

# Supporting Document EE

## Economic Impact of Recommendations

The aim of this supporting document is to quantify the impacts of recommendations contained in the Review of Intellectual Property and Growth (the Review) on the economy. We provide a brief assessment which is intended to help inform Government in formulating policy in the light of the Review. It is important to acknowledge a high degree of uncertainty in projections of this sort; however these are the best estimates we have made given the information and timescales available. These estimates will need to be refined as options for implementation are further developed.

We approach each recommendation in turn by briefly outlining its rationale, and then analysing its impact on those who should gain from the change. We then look at the risks and those likely to lose, noting where there may be particular sensitivities. Finally we estimate the impact the change will have on costs of the IP system to users or operators, and on UK growth and innovation over the coming decade. Where necessary, recommendations have been broken down into parts to cover every aspect.

### Overview of recommendations

We present the cost saving of each recommendation as an annual saving to users or operators of the IP system. Cost savings assume constant activity levels. We divide these transition savings over 10 years to provide an annual saving, assuming that such large savings will be spaced out over time.

In terms of growth impacts, for the majority of recommendations the impacts are likely to be realised at the point at which they are implemented. Two exceptions to this are the recommendations around the EU patent and Digital Copyright Exchange (DCE), where there is likely to be a transitional phase before the impacts are fully realised. This transition involves the changed behaviour of rights holders and users as well as the successful operation of the systems. Our estimated impacts from these two measures refer to the point at which they are fully operational, which we expect to be 2020 at the latest. Where possible, we have drawn on more detailed existing studies of the impact of digital markets or EU market integration to inform our estimates.

In some cases we have treated the changes recommended as part of the social innovation remit of the Review which lies outside the scope of this economic impact assessment. For these recommendations, we expect that the economic impacts are likely to be small relative to social benefits (with the exception of measures relating to text and data analytics and new technologies, where the economic impacts are likely to outweigh social impacts over the longer term). There are some recommendations which do not have a direct economic impact, but which are necessary for others to work. Finally there are one or two recommendations, mainly those affecting IP services to young innovative firms, where the evidence available is not yet robust enough to allow us to make reasonable estimates of growth impacts. We are however clear throughout that the impacts will be positive, except possibly in the proposal to reduce patent thickets where the outcome is unclear given that international collaboration would be needed to bring about a positive impact on growth.

	Recommendation	Cost Saving, per annum	Growth Impact, per annum
1	Evidence	Enabling policy	Enabling policy
2	International Priorities (EU patent & Court)	£20 m	£2.1 bn
3	Copyright Licensing		
	Digital Copyright Exchange	£10 m - £20 m	£2.2 bn
	Cross Border Licensing	£10 m	£0.6 bn
	Collecting society codes of practice	Enabling measure	Enabling measure
4	Orphan Works	£320 m	£0.1 bn - £0.3 bn
5	Limits to Copyright		
	Format shifting for private use	£0.5 m	£0.3 bn - £2.0 bn
	Parody and pastiche	£1 m	£0.1 bn - £0.6 bn
	Format shifting for archiving (update)	£200 m	Social innovation
	Creation of libraries' archival copies	£200 m	Social innovation
	Private research for all content	Social innovation	Social innovation
	Text and data analytics	Not quantified	Social innovation, but longer term scope for major economic gains
	Exception for new technologies	Not quantified	Social innovation, but longer term scope for major economic gains
	Preventing override by contract	Enabling measure	Enabling measure
6	Patent thickets and other obstructions to innovation		
	Patent scope extensions	£0 m	£0.0 bn
	Workshare to reduce backlog	£2 m	£0.1 bn
	Renewal fees and thickets	Not quantified	Marginal without international cooperation
7	Design	Not quantified	Not quantified
8	Enforcement of IP Rights		
	Follow DEA	Not quantified	Not quantified
	IP Small Claims track	Not quantified	Not quantified
9	Small Firm Access to IP Advice and Protection	£6 m	Not quantified
10	IP System Responsive to Change		
	Statutory Opinions	Enabling measure	Enabling measure
	Total	£770 m - £780 m	£5.5 bn - £7.9 bn

In general, our estimates of cost savings are firmer than those of growth impacts. In part this is because growth due to IP investment – which the changes should stimulate – is contingent on a wide range of other economic and market factors. We present these figures as conservative estimates, given available research. Growth estimates will also depend on further work, yet to be done, on detailed policy design.

Implementation costs for the recommendations have yet to be determined. Most will be small when compared to the estimated benefits. The largest is likely to be the development of a DCE. The recommendation on improving advice to SMEs is likely to save IPO as much in improved patent application quality as it costs in administration.

To estimate this as a percentage of Gross Domestic Product (GDP), we have taken the totals and divided by UK GDP in 2009, according to the ONS Blue Book.<sup>1</sup> We use Gross Domestic Product at Market Prices (YBHA; £1,393 bn) which suggest the annual cost savings amount to approximately 0.05 per cent of GDP. The growth contribution, in addition to these savings, is between 0.3 per cent and 0.6 per cent, rounding to the minimum and maximum.

## Chapter 2: The Evidence Base

### **Recommendation: Evidence.**

*Government should ensure that development of the IP System is driven as far as possible by objective evidence. Policy should balance measurable economic objectives against social goals and potential benefits for rights holders against impacts on consumers and other interests. These concerns will be of particular importance in assessing future claims to extend rights or in determining desirable limits to rights.*

### *Why is it needed?*

Intellectual property rights (IPRs) and related policy making can be legally technical and complex. This area includes fundamental issues of how Government encourages private ownership, creation and innovation; it also has vocal vested interests from across a spectrum of beliefs. For policy to serve the economy better by creating effective incentives to innovate through the intellectual property (IP) regime, decisions should be based on objective economic evidence. The suggestion throughout the Review is that the purpose of IP policy should be to encourage economic growth and innovation, and that economic analysis should shape policy.

### *Who should gain from the proposal?*

Government, rights owners and rights users should benefit if there is a genuine re-focussing of efforts toward understanding what drives innovation and growth, and how the IP system can be used to promote this.

### *Who is likely to lose, and what are the risks?*

People who seek to influence Government policy based on considerations other than an evidence-based approach to policy may lose out. This is a desirable outcome given that this likely to have a beneficial impact on innovation and growth overall.

### *What is the likely impact on productivity and growth?*

There is likely to be a positive, though unquantifiable, impact on growth given that policy would be based firmly on evidence and considerations of the wider economy.

A number of policy initiatives involving the IP system illustrate the need for economic evidence to guide policy, and the Review has pointed to the EU Database Directive and copyright term extension as two examples.

<b>Recommendation</b>	<b>Cost Saving, per annum</b>	<b>Growth Impact, per annum</b>
Evidence based policy; term extension example	Enabling policy	Enabling policy

## Chapter 3: The International Context

### ***Recommendation: International priorities.***

*The UK should resolutely pursue its international interests in IP, particularly with respect to emerging economies such as China and India, based upon positions grounded in economic evidence. It should attach the highest immediate priority to achieving a unified EU patent court and EU patent system, which promise significant economic benefits to UK business. The UK should work to make the Patent Cooperation Treaty a more effective vehicle for international processing of patent applications.*

There are two distinct aspects to the impacts of a unified EU patent system:

- Growth impacts
- Cost impacts

These have been analysed separately due to differences in how the estimates are calculated.

### **EU Patent: Growth Impacts**

#### *Why is it needed?*

The single European market has improved economic performance across the EU over the last 30 years. When launched, the Commission forecast economies of scale as more successful firms won the competition to become European leaders, and compete with US and Japanese firms on an equal footing. When the single market was evaluated in the late 1990s, it was clear that something else had changed in EU industry.

Before the single market was created, the more profitable firms in pan-European markets were:<sup>2</sup>

- more focused on narrower ranges of products, services, and customers
- less likely to be innovative and in the market as followers rather than leaders.

After the single market in 1992, the most successful firms were more likely to be:

- in the top three suppliers to the EU market, with higher share than competitors
- no longer followers in technology and likely to invest more heavily in R&D
- in markets where marketing activity matters

These changes represent a move towards an innovation based economy, with rewards going to firms which are better able to develop new products and services and exploit them at scale. They are underpinned by the ability of firms to innovate in larger markets where they can reap larger returns. These characteristics for success have been the norm in the large US single market since the 1970s.

