

**GOWERS REVIEW OF INTELLECTUAL PROPERTY
COVER SHEET FOR RESPONSES**

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Please indicate below which issues are covered by your response. Not all issues will be relevant to all respondents – please feel free to skip questions that are not relevant to you.

General Questions covered:	
How IP is awarded	✓
How IP is used	✓
How IP is licensed and exchanged	
How IP is challenged and enforced	

Specific Issues covered:	
Current term of protection on sound recordings and performers' rights	
Copyright exceptions – fair use and fair dealing	
Copyright – digital rights management	
Copyright – orphan works	
Copyright – licensing of public performances	
Copyright – designated archive status	
Patents – utility patents	
Pharmaceutical Supplementary Protection Certificates (SPCs)	
Trade Marks – international issues	
Designs – registered designs and unregistered design rights	
Legal sanctions on IP infringement	
Parallel Imports / International Exhaustion	
Coherence between competition policy and IP policy	

Have you raised any other issues in your response?

Y

Details of accompanying documents (Please continue on additional sheet if necessary)
Report providing overview of UK-US patenting activity in universities. This discusses the implications of differing timescales of time to grant for patent applications. The report presents an advantage in the US of faster time to grant that facilitates raising of finance and the innovation process - 4 pages in total

Please TICK BOX if you DO NOT want your response posted on the Gowers Review website.

UK – US University Patenting

Time to Grant Comparative Study

Introduction

The Knowledge Economy Research Group at Swansea University is currently undertaking a comparative study examining the use of intellectual property by universities in the United Kingdom and United States.

The findings of this study are currently being compiled into an academic paper, though we feel that some of the issues identified, along with the supporting evidence are of direct relevance to the Review, particularly with regard to the **General Questions: 1. How IP is awarded and 2. How IP is used.**

While this study focuses on university patenting, the findings have implications for the wider community both in terms of technology and knowledge transfer effectiveness and in their indication of the patenting experience of other organizations.

Stage 1 – Exploratory Study

This research project commenced with an exploratory study based around interviews with technology transfer managers at a range of institutions in both countries. The interviews were conducted with managers from institutions including in both countries including those categorized as 'Ivy-league' (e.g. Oxbridge), 'red-brick' (e.g. Pre-1992 Research-led) and 'New' (e.g. Ex-Polytechnic). Aimed initially at investigating technology transfer practices and experiences in a broad sense, it became apparent that key to the behaviour of technology transfer offices was the manner and timescales in which it acquired protection of intellectual property.

Exploratory Study Findings

The exploratory study indicated that US universities may benefit from certain advantages arising from the nature and performance of their national patent system. The discussions revealed that US institutions had two particular advantages over UK counterparts. The first relates to use of the provisional patenting system in the country that allows a less expensive filing to be made, providing a priority date at minimal cost and with less initial information about the invention than a full filing. The second advantage was that full patents appeared to be granted more quickly and generally before PCT decisions, when costs were incurred. Further to this, technology transfer managers in the US were far less likely to consider taking an invention past the PCT stage without a partner to share the costs, concentrating on a faster commercialization process.

This gave the exploratory study the broad conclusion that US universities could employ a strategy of more widespread patenting with patents being granted earlier, making technologies more appealing to potential licensees. Having patent applications granted significantly more quickly through their national systems than their UK counterparts provides earlier clarity of protection status increasing invention value and reducing risk in embarking upon further development. This assists a University in a number of ways to licence/develop an invention, by providing a strong indication of freedom to operate and establishing security of monopoly for the invention, along with a demonstration of uniqueness.

This creates a stronger position for the University in offering the technology to potential licensees as it creates a stronger case for raising finance for development, as the market potential for the invention is more clearly defined.

Stage 2 – Empirical Study

To follow up the findings from the interview stage, a statistical study was undertaken to examine whether empirical evidence could be collated to demonstrate the existence of such advantages. The empirical study focused on a significant number of recently granted University-held patents awarded through the national patenting system (100 in the UK and 500 in the US). Data gathered included the time to grant and information relating to numerous possible factors affecting this, such as type of invention, etc.

These datasets were then correlated with other available data on University patenting to ensure it was properly representative, including information from the AUTM, NUBS and HEBI surveys, and drew extensively upon the kind support of IP Wales (who have also offered separate evidence to the Review), for both comparison of datasets and development of the understanding of IP being used as a financial tool.

