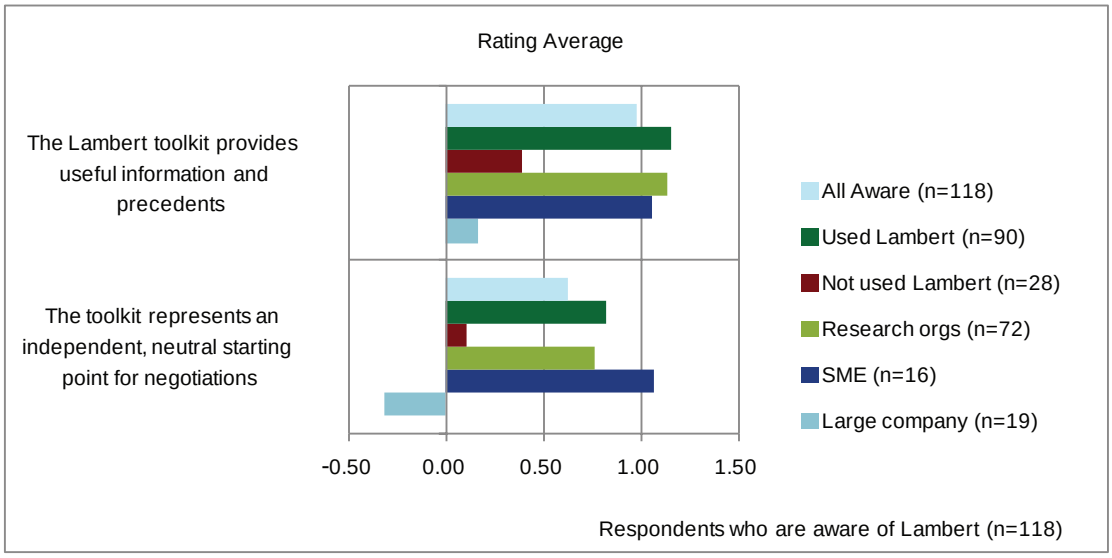


Figure 3.10 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

7 R.P.C. (2006) 123(17): 567-579.

8 R.P.C. (2004) 121(23): 887-911; Court of Appeal: [2004] EWCA Civ 380.

In our survey, this proportion has risen and now **80% of those who are aware of Lambert agreed that the toolkit provides useful information and precedents**. This is where we found the greatest support for the positive benefits of the toolkit. For universities in particular, the principles of the toolkit can be very useful to provide external verification that the position they are taking is "reasonable", allowing them to manage partner expectations with an authoritative tool. **This view of the agreements as being independent and neutral was supported by 72%**, and was cited by both universities and large companies as being particularly helpful in their dealings with SMEs who may not have done any collaborative research before. It provides comfort that what the SME is being asked to sign is a reasonable compromise, and that the larger more experienced partner is not "taking advantage" of their position. Many also found the agreements a useful source of clauses on specific issues which they can reuse within their own or other agreements.

"Lambert agreements can be used to support positions because of the authority that they have. Their presence on the IPO website gives them a credibility with partners in industry" - University

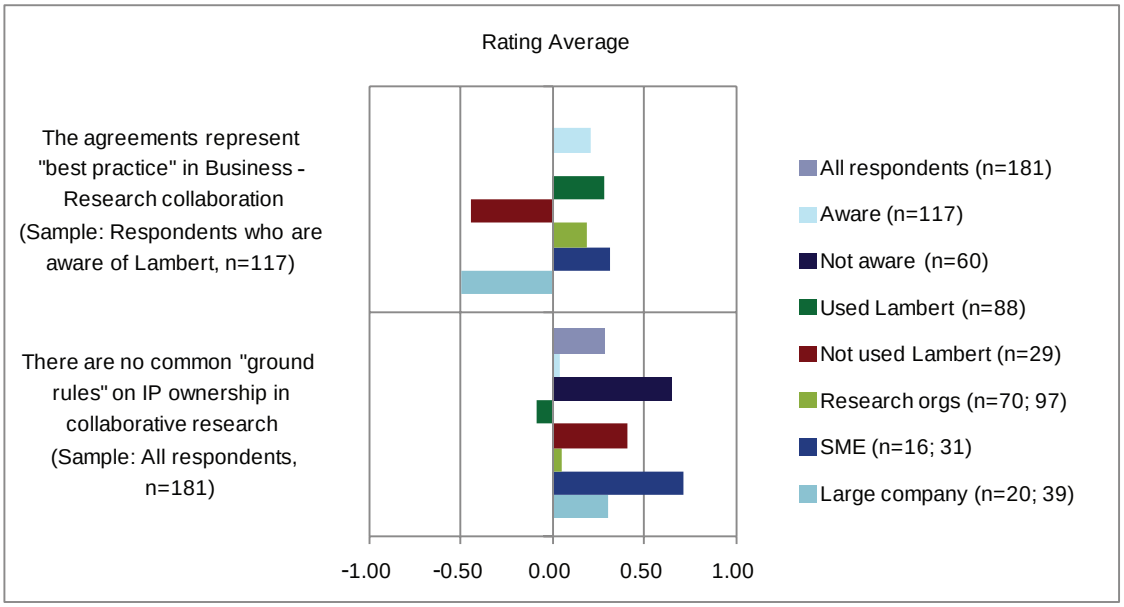


Figure 3.11 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

Support for the toolkit as representing "best practice" was weaker (55% agreement), again particularly amongst those who have not used Lambert and the large companies. Many commented that there is no such thing as best practice in research collaborations, as each individual situation is different and should be treated on its own merits. Similarly, 55% of the sample agreed that there are no common "ground rules" on IP ownership in collaborative research. Reflecting the results found about usage, **the toolkit was often seen as a good solid foundation as a starting point for negotiations, or a source of clauses that could help to resolve a particular negotiation point, rather than a package of best practice in its own right**.

"It is helpful to have a suite of model documents that can be used in the first instance to guide the parties through a particular research collaboration but I can't recall ever agreeing to a model agreement that hasn't been changed in some way. The nature of research contracts is such that every project and deal will have its own nuances, so the need to make bespoke changes should never be underestimated and will always depend on the circumstances." – Russell Group University

Endorsement

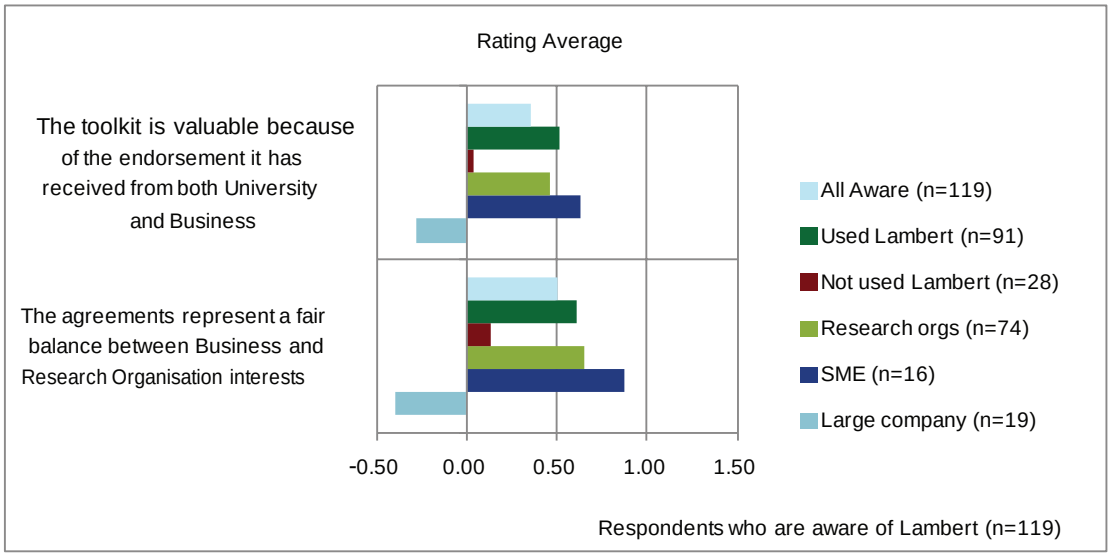


Figure 3.12 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

The unique way that the Lambert agreements were derived was expected to give rise to a set of tools that was endorsed by both the research and industrial communities. This aspect was recognised by the survey sample, however in practice many felt that **industrial support for the toolkit has been lacking**. Indeed, while 64% of the respondents who are aware of Lambert agreed that toolkit is valuable because of this endorsement, only 39% of those from large companies agreed. Several of the companies which were part of the working groups have subsequently not taken up the agreements, and as can be seen from all the attitudinal questions in this chapter, respondents from large companies generally have a much more negative view of the toolkit than the rest of the survey sample. They are also much more likely to view the agreements as biased towards the university, and not reflect commercially acceptable terms. Only 40% of those in large companies feel the agreements represent a fair balance, compared with 73% of the sample who are aware of Lambert. These views are explored in more depth in Chapter 4. **The endorsement received from the university sector has been more as their compromise position, rather than their preferred choice**.

"Despite the "endorsement" from both universities and businesses, this has never been accepted as a valuable rationale or argument for using the Lambert toolkit. If businesses are to endorse the toolkit, they need to use it and accept its use themselves - proposing documents that look radically different seem to make a mockery of their endorsement in practice." – Russell Group University

Where other template agreements have proved successful and popular, this has sometimes been accompanied by a public positive endorsement, whether this is national as in the case of the Brunswick agreements for inter-university collaboration, or international in the case of the Uniform Biological Material Transfer Agreement. Some form of voluntary public acknowledgement that a particular organisation is willing to base their negotiations on the Lambert agreements and principles would be valuable in reinforcing the message that the agreements will be acceptable, and allow organisations to make decisions about their research partners in the knowledge that they can start negotiations from a known template. To be influential, this acknowledgement should be administered by an independent body, as is the case for the UBMTA.

Case Study - Uniform Biological Materials Transfer Agreement (UBMTA)

In 1995, the US National Institutes of Health led an initiative to develop a standard agreement for the transfer and use of biological materials between US research institutions. The aim was to produce a simple agreement, which could be publicly endorsed by any organisation which agreed to use it. This resulted in the publication of the Uniform Biological Material Transfer Agreement (UBMTA) and a Simple Letter Agreement for the Transfer of Non-Proprietary Biological Material. For institutions that have signed the UBMTA Master Agreement, materials can be transferred under the terms of the UBMTA upon execution of an Implementing Letter for the particular transfer. There is also a version of the UBMTA which can be used between companies and universities.

The Association of University Technology Managers (AUTM) in the US agreed to serve as the repository for the signed UBMTA Master Agreements from those institutions who agree to use the UBMTA for some or all of their exchanges of biological materials. AUTM posts a listing on their website including: the name of the institution, the name and title of the official signatory, and the date the Master Agreement was signed. Although this was a US initiative, the current list of 490 signatories includes institutes from all around the world, including several UK universities and research institutes.

The complete list of signatories can be seen at: http://www.autm.net/Master_UBMTA_Signatories/10618.htm

Education

A secondary aim of the toolkit was to close the gap between the more and less "IP-capable" universities. Those who have been involved with research collaboration for 5-10 years, and so were likely to have entered the profession at about the time the toolkit was introduced, have the highest awareness of the toolkit, at 85%.

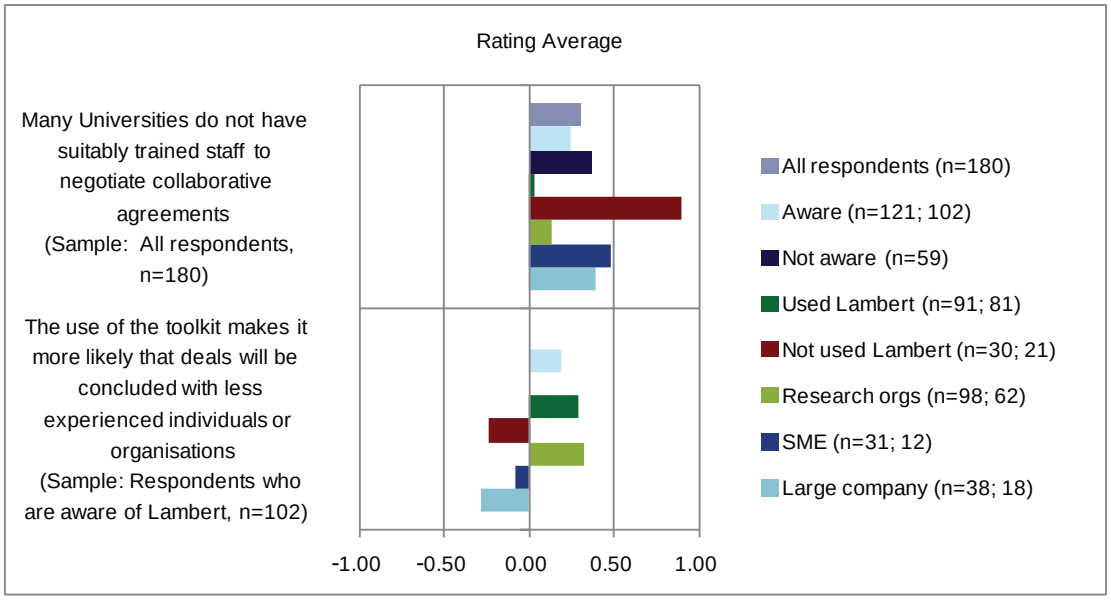


Figure 3.13 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

There remains a general perception that universities do not have staff with suitable training to successfully negotiate research collaborations, although as might be expected this perception is lower amongst the research organisations themselves. Several respondents commented that this had improved in recent years, and progress appears to be in the right direction. Others commented that the lack of training is also notable in some companies, where negotiation can be delegated to those who do not have the authority to make changes to the deal. It was noticeable that the answer to this question was most polarised between those who have used Lambert (47%) and those who do not (77%), so perhaps in this instance **the toolkit has had an effect on making it easier to conclude deals with less experienced individuals.**

The main source of training for the survey sample is on-the-job training and mentoring, and just under half of those receiving this type of training were introduced to the Lambert toolkit through this mentoring, reflecting the proportions of organisations (45%) that are using the toolkit. Within the university sector, the PraxisUnico courses (particularly their "Research Contracts" course) are a common source of training, and this course does have a session on model agreements, including Lambert. However, there are limited opportunities for both university and industry negotiators to come together on the same training courses or workshops where they could benefit most from learning about each others perspectives. The provision of more specific training, workshops or advice on how to use the Lambert toolkit would also help to raise awareness of the resource.