These sources also showed, in EU/US comparisons published in DG Enterprise *Panorama* 1996<sup>3</sup>, that firm level productivity differences between Europe and the US mirror national statistics – with a higher figure of 20 per cent value added per employee typical in the US. With cheaper innovation, and higher returns, it wasn't surprising that US firms were more innovative, or more productive. The inference is that further moves to enable firms to exploit knowledge and ideas more easily across a larger single market can help close the EU / US productivity gap.

In the 1990s, the EU addressed one element of the lack of a single market in innovation. Alongside an EU system for brands, reductions in national barriers made it possible for the first time to design marketing programmes for new products across all the main markets of Europe. This has helped larger, marketing intensive firms build and sustain strong brand positions, supported by innovation. But it has done less for small innovative firms dependent on technology based IP rights.

Comparisons by OECD on dynamics of business growth across countries show that there are significantly fewer high growth businesses in EU countries than there are in the US.<sup>4</sup> In part this is due to differences in flexibility of labour markets, but some of the difference relates to the ability of small firms with innovative technology in the large US market to sell to 250 million consumers with a single marketing programme, and just one patent regime to protect their IP. In Europe, in addition to multiple languages, innovative SMEs have to decide whether to invest in, and enforce, IP protection in multiple legal frameworks.

### *Who should gain from the proposal?*

Looking at this from a growth perspective, a single patent system should particularly benefit younger, innovative firms which will be better able to protect their IP as they grow across the EU. It will also benefit larger and established firms by allowing them to save costs and expand patent protected products in a simpler manner. The OECD analysis shows that productivity growth (measured at national level) is strongly correlated with the dynamism of business growth. Productivity grows faster if the share of fast growth (and shrinking) firms is higher. It grows more slowly if the share of static firms is greater. Initial work links some of the differences to market regulation, innovation, financing and institutional factors. But there is currently no work testing whether differences in use of IP lie behind the growth differences, or how much fixing the complex EU IP system will close the dynamism gap.

Research which looks at the impact of patent regimes on business behaviour pre and post introduction of a unified system covers the US before and after creation of the unified US Court of Appeals for the Federal Circuit (CAFC) which unified enforcement of patents.<sup>5</sup> It did not reduce costs, but it does appear to have reduced risk, and coincided with an increase in the number of inventors per patent. It also coincided with a shift to pro patent holder court decisions so it is difficult to know how far the rise in patent activity was due to a simpler system for inventors.

The growth case for a single EU patent, or for enhanced cooperation, rests in part on the experience that shows higher innovation, and therefore growth, in markets where the costs of innovation are lower and returns to innovation higher. It also draws on the OECD evidence that in the largest single market with a common innovation system the ability of firms to grow is more prevalent and the incidence of static firms much lower, and this is linked to whole economy growth.

### *Who is likely to lose and what are the risks?*

There are risks which could outweigh the growth impact of a common patent system. It is possible, if not well managed, that it could lead to continued rise of patent backlogs which have plagued the European Patent Office (EPO). Backlogs increase uncertainty in markets, and limit the ability of innovators to raise finance for new technology.<sup>6</sup> The costs are large, and can undermine both the IP and the innovation systems as engines for growth. Potential costs if a poorly managed system leads to longer EPO grant delays, without options for patentees to go elsewhere, would be large.

Execution of this policy matters. The objective should be a common IPR system which is as well regarded by users. If this cannot be established directly, then cooperation should permit effective competition between offices on standards of service, so that there are ways for users to seek speed and quality of service in a distributed system.

### *What is the likely impact on productivity and growth?*

Gains to innovation from an efficient common system depend on how much of the regulation effects analysed by OECD could be attributed to IP.

Analysis for the Department of Business, Innovation and Skills, based on a computable general equilibrium (CGE) model, suggests that if remaining EU country barriers to competition were reduced to the point where trade is half as easy as it is between US states, recognising the irreducible differences in language, regulation and culture then UK national income would be seven per cent higher by 2020.<sup>7</sup> About four per cent of this growth is attributable to convergence needed in digital market infrastructure – including IP for digital markets, leaving three per cent for other regulatory barriers between EU countries, including patents. If patents account for only 20 per cent of the impact, and their effect is only on traded products and services from patent using industries (about 25 per cent of all UK exports), the annual impact on innovation and growth could add £2 billion to UK output, provided that the Government maintains its other policy objectives of providing growth incentives and maintaining the human capital and digital infrastructure in the UK.

<b>Policy Proposal</b>	<b>Cost Saving, per annum</b>	<b>Growth Impact, per annum</b>
International Priorities (EU patent & Court)	£20 m	£2.1 bn

## EU patent: Cost Impacts

### *Why is it needed?*

The EU patent<sup>i</sup> aims to provide patent protection for the whole EU. At present a European patent is available from the EPO which reduces application and translation fees compared to applying in each individual country in which protection is sought. Once the patent is granted the patent becomes a bundle of national patents and renewal fees must be paid in each country within which the patent is effective. Any disputes over the patents must also be litigated in multiple jurisdictions. Costs remain high, which favours larger companies who are more likely to be able to deal efficiently with multiple jurisdictions than SMEs. An EU patent and court offers the potential for further reducing these costs and simplifying disputes over patents. The existing European Patent approach also fails to create a single patent market for Europe, which could make patenting in the EU less attractive than in the US, China or India, each of which has a single patent system covering similarly sized areas. The EU patent aims to centralise the patenting process, allowing applicants to get an EU wide patent from a single patent office; a single patent court would reduce costs arising from litigating in multiple jurisdictions.

### *Who should gain from the proposal?*

There is consensus on potential economic benefits to the patentee of an EU patent – and an EU patent court. Enhanced cooperation has been proposed to achieve something analogous to an EU patent for countries willing to proceed, but the actual mechanics are at an early stage. Due to a lack of agreement on essential elements of the EU patent, it is difficult to assess benefits in financial terms. The fees of an EU patent and how the revenues should be divided between collaborating countries are key areas to be decided. Both are essential for quantitative appraisal. Suggestions for each have been presented to the EPO<sup>8</sup> outlining the overall effects on IP admin and legal costs for Europe.

### *Who is likely to lose and what are the risks?*

The main risk is that the EU patent will not be implemented due to lack of international consensus, leading to a second best solution of enhanced cooperation. This would mean a patent which is not valid for all the 27 members of the Union, and the advantages would be proportionally smaller. Assuming more than half the EU's GDP were part of this system, the systemic benefits should still arise. It has taken forty years since a proposal for an EU patent was first aired in the EU to reach the current level of progress towards implementation; it is difficult to predict how long it will take to be implemented. At present, enhanced cooperation seems to be the most likely short term outcome, and it includes 25 EU nations in its negotiations – omitting Italy and Spain – so this would still provide the majority of benefits outlined below.

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i Also referred to as the unitary or community patent.

Another key risk is that providing patentees with a cheaper system will directly affect funding of the EPO and the national offices. At present both the EPO and national offices are reliant upon revenues received from EPO patents. If these revenues decrease, this may lead to a reduction in the ability to operate the patent system to the current standards of quality and timeliness.

### *What is the likely impact on productivity and growth?*

The IPO has analysed how different factors may affect the EU patent in terms of the benefits it provides to patentees, the EPO and national offices. While the model is relatively sophisticated and can predict expected costs/benefits to EPO patentees, the EPO and national offices, it does so using a range of assumptions. The aim is to help shape discussions about the key elements of an EU patent, but, the actual cost/benefits vary for patentees or the patenting organisation, depending on the key factors. This model does not distinguish between patents by the applicant's country of origin. For these two reasons, a prediction of the value of saving to UK patentees of the EU patent can only be estimated approximately.

Using the IPO EU patent model it is possible to determine that the EU patent could save UK patentees €13,192 per patent.<sup>ii</sup> Under a simplified model, assuming that the patents of all UK applicants behave in exactly the same way over their lifetime with a set of given assumptions,<sup>9</sup> this could save UK businesses over €20 million during these patents' lifetime.