Empirical Study Findings

Time to Grant – Overall

Investigation of the data quickly showed that US patents were typically granted more quickly as shown in Fig. 1 below. Crude averages give a time to grant of 35 and 40 months for US and UK patents respectively. However, this is misleading due to the effect of a group of rather drawn-out US patents which are described later in more detail. Further, the far higher proportion of biotechnology inventions in the US (which generally took longer to grant) also act to increase this average.

It can, though, be seen that almost half of US patents were granted before month 30, while only 15% of UK grants had been made by this point. This provides US universities with a stronger position to license many of their technologies before expensive PCT decisions are required.

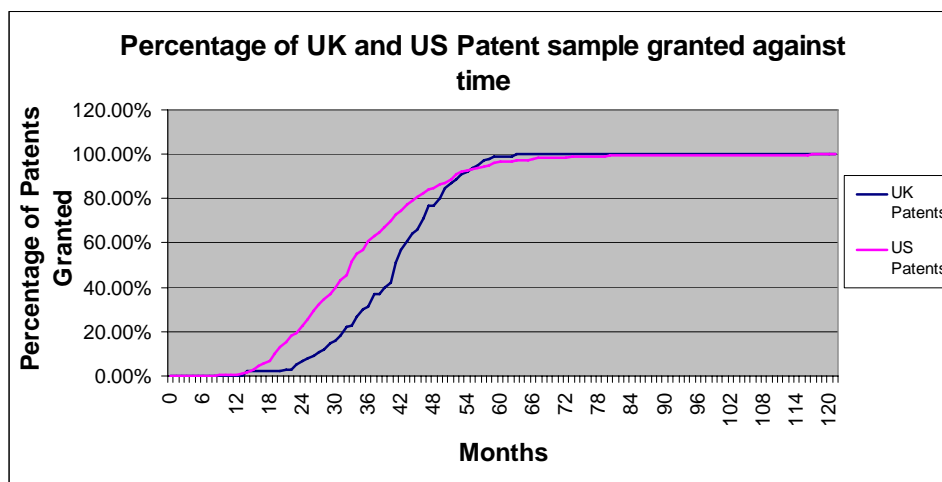


Fig. 1

The crossover around month 55 shown in Fig.1 and relates to around 3.5% of the US patents that take over 60 months. This is partly an effect of the fact that the UK patent data used made it difficult to identify applications that took longer than five years. This data would generally be discarded as an anomaly as direct comparison is difficult and falls outside the period of interest.

Time to Grant – By Sector

Several interesting points can be observed when examining averages of time taken to grant for technologies in different fields. This is presented in Fig. 2 below. Patent grant times for UK inventions was relatively independent of invention type, with the slight exception of devices (e.g. ‘widget’ type inventions that do not fall within the other categories). The general trend of faster grant times for US inventions can be seen in the averages for each technology, with only grant time for biotechnology inventions being comparable with the UK.

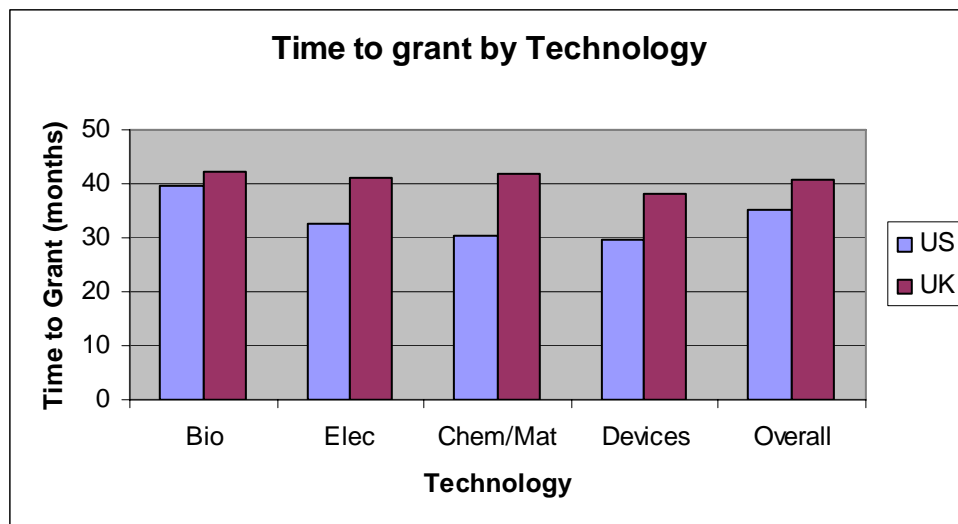
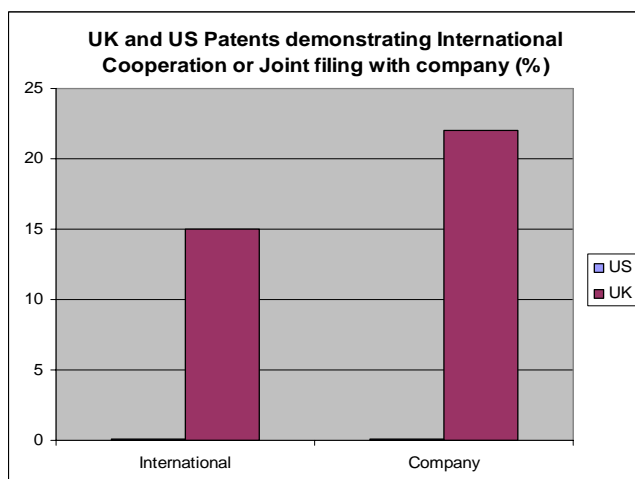