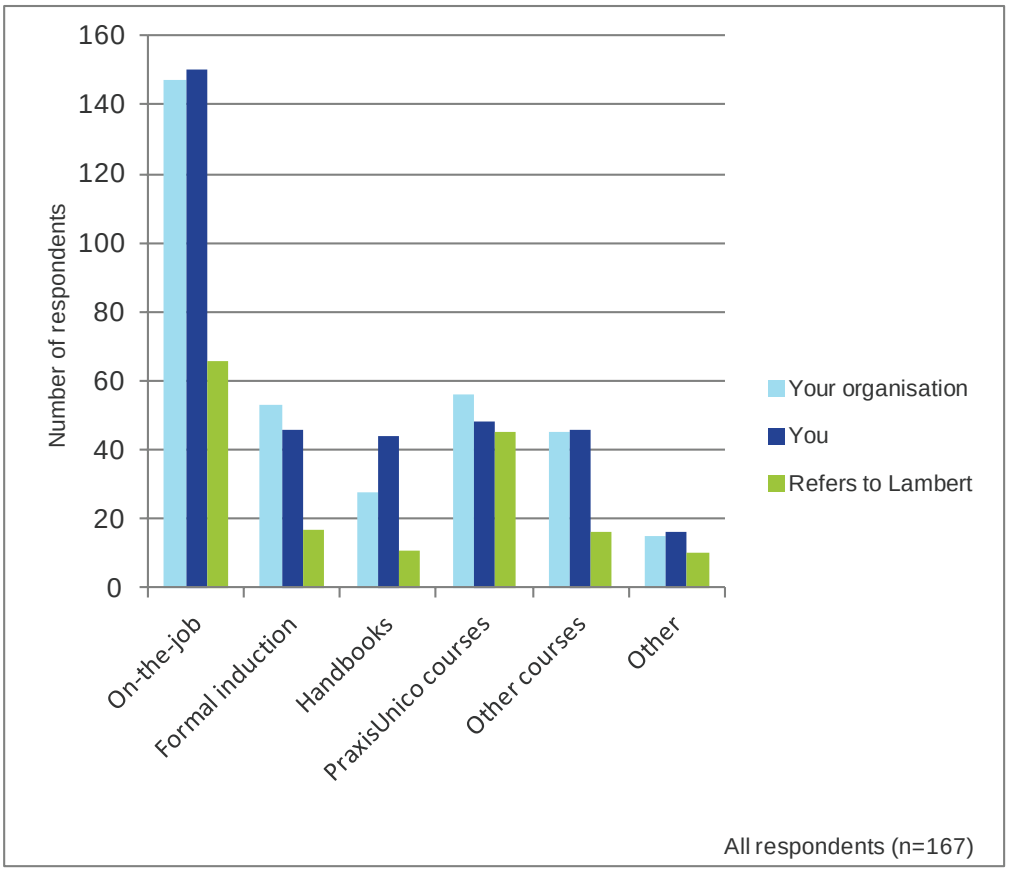


Figure 3.14 - What forms of training for those involved in research collaboration negotiations are used by your organisation, or have you received, and which of these makes reference to the Lambert toolkit?

It is important that staff do not simply have administrative training, but gain insight into the commercial concerns of a company, or vice versa into the setup and philosophy of a university. The guidance notes, outline and decision guide can be used as tools to take a partner through the important issues. For some, this is a very important point, with training and insight on both sides seen as more important than the standard agreements themselves. This is particularly true for less experienced negotiators, whilst someone more experienced is likely to be aware of the important issues and of ways to deal with them. In the sample who are aware of Lambert, **72% felt that the toolkit gave a useful insight into the motivations of the other party, particularly within the SME sector** (89%) which is likely to be the least experienced in research collaboration and IP issues. The survey sample neither agreed nor disagreed however that this had fed through into a greater understanding of the needs of each side, and disagreed that it had led to more realistic expectations for collaborations.

"The issue is not one of different standard terms, but of education and organisational attitude, which are the greatest determinants in negotiations of research contracts" – Lawyer

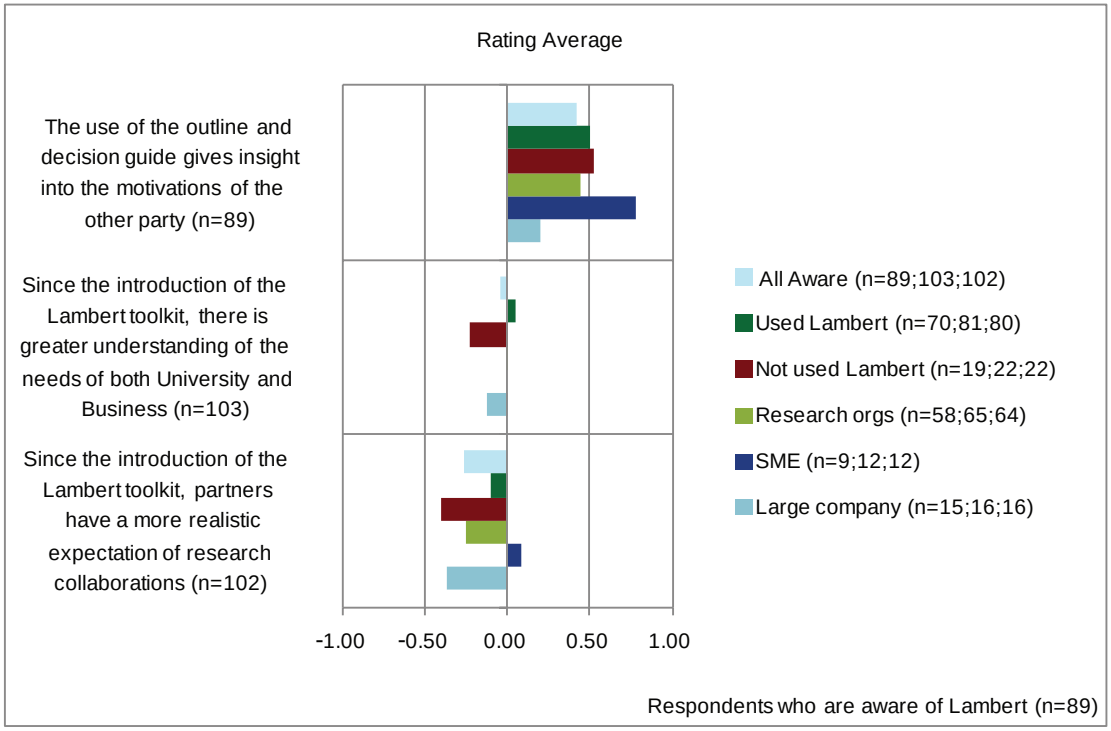


Figure 3.15 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

One respondent described how he uses the decision tree to discuss the main points of a collaborative research project with the principal investigator, to give them an insight into the important issues to be aware of when agreeing the scope of the project with their industry partners. A number of others have used sections of the guidance notes to help them to explain their position on contentious issues. **Despite this emphasis on the value of the toolkit as a training tool, only 26% of the survey participants have used the toolkit directly in this way, although most that have done so (over 80%) found that it was useful**.

"Where the toolkit is under-appreciated is in its training for technology transfer staff. It gives people a common framework to talk about these kinds of issues, and has sensitised a whole generation of technology transfer professionals – a process which is still going on today." – University

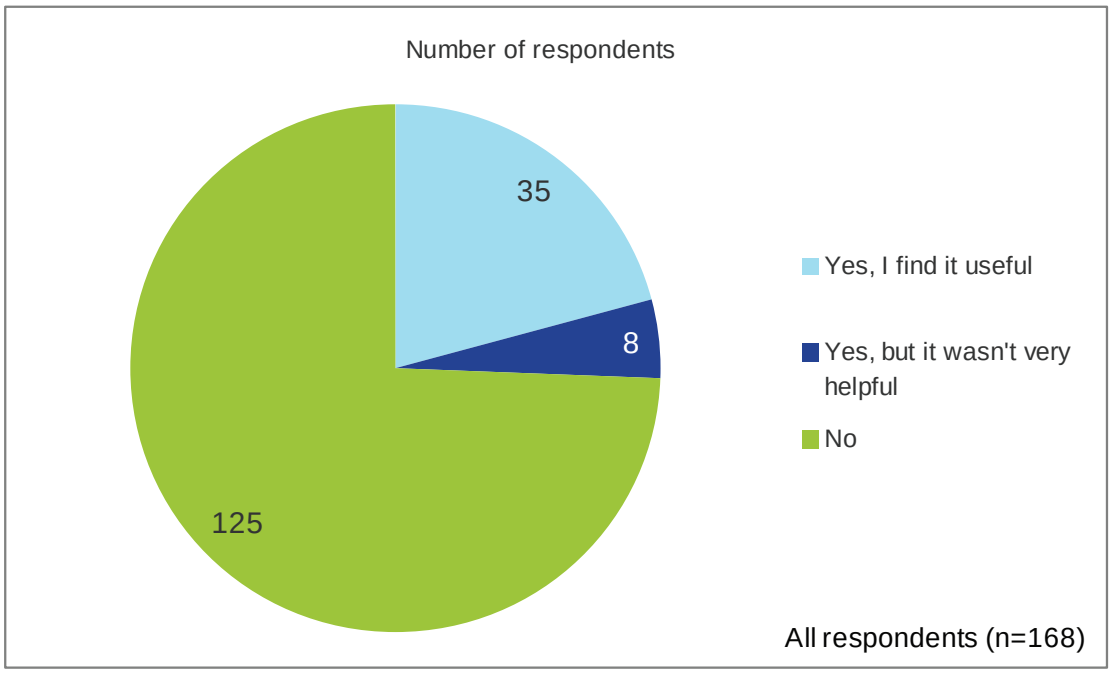


Figure 3.16 - Have you used the Lambert toolkit as a training tool?

SME involvement

As was discussed in the previous chapter, the toolkit has not been as successful as might have been hoped in reaching the SME sector, and **the secondary aim of increasing and helping SME interactions with universities has not been well achieved**. 72% of the SME sample still agree that small companies are deterred from collaboration by the costs and time required for negotiation, and only 17% of those who are aware of Lambert believe that it has helped to increase the amount of SME-university collaboration. This appears to be more a problem of awareness, and allied to the more general problem of how universities can increase their engagement with the SME community, as well as lower awareness of IP issues within SMEs, rather than the toolkit being unsuitable for SME needs. As with the main sample, the most common alternatives for SMEs to using the Lambert agreements were either their own agreements, or those suggested by a partner or funder. In this second case, the Lambert agreements could offer a more balanced alternative to the agreements offered by a larger partner.

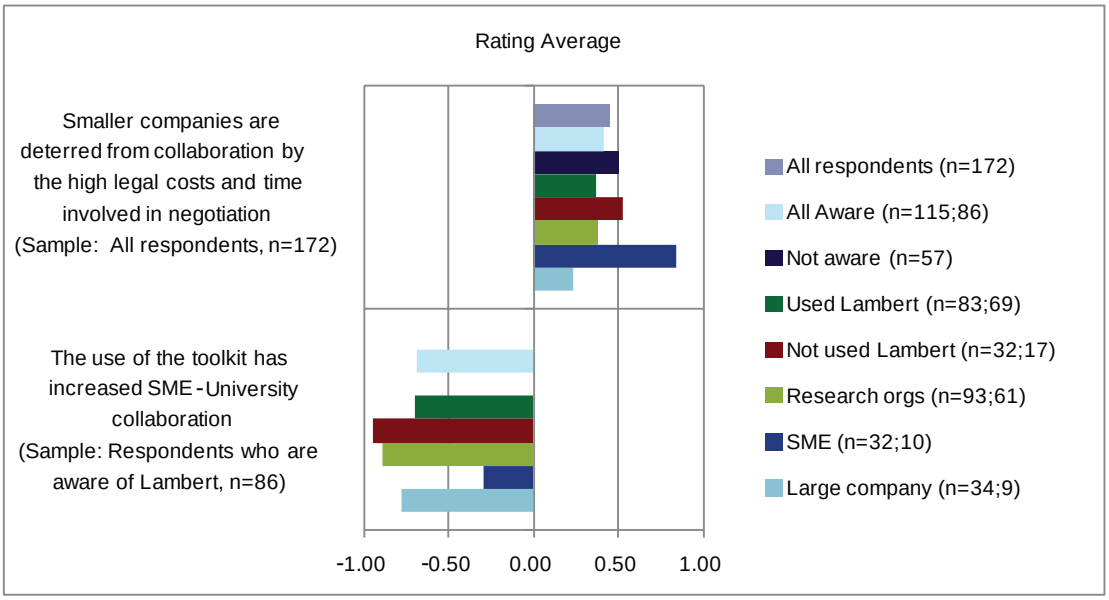


Figure 3.17 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

Case Study - Digital health technology consortium

uMotif Ltd is a start-up working on mobile solutions to help track and monitor health conditions. Their first product helps patients with Parkinson's Disease to adhere to their medications and uses cognitive game testing to monitor their progress. The technology is being tested in an SBRI-funded project which is a collaboration between uMotif, who provide the monitoring technology and app development, Cure Parkinson's Trust who are recruiting the patients, and Birkbeck, University of London, who are running the clinical trial.

The university, through UCL Business, introduced uMotif to the Lambert toolkit. Bruce Hellman, CEO, said "Although I was nervous about the IP position going into the negotiations, the university took a pragmatic approach, and it was hugely helpful to be able to access an agreement that was ready for use. Starting from scratch as a start-up company would have been nearly impossible for us. I will definitely use the Lambert agreements again." The pilot study is nearing completion, and the group are now planning a larger follow up study in the summer.

Impacts and influence

Overall, therefore, we have found evidence that where it is used, the Lambert toolkit has been successful in achieving its aims of making negotiations faster, cheaper and easier, and in providing useful information, precedents and support to facilitate these negotiations. The agreements have most value as an independent exemplar of a fair and reasonable approach to collaborative research. The extent of this impact has been limited, however, by the lower than expected levels of use of the agreements as a first choice option. Nevertheless, the effect of the toolkit extends beyond these direct results, and has perhaps been more significant in the

influence that it has had on the way in which innovative research collaborations are structured and negotiated. It is now standard practice for IP ownership and access arrangements to be agreed up-front as part of any collaboration agreement, whether it is based on the Lambert toolkit or not, and the decision guide approach supports this practice.

The Lambert approach itself built on pre-existing model agreements, for example the agreement associated with the LINK funding scheme for collaborative research. Over the years, this type of approach has become commonplace and is now a standard tactic which has been adapted for a number of situations. Some of these have produced standard agreements which are based directly on one or more of the Lambert templates, examples including the mICRA[9] agreement for clinical collaborative research, or the agreements used by the Aerospace Technical Steering Group[10], although in this case the starting point for the IP provisions has been shifted. The Scottish universities have published a single set of standard template contracts and agreements, including a simple joint award agreement for grant funded collaborative research[11], and also state that they are willing to use the Lambert agreements, and include a link to the website.

In other cases, the IP principles behind the Lambert agreements have been modified for other circumstances, including the recent adoption of IP policies for the use of research sponsored by the NHS Health Boards and NHS Trusts in Wales[12].

The process of negotiating, discussing and ratifying the agreements was also beneficial in providing a forum in which both university and industry sides of the collaboration could meet and exchange ideas in a neutral setting that wasn't linked to a particular deal. This was mentioned as being a valuable part of the process, and is something that has been missing since the last meeting of the Outer Working Group in 2008.

Another influence of the agreements has been their adoption in the wider context of research collaboration, including business-to-business research consortia. The principles in the consortium agreements in particular lend themselves easily to use in this way.

9 http://www.nihr.ac.uk/industry/Pages/model_clinical_trials_agreement.aspx
10 https://connect.innovateuk.org/web/atsg/overview
11 http://www.universitytechnology.com/ScottishUniversityAgreements.aspx
12 http://www.wales.nhs.uk/sites3/page.cfm?orgid=952&pid=65087

Case Study - Business to business use

Scottish Bioenergy is a five year old SME that designs, installs and operates algal photobioreactor systems for carbon capture, wastewater treatment and biochemical production. They are also involved in bioprospecting activities, isolating commercially useful algal and cyanobacterial strains for a variety of bespoke applications. The IP pipeline behind this innovation is very important to the business, and the company funds research with leading universities in the UK and the Republic of Ireland. These collaborations have used the Lambert consortium agreements, and when the time came to put together a business to business consortium, the company turned to these agreements again.

Scottish Bioenergy is now bringing together an exciting new project which will use their algal expertise to develop and produce the raw ingredients for biopharmaceutical products. The consortium contains Scottish Bioenergy, another SME and a larger company. The group is also hoping to bring a distribution company into the consortium in the near future. The contract they are using is based on the Lambert Consortium Agreement D, in which each member of the consortium owns the IP in the results that it creates in the project, and grants each of the other parties a non-exclusive licence to use those results for the purposes of the project only. As the exploitation possibilities of the project become clearer, this allows the group to move ahead with confidence that they are building a strong collective body of IP, and allows them to negotiate a licence or assignment to the IP of another member of the consortium if that is needed for exploitation.