Saving per patent <sup>i</sup>	€ 13,192
Number of UK origin patents granted at the EPO in 2009 <sup>10</sup>	1,646
Total saving for UK applicants	€ 22 million

ii Under the following main assumptions:

- 1) All UK EPO applicants choose the EU patent;
- 2) All patents are granted by the EPO within seven years;
- 3) All patents are renewed for 14 years;
- 4) The EU patent fee used is that of the council (von Pottelsberghe, Danguy 2009).

All patents would have designated/validated the patent in France, Germany, Italy, Netherlands, Spain, Sweden and the UK.

## Chapter 4: Copyright Licensing: A Moment of Opportunity

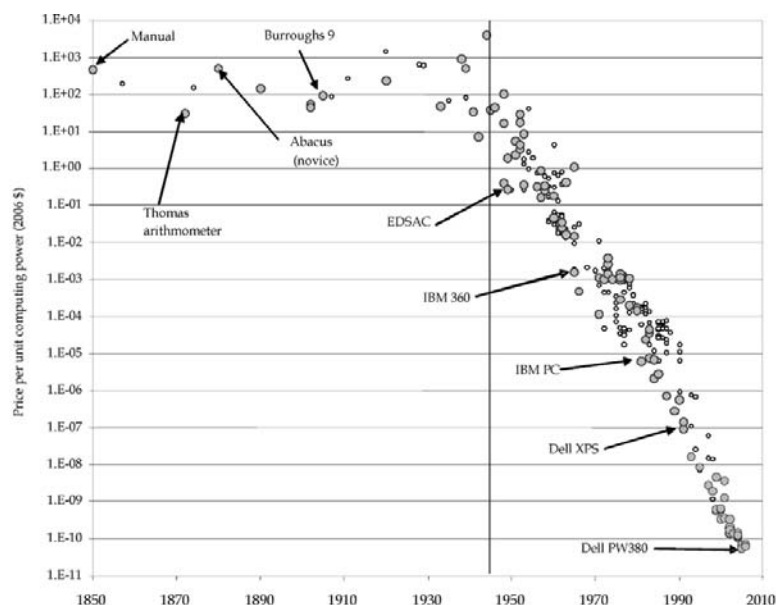
### **Recommendation: Copyright licensing.**

*In order to boost UK firms' access to transparent, contestable and global digital markets, the UK should establish a cross sectoral Digital Copyright Exchange. Government should appoint a senior figure to oversee its design and implementation by the end of 2012. A range of incentives and disincentives will be needed to encourage rights holders and others to take part. Governance should reflect the interests of participants, working to an agreed code of practice.*

### *Why is it needed?*

Since 1980, the cost of computing powering digital industries has fallen by a factor of one million. In the same period the legal framework for content, now used as the basis for digital entertainment and creative industries, has changed much less. Processes for searching and clearing rights are bound by old constraints. Incentives on owners and managers of rights to make the processes more efficient are weak. Rights usually have single owners, and are traded in national markets. Users have little choice.

**Fig.1 The Progress of Computing Measured in Cost per Computation per second Deflated by the Price Index for GDP in 2006 Prices**



Source Nordhaus 2007<sup>11</sup>

The UK is a major exporter of creative content, and has a set of growing industries based on packaging content and delivering it to consumers. This mismatch between technology and market infrastructure is likely to limit growth and innovation. Firms trying to access and use rights find it complex and costly to navigate the process. It is inevitable that some are deterred from developing new economic activity.

Copenhagen Economics' study *Economic Impact of a Digital Single Market*<sup>12</sup> looks at the impact of this in an EU context. It concludes, from a range of analyses, that although Europe has invested more heavily in broadband capacity than the US, the impact of ICT investment on productivity and growth in Europe has been half that in the US. This difference is attributed to fragmented broadband supply, inconsistent regulations between countries, lack of skills and an IP system which fails to recognise the changes which have taken place.

The study estimates that the EU will lose out by four per cent of GDP annually by 2020 if it does not address these issues, as a result of slower productivity growth and lower growth in ICT investment due to lower returns. For the UK this would mean a loss of output of around £56 billion in 2020. Revenues relating to copyright works could make up a significant proportion of this potential loss, as markets for digitally delivered copyright works grow.

The country which moves first to address the IP issues stands to gain significantly. By developing an efficient digital rights clearance system it would make possible productivity gains in its own media industries. It should also be able to attract other users, and influence development of rights markets internationally. If a UK system were successful other EU players would have incentives to “plug in” to build an EU market based on UK principles.

### *Who should gain from the proposal?*

The immediate beneficiaries from a transparent, efficient digital copyright exchange in the UK would be:

- firms delivering new bundles of content services through existing technology
- firms aiming to introduce new services using new devices or software systems which present content to consumers in new ways.

In the last four years Apple has built new businesses worth £1.6 billion a year in profits from doing the second of these. The ability for smaller niche service providers to compete in these types of markets is limited by the cost and complexity of rights acquisition. The markets themselves are less competitive than they otherwise would be, and the range of consumer offerings is more restricted.

Beneficiaries will be consumers who buy the new products and services, and are able to consume them in ways which suit them best, selecting and organising their content as they wish.

### *Who is likely to lose and what are the risks?*

If the licensing process becomes more efficient it is difficult to see how rights owners are likely to lose. One outcome should be that as deadweight administrative costs fall, and content becomes accessible to more distributors, returns to creators could increase. Operators of existing rights granting systems would have to choose between helping to develop a new system, contributing expertise and data, competing with it or standing apart.

A major risk is that not enough rights holders / operators would join the system. Careful thought must be given to incentives which give rights holders and others enough reward to bring them in, but not so much as to pre-empt returns to firms which are taking new risks, and developing new businesses.

### *What is the likely impact on productivity and growth?*

Economic impacts of a digital licensing system should include:

- immediate cost savings to existing firms and individuals seeking to license content, substituting an automated mouse click for individual search and negotiation; the savings will be in terms of time and transactions costs
- enabling new uses, to meet new or unmet needs, thanks to lower costs of entry to media markets
- secondary effects as firms invest more heavily in digital markets to exploit new opportunities within the UK
- productivity and investment effects as the UK forms a hub for an integrated EU market for content, and firms achieve higher returns in a larger market.

Cost saving effects can be estimated by reference to the costs of collecting societies, whose transaction costs are likely to be mirrored at least 1:1 in the firms with which they do business. Transaction costs with rights users are of the order of £50 - 100 million a year. UK evidence shows that digital procurement in these types of industries can save up to 20 per cent in terms of productivity over a relatively short period,<sup>13</sup> suggesting cost savings for rights users of £10 - 20 million annually.

The growth and investment effects should be much more substantial. Taking the four per cent increase in GDP, through productivity and induced ICT investment, which the Copenhagen Economics study expects from better market infrastructure, we assume (conservatively) that the impact of market infrastructure provided by a digital copyright exchange applies only to the four per cent of the economy which is copyright intensive. By 2020, on this basis, up to an additional £2.2 billion could be provided to UK GDP by a digital copyright exchange.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Digital Copyright Exchange	£10 m - £20 m	£2.2 bn (linked to cross border licensing)

### **Recommendation: Copyright licensing.**

*The UK should support moves by the European Commission to establish a framework for cross border copyright licensing, with clear benefits to the UK as a major exporter of copyright works. Collecting societies should be required by law to adopt codes of practice, approved by the IPO and the UK competition authorities, to ensure that they operate in a way that is consistent with the further development of efficient, open markets.*

#### *Why is it needed?*

The countries in the EU have different national systems for negotiating and rewarding rights. This means that users attempting to set up pan European content based services must face multiple sets of national negotiations for access to collective rights plus an indeterminate number for rights not deposited with collective rights organisations. This presents barriers to the creation of innovative international content delivery services from the EU, and disadvantages them in the global market for large scale content service innovation compared to entrepreneurs from elsewhere.

This recommendation lifts barriers to the development of new products and services across markets in the EU. It would provide users and rights holders within the EU with a choice of “one stop shops” for licences, which would guarantee all rights necessary for providing a service, regardless of label or affiliation. Collecting societies would compete, as they do not need to today, on overheads, efficiency and service delivery, with benefits for rights holders, service providers and consumers. Collecting societies could be required to produce clear, published, comparable tariffs for rights, enabling rights owners and users to choose which society to deal with based on the terms available.