Fig. 2

The average time to grant for biotechnology inventions is relatively close in both the UK and US systems. This data must be considered in the context of a massive increase in patenting in the US, and an explosion in the number of biotechnology inventions. This was at the time of a reported shortage of examiners in the US with appropriate expertise to handle this massive increase.

Industry and International Involvement



Also uncovered in the study was the participation of an industrial (joint filing with company) or international (foreign co-inventor or industrial co-assignee) partner in applying for patent protection.

The levels of co-operation identified in the US and UK are shown to the left in Fig. 3. This shows a far greater proportion of UK patents awarded in partnership with industry. This is in keeping with findings from the explorative study, indicating that UK universities were more eager to defray the higher initial patenting costs to an industrial partner but can be interpreted

as a positive indication of UK universities’ ability and willingness to engage with industry.

Fig. 3

The 'International' comparison may be a little unfair on the US, as interstate may represent a greater geographical distance than cross-channel co-operation. However, the language and logistical challenges faced by UK universities embarking upon such collaboration should be recognized. This therefore makes an impressive showing of UK universities collaborating on an international stage. Combined with the higher level of industrial co-operation during application this also presents a strong positive indication of patent value in the UK.

Role of Academic Knowledge

The study has aimed to identify differences in the type of invention that could affect the time taken to process applications. This included looking at citations of prior work that relates to the invention for each type of invention. Fig. 4 shows an average count of patent and academic references cited for each invention type. This shows that while 'devices' are more closely related to existing patented inventions, biotechnology inventions are closer to academic literature. For biotechnology inventions this means an examiner may often be confronted by a field and literature with which he is less familiar. This would demonstrate that biotechnology invention applications could be more difficult to process and may therefore take longer.

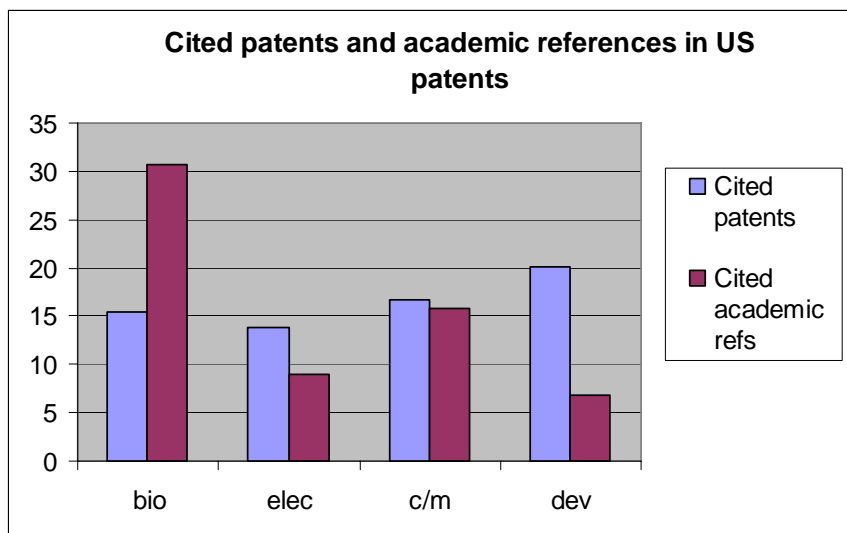


Fig. 4

Conclusion

The findings from the research described above would indicate that US universities, and industry, enjoy an advantage over their UK counterparts by seeing protection of inventions being granted earlier. This allows them to develop and exploit technologies more quickly and effectively, by reducing risks allowing finance to be acquired more easily providing faster innovation, giving the further advantage of faster time to market. The research also demonstrated how the time to grant varies with type of invention, along with a correlation with the knowledge to which the invention relates.

For further information about this research please contact;

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