“Our business and academic collaborations are invaluable to the company’s collective knowledge and development of new progressive technology through innovation. We have used the Lambert agreements since the company was formed, and find that they work just as well in a business-to-business consortium as they do for university-business research. The more universal the use of the agreements becomes, the more useful they are to us.” said David van Alstyne, the founder of Scottish Bioenergy.

Chapter 4: Perceptions and attitudes

- Barriers to negotiation that are cited as still important include valuing IP (for almost 80% of the respondents), organisational bureaucracy in both companies and universities, and lack of skills of the negotiators on both sides (about 75%).
- Although the toolkit can identify workable solutions, the agreements represent a compromise position between university and industry missions and priorities. These issues underlie some of the reasons that the agreements are not always chosen as a starting point.
- IP ownership is one difficult issue, and is closely linked to the development stage of the technology. Publication is another area where there are tensions between the timescales of universities and companies. Finally, liabilities, indemnities and warranties are clauses that are often challenging to negotiate, partly because universities and companies have very different approaches to risk management.

The introduction to the toolkit on the Lambert website explains the philosophy behind their development: "*The aim of the model agreements is to maximise innovation. They have not been developed with the aim of maximising the commercial return to the universities; but to encourage university and industry collaboration and the sharing of knowledge. They do not represent an ideal position for any party; depending on the circumstances they are designed to represent a workable and reasonable compromise for both or all parties.*" This compromise position lies behind some of the reasons why the toolkit is not always used without modification as a first choice, and these perceptions were explored when the survey examined attitudes to the toolkit, and to research collaboration more widely.

Figure 4.1 - Word cloud of the attributes associated with the "Lambert" brand.

The word cloud above shows the attributes that the survey participants were most likely to associate with the "Lambert brand". As might be expected, Intellectual Property (IP) and Collaboration feature highly, but it is notable that University is highlighted much more often than Business or Endorsed, reflecting the stronger association of the toolkit with the research sector. Of the original aims of the toolkit, Fair and Ease of Use are prominent, but not Fast. The Intellectual Property Office (IPO) is also not particularly strongly associated with the brand, which emphasises their "neutral" positioning.

Barriers to negotiation

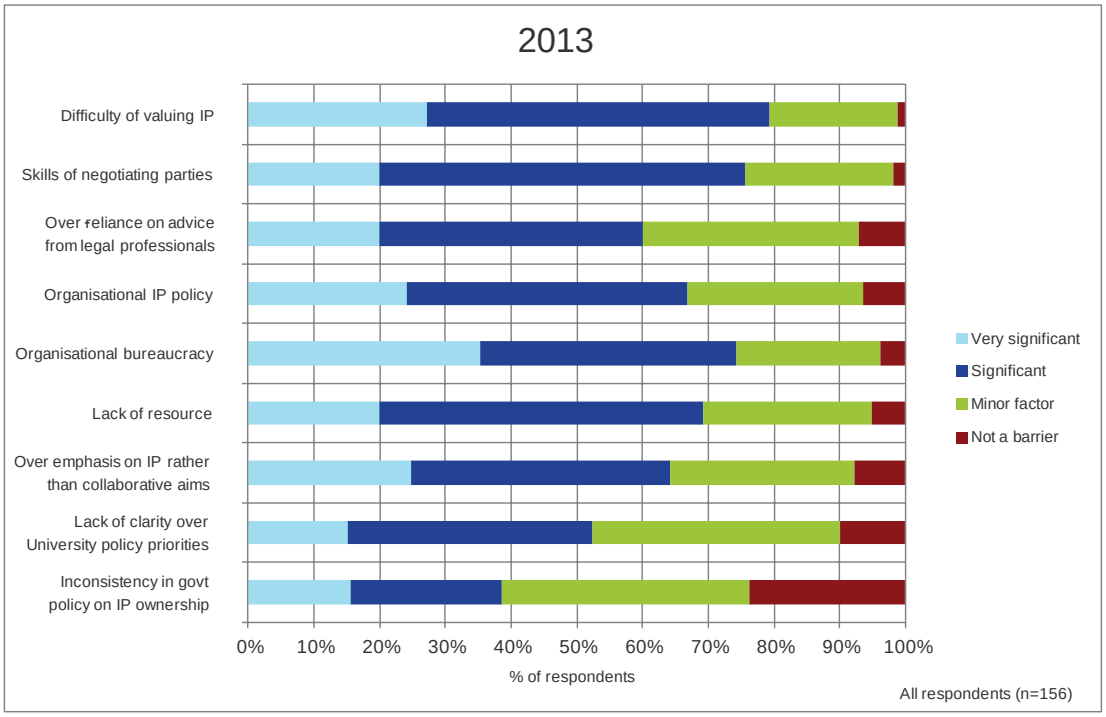
Some of the attitudes discussed in the previous section were also highlighted when the survey looked at the most important barriers to negotiation of successful research collaborations. The results can be compared with the results from the 2009 AURIL survey, and also the issues identified by Saraga in his 2007 report, which were:

- *Overemphasis on IP*. It is important that adequate protection is made for Intellectual Property, but we feel that both universities and businesses are guilty on occasions of putting excessive emphasis on ensuring their own ideal outcome from the negotiation in relation to IP, when it is often not even the most important aspect of the research collaboration.

- *Unclear messages*. There is still a lack of clarity over some important high level messages coming both from Government and public funders. For example, there is confusion as to whether the primary aim of collaborative research should be to generate income for universities or to create benefit for the wider economy; and it is not always clear what public research funders expect to see as an appropriate outcome in relation to IP.

- *Need for good practice in negotiating process*. We have identified a number of aspects of good practice in the process of negotiations, such as understanding the motivations of the other party and having appropriate escalation procedures. Whilst some of these are commonly recognised practices that are self-evidently sensible, it is clear that they are often not followed (Saraga, 2007[13]).

13 Streamlining University / Business Collaborative Research Negotiations: An Independent Report to the "Funders' Forum" of the Department for Innovation Universities and Skills, August 2007.



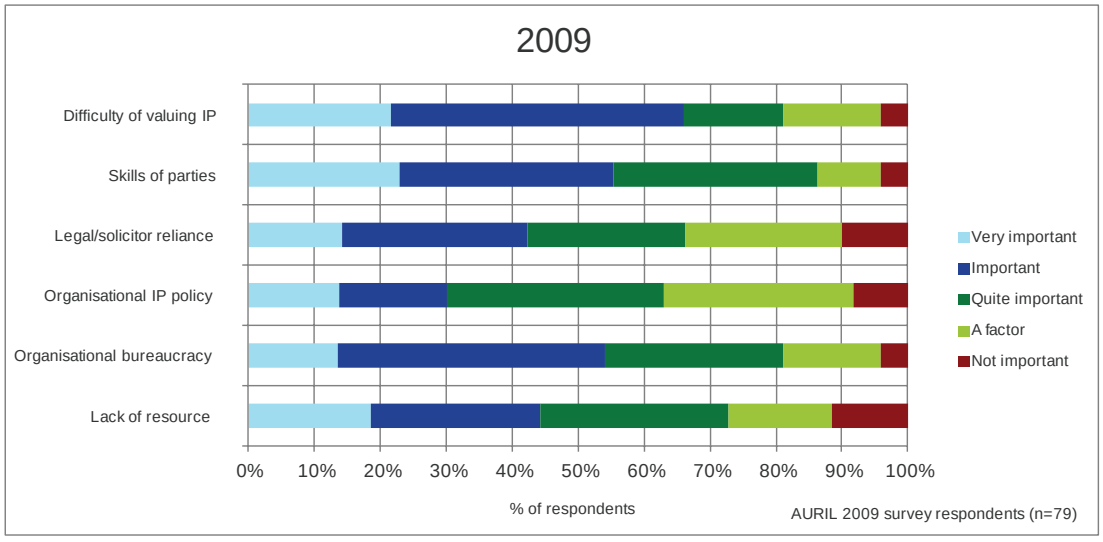


Figure 4.2 - Which (if any) of the following barriers do you believe are still important in negotiation of collaborative research agreements?

Similar concerns run through all three surveys. In our sample, **difficulty in valuing IP was rated as significant or very significant by 79% of the respondents, and other IP issues also rated highly**. Organisational bureaucracy within both companies and universities (74%), and the skills of the negotiators on both sides (75%) also remain of particular concern. **Lack of clarity over university policy priorities was not considered so much of an issue as it was in the past**, which suggests that some of the issues surrounding the university mission have been resolved, although there is still work to be done here.

"*Negotiating agreements is about getting a shared understanding and agreement on mutual benefits of a collaboration … Without this the best toolkit in the world is of limited benefit.*" – University

Although barriers can always be identified when the focus is on negotiation of a deal, in practice these barriers do not actually prevent the completion of deals where there is a will on both sides to do so. Other research by PACEC[14] has identified that agreement of IP issues was at the bottom of a list of constraints to knowledge exchange interactions between academics and firms, with resource issues and the practical aspects of identifying and interacting with potential partners in the first place much more important in the overall collaboration process.

Culture

When we explored the reasons why different individuals and sectors are using or are not using the agreements, we found that opinion was quite polarised:

- A few are strong advocates for the toolkit, and will always try to use it.
- Many more, particularly in the university sector are well disposed towards it and will use it as a compromise position, but are frustrated that it is not more widely used.
- At the other end of the spectrum are a powerful group of large industry players who have rejected the approach altogether.

Several of those we interviewed from industry had reviewed the agreements and toolkit when they were introduced, decided that their existing approach suited their needs better, and have not really revisited them since. As the providers of funding for the collaborative research, they are in a strong position to impose their own terms and agreements on the collaboration, and most research partners find it easier to work with these agreements and negotiate for the changes they need, than to suggest a different approach altogether. **It seems unlikely that the position of many of these large companies would be altered by any updates or changes to the toolkit**, and this is also supported by the generally negative attitudes to the toolkit from large companies reported in Chapter 3. However, some large companies are now beginning to use a Lambert-like approach to their initiatives in Open Innovation, as was illustrated by the case study involving AstraZeneca in the previous chapter.

14 The Intellectual Property Regime and its Implications for Knowledge Exchange, PACEC, 2010.

At the heart of some of the more fundamental objections to the toolkit, and the IP principles behind them are some important issues surrounding the different cultures within universities and industry. These are the key issues where compromises were made in drawing up the model agreements in the first place, and they are the issues which are still raised now as being the reasons why the agreements cannot be an organisation's first choice agreement unless they are more widely adopted. Alongside the provision of templates which cover standard contract clauses, the Lambert toolkit intended to find workable compromise positions on the key points of negotiation between universities and industry:

- **IP ownership and valuation issues**
- **publication rights**
- **liabilities, indemnities and warranties**

Above these lies what many still perceive as a lack of a clear strategy on the role of universities in these interactions. As publicly funded bodies, with charitable status and associated obligations of public benefit, there are rules surrounding university behaviour which do not always fit with industry commercial needs. Over the years, the emphasis within universities has shifted from a desire to gain an income stream from third stream activities such as patents and licensing, to increasing their role in the innovation culture and maximising interactions with all sectors of industry, to increasing the "Impact" of their research by making it widely available and exploited, and now to fulfilling their role in driving economic development through the growth agenda.

"*The toolkit needs an explanation of the university's responsibilities under the Charities Act as a preamble to frame negotiation*" – Russell Group University

Closely associated with the issues of charitable status are the issues of Full Economic Costing (FEC), and EU State Aid rules, which can apply when public funding is used to benefit one industry player above others in the sector. The rules are complex, with many exemptions, and whilst the starting model agreement should comply with the rules this can quickly be altered if the terms are altered, for example by providing in-kind rather than financial support, or paying less than FEC for the university research. Development of a common understanding of how the State Aid rules apply to university-industry collaborations would help to align company contributions correctly to IP access rights.

There is a lack of consistency in the application and interpretation of these rules which has led to a number of companies finding that some universities offer a more flexible and pragmatic approach than others. In some instances, this has resulted in a company continuing to work with a particular group of universities to the exclusion of others. Some universities have been accused of "hiding behind" their charitable status, rather than considering the merits of each specific collaboration.

Issues in IP ownership

There is a tension in all collaborations between a desire from the university to maximise the exploitation of their research, and a desire from industry to protect their commercial position. We found that **IP ownership was still seen as a major cause of disagreement within collaborative research, with 76% of the survey sample agreeing or strongly agreeing with this statement.**

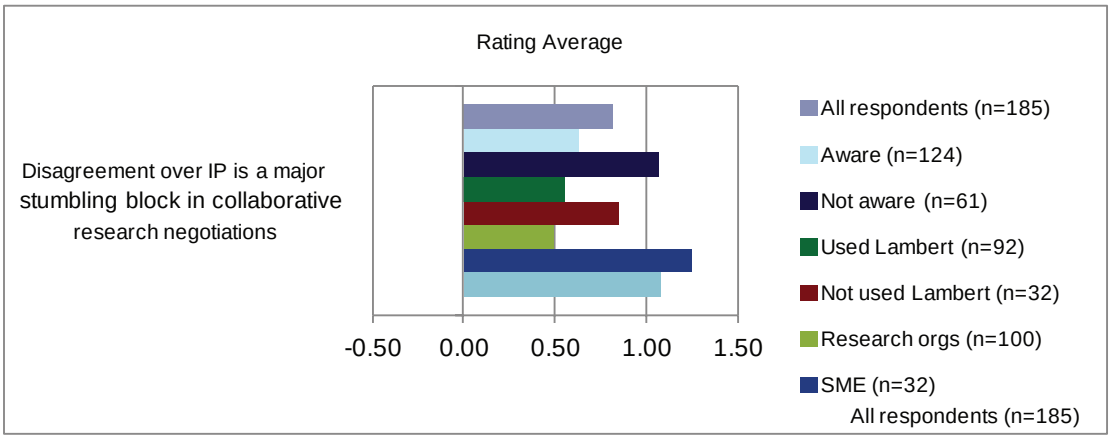


Figure 4.3 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

Most respondents (74%) felt that the toolkit rightly concentrates on the role of IP in these collaborations. Apart from large companies, the survey sample was neutral on the question of whether the decision guide helps to resolve the IP ownership issues. Indeed, some of the individual cases mentioned suggest that many disagreements arise where the decision guide has not been used to determine which agreement to use, but instead one or both parties automatically chooses a particular starting agreement in all circumstances. The guide can be a blunt tool, and sometimes will still not recommend one particular agreement even after answering several questions.