#### *Who should gain from the proposal?*

The immediate beneficiaries should be firms seeking to launch pan EU services, using European originated content, and presented in new ways to consumers. The consumers would benefit as a result with a more choice of suppliers, more diversity in services available and a more competitive market.

The ability to create large EU scale services, perhaps starting from small local experiments, should enable the creation of globally competitive content delivery services, which can export their business models to other markets. The most efficient collecting societies will also benefit as they can use the opportunity to expand in to new markets.

Overall we would expect rights owners and creators to benefit from a cross border licensing system. It would enable more consumers to access content in ways which better suit their needs, and more cost effectively. Some of the extra consumer value should flow back to creators, provided the market structures are well designed.

### *Who is likely to lose and what are the risks?*

Inefficient collecting societies would lose out if the international licensing system works, and more efficient international societies take their market share.

An implementation risk is that collaboration between existing national collecting systems could result in stacked licence upon licence fees, with multiple administrative fees – although even that may be cheaper for firms than dealing with 27 copyright licensing systems.

There is also a risk of developing an inefficient system if it is constructed with its main design characteristics based upon Government supervision or incumbent revenue models. The principles of a pan EU rights system need to be organised around simple and transparent access for the user, and competition.

### *What is the likely impact on productivity and growth?*

Our comparator for Europe to estimate the impact of a cross border licensing system is the US. There a continental scale licensing system is in place, and it supports a substantially larger digital music market relative to GDP than exists in the EU.

The crude comparisons suggest that the EU digital music market has the potential to at least triple to hit US digital market levels, and perhaps more to allow for higher EU GDP compared to the US.

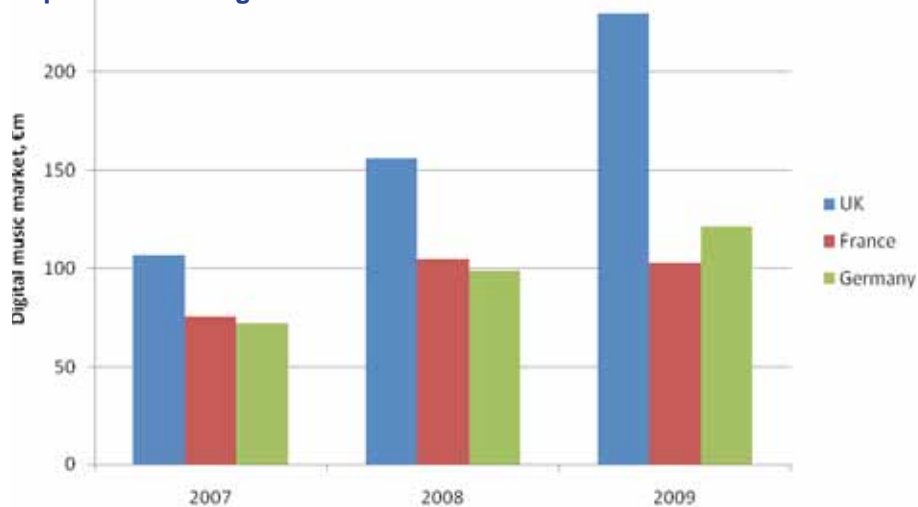
#### **Comparison Between the European Digital Music Market and the USA**

	EU	US	EU as percent of US
Population	501 million	310 million	162%
GDP	EUR 12.8 trillion	EUR 11.1 trillion	115%
Digital Music Market	EUR 900 million	EUR 2.7 billion	33%
Digital Percentage of Recorded Music Market	13%	43%	30%

*Source: Nokia*

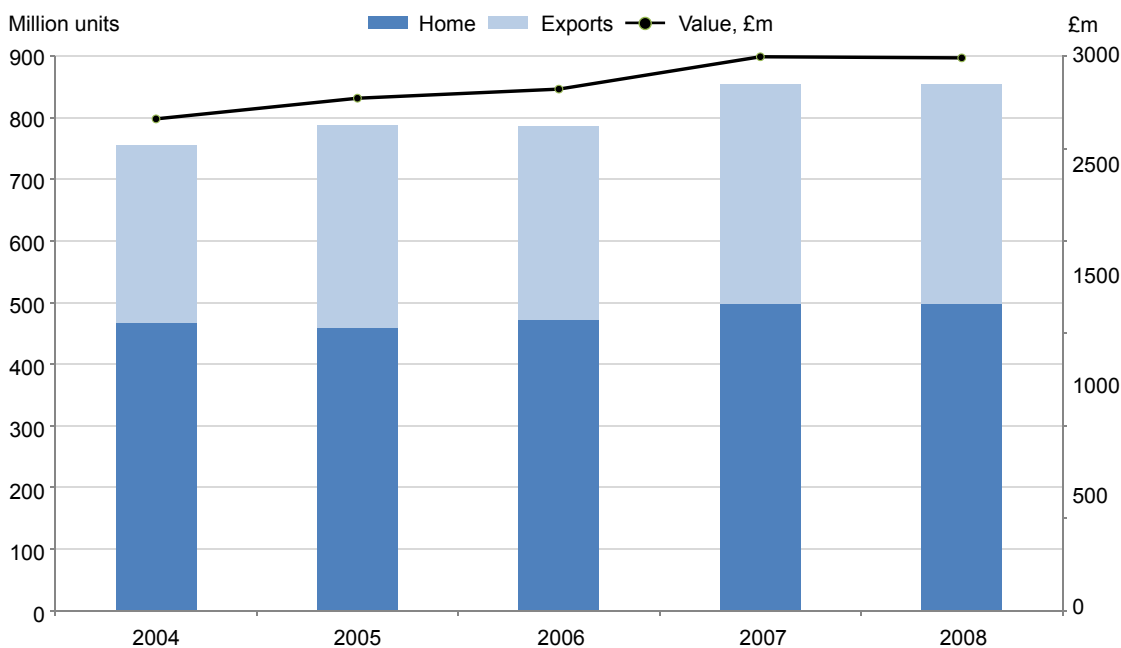
Within Europe, differences also exist. The UK digital music market is larger and faster growing than those of other major EU economies. A number of possible explanations for this have been advanced, including better arrangements for music licensing. The UK is about a third of the EU share, with UK sales through digital channels rising more strongly than in other major markets. In Europe digital revenue growth has still been strong, with most major markets – including Germany, France, Italy and the Netherlands – seeing double digit increases.<sup>14</sup>

**Fig. 2 Development of EU Digital Music Market**



Source: via Nokia (raw data)

**Fig.3 Publisher sales of books**



Source: Publishers Association

The UK may have less potential to grow music output than other EU markets, partly because its rights system is already somewhat more efficient, and partly because it starts out as the largest music market in the EU. Industry estimates quoted by UKTI show UK music exports at over £1billion. If cross border licensing were to stimulate just one tenth of the growth implied in the US comparison, this could increase by 30 per cent - implying additional exports of £300 million.

In addition we could expect to see similar gains in publishing and films. Publishers Association data shows current exports of £1billion in publishing alone which could provide a base for an additional £300 million of exports.

We would also expect to see cost savings in international rights clearance; we have tentatively set these at the lower end of our estimates for savings from the digital copyright exchange proposal, recognising that current volumes of international transactions may be lower than domestic, but their complexity and cost may be higher.

If both the DCE and Cross Border Licensing were successful, then the combined gains – especially in growth – could be higher than each element, which we have estimated here and above.

Proposal	Cost Saving, per annum	Growth Impact, per annum
Cross Border Licensing	£10m	£0.6 bn

### Recommendation: Copyright licensing.

- *The UK should support moves by the European Commission to establish a framework for cross border copyright licensing, with clear benefits to the UK as a major exporter of copyright works. Collecting societies should be required by law to adopt codes of practice, approved by the IPO and the UK competition authorities, to ensure that they operate in a way that is consistent with the further development of efficient, open markets.*

### Why is it needed?

Collecting societies play an important role in licensing content markets by reducing the costs of licensing for rights holders.<sup>15</sup> Due to the nature of their business each society in the UK is an effective monopoly, as the only seller of licenses for the rights which it manages. While this natural monopoly position may be efficient in market terms, the individual organisations appear to be the cause of some avoidable deadweight losses and inefficiencies. A very wide dispersion of cost margins and director remuneration in the industry suggests inefficiencies, while instances of price discrimination, repeated customer complaints – in submissions or tribunals<sup>iii</sup> – and opaque financial reporting, lead to uncertainty on the operation of societies both to its members and customers.

Overall, the UK's copyright collecting societies collect nearly £1 billion annually. While the collection of licence fees by societies is supported by law, their own operations are currently unregulated. Consumer Focus has stated that the UK is one of only three EU member states which does not regulate collecting societies by providing for their formation or the regulation of their activities in law.<sup>16</sup> The absence of regulation or oversight of collecting society activity is in contrast with other monopoly suppliers (e.g. utility companies). In some sectors the majority of licensees are small and micro businesses and sole traders, but because transactions with collecting societies are categorised as business to business, these licensees do not enjoy the kind of protections that domestic consumers have when dealing with monopoly suppliers.

It is difficult to access detailed financial accounts for some collecting societies. Additionally, information on earnings, distributions, costs and cost-income ratios are not reported in one format making it hard to provide an overview of the sector. The table below is an attempt to summarise the financial reports of major UK collecting societies. This may be the first estimate of an industry total, based on annual reports, filed accounts and some investigative accounting.<sup>iv</sup> It has not proved possible to develop a comprehensive account of this economically significant sector,<sup>17</sup> which underlines the need for better transparency and oversight.<sup>v</sup>

iii For example PPL were recently ordered to repay £18.1m by the Copyright tribunal. PPL put that money aside in its accounts with the note that "You will only be entitled to a refund if you make a claim to PPL for repayment" see <http://www.ppluk.com/en/music-users/copyright-tribunal-refunds/>

iv There may still be instances of double counting as some societies receive money from other societies (such as the PLS, ALCS and DACS) but the range includes the possible minimum and maximum based on available sources.

v We provide company numbers where we had to refer to annual accounts, so interested readers can consult the relevant sources. Companies House offers £1 downloads of all submitted papers, and accounts are filed under 'AA'.

Society	Total collections, 2008-09 (millions)	Paid to members, 2008-09 (millions)	Cost-income ratio (based on published figures)
NLS <sup>18</sup>	£26.7	£20.9	21.7%
DACS <sup>19</sup>	£9.4	£7.6	19.1%
PPL <sup>20</sup>	£129.6	£111.5	13.9%
ACS <sup>21</sup>	£0.4	£0.37	15.0%
PRS-MCPS <sup>22</sup>	£646	£574	11.1%
CLA <sup>23</sup>	£62.7	£57	9.1%
BECS <sup>24</sup>	£8.4	£7.7	8.3%
Directors UK <sup>25</sup>	£8.4	£7.8	7.6%
ERA <sup>26</sup>	£7.7	£7.2	6.5%
ALCS <sup>27</sup>	£25.2	£24	4.8%
PLS <sup>28</sup>	£27.1	£26.1	3.7%
MPLC <sup>29</sup>	£0.66	not audited	
total	£952.3	£844.1	11.4%

The 12 largest UK copyright collecting societies collected between £900 and £950 million in the financial year 2008-09, and distributed approximately £844 million to their members. The largest collector among the societies was the PRS group<sup>vi</sup> which collected £646m for 2008-09 and paid out £574m. This was followed by Phonographic Performance Limited (PPL) which collected over £129m and paid out £111m.<sup>30</sup> On average the societies, which are not-for-profit organisations, retain 11.4% of their collections, but cost-income ratios range from the PLS's 3.7% to 21.7% at the NLA.

There is a similarly wide range of payments to directors. The highest paid directors appear to be with the PRS-MCPS Alliance and PPL, each earning in excess of £500,000 per annum according to their submitted accounts.<sup>vii</sup> Each society maintains a number of directors on their board. ACS and Directors UK report payments of less than £100,000 to their entire board of directors.

### *Who should gain from the proposal?*

Codes of practice would introduce standards of operation and disclosure requirements to help ensure transparency in the operation of collecting societies. Transparency is likely to improve efficiency and so reduce some administrative costs, benefitting members and licence customers.

Existing members of collecting societies, i.e. rights holders, are likely to gain because they would have clear information about how their societies operate, how their rights are being administered, where fees come from, and how they are used.

vi Which for these purposes means all the five companies run by PRS and MCPS on licence fee collections: "PRS for Music" (company number: 06825354), "Performing Rights Society" (00134396), "PRS for Music (USA)" (06805434), "The MCPS-PRS Alliance" (03444246), and "Mechanical-Copyright Protection Society" (00199120)

vii For the PRS group, the highest paid director earned £509,000 (working from the MCPS-PRS Alliance, company number: 3444246) and for PPL, the highest paid director earned £550,000 in 2009.

This increased transparency is likely to improve confidence in collective licensing systems overall, thereby attracting more members to join, so the societies could gain from increased membership in the long term.

Customers who pay license fees would gain because they would purchase licences based on prices set more in a more transparent fashion. Currently, licensee businesses often negotiate individually with societies, and many report that they lack a good understanding both of the basis for fees and of what the licences cover. Therefore they lack confidence in negotiating, and the majority of customers are not aware that they can negotiate the license fee. Shops, bars and many workplaces buy licences from both PRS and PPL to play music, almost always in separate transactions with accompanying administrative costs to licensees, and many have reported concerns of this kind. Following the Government's Your Freedom exercise, which asked the public for their ideas to reduce pointless regulation and unnecessary bureaucracy, representatives of small businesses reported that licences from the music collecting societies were among the more unpopular regulatory costs.

Greater transparency and standards of practice could reduce transaction costs for a wide range of private and public sector organisations, from sole traders to schools.<sup>viii</sup> Benefits from transparency may be most significant for organisations for whom licensing is an incidental rather than a central business interest, who have few or no legal resources to devote to it, and so may be particularly poorly equipped to negotiate effectively.

### *Who is likely to lose and what are the risks?*

In the short term, collecting societies could face increased costs in terms of new operating and disclosure requirements. Over the longer term, we expect increased oversight to lead to increased efficiency in operation, meaning that collecting societies would be able to provide an improved level of service to its members, thereby having the potential to attract more new members.

### *What is the likely impact on productivity and growth?*

A higher level of transparency in the operation of collecting societies is a benefit in itself. It is likely to improve accountability and efficiency, which could lead to a narrowing of the differential in administrative fees charged by different collecting societies. This means that there could be increased levels of competition – on cost ratios and distribution – among collecting societies, which is likely to have a positive impact on growth. However, insufficient information and data is available at present to quantify this impact at present.

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viii The Pinsent Mason report for BECTA estimates that schools and colleges spend £2.8 million annually on PRS licence fees, and a similar figure on PPL licence fees. Schools can be required to obtain licences from both music collecting societies, for instance to cover the incidental music in films shown by a school film club (though a separate MPLC licence would also be required to cover the films themselves).

Additionally, increased transparency serves to support other measures recommended by the review to establish better functioning markets: it is necessary for the DCE to function; it will support Cross Border Licensing systems and allow consumers and producers access to a transparent marketplace for licensing content in the UK. As such it is an enabling proposal so that collecting societies, industry and consumers can benefit from these other recommendations.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Collecting Society Codes of Practice	Enabling measure	Enabling measure

## **Recommendation: Orphan works.**

*The Government should legislate to enable licensing of orphan works. This should establish extended collective licensing for mass licensing of orphan works, and a clearance procedure for use of individual works. In both cases, a work should only be treated as an orphan if it cannot be found by search of the databases involved in the proposed Digital Copyright Exchange.*

### *Why is it needed?*

An orphan work is a copyrighted work where it is not possible to identify or contact the copyright holder in order to seek permissions or licences. Without these it is not possible to use the copyrighted works legally. The orphan work problem results in large quantities of copyright works being effectively unavailable for use, whether for cultural or commercial purposes. Estimates suggest that 5-10 per cent of public sector holdings are orphans and conservative figures make this 25 million orphan works in UK public sector organisations.<sup>31</sup>

The development of digital technologies has made the orphan works problem much more significant. Previously, the cost of reproducing material was the primary obstacle preventing a work from being used. Now, because digital technology has radically diminished the costs of reproduction, there is interest in re-using even works which do not have a large likely market, and the most significant remaining obstacle is rights clearance.