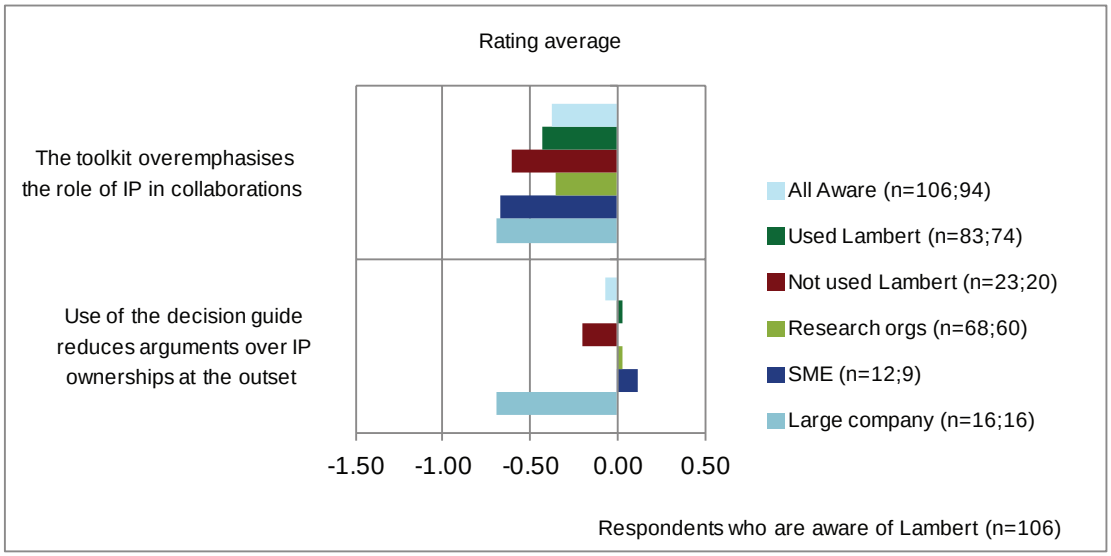


Figure 4.4 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

The issue of IP ownership is strongly influenced by the development stage or Technology Readiness Level of the technology. For example, for early stage or more fundamental research the university partner will be more concerned about retaining the IP rights to enable them to take the research on in a number of different directions and exploit it in multiple application areas. At this stage, an industry partner may be more relaxed about leaving some or all of the IP rights with the university, whilst for research on a technology or product which is closer to the market they will be much more concerned about their ability to police and protect the IP.

"There are many valuable areas of research that larger companies are keen to engage in on the basis that the output is valuable but precompetitive and not requiring IP ownership by them." – Large Company

To some extent this comes down to an issue of trust – does the industry partner "trust" the university to protect the IP in the same way as they would, or is it too important to their commercial strategy to be out of their control. This does not necessarily reflect a lack of respect for the university procedures, but rather a need to integrate the entire company IP protection strategy so that it works together to protect their particular products or services effectively. For some companies this means that they will only carry out pre-commercial or fundamental research with university partners. For later stage collaborative research they only use commercial partners on commercial terms.

There is also often confusion between the need to own the IP compared with the ability to have exclusive access to it. In many situations, these alternatives are functionally equivalent, and the IP ownership can rest with either partner to suit the circumstances. **Usage rights, rather than ownership of IP, are the important factor**. For SMEs building a business on a technology platform, however, the ownership of IP can be essential for them to raise further funding. Some

industry respondents felt that the default position of university IP ownership enshrined in the Lambert IP principles is biased too far in favour of the universities. This fails to recognise the obligations placed on the universities by their charitable status, and the need to return benefit both to the public good and the public purse by maximising exploitation of their research.

"IP is not all about ownership. One needs to focus on usage, not ownership, most of the time." - University

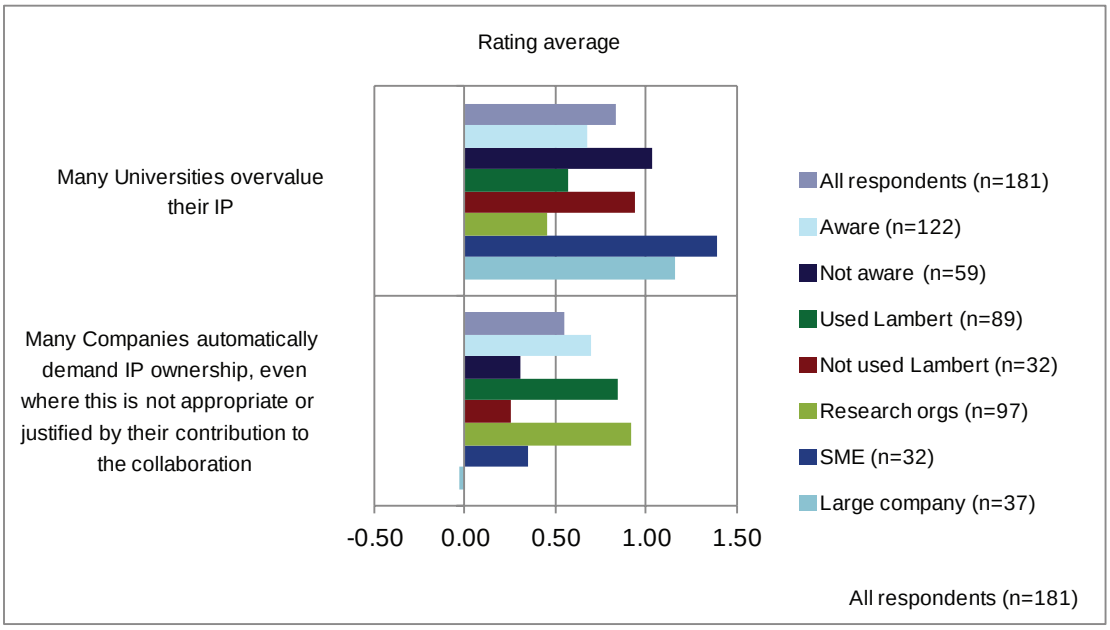


Figure 4.5 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

This position is reflected in the attitude found in all but the large companies in the survey that **companies tend to demand IP ownership even where this is not appropriate**, with 70% of the sample agreeing. The other big issue with IP relates to valuation, and whether a return should flow back to the university to reflect their role in the collaboration. This again is a major discussion point for a number of reasons. As can be seen in the figure, **there was agreement from 73% of the sample, even from 65% of the research community, that some universities overvalue their IP**. This is closely linked to the unpredictable nature of research; when a collaboration begins, there is generally no way of telling whether or not it will produce anything of commercial value, nor how much additional time, development work, investment, and complementary IP from other sources may be needed from the company to turn this research into a commercial product. Both parties are driven by a desire not to miss out on the opportunity of "the next big thing". One way to avoid this issue is to delay these discussions until some of the uncertainties become clearer, by including an "agreement to agree" clause. This has proved helpful in some cases, and is a practical response to the fact that most research will not lead to a high commercial value outcome and so it is not worth spending time arguing at the outset over something that will never happen. Some of the survey respondents favour this approach, but it is deliberately not included within the Lambert principles which require the

parties to deal with these issues up front. Many, however, find that the approach would not be acceptable for them in terms of commercial risk, particularly if the company is venture backed, and fear that they may be "held to ransom" by their research partner in the future. Under English law, this type of clause is not legally binding, and so most lawyers also advise against its use.

Publication versus confidentiality

Publication is the lifeblood of any university, and industry collaborators are well aware that this is an important issue for them. Some industry participants however commented that the **timescales for publication set out in the Lambert agreements are not always in line with the timescales needed to secure suitable IP protection for commercially oriented research**. The simplistic response to this is to file a patent on the invention, and then allow publication by the academic. However, particularly with early stage research, this may not be the best route as further research or development may be required before the most effective patent application can be constructed. This becomes particularly acute where multiple IP strands are combined into one commercial product. This is another instance where the pressures on an SME, where their main value is tied up in their IP can be very different from those for a bigger company. Similar concerns also apply to the timescales applied to commercial options to negotiate a license. For the universities, publication becomes particularly important for PhD students, who need their thesis not just to get their degree, but also their next academic position. If both sides are sensitive to these needs, then creative solutions can be found which allow publication of the academic research without revealing commercially sensitive aspects. Several of the SMEs emphasised that the endorsement they get from academic publications is very valuable to them in building their external credibility.

"*Universities are under a duty of care to ensure that postgraduate students are supported and enabled to complete their degree. Embargoing their thesis for long periods is an absolute joke in most cases.*" – University

Related to the protection of the commercial route for an industry partner is their concern about potential leakage of company know-how that may come from a true collaboration where both parties are contributing research and intellectual input as well as funding. Whilst it may be appropriate for the university to retain ongoing research rights from the results of the collaboration, this becomes less clear when in order to use these rights they are also gaining insight into commercially sensitive tips and tricks. In this case, use for research and teaching may be acceptable when use in other commercial collaborations would not be. This type of distinction can be difficult for a university to cope with, and the issue is becoming more acute as grant funding, particularly in the physical sciences is becoming more and more dependent on the presence of industry partners. Some potential solutions to division of the outputs of this type of collaboration will be discussed in Chapter 5.

Liabilities, indemnities and warranties

The clauses relating to liabilities, indemnities and warranties were also raised by both universities and companies as causing problems for both sides of the collaboration. **Universities have a very different approach to risk management and will not take on risk of factors outside their control, whilst companies may be able to take more of a risk-reward approach to liabilities, indemnities and warranties**. Some of this stems from the charitable status discussed above, and some reflects institutional practices. This can result in considerable frustration where a university feels that industry does not recognise that they operate in a different environment, or where a company feels that the university is demanding commercial-style returns, but is not willing to make commercial-style commitments. Sensitivity to warranties and liabilities is also high for SMEs, and for them reciprocity of these clauses is important – so that they are not being asked to make commitments that the other party is unwilling to give in return.

The issue of academic freedom can also cause complications here, as the relationship between an academic and his university may be contractually quite different from the relationship between a company researcher and his employer. Again this is most likely to become an issue where a university is undertaking a more contract-research style collaboration, but cannot behave in the same way as a contract company would.

If the agreements are updated, it may be worthwhile to review these clauses in the Lambert agreements to ensure that they still reflect general practice, and that the balance between university and commercial interests is a fair reflection of the different activities anticipated by the different style of agreements.

Influence of industry sector

The numbers of survey respondents from some individual industry sectors are too small to draw any firm conclusions about the difference between them, but by aggregating the data, some general trends can be seen. These trends support the comments we received that **the agreements are more widely used in life sciences and ICT than more "physical" sectors such as aerospace, defence, nuclear, transport, oil & gas or engineering.**

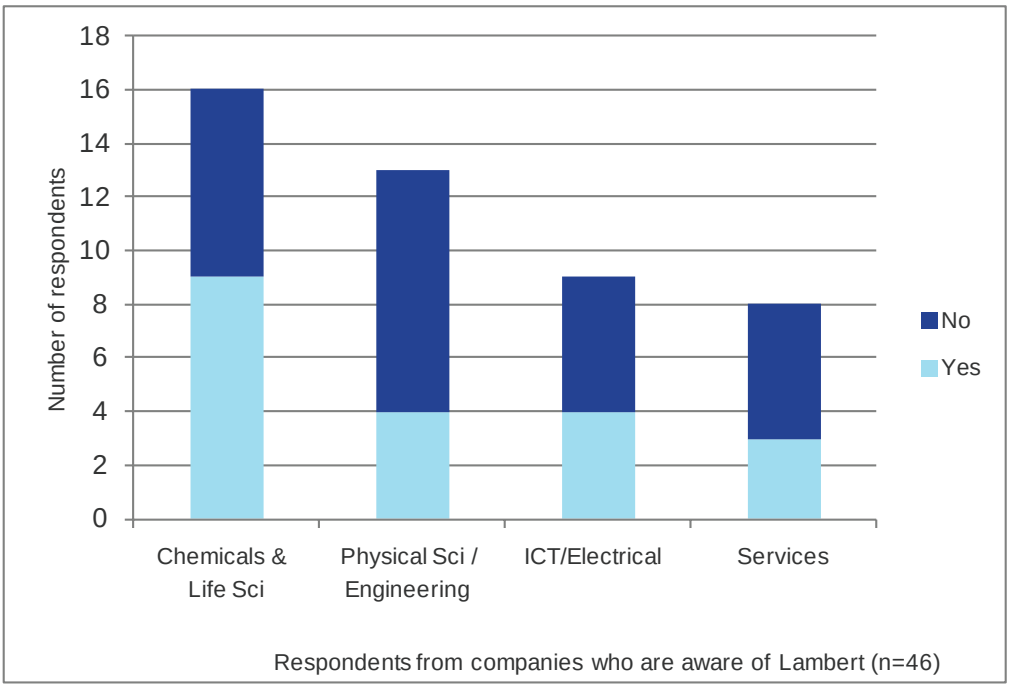


Figure 4.6 - Have you used any of the Lambert agreements (including individual clauses), or the other components of the toolkit (Outline document, Decision tree, Guidance notes)?

56% of the life science and 44% of the ICT participants have used the toolkit, compared with 31% of those in physical science or engineering. We also found that the research organisations reported that the agreements are a little more likely to be helpful (59% and 65% vs 47%) in negotiations with these groups. To some extent, this reflects the different levels of research carried out by these different industry groups. According to the latest data from the Office of National Statistics[15], the pharmaceutical industry is by far the highest spender on R&D in the UK at £4.9 billion in 2011, followed by computer programming, then motor vehicles and parts, then aerospace, then telecommunications, each spending between £1-2 billion pa.

15 http://www.ons.gov.uk/ons/rel/rdit1/bus-ent-res-and-dev/2011/index.html

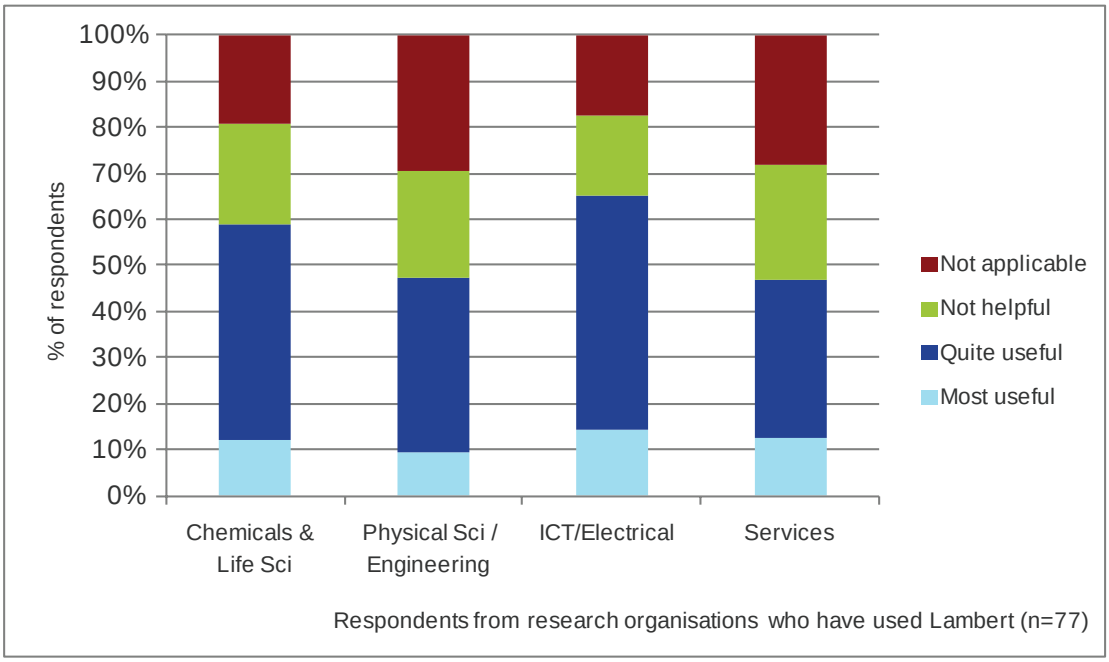


Figure 4.7 - Please rank the usefulness of the toolkit and agreements for the following negotiations.

Similarly, the agreements are more likely to receive a positive or neutral reception if they are offered to the life sciences or ICT sectors, and more likely to receive a negative reception from oil, gas and mining or transport. The aerospace industry is also cited as having a negative attitude to use of the toolkit. Most of these industry sectors will never offer a Lambert agreement as their first choice, with life sciences again the most likely to do so (and much of this is likely to be the influence of agreements with GSK). The aerospace and defence sectors tend to have a more aggressive attitude towards IP ownership and confidentiality than that taken by the compromise position of the Lambert agreements. Some of this is fed through from the terms of funding from organisations such as the Ministry of Defence, in other cases it is a more fundamental industry attitude to trade secrecy and also reflects the long product development times in these industries. Particularly in the case of more blue-sky research, this can cause conflict between the university mission to exploit the technology widely in different areas and the company desire for exclusivity in all fields.