### *Who should gain from the proposal?*

The organisations likely to be most affected by the orphan works problem are those wishing to undertake digitisation projects to make works available through newer channels. An orphan works system would save these content holders the initial rights clearing costs for digitizing their collections.

The British Library, which holds 150 million items,<sup>ix</sup> estimates that up to 40 per cent of its archive consists of effectively orphaned works, with the problem being even greater in its collection of old newspapers – which includes all UK dailies since 1801.<sup>32</sup> The BBC Archive currently comprises around 600,000 hours of television content, 350,000 hours of radio programming, five million still photographs, as well as millions of music scores, letters, news reels and other content all of which are orphaned.<sup>33</sup>

The BBC, which has undertaken some rights clearing for orphaned footage, estimates that it takes 13 hours on average to clear and then obtain permissions to use one hour's material. To get an estimate for the cost saving, we assume that other forms of content take less time to clear.<sup>x</sup> Assuming that 75 per cent of the British Library orphans are newspapers, it would take the British Library and BBC more than 200 million hours to clear their archives for digitisation. The cost of this, given an average salary of legal and administrative staff of £30,000 per annum would be around £500m for the BBC and

ix This includes around 14 million books, 920,000 journal and newspaper titles, 58 million patents and three million sound recordings. (British Library website)

x We assume that film and radio both take 13 hours to clear, photographs and newspapers take 3.5 hours to clear, while books take only an hour.

£2.7bn for the British Library. This cost saving is only for these two organisations, and is likely to be much higher if one considers all museums, archives and libraries in the UK.

### *Who is likely to lose and what are the risks?*

Concerns around an orphan works system have come from specific groups of rights holders. They are concerned that their content could be intentionally stripped of identifying metadata and the content used without reasonable compensation. It is also possible that there could be increased competition from additional supply of previously orphaned content.

To help overcome the risk of works being stripped of identifying metadata, anything digitized or copied as an orphan work should include all possible metadata from the original and orphan work. The Review suggests that the DCE should provide a defence against rogue orphaning of works, through digital fingerprinting. With regard to the possibility that orphan works might increase competition in markets for other works, the Review's view is that this is a case where the wider economic interest outweighs the perceived risk to rights holders.

### *What is the likely impact on productivity and growth?*

A solution for orphan works is likely to contribute towards:

- An expanded resource database for research and educational purposes;
- Increased diversity in content available for research and education;
- Preservation of cultural heritage and history
- The possibility of new businesses around content rich services

The Collections Trust estimates that UK museums, libraries and archives contribute around £1.2 billion to the UK economy each year.<sup>34</sup> If 5-10 per cent of collections are orphaned and therefore not used, adding them to economic contribution of the exhibitions would add between £30m and £60m per annum, if we assume the orphaned works are worth 50 per cent less per item on average than non-orphaned work. Where there is likely to be higher long term benefits are the services which can be created around orphan work content. One example of where such information has been used is in the growing genealogy market where public census information is digitised and value is created as consumers trace their origins. (In the UK, one example is Genes Reunited which has 11 million members and run a pay service. In the US, six of the top 10 genealogy sites are fee based sites, and a single one turns over in excess of \$150 million per annum).<sup>35</sup> It is not unreasonable to suggest that if census data and family records alone can generate value of a few hundred million pounds, then the much broader information held in newspapers, public documents, radio, news shows, photographs, music scores and film footage will create markets that are worth at least twice as much per annum. The main point here is that the value is often *not* in single pieces of work, but the ability to combine multiple items whereby the aggregate has a value. That suggests value adding activity of between £100m - £250m per annum, plus the contributions to museums and archives of £30 - £60m per annum.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Orphan Works	£320 m	£0.1 bn - £0.3 bn

## Chapter 5: Copyright: Exceptions for the Digital Age

### Recommendation: Limits to copyright.

*Government should firmly resist over regulation of activities which do not prejudice the central objective of copyright, namely the provision of incentives to creators. Government should deliver copyright exceptions at national level to realise all the opportunities within the EU framework, including format shifting,...*

### *Why is it needed?*

Digital technology has led to the development of new products and services which facilitate use of copyrighted works in different ways, but when it is illegal for consumers to format shift legally purchased content, technological innovation and markets can be restricted. A classic example of this is the development of the Apple iPod, which had sold millions of devices before digital music could be purchased directly, meaning all content on these devices would have been format shifted and may have been illegal in the UK. Most recently, a new CD to digital private jukebox invented in Britain by Brennan experienced a 700 per cent sales growth last year and is a growing young firm.<sup>36</sup> Brennan was forced to amend its advertisements, causing potential damage to its business, as the normal operation of the product was thought to breach copyright law.<sup>37</sup> It is worth noting that of all the major players who produce and design devices which make use of format shifting, none of them appear to be British, and when a young innovative firm comes along, like Brennan, the law works against them.

Format shifting of music by consumers is already wide spread and acceptable practice: The British Phonographic Institute has publicly stated it is not in its members' interest to pursue format shifters,<sup>38</sup> while format shifting is now explicitly allowed with the digital purchase of music from iTunes (as current Digital Rights Management (DRM) protection allows three copies) and Amazon and other retailers offer files DRM free. This suggests that consumers and producers have pressured at least Apple into changing its otherwise one copy DRM protection. In addition 97 per cent of 18-24 year olds format shift legally purchased content and 87 per cent say that being able to do so is important to them;<sup>39</sup> it increases the private value derived from purchasing music.

### *Who should gain from the proposal?*

Given that format shifting already takes place, there is likely to be minimal additional benefit to consumers, although they are likely to benefit as this exception legalises what they are already doing and allows them to utilise new technologies in a variety of ways. The change would bring the law into line with consumer behaviour, and help to reduce uncertainty over what is and is not legal.

This would not lead to large cost reductions, as format sharing is generally not pursued in the courts "or at all " so there would be some minimal savings to the Advertising Standards Agency (ASA) and the IPO from fielding complaints at perhaps £0.5m per annum.

The main beneficiaries would be technology firms innovating new ways of using privately owned content, and content industries which should experience increased demand as output can realise higher value. The clarification of the law on format shifting is potentially an important aspect of restoring confidence in copyright law, which, if achieved, will tend to increase business confidence in handling copyright issues.

### *Who is likely to lose and what are the risks?*

Varian (developing Liebowitz' concept of "indirect appropriability")<sup>40</sup> shows that if sharing takes place – a concern from the producers' side of format shifting – the producer is likely to sell fewer units of the work. Since the consumer derives greater value from each unit, argues Varian, the producer's profit might even increase, if pricing is right: "If willingness to pay for the right to copy exceeds the reduction in sales, the seller will increase profit by allowing that right." In a free market, demand and supply will settle on a price for goods where consumer and producer surplus are maximized. When consumers value something highly it increases their welfare, but it does not mean the producer has a right to appropriate that value beyond what the market will bear.