Case Study - GlaxoSmithKline's use of the Lambert toolkit

GlaxoSmithKline (GSK) has always been a strong supporter of the Lambert toolkit, and was a member of the Inner Working Group which helped to draft the model agreements. GSK was also the industrial partner in the first ever Lambert agreement, signed in March 2005 with the University of Manchester. Up to the end of 2012, GSK has signed 239 different Lambert agreements with universities both in the UK and abroad.

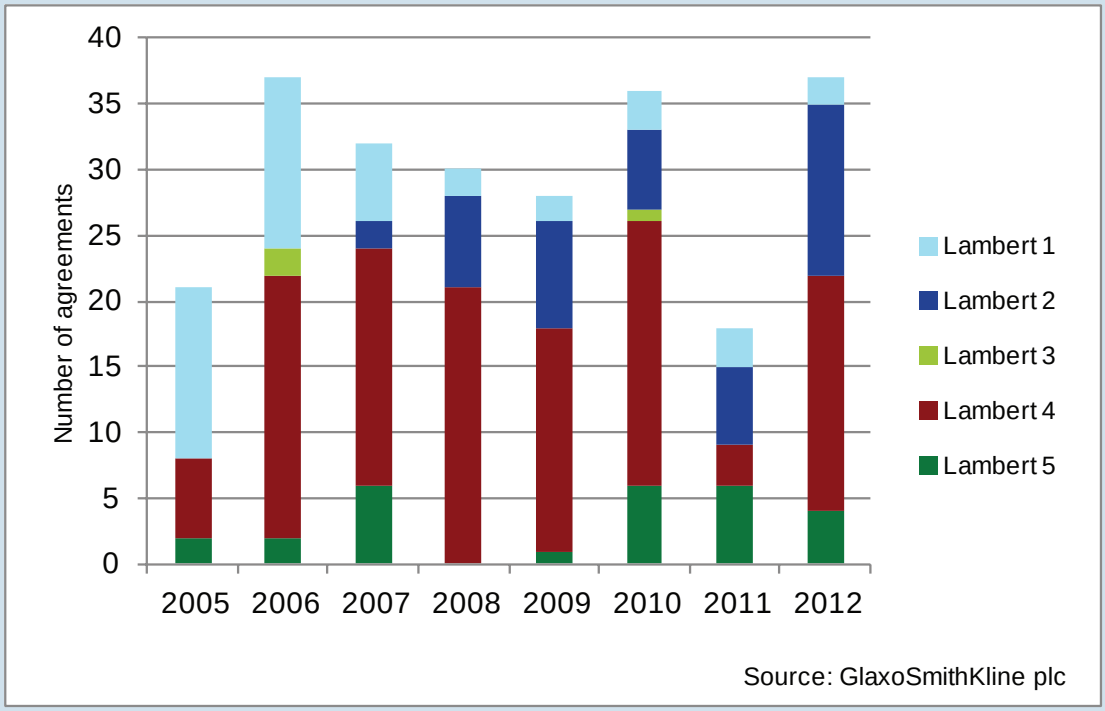


Figure 4.8 - Lambert agreements signed by GlaxoSmithKline in the UK and abroad.

In the UK, GSK has Lambert agreements with 35 different organisations, including all but four of the Russell Group of research intensive universities. For 21 of these organisations, GSK has two or more agreements, in one case having 32 separate agreements with one university. Some agreements have been completed very quickly, with a turnaround of less than 24 hours. Although many of the agreements are for one-off research collaborations, GSK has also used the templates successfully to structure a £6 million, 6 year research framework agreement with the Institute of Ophthalmology.

"The Lambert agreements have saved my team hours of negotiation time" said Malcolm Skingle, Director, Academic Liaison at GSK. "We have also used them successfully with research organisations and universities overseas, where it really helps that they are contained on a "neutral" website at the UK Intellectual Property Office".

GSK has used the Lambert agreements with 32 overseas organisations in 15 countries, mainly in Europe. The knowledge and experience that GSK has with the agreements, combined with their reputation and origin as a negotiated compromise has helped to make these agreements acceptable to a wide range of European institutions.

In other physical sciences and engineering sectors, there are fewer fundamental differences between their approach and that of the Lambert toolkit. For these sectors, wider awareness and education of the issues surrounding research collaboration with universities may increase uptake of the agreements.

Some of the university respondents felt that the agreements were over complicated for use in the creative sector or social science research, where the knowledge and data gained from the research are more important than formal IP. Our sample did not have sufficient representation from these sectors to draw any firm conclusions.

Chapter 5: Issues and applications

- Possible extensions and updates to the existing toolkit have been suggested. For instance, showing how the agreements can be used to assign more flexible IP ownership, exploitation rights and use of the results could make the toolkit more relevant to current collaborative styles.
- More than half the universities and companies that have used Lambert said that a model agreement approach could be usefully extended to other types of collaboration:
  - For Knowledge Transfer Partnerships (KTPs), especially for SMEs that get involved with this scheme as their first interaction with university research.
  - Whilst government is a big funder of research, this type of collaboration is more usually conducted as a procurement exercise, and met with considerable frustration by universities. 75% of the respondents felt that the use of a "Lambert-like" approach would be helpful here.
  - For overseas partners, over 50% of universities and over 40% of companies who have used Lambert found that it was useful even though awareness is currently low. Foreign partners are often receptive when introduced to the agreements, particularly if they are collaborating in research within the UK for the first time when the presence of a standard approach which is acceptable to a large proportion of UK universities is attractive for inward investment.

In the AURIL 2009 survey, 43% felt that aspects of the Lambert toolkit could be improved. In our survey, 30-64% of the participants who gave an answer felt that changes were needed to the toolkit, depending on which part of the toolkit was being considered. Many of the respondents left this question blank, and it is reasonable to assume that if they skipped the question then they did not feel the need for any particular changes. If the "yes" answers are instead calculated as a percentage of all those who were offered the question (yes, no, and blank responses), then **the percentage of the survey participants who felt that changes were needed to the toolkit is 10-26%**, with the comparable figure in 2009 being 25%. **The most common areas suggested for change were to bring the agreements up-to-date, plus improvements to their awareness and uptake**. Nearly all the suggestions for changes to the other parts of the toolkit were to reflect the alterations suggested for the agreements.

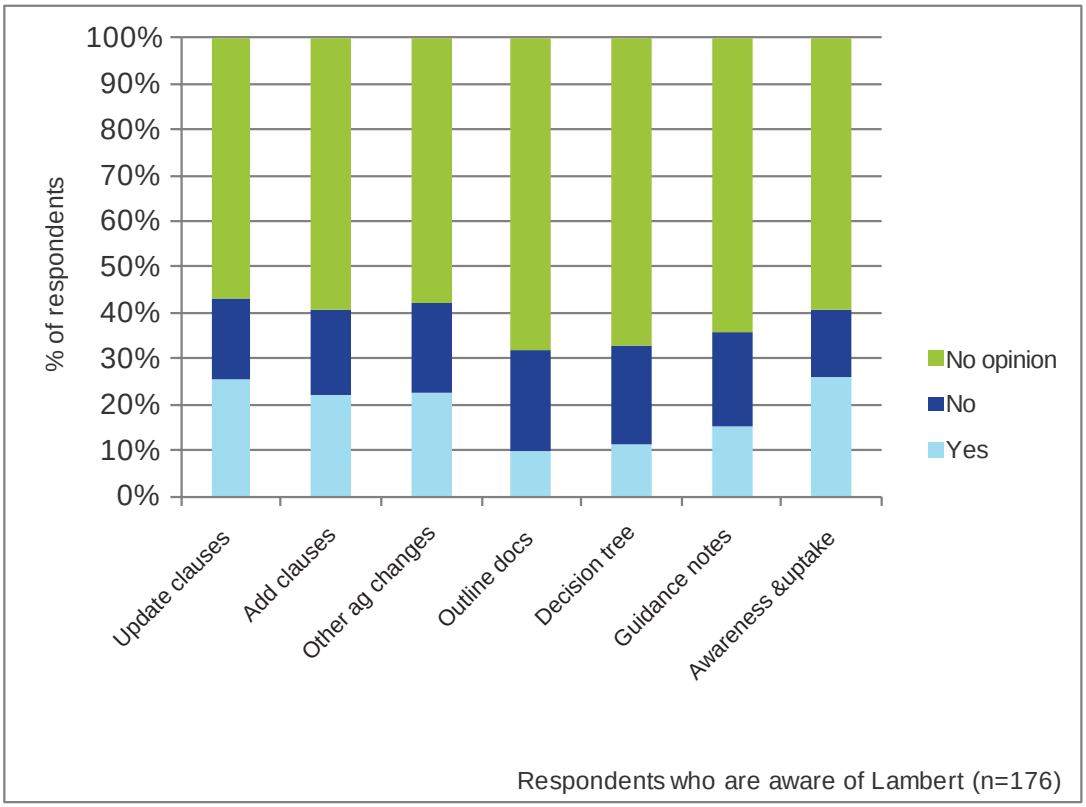


Figure 5.1 - Do you think any parts of the toolkit could be improved?

Flexibility for today's environment

The most common fundamental change suggested for the agreements was to make them more flexible to reflect the realities of collaborative research today, with roughly a quarter of those who made comments raising this issue. The existing agreements are based mainly around a "service provision" model, with the university doing all the research with different levels of financial and intellectual input from the sponsor. **Today, collaborative research is more often a true collaboration, with both sides undertaking research on different aspects of the program, and more sharing of ownership, expertise, risk and reward**. The agreements are not designed to cope well with industry in-kind input in the form of know-how, expertise and materials.

"*Tried to use the Lambert agreements, but none really fitted; too many options and could not balance the issues. The other side disliked it.*" – University

Case Study - Flexible management of research outputs

The University of Oxford and GlaxoSmithKline (GSK) successfully applied for funding from the TSB Stratified Medicine Innovation Platform. Their research project was designed to evaluate a new biomarker in osteoarthritis, to examine whether it could be used to measure the progress of treatment and to predict which patients would benefit most from the treatment. GSK provided their experimental therapeutic for osteoarthritis for the study, and had also developed a biochemical assay. The university provided clinical expertise, and an imaging technique which can evaluate the progress of the disease.

IP management was one of the central features of the research collaboration, and it was important to both parties to ensure that they had access to the IP that they needed to allow them to move forward with their ongoing research, and with development of the therapeutic. The TSB funding competition suggested the use of the Lambert toolkit, and as both parties had worked together previously using the agreements, this was an obvious choice. Although the collaboration only had two parties, they agreed to use the consortium agreements, rather than the one-to-one agreements as a starting point.

"GSK proposed the consortium agreements because we wanted to use some of the features, including the ability to add partners at a later date, and the steering group project management arrangements", explained Caroline Jenkins, Senior Contracts Specialist at the University of Oxford. "Because this gave us a framework that we were comfortable with, it allowed us to focus our negotiations on clauses covering the transfer of materials, and on how to deal with the IP in the project, which turned out to be quite complex." The two parties constructed a series of IP terms, which divided the IP arising from the project into four different fields which could be handled separately. For example, in this project any IP which related to the existing GSK therapeutics or to the use of the biomarker assay alongside those therapeutics would belong to GSK, but any IP relating to development of the biochemical assay system as a diagnostic biomarker of disease would belong to the university. There were also different terms relating to rights to access and use of the IP by the other party, potential revenue sharing, and how to handle IP which was created jointly. "We used a Memorandum of Understanding initially to identify a series of categories of IP which we wanted to handle in different ways, and then identified a consistent terminology using the potential IP arrangements in the different one-to-one Lambert agreements, and slotted them into the overall framework. This allowed us to be very efficient, and to focus our efforts on ensuring that we all had the freedom we needed to continue with both our academic research and GSK's product development."

The research is now in the second year of the two year project, and promising results are beginning to emerge that should enhance our understanding of the biology of osteoarthritis and enable efficient clinical trial design.

A number of organisations have already adapted the existing model agreements to allow for ownership, exploitation rights and use of the results arising from the collaboration to be divided up in different ways (one company referred to this approach as "Lambert 3½"). Typical ways this may be achieved are by field (a specific business or technological area), by time, or by geography, which are already covered by the Lambert agreements. More flexible still, is the ability to divide the results into different categories depending on the IP that they are based on, or depending

on the type of IP that is being generated. For example, in a collaboration where an engineering company is providing its components to be tested in a proprietary university performance testing system, then the results can be divided into those related to the components themselves and their performance in the tests (which should belong to the company) and those related to improvements to the testing system (which should belong to the university). **A simple and flexible scheme to allow for splitting of the inputs and outputs into sponsor and university-dominated IP would make the agreements more applicable in these situations**. Some of the consortium agreements already consider this type of arrangement, and it would be relatively simple to incorporate this approach into the one-to-one agreements as well, and potentially to extend both of these to include a revenue share template.

Many of the survey participants commented that the current agreements are too inflexible and do not cover all the nuances of each potential collaborative situation. By trying too hard to be a "one size fits all" solution, they do not adequately address any one situation. This results in the situation discussed earlier in the report where many will use the templates as a good starting point, but recognise the need to negotiate each case on its own merits. Conversely, some see that the existence of the model can lead to one party becoming entrenched in a particular position and unable to consider alternative approaches. A more flexible approach might go some way to allaying these concerns and increase the acceptability of the toolkit, although it is clearly moving away from the original intention for the agreements. Allied to this is the concern that if the agreements are seen as providing the "correct" answer, then less experienced collaborators may inadvertently sign up to terms without considering the implications for their particular situation.

"*The danger with the Lambert approach is that the agreements are seen as inflexible, non-negotiable, and the only "right" answer, rather than a starting point with flexibility to address each specific collaborative situation. They are not a panacea for every situation.*" – Large Company

It is interesting to contrast the approach taken with the Lambert toolkit and the approach being used by the University-Industry Demonstration Partnership (UIDP) whose purpose is to enhance the value of collaborative partnerships between university and industry in the United States. This initiative, established in 2003, is supported by the Government-University-Industry Research Roundtable (GUIRR) and its overall aims are closely aligned to those of the Lambert toolkit[16]. Its inaugural project was to tackle the significant issues affecting university-industry sponsored research agreements through a series of Contract Accords, which are now available. Many of the international companies who are members of UIDP are also the same companies sponsoring research at UK universities. The UIDP Contract Accords are not well known in the UK, and only one survey participant has used them.

16 http://sites.nationalacademies.org/PGA/uidp/index.htm

Case Study - UIDP Contract Accords

In collaborative research agreements, there are commonly recognised areas that typically require additional time for resolution. The UIDP Contract Accords address each of these areas, with the aim of providing practical guidance and detailed reference material that helps both parties understand typical issues, address them and thereby collaborate more effectively. Each Accord has been developed by a working group with representation from both academia and industry.

Each document gives a brief introduction to the specific issue and the purpose of the clauses, then considers the principles, and gives typical ways in which they can be handled or solutions for particular situations. They do not include specific legal clauses, but instead can be used to discuss the potential options for a particular topic which may then feed through into a Heads of Terms.

An initial set of five Contract Accords was published in August 2009 and five more were released in July 2012. The UIDP views them as living documents, updating the initial versions as needed and also developing additional Contract Accords. They have also run educational webinars which explain each accord in detail and are considering adapting them into a wiki-type reference bank.

Completed Contract Accords	
0	Preface
1	Statement of Work
2	Indemnification
3	Publications
4	Other Research Results
5	Background Intellectual Property
6	Foreground Intellectual Property
7	Export Control
8	Copyrights and Software
9	Confidential Disclosure Agreements
10	Material Transfer Agreements

Contract Accords Under Development	
11	Conflict of Interest
12	Specialised Services/Testing Agreements
13	Budgeting
14	Data Use Agreements
15	Gifts

Updating

Unlike some other sources of precedents which are regularly reviewed, the Lambert agreements have not been refreshed or updated since their introduction in 2005 and relaunch in 2008. **There are some specific areas of law and clauses which may need to be updated or clarified to bring them in line with modern legal practice**. Some of those which were mentioned by the interviewees are:

New or updated laws and practices:

- Anti-bribery and corruption provisions
- Import and export controls
- Freedom of Information
- Data protection
- Statutory health and safety standards

University concerns:

- Clear and specific explanation of the charitable status constraints
- Clear and specific explanation of the State Aid rules and constraints
- Open access requirements for government funding
- Fraud

Practical issues:

- Reference to Scottish versions of legislation
- Realistic way to deal with retention of confidential data
- Counterparts clause
- Definition of Background is wider than IP, which does not work with the clauses relating to licensing of “Background” rights

Other more general points were how to deal with common industry-specific clauses which may be required. Examples would include additional security provisions, export controls and confidentiality requirements for defence collaborations, or clauses relating to stem cells or the use of human tissues in pharmaceutical collaborations, or provisions for Open Source or Creative Commons approaches in software collaborations. It would be cumbersome to include all the options in the standard agreements, but there could be some additional sector-specific documents which give common clauses which can be added in to the agreements for different industries. By covering a range of industries, this could help to balance the external perception that the agreements are biased towards the life sciences.

Extensions

A Heads of Terms document which irons out the principles of the collaboration before entering into legal drafting and discussion of specific agreements is widely used by our sample in many different types of negotiation and seen as very useful, but is not explicitly included within the toolkit. The outline documents combined with the decision guide do a similar job, but as was seen in Chapter 2, these parts of the toolkit are not as widely used, which may be because they are not recognised as being equivalent to a Heads of Terms.

Other potential extensions suggested for the agreements would be to include a format for amending agreements when new parties join or leave, or for changes to the funding and project time, a simpler and shorter format for straightforward collaborations and a template for sub-contracts under the agreements.

Creative use of modern technology

We also heard that **the potential of modern IT technology to enhance the Lambert website could make the toolkit more accessible**. At a simple level, automatic updating of clause numbering and cross-references would be helpful. At the moment, you can download a model agreement from the website with embedded hyperlinks to a web version of the relevant sections of the guidance notes. This could now be implemented to show the document directly on the website, with pop-up help boxes that give the relevant guidance. Similarly, the web-based decision guide was felt to be dated, with tick boxes bringing up instructions to move on to specific sections. This could be made much more automatic and appealing.

More ambitiously, technology was proposed as a way of encouraging partners to take the Heads of Terms approach, perhaps by allowing both parties to input their thoughts into an interactive outline and decision tree which would automatically produce a draft Heads of Terms document for further discussion and refinement.

Modern social networks can be used to build a community around the Lambert toolkit using resources such as LinkedIn and Twitter, which would also help to build awareness.

Other applications

The suggestions discussed above all relate to updates or extensions to the existing toolkit, but the survey also looked at other areas that might benefit from a model agreement approach. The three areas that gained most interest were Knowledge Transfer Partnerships (KTPs), university collaborative research with government, and for international collaborations. In each case, about 54% of the sample who have used Lambert felt that a model agreement approach could be usefully extended to these types of collaboration. This would not necessarily mean applying or adapting the Lambert agreements directly, and these options will be discussed in more detail below.

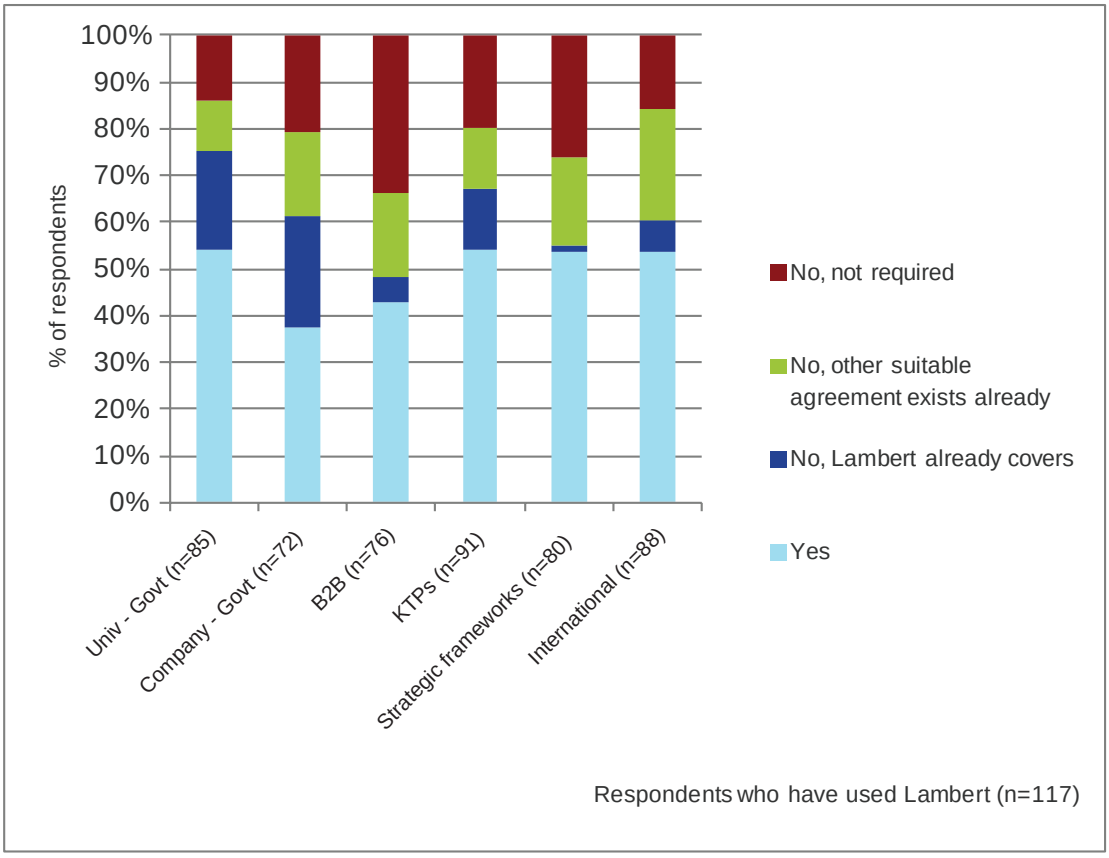


Figure 5.2 - Are there other situations where a "Lambert-like" approach and model agreements would be useful?

There was also a similar level of support for a common approach to strategic framework partnerships, but balancing this was a strong feeling that these partnerships are all very different and so much less amenable to a standard template approach. They will also be large, long-term, expensive relationships which will naturally get a lot of internal attention on both sides so it is less important for these agreements to be completed quickly, cheaply and easily. In terms of priorities, framework partnerships would rank lower down the list.

Knowledge Transfer Partnerships

On the other hand, KTPs are a fairly standardised type of university-industry interaction, where the government sponsor could have an influence on the type of agreement that is used. As reported in Figure 5.2, **54% of the respondents who have used Lambert felt that a "Lambert-like" approach would be useful for KTPs, and another 13% felt that the existing Lambert agreements are already suitable for this**. We have identified examples where a Lambert agreement has been successfully adapted for use as a KTP contract, but awareness of the toolkit amongst KTP managers seems to be much lower than within our overall survey sample (see the case study on IP in KTPs for details). There are also some specific features of the structure and terminology of this type of interaction which mean that a bespoke KTP standard agreement, with associated guidance notes and outline could be more appropriate. As with the Lambert agreements, it would be important that any standard approach gets buy-in from both the university and industry sides, and that it is well publicised and promoted to encourage its adoption as the preferred agreement for this scheme.

Case Study - Managing intellectual property in Knowledge Transfer Partnerships

At the last KTP Managers' National Conference, held in Hertfordshire in November 2012, one workshop examined some of the issues surrounding the management of IP in KTPs. After an introduction to IP and how it relates to KTPs, the presenters took a short survey of those present. Of the 32 KTP practitioners at the workshop, only 38% were aware of the Lambert toolkit, and only 30% of those who were aware had used the agreements. In most cases this was through using slightly modified versions of the agreements.

Susan Suttle, KTP manager at Liverpool John Moores University was a joint presenter at the workshop. "We were surprised that awareness of the Lambert toolkit was so low amongst the group", she commented. "But the response from the participants once they were introduced to the Lambert approach was really positive, and we found that the decision tree and the research outline were particularly helpful to give a holistic picture of the issues involved with IP in research collaborations. Several people commented that this knowledge would give them more confidence in negotiations, and that wider availability of further workshops on how to use the toolkit would be very welcome."

At Liverpool John Moores, the university has recently introduced a standard contract agreement for all their KTPs. This template was based on Lambert 4, and has been adapted to reflect the terminology and structure of the KTP scheme. This has simplified their procedures significantly, by bringing together all the financial, personnel, IP, delivery and research program requirements into one document. In the majority of cases, the IP terms in Lambert 4 give the company partner the access to arising IP which they need, whilst allowing the academic the freedom to continue in their research. In other cases, where the university has pre-existing IP, they have used the decision tree approach to identify more suitable IP arrangements which can then be negotiated and agreed with the partner company.

The TSB do not provide a standard format agreement for KTPs, and the KTP portal refers to the Lambert website as a source of useful agreements and information. It is a condition of TSB funding that an IP agreement is put in place before the KTP Associate begins work. Certain universities run a large number of KTP projects, and will typically also have their own standard agreements already and the administrative support needed to process them. For universities that only do occasional KTPs, however, the bureaucratic requirements can be demanding and time-consuming. A standard model agreement approach would also be very helpful to the many SMEs that get involved with this scheme as their first interaction with university research, and therefore are new both to KTPs and to university-industry collaboration.

Government

This survey has looked at the role of government in relation to the Lambert agreements from a number of different angles. As the host of the Lambert website, and commissioner of this research, the Intellectual Property Office (an Executive Agency of the Department for Business and Skills) clearly has an important role to play, and the results of this research will be considered by the IPO in future policy development. A number of government research institutes have also responded to the survey. These Public Sector Research Establishments (PSREs) form part of the wider research community, and have been analysed alongside the university sector for the purposes of this report.

Government as a funder

The role of funders in recommending and promoting the use of particular agreements has been highlighted earlier in this report. The two main bodies which fund collaborative research in England are Research Councils UK (RCUK) and the Technology Strategy Board (TSB). The Devolved Authorities also have various funding mechanisms for their specific territories.

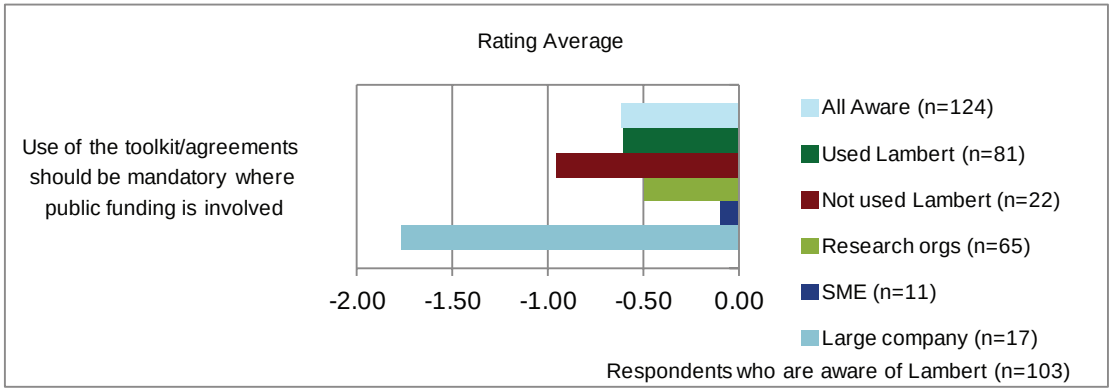


Figure 5.3 - Rating averages of agreement/disagreement with the statements on a scale of -2 (strongly disagree) to +2 (strongly agree).

There was general disagreement in the survey (70% disagreed) with the suggestion that the toolkit or agreements should be made mandatory if the research uses public funding. This was particularly evident amongst large companies, where 88% strongly disagreed. This was seen as a retrograde step, and would erode the competitive advantage in terms of flexibility which the UK has over the US for example, where there are statutory terms and agreements which must be used with certain funding sources. Nevertheless, several respondents felt that more could be done by the funders, for example to promote the use of the toolkit and its IP ownership provisions as their recommended starting point for negotiations.

"*The models need to be backed up by government policies and awareness programmes to promote the strategic benefits of collaborative research and the operational processes.*" – University

At the moment, both TSB and RCUK have links to the Lambert website, but these are not very prominent, and are provided more for information than as a recommendation of what to use. The research councils have a set of joint grant funding conditions published by RCUK[17], which include some general principles to ensure that the results of their sponsored research are used to the benefit of society and the economy. As a default position, ownership of any IP arising from the research rests with the organisation which generates it, but the responsibility for how this IP is best protected, managed and exploited is delegated to the universities themselves.

The Medical Research Council (MRC) is one research council which goes further in placing explicit conditions on university-industrial collaborations which include MRC support. The MRC Industry Collaboration Agreement[18] (MICA) is a simple system which is a required part of the application process for any research proposal for MRC funding involving a collaboration with one or more industrial partners (contributing either in cash or in kind). The scheme allows for different IP ownership provisions, depending on the level of industrial contribution, and requires that a collaboration agreement is put in place for which it recommends, but does not mandate, the Lambert agreements (or the mICRA agreements for clinical research) as a starting point.

17 http://www.rcuk.ac.uk/documents/documents/tcfec.pdf

18 http://www.mrc.ac.uk/Fundingopportunities/Grants/MICA/Specification/index.htm

The plethora of different funding schemes have also resulted in different and sometimes conflicting IP and exploitation requirements that feed down into collaborative research agreements. This can even happen within the same organisation. For example, the TSB recommends the Lambert toolkit on its website and in its standard terms and conditions. However, several TSB funding competitions have an associated "TSB standard model agreement", which is provided as a potential template on award of the grant, and is based on the LINK agreement, rather than the Lambert toolkit. When TSB contracts research which it funds fully, then it will use a separate TSB in-house agreement, which again is not based on Lambert. Discussions are still on-going about the type of agreements which will be used by the newly formed Catapult centres which are run as a TSB program with the aim of bridging the gap between universities and business. Again this is likely to be a recommended approach, rather than a requirement, and is likely to involve the direct use of the Lambert agreements where appropriate. The TSB is also considering an SME IP support model which is based on a Lambert B collaboration model with additional clauses to allow the Catapult to support the exploitation of the IP. TSB wishes to operate a "soft-touch" approach with a portfolio of agreements to suit all needs, and does not feel that it is in a position to mandate any particular agreements, particularly to industry. Mandatory agreements were not favoured in our survey either, but these different attitudes to use of the toolkit in different circumstances can be confusing to universities and industry alike.

One helpful aspect of TSB funding rules which manages to focus the minds of the research collaborators is their requirement that an agreement is in place before the funding is released, and a time limit in which to complete this agreement otherwise the funding is lost.

Government as a research collaborator

Government is also directly involved with collaborative research, however, as a sponsor of university or company research which is directly relevant to their government mission. According to the Office of National Statistics[19], **Government directly funded over £3 billion of R&D in 2011** (in addition to the funding provided via the Research Councils and HEFCE), **of which over £2 billion went to the university and industry sectors**, with most of the remainder going to other parts of government, which will include the PSREs. The amount of government funded external R&D is likely to increase over the next few years as the funding cuts in PSRE budgets continue to be implemented.