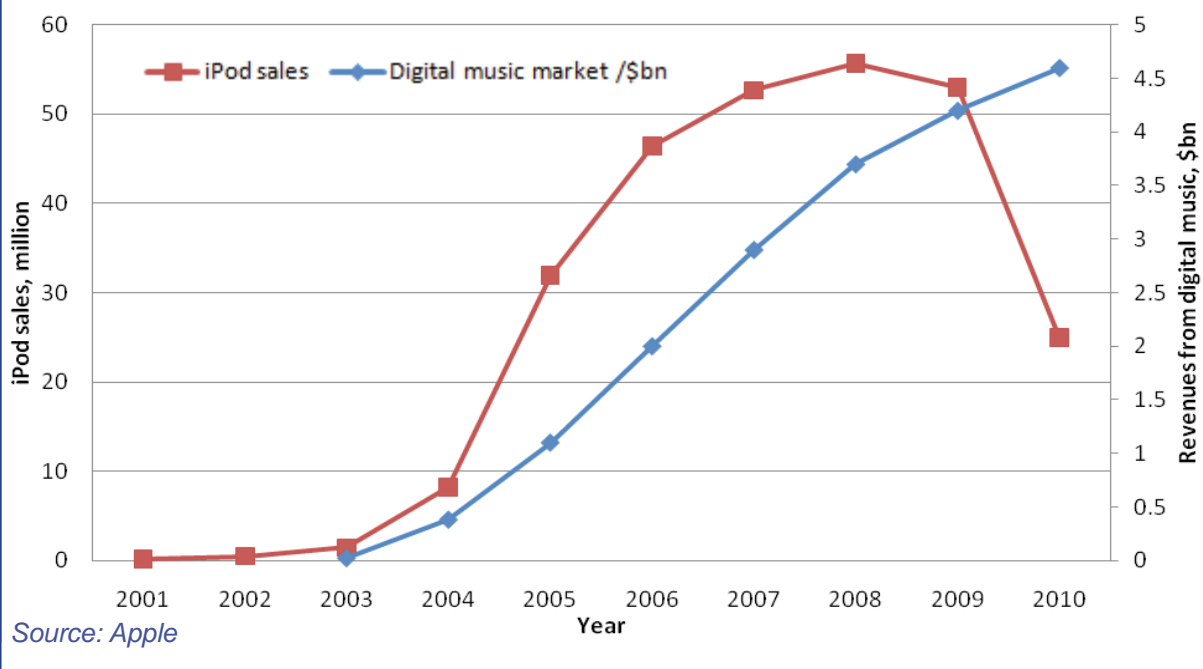
There is no additional direct harm to producers, partly because private format shifting already occurs, but also because format shifting leads to increased consumer welfare, not producer losses. Private format shifting pivots or raises the demand curve and no convincing evidence of demonstrable harm to producers has been submitted to the Review.<sup>41</sup>

A risk factor of private format shifting is that it may increase pressure for the introduction of a copyright levy as compensation for detrimental effects on producers. Given that the Review recommends a limited private copying exception corresponding to the expectations of buyers and sellers of copyright content, compensation is already priced into the purchase. By definition, there will be no loss for right holders. The evidence on copyright levies suggests that they distort markets and affect product introduction as they are both inefficient and negative in terms of distributional and welfare effects.<sup>42</sup>

### *What is the likely impact on productivity and growth?*

In terms of indirect effects, this exception is likely to enable the expansion of new markets for products and services. The CD jukebox Brennan JB7, a CD player with a built in hard drive onto which users could copy music tracks, was cited earlier as an innovation affected by copyright infringement through format shifting.

**Fig. 4 Global iPod Sales and Digital Music Market Development**



The same applies to the development of the MP3 player market (here characterised by Apple’s iPod being a market defining product) which predates the market for lawful online downloads. The initial selling point of the MP3 player was the possibility of transferring one’s stock of music on CD to a portable player – probably via computer. The ability to format shift CDs was the cause of the growth in the MP3 market. After sufficient MP3s had been created, unlawful file sharing became a secondary driver of the market for MP3 players. But the ultimate source of the shared files was still format shifted CDs; legitimate services were not available. The point is that content markets followed technology markets. A format shifting exception would be one step towards optimising the copyright system to allow such technological innovation to take place.

The examples highlighted above are both from the music industry. However given that format shifting could apply across all content, and that small and innovative firms tend to create products in this space – as well as technology giants, there is likely to be considerably more scope for growth.

Format shifting within music has already led to creation of new global markets worth tens of billions of pounds of sales for products as well as billions for digital content in music alone. UK firms were unable to initiate this type of innovation because of the private copying restraints. With a suitably drawn exception, the scope for UK businesses to create products to support new digital content services would be widened.

The potential size of new markets would increase as applications expand, and as the number of internet users continues to grow. If this exception enables firms to create new products and markets over the next decade of up to half the size of the iPod market over the last decade, this could grow the economy by up to £2 billion per annum at the upper end of possible outcomes.

On a more modest scale, if it encouraged more new firms like Brennan (which grew its turnover to 10 million pounds in three years despite the constraints) and others to create new niche products an extra £0.3 billion could be possible. Because the UK is well placed in most of the digital content industries, it is much more likely than other EU economies to be able to exploit the opportunities.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Format shifting for private use	£0.5 m	£0.3 bn - £2 bn

### **Recommendation: Limits to copyright.**

*Government should firmly resist over regulation of activities which do not prejudice the central objective of copyright, namely the provision of incentives to creators. Government should deliver copyright exceptions at national level to realise all the opportunities within the EU framework, including format shifting, parody,...*

### *Why is it needed?*

As the cost of editing and creating copyright content has fallen, the potential for creating comedy, parody and pastiche material from existing recordings, pictures and videos has expanded. What used to be an area of commercial interest for large corporate broadcast entities, like the BBC, is now possible on much smaller budgets.

There has also been a growing market in entertainment both in the UK and the world, as programmes can be aired to ever larger audiences. Comedy programmes may be syndicated, and can make good use of existing content for the purposes of comedy, as illustrated by America's *The Daily Show with Jon Stewart*, which is syndicated across the world using copyright content for parody.

The ability to create such comedy content presents a potentially valuable market, where UK content has traditionally been strongly represented, but appears to be losing ground as programmes cannot use copyright content without long clearing processes which are not effective for such short lived formats.

### *Who should gain from the proposal?*

While there are general social benefits to improving the range of entertainment programmes and creating more diverse cultural content, there are also potential economic benefits:

- Commercial benefit to internet, TV and radio producers who are able to produce new types of entertainment programmes;
- Publicity and commercial benefit to comedy entertainers from wider scope of inputs;
- Savings to broadcasters from not having to clear rights on content.

Quantifying these gains is hampered as there are no statistics which show the size of the comedy industry, or how copyright content is included. We would expect that satirical news shows, such as the BBC's *Have I got news for you* or Channel 4's *Ten o'clock live*, would be able to make savings and add to their repertoire of inputs. The value of these savings to all UK shows is probably not more than a million pounds per year, if that.

Similarly in music, parody can raise profiles – as in the case of *Newport State of Mind* – or raise profits as demonstrated by parody singer “Weird Al” Yankovic's 12 million album sales, three Grammys and numerous live tours.<sup>43</sup> If a comedy exception was applied across content, there is a chance that at least one artist, show or piece of content would spur an entertainment industry expansion.

### *Who is likely to lose and what are the risks?*

A comedy exception would mean a reduction in the moral rights of content creators, as parody would be allowed on the basis of the exception and would not require the approval of the copyright holder. This should not have an effect on the incentive to produce new works.

### *What is the likely impact on the productivity and growth?*

How far this exception can remove the barriers to a British show becoming a global success is a probability question. Today the chance is zero, so this would be a positive change. In this winner takes all scenario the UK has a strong track record for comedy so may be at an advantage.

The global market for entertainment is approaching \$2 trillion, so any increased share for the UK economy can be quite significant.<sup>44</sup> One conservative suggestion would be that this exception could add between 0.01 per cent of that market from domestic improvements to 0.05 per cent if a more global success were to occur. This would translate into additional growth of between £130m per annum to £650m per annum. This may be a conservative estimate. Even if the comedy market is only worth one per cent of the global entertainment market (probably an under estimate) it is possible the UK would gain one per cent of this market with one or two successes under a comedy exception, and up to five per cent if it enabled a global hit.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Parody and Pastiche	£1 m	£0.1 bn - £0.6 bn

**Recommendation: Limits to copyright.**

*Government should firmly resist over regulation of activities which do not prejudice the central objective of copyright, namely the provision of incentives to creators. Government should deliver copyright exceptions at national level to realise all the opportunities within the EU framework, including format shifting, parody, non-commercial research,...*

This exception refers only to non-commercial research, and is unlikely to have major direct implications for business. However, it should enable a much wider range of research to be undertaken without coming into conflict with the copyright system in academia, the charitable sector and by private citizens.