19 http://www.ons.gov.uk/ons/rel/rdit1/gross-domestic-expenditure-on-research-and-development/2011/index.html

Sector carrying out the work	£ million
Government	977
Research Councils	86
Higher Education	406
Business Enterprise	1,601
Private Non-Profit	68
Total	3,138

Table 5.1 Expenditure on R&D performed in the UK in each sector using funding provided by UK Government in 2011.

The Department of Health is a big funder of research, as are several other departments, such as the Department for Environment, Food and Rural Affairs (Defra), the Department of Energy and Climate Change (DECC) and the Department of Transport (DoT). The Ministry of Defence (MoD) also commissions a large amount of collaborative research, most often by the Defence Science & Technology Laboratory (Dstl). Traditionally, this has been mostly through large companies who will project manage the research rather than directly with universities or SMEs, but this may be changing.

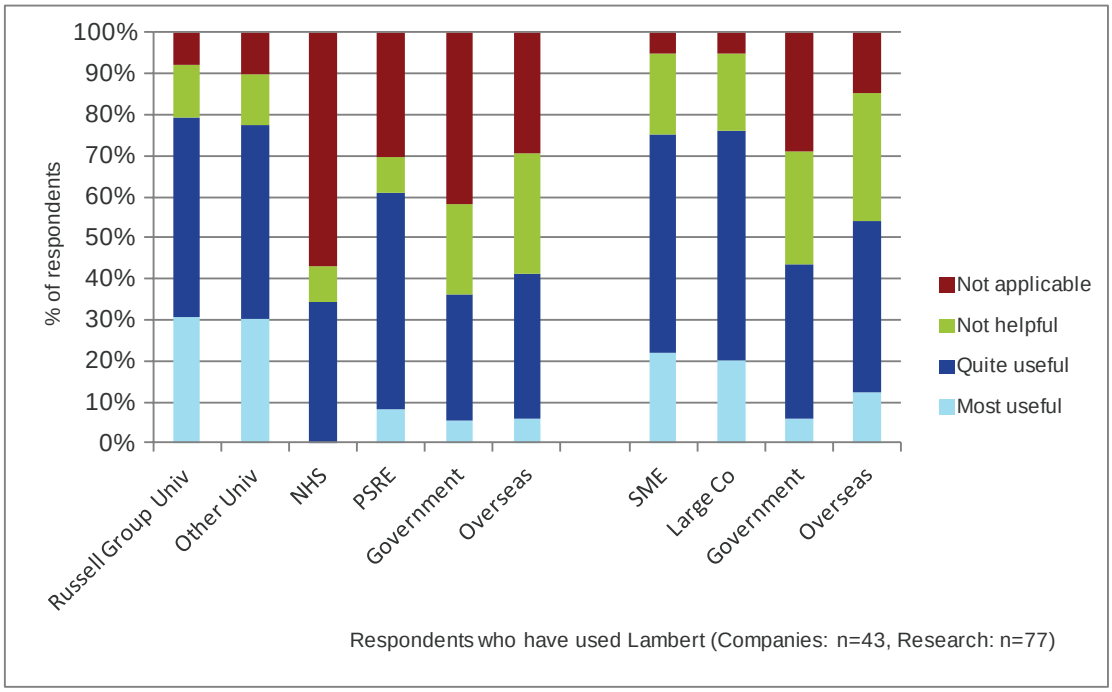


Figure 5.4 - Please rank the usefulness of the toolkit and agreements for the following negotiations. Left hand side shows company responses, right hand side shows research organisation responses.

We found considerable frustration amongst the universities who were recipients of this type of funding, which is approached by the government departments as a procurement exercise, rather than as collaborative research. **Government was the group where the Lambert**

agreements were seen as least helpful with only 41% of respondents finding them useful, and government rarely offers the use of a Lambert agreement. Where it does so this is in the context of providing innovation funding to others, rather than where it is commissioning research for its own use. Similarly, it may be positive about others using the agreements when funded by its schemes, but will be very inflexible about using its own standard procurement contracts if it is commissioning research. This dual attitude to the agreements can be confusing and unhelpful.

"*The agreements are great but when even UK government departments will not use them, we cannot possibly expect independent companies to!*" – University

As was reported in Figure 5.2 above, **54% of those who are aware of Lambert felt that the use of a "Lambert-like" approach would be helpful for university research collaborations with government, and a further 21% felt that the existing Lambert agreements are already suitable for this**. 24% also felt that the existing agreements would be suitable for business research collaborations with government, and many of the issues that universities face when working with government are also faced by the SME sector. Government has already acknowledged that it can be hard for smaller companies to access government departments, or for the public sector to discover businesses with the most innovative products and ideas, and is continuing to introduce schemes to address this. For example, the Small Business Research Initiative (SBRI) matches business ideas to government challenges through a simplified procurement process.

Invariably, when research falls into the standard government procurement system, this means it must comply with government procurement rules which have a number of consequences. Firstly, it requires the use of long and complicated procurement agreements which are designed for the purchase of commercial goods and services, rather than unpredictable research. One respondent reported the use of a 98 page document for a PhD student research project. These agreements are extremely rigid and inflexible, and no negotiation is possible. This is compounded by procurement being carried out by staff who do not have the authority to make any changes, or contracted out altogether. The principles that have been drawn out elsewhere in the report of approaching collaborative research by coming to mutual agreement on the principles that will be used are not applicable here, and this leads to high transaction costs in the universities. In some cases, these documents will require that any IP arising from the research is owned by the commissioning government department, but without any internal structure to support this or to ensure the exploitation of this IP.

"*Consistency across government departments, and acceptance by them of the issues that are important to universities in these negotiations would be very helpful.*" – Russell Group University

The MoD generally uses the DEFCON 705 or DEFCON 703 procurement contracts for their collaborative research. These have been agreed with industry bodies, and include standard provisions relating to IP ownership, based on the principles that background IP should remain with its original owner, and the IP coming out of the research should go to whoever is best placed to exploit it (usually industry). MoD's concern is to be able to use the IP, and they will usually not take ownership except in specific circumstances relating to national security for

example. However, these contracts do also allow for significant MoD access to pre-existing IP owned by the researchers, to enable MoD to use the results of the collaboration. Although these contracts may offer a more balanced approach to IP ownership in some respects, nevertheless they are still non-negotiable.

Case Study - Centre for Science and Policy (CSaP) Global Uncertainties Conference

In 2012, the Centre for Science and Policy (CSaP) at the University of Cambridge hosted Dr Tristram Riley-Smith in a year-long Fellowship which aimed to improve the engagement between government National Security challenges and academic research. One of the issues identified in his work concerned guidelines for IP, where he identified:

- Lack of transparency and consistency in how IP is handled by the government, different approaches
- Confusion between collaboration and procurement
- Academic pressures to own and commercialise vs government need to obtain "value" from public funding
- Implications of ownership decisions
- Different approaches by different universities

At the CSaP Global Uncertainties conference, held in December 2012, these issues were examined in a session which covered "Intellectual Property Rights and Pull-Through: Turning Research into Capabilities". A group of about 40 influential National Security (NS) stakeholders from government and academia reviewed the work-streams from the Fellowship. Some of the key points raised in the discussions were:

- Lack of awareness and education on IP on both government and academic sides
- Fundamental issues about whether NS IP should be commercialised at all, and if so, how to balance the interests of national prosperity against national security
- The criticality of retaining royalty-free government rights to use the outcomes of the research that they sponsor
- Procurement rules can get in the way of effective collaboration and discussion of IP issues
- Government ownership of IP can be a barrier to effective commercialisation in both NS and parallel exploitation routes
- A framework like the Lambert toolkit could provide a useful structure to bring clarity to some of these discussions at the beginning of collaborative NS research projects

The other aspect of taking a procurement approach to research is that standard government contracts include a number of terms designed to protect the department from risk, particularly around liabilities and indemnities. These are not appropriate for use with a university, but cannot be removed or adjusted, and can result in a university signing up to terms that under other circumstances it would be prohibited from agreeing due to its charitable status, and government given mission to the public good.

The agreed compromises contained in the Lambert principles and agreements, particularly where they relate to IP ownership and exploitation, and to liabilities, indemnities and warranties may be more appropriate for government sponsored research than a straightforward procurement approach.

International use

The Lambert toolkit was drawn up with the intention of helping with collaborations between UK universities and UK companies, and the agreements all use English law as their basis. However, they can also be used to aid the negotiation of agreements between UK universities and foreign companies, or UK companies and foreign universities. As seen in Figure 5.4 above, **41% of company respondents and 54% of university respondents who have used Lambert found that it was useful for agreements with partners from overseas**. From Figure 5.2 above, 53% of those who have used Lambert agreed that a "Lambert-like" approach to international collaborations would be helpful, although only 7% felt that the agreements could be used in their current form for this purpose, which is surprising given the more positive response to the question about their usefulness in this situation.

Overseas companies and universities, even where they have UK-based affiliates, seem to be unaware of the Lambert agreements and toolkit, and do not propose its use to their UK research partners. If they are introduced by the UK party, however, the response is often positive or neutral, particularly if they are collaborating in research with the UK for the first time. The advantages of doing business under a deal which is independent and represents a negotiated compromise is attractive, and the deals are recognised as being a fair and reasonable position. The presence of a standard approach, which is broadly acceptable to a large proportion of UK universities, should be seen as a positive benefit by multinational companies commissioning research in the UK. This benefit is two-fold; firstly by setting expectations up-front that a reasonable position will be taken on key issues, and secondly by avoiding the need for the company to start from scratch in negotiations with a new UK university partner. These advantages could be used to support the efforts of organisations such as UKTI and the Foreign Office, as well as the universities themselves when encouraging inward investment to the UK. This needs to be handled carefully, however, to prevent "leakage" of the IP generated from UK government supported research into foreign ownership without appropriate return to the UK economy.

"*We operate in an international environment and Lambert is not understood outside the UK.*" – SME

At the moment, there is no guidance about when or how to use Lambert internationally. Translation of the contracts can solve the issue of language, but does not address the more fundamental issues of incorporating local law and culture, in particular attitudes to aspects such as dispute resolution. There are some current initiatives within IPO which are investigating whether the agreements can be adapted rather than just translated to suit local conditions in countries such as India and South Korea.

Case Study - Japanese collaboration

The Department of Pharmaceutical, Chemical & Environmental Sciences at the University of Greenwich has a practical focus, with expertise on various formulation and drug delivery systems. Following a successful collaboration with a French company, Greenwich was introduced by them to a Japanese pharmaceutical company which was interested in their research into hot melt extrusion. This technique can produce tablets with a number of advantages, including improved solubility, taste masking and tablets which dissolve in the mouth.

The university suggested an appropriate Lambert agreement for the collaboration, under which the sponsor owns the IP and the university has rights to use the research for non-commercial purposes. The Japanese company was not aware of the toolkit beforehand, but were happy to consider it. Apart from some changes to jurisdiction, and some minor adjustments to ensure that the university and company have the research and commercial freedom they needed for the future, the negotiations went very smoothly.

“I think that this is because the Japanese company recognised that the agreement offered a fair and reasonable approach” said Dr Paul Williams, Commercialisation Manager at the University of Greenwich. “I try to use the Lambert agreements whenever I can, and find that proposing them as a starting point can speed up the sign off process significantly.”

The collaborative program with the company is now in the early stages of a 3-year research programme.

The European approach to collaboration tends to follow similar principles to the Lambert toolkit, so it can be easier to use the Lambert agreements here. However, the Lambert agreements do not consider cross-border issues which may arise when collaborating with European partners from other countries. The existence of EU funding agreements, such as DESCA, also makes the negotiation of collaboration agreements within Europe relatively straightforward.

Most of the survey respondents were more concerned about improving the toolkit for use in the UK, rather than extending it internationally. Where specific areas were mentioned, the fast developing nations with different cultural outlooks, such as China, India, Brazil, South Korea and Taiwan were of particular interest for collaborative work.

Lambert has already had significant and continuing influence abroad in the technology transfer and knowledge exchange communities. The European Commission has adapted the Lambert approach to both standard agreements and a decision tree methodology for its own purposes.

The European Committee de la Recherche Scientifique & Technique (CREST) which advised the European Council produced an interactive toolkit, closely based on the Lambert decision guide, which guided the user through a decision process and raised a set of strategic questions to consider when planning and negotiating collaborative research projects across European country borders. Although this is no longer supported, the resource is still available on the Europa archive website[20]. The DESCA model agreements used for EU FP7 funded projects also use the Lambert standard agreement approach, and were developed using a process based on the Lambert working groups, using a stakeholder driven process with equal representation from the public and private sectors. This approach is continuing, and we understand that the Commission is investigating the possibility of extending the decision tree approach into a web-based platform for drafting a tailor-made research collaboration template for publicly funded research projects under the Horizon 2020 EU Framework Programme for Research and Innovation.

The Lambert toolkit and agreements have similarly inspired the development of comparable approaches in a number of other countries, including Denmark[21], Ireland and Portugal. Other countries, such as Germany, and industry groups such as the Europe-wide digital technology industry group EICTA, or EUCAR, the European Council for Automotive R&D or the AeroSpace and Defence Industries Association of Europe, have also produced standard agreement approaches for collaborative research, although these have been reported to be more strongly biased towards industry interests than the Lambert toolkit[22]. There have also been recent initiatives in France to investigate the use of a Lambert-style approach to collaborative research. Despite these influences, the Lambert toolkit itself remains relatively unknown outside the UK. Even in this UK-based survey, only 32% of the respondents with headquarters outside the UK were aware of the Lambert agreements, and for overseas respondents our sample is likely to be very biased towards those who have either heard of Lambert, or who are actually based in the UK but have overseas headquarters.

20 http://ec.europa.eu/invest-in-research/policy/crest_cross_en.htm

21 http://fivu.dk/en/research-and-innovation/cooperation-between-research-and-innovation/collaboration-between-research-and-industry/model-agreement

22 2009 Expert Group on Knowledge Transfer. Final Report – 30 November 2009, European Commission

Chapter 6: Conclusions

The innovation landscape in the UK looks very different today compared with when the Lambert toolkit was conceived. New patterns of industrial research and development are now more open to external inputs through an "Open Innovation" model, which brings in the best research wherever it originates, whether internal or external, from the UK or abroad. This trend is continuing as economic pressures force businesses to focus on their core areas of strength. It is widely recognised that well-managed research collaborations between public and private organisations can bring benefits to both sides. Collaboration can enable the development of new products and services and better innovation, all important contributors to economic growth.

Effective management of IP is an important part of the collaboration and knowledge exchange process, and new ways of protecting IP and facilitating value creation, particularly in the context of Open Innovation, require simple and effective ways of forming relationships. The negotiation of collaborative research agreements between universities and businesses remains contentious, and will probably always continue to be so. This is because balance points can be hard to find, especially on IP ownership and valuation issues, on publication rights and on liability, indemnity and warranty clauses.

This research shows that the Lambert toolkit has had a positive influence on some innovative research partnerships between UK universities and businesses. There could be ways to develop these foundations through better communication of the best use of the existing tools, targeting them at the organisations that need them the most with endorsement of their benefit in different situations. We found that the Lambert toolkit can provide effective support not just where both parties already use it, but especially if one partner has no standard agreements, or is new to collaborative research, or if the partners have not collaborated before. This can apply across the range of partnerships, but SMEs are the most likely to be unaware of the toolkit, to have no agreements of their own, and to be less experienced in IP management and in research collaboration. The research also suggests that there could be potential in extending the approach to other areas, for example in Knowledge Transfer Partnerships, Government sponsored university research, and with overseas companies.

Appendix 1: Methodology

The research work underpinning this report was carried out over the period October 2012 – March 2013, and was overseen by a Steering Group which contained representatives from IP Pragmatics, IPO, AURIL, CBI, PraxisUnico and TSB.

There are two key strands to the evidence base used to support this report. The first was an online survey (see Appendix 2 for details) which was widely publicised by IP Pragmatics and the IPO, as well as through our Steering Group Partners and other interested groups. We took the decision to allow more than one survey respondent per organisation. This is because although there may be a common organisational approach, contract negotiation is a very personal activity and we found that different people within the same organisation could have quite different views and experiences.

The second strand of evidence was a series of in-depth interviews and case studies, based on the online survey, and carried out in person or by telephone with individuals from the key sectors involved. The participants were selected to represent different types of research organisation, companies of different sizes and industry sectors, IP and legal professionals, and other relevant stakeholders. Four members of the original Inner Working Group were interviewed, as were representatives from a number of the groups involved with the Outer Working Group and associated discussions.

This was supplemented by informal discussions with many more individuals at meetings and conferences throughout the research period.

The in-depth interviews were carried out with:

- 7 Russell Group universities (research intensive)
- 5 Other universities
- 4 Government research organisations
- 8 Large and multinational companies (pharmaceutical, aerospace, performance chemicals, oil & gas, ICT, engineering)
- 12 SME companies (biotechnology, medical devices, mechanical engineering, nuclear, engineering research, transport, electronics, thin film coatings)
- 5 IP and legal professionals
- 7 Other stakeholders (Research Councils, TSB, Government, AURIL, PraxisUnico)

In all, survey responses were collected from 256 participants, of which 186 (73%) finished the survey. Just over half the survey participants (52%) came from the research community, with nearly 40% from industry both large and small, and 5% from the IP or legal profession. The full breakdown is shown in the chart below.

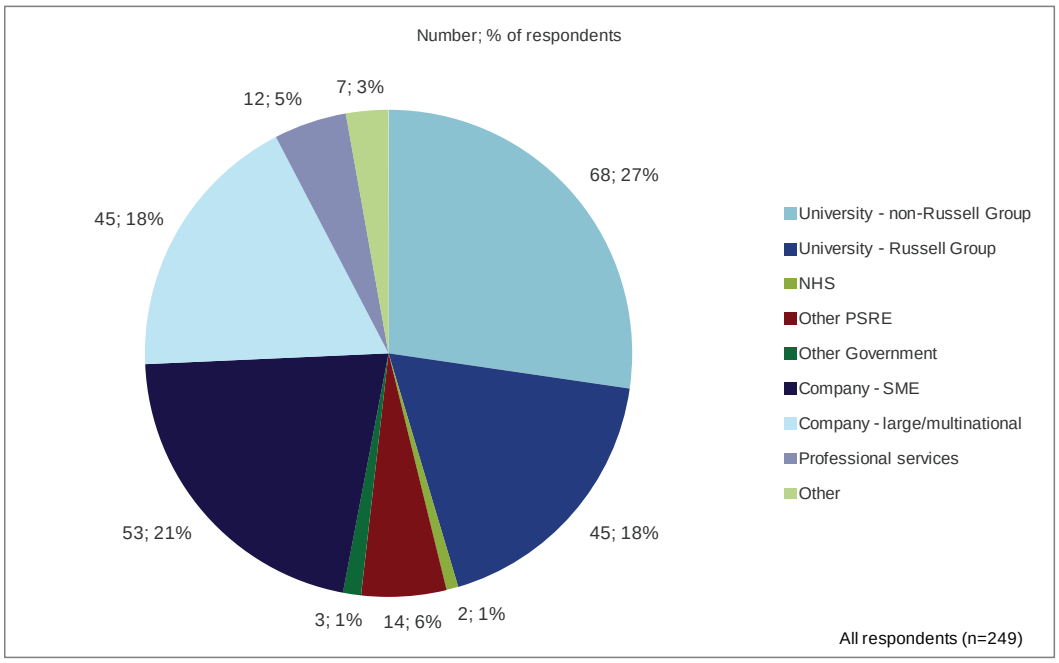


Figure 7.1 - What type of organisation do you work for?

The industry respondents were well spread across the most relevant sectors, with the highest representation from life sciences, services, ICT and aerospace. The numbers of respondents in some sector categories were too small, however, to draw many general conclusions comparing responses across sectors:

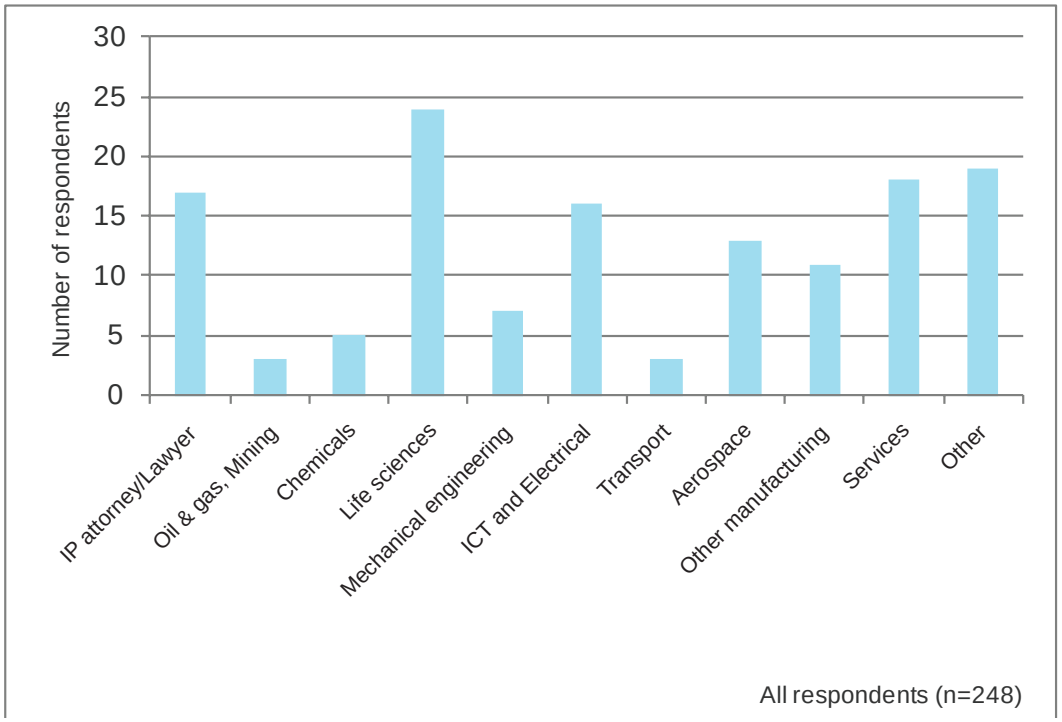


Figure 7.2 - Please indicate the sector that best describes your work.

Geographically, the vast majority of the responses came from England, which is to be expected as that is where most of the advertising was focused. Other input came from Scotland, Wales, Northern Ireland, Republic of Ireland, USA, Germany, Netherlands, Belgium, India, Japan, Austria, Canada, China, Philippines, Sweden and Switzerland.

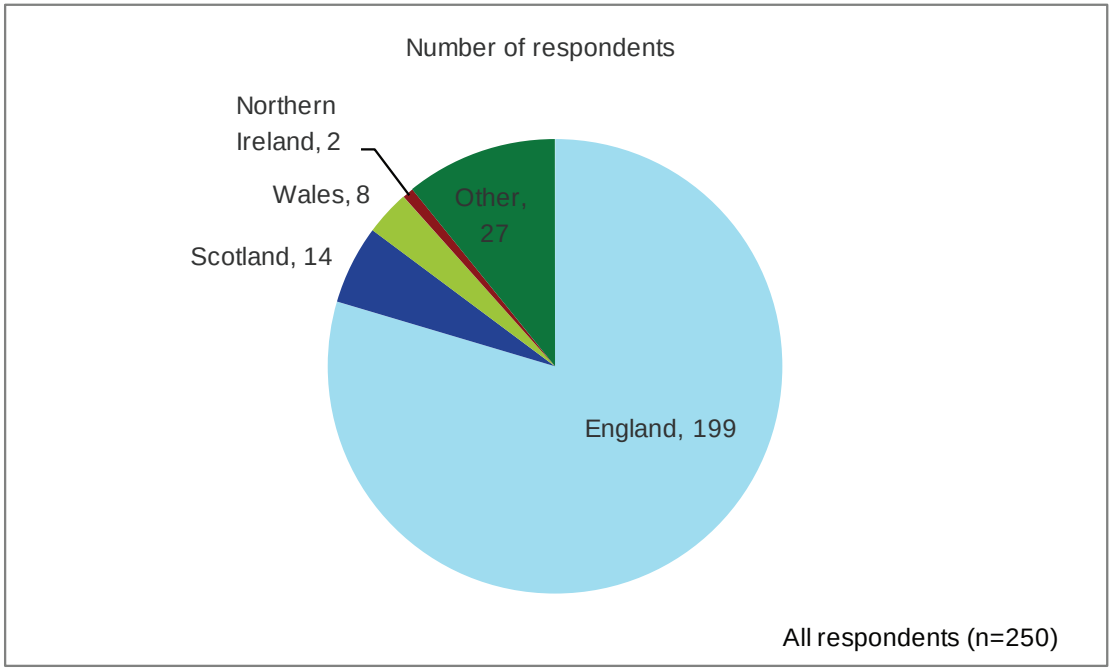


Figure 7.3 - Where is your headquarters located?

We also received responses from those with a good cross-section of experience in negotiation of research collaborations, with the greatest contribution from those with extensive experience, and therefore good insights into the issues and impacts of the Lambert toolkit.

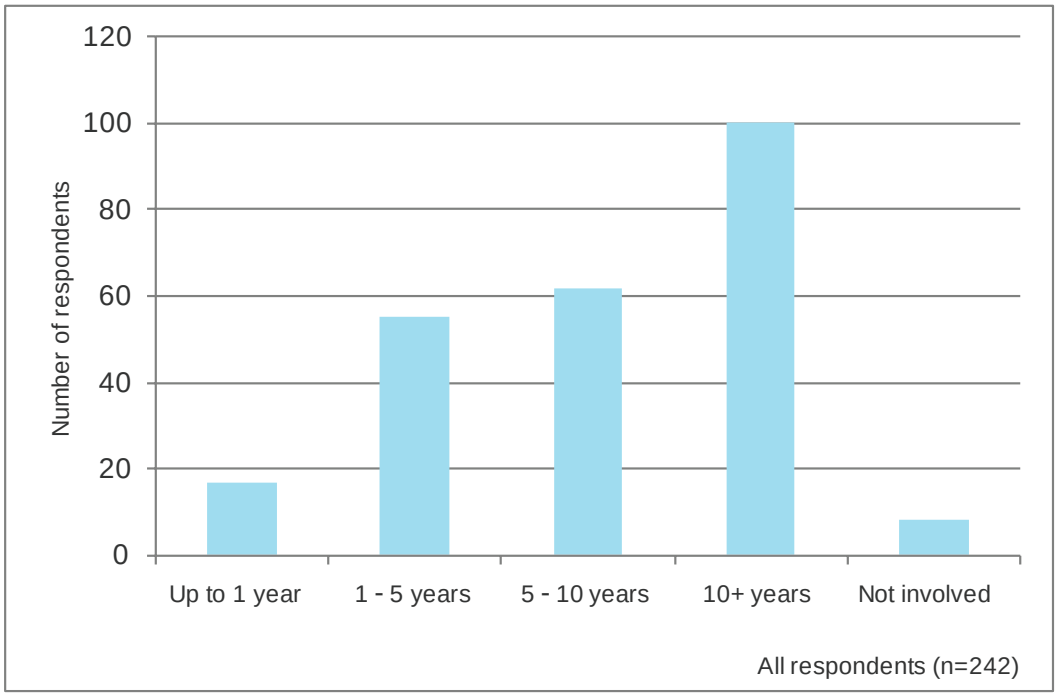


Figure 7.4 - How long have you personally been involved in negotiating research collaborations?

Evaluation challenges

There are some inherent challenges in attempting a retrospective evaluation of an intervention like this. Some of the key issues we have faced are:

- Defining the base line, which was not measured at the time the toolkit was introduced
- Lack of specific, publicly stated aims for the toolkit
- No specific performance indicators were defined at the time, and no measurement of the status quo
- Shifting base line – can we disentangle effects of the toolkit from wider shifts in the landscape
- Incomplete metrics for IP deal making and KE targets
- No systematic follow up of activities, outputs and outcomes
- Variable responses to different survey questions leading to variable sample sizes
- Lower than expected use of the agreements themselves, leading to small data sets of actual experience in their performance

Where possible we have used proxy measurements and inference from the available evidence to counteract these issues. We have also used attitudinal questions to measure the strength of opinion in our survey sample. We found that the effects of the agreements on time or cost taken to do a deal could not be accurately quantified retrospectively, because the data are not routinely collected, and because these factors are strongly influenced by the nature of each collaboration as well as by the type of agreement and approach that is used. We also found it impossible to draw accurate comparisons between "users" and "non-users" of the toolkit, because the majority of those who have used the toolkit do not use it for all their negotiations, but only in specific circumstances.

Changing landscape of knowledge transfer

Probably the most difficult aspect is the impossibility of disentangling any effects and impacts of the toolkit from the significant wider changes in the Knowledge Exchange landscape of the UK over recent years. Some of the most important changes have been:

- The aim of collaborations shifting from "Technology Transfer" to "Knowledge Exchange"
- Open Innovation
- Multinational collaboration, and an increased willingness to source the best research from abroad
- HEIF and the rise of the Impact Agenda amongst funders
- Shift towards framework agreements and larger longer term relationships
- Easy Access IP
- KT 2.0
- Formation of the National Centre for Universities and Businesses (NCUB) by The Council for Industry and Higher Education (CIHE)
- Other government programs, reports and initiatives
- Global recession from 2009/10 onwards

Against this backdrop, the impact of the Lambert toolkit may be influential, but it is just one small cog in a much bigger machine that establishes and drives a successful research collaboration.

Appendix 2: Survey question areas

Figure 8.1 - Question areas covered by the online survey and in-depth interviews.

The online survey and the in-depth interviews both covered the same question areas, and used the same questions, with the self-administered online version consisting of a slightly cut-down set of the questions used for the in-depth interviews. The topics covered are shown in Table 8.1 on the other page.

Awareness & Involvement	Use

• Administration
  o Organisation category, size, location, length of TT experience, etc
• Involvement
  o Inner/Outer Working Groups
  o Original and Relaunch
  o Personal and Institutional
• Awareness
  o Individual parts of the toolkit
	• For each component separately
	• Most common documents used
	• Proportion that Lambert could relate to
	• Status – prefer to use vs will use if asked vs won't use (and why)
	• Non-use (why not)
	• Whole document vs clauses (and why)
	• Any quantitative information (ranges)
	• "Brand recognition"

Impacts & Attitudes	**Suitability, Legal issues**
• Effects on: o Cost, Simplification, Time, Resources, Quality of partnership, Quality of contract • Reliable/reputable/endorsed • Suitability for the inexperienced • Is IP still/really a barrier? • Effects of the process • Training • Use and alternative approaches abroad • Basis for other agreements	• Balance – University vs Industry • Take up/suitability for SMEs (original targets) • Suggested amendments (and why) • Outstanding issues in Univ-Ind negotiations • Alternatives used, and in which situations • Use of similar approaches eg Russell group studentship, Brunswick MTA, Clinical trials • Any evidence of legal challenges, case law
Changes, Extensions	**Case Studies**
• Situations where they don't fit • Relevance to today's University – Business interactions • Changes in relevant law since 2005? • Collaboration with government? • Business to business collaboration? • Other suggestions?	• Positive and negative, use and non-use • Successful partnerships, strong relationships, licensing success, product development

Table 8.1 Details of the question areas included in the online survey and in-depth interviews.

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