Some of this newly enabled research may spill over into commercial applications or publications, for example as new medical research findings as published, but for the purposes of this assessment we assume that its impact will be mainly in terms of social innovation.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Private research for all content	Social innovation	Social innovation

### **Recommendation: Limits to Copyright.**

*Government should firmly resist over regulation of activities which do not prejudice the central objective of copyright, namely the provision of incentives to creators. Government should deliver copyright exceptions at national level to realise all the opportunities within the EU framework, including format shifting, parody, non-commercial research, and library archiving...*

The Gowers Review's recommendations on Archiving came in two parts:

- Amend section 42 of the CDPA to permit libraries to copy the master copy of all classes of work in permanent collections for archival purposes and to allow further copies to be made from the archived copy to mitigate against subsequent wear and tear.
- Enable libraries to format shift archival copies to ensure records do not become obsolete.

#### *Why is it needed?*

Technological development has led to new ways of reproducing and maintaining archival copies which were not anticipated when the existing copyright regulation was developed or past contracts were signed. As newer methods of maintaining and creating archives are developed, archive holders need to acquire the consent of rights holders if copyright was not assigned or the specific technology for archiving was not included. This imposes a severe burden on record holders who may wish to update their archives to maintain Britain's cultural heritage (as in the case of the British Library or National Archives) or those who wish to have more cost efficient ways of storing information (as in the case of the BBC, ITV or other firms and public sector enterprises).

The changes are intended to allow archiving practices to continue in new ways as technology develops, and where appropriate to permit libraries to take a single action with their holdings. At present, these actions would require permission from every rights holder.

#### *Who should gain from the proposal?*

Libraries and firms holding archives would be the main beneficiary, and there would be a benefit to library users who will be able to access copies of material that would otherwise have been damaged or lost over time. Savings would include

- Monetary cost savings from being able to archive works more cheaply and efficiently using new and more advanced archiving methods
- Transaction cost savings in not having to contact rights holders individually to ask for permission to archive their works in new ways
- Improved accessibility to its collections, for example by being able to search electronic databases for specific information
- Cheaper and more efficient methods of storage and preservation, for example the cost of storing electronic data has fallen over time (and this trend appears to continue) as illustrated by the reduction in hard drive costs per unit of storage, and the development of cloud storage facilities
- Lower risks to collections being damaged – technological advancements have lowered the cost of reproduction, meaning it is easier and cheaper to create additional copies for storage in order to minimise risk of losing valuable works

As older technologies become obsolete, the cost of preservation for works stored using these technologies increases. The British Library has illustrated how digitisation for sound recordings is costlier for older formats, with Vinyl records costing 10 times more than VHS or Betamax holdings.<sup>45</sup> These exceptions will prevent preservation costs from rising, as archive holders can apply new technologies as they are developed.

For the exception to allow libraries to format shifting for archiving, we use the same method and data as for the orphan works impact assessment above.<sup>xi</sup> While the library no longer has to identify the owner, it still has to locate addresses and current contacts while checking administrative records, old contracts and agreements. The BBC archive exercise to identify orphan works estimated that it took 6.5 hours to identify rights holders, and a total 13 hours to clear one hour's content. We therefore apply the assumption that half the time spent in clearing orphan works relate to the post identification stage which is undertaken here. Assuming that the Review's recommendations are followed, this exception applies to the 60 per cent of content not orphaned. This excludes all the BBC content covered under the orphan works estimates as this exception is for libraries only.

The British Library stands to save £2.7bn in clearing the rights of orphan works which constitute 40 per cent of its collection. If half of that cost is incurred after identification of the rights holders, the potential saving in rights clearance from the remaining collection 60 per cent would be approximately £2bn, or £200m per annum over 10 years.<sup>xii</sup>

For the exception to create new archival content from existing holdings, we follow the above estimates. This is also an exception to allow a single action to be taken for content, and using the British Library holdings as an indication for what the largest saving would be, it mirrors the values derived for the format shifting exception of £2bn. The value may be higher as other entities can take advantage of this archival exception - the BBC would save £250m by the above method - but we maintain the £2bn, or £200m per annum over 10 years and expect this to be a bigger underestimate.

### *Who is likely to lose and what are the risks?*

This exception relates to archived content and there are no explicit losers. We expect that anyone wishing to format shift their archives would do so based on an internal assessment of the costs and benefits involved, so while all archives may not be updated as a result of this change, we would reduce the cost side of the equation by a substantial amount.

There would be a risk around whether libraries are allowed to share newly archived content digitally within or beyond the library premises. Such sharing may be good for library users but negatively impact publishers of content as the library offering may be a substitute for purchases.

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xi Clearing an orphan work rights would relate all uses of the work, while here rights clearing for archiving is just a single use. The orphan work estimate is applied to 40 per cent of the British Library holdings and the saving calculated by estimating the cost of undertaking one action (in that case, clearing for Orphan Works). Because the format shifting is also a single action, the cost savings apply, and would be relevant for the remaining 60 per cent of British Library holdings.

xii  $((£1.35bn/40)*60)=£2.0bn$

### *What is the likely impact on productivity and growth?*

Overall, enabling libraries to archive their holdings in new ways is likely to reduce libraries' overall operational costs in the long run, and perhaps save on preservation costs. Ultimately these savings and efficiencies are likely to be passed on to the taxpayer in the form of improved quality and accessibility of library collections for research, educational and recreational purposes.

Quantifying these probably lie beyond the scope of what is possible, so we settle for only estimating the potential cost saving of having this exception. We include here the lower estimate spread over 10 years. Contributions to growth are difficult to estimate; what is certain is that there will be potential social innovation due to better availability of digitised collections for research.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Creation of libraries' archival copies	£200 m	Social innovation

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Format shifting for archiving (update)	£200 m	Social innovation

### ***Recommendation: Limits to copyright.***

*Government should firmly resist over regulation of activities which do not prejudice the central objective of copyright, namely the provision of incentives to creators...The UK should also promote at EU level an exception to support text and data analytics...*

#### *Why is it needed?*

At present the law inhibits use of text and data analytics on pre-existing research and journal articles, i.e. copying them in order to run software seeking patterns and associations which would assist researchers, including mining for commercial or non-commercial purposes. This is a real lost opportunity to derive additional value from published research. The barrier is an inflexible copyright system which failed to envisage how old material could be exploited by new technology. The Review gives as an example research that went into Malaria in the first half of the twentieth century, where many journal papers were created about the biology of this disease. Researchers wanting to text mine these papers are unable to do so.

#### *Who should gain from the proposal?*

The recommendation to realise all the opportunities within the EU framework, including for non-commercial research would allow researchers to undertake content analytics for non-commercial purposes. If the recommendation to change EU law were successful it could have wider benefits for example in enabling the use of text and data mining in commercial research.

#### *Who is likely to lose and what are the risks?*

Text and data mining is essentially an automation of humans reading texts to find links between them, and in principle there should not be losers. It is conceivable that some rights holders may fear that others forms of copying might be permitted if the exception is not framed well.

#### *What is the likely impact on productivity and growth?*

This specific example cited in the Review is one of primarily social importance rather than economic; the first reason for an exception to be made is for potential medical and scientific breakthroughs by allowing academics and scientists to use powerful searching programmes to pick through published knowledge in a short space of time. The initial recommendation to implement for non-commercial use in the UK is aimed at solving this problem.

However, even non-commercial work could bring about financial and economic gain benefits, thanks to new knowledge. If commercial use were covered by an EU exception it is likely that there would be scope for significant gains

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Text and data analytics	Not quantified	Social innovation, but longer term scope for major economic gains.

### ***Recommendation: Limits to copyright.***

*Government should firmly resist over regulation of activities which do not prejudice the central objective of copyright, namely the provision of incentives to creators...The UK should give a lead at EU level to develop a further copyright exception designed to build into the EU framework adaptability to new technologies. This would be designed to allow uses enabled by technology of works in ways which do not directly trade on the underlying creative and expressive purpose of the work...*

#### *Why is it needed?*

Technological development has produced new ways of interrogating information sources. To enable these new methods to be used, existing information and data may have to be converted and stored in different forms and be made accessible in new ways, which were not anticipated when existing copyright regulation was developed or past contracts signed. Text and data analytics is one such development. In future it is possible that additional methods are developed and we would want to enable these technologies to be utilised to their fullest as and when they become available, which is the aim of this exception.

#### *Who would gain from the proposal?*

All users of information and data should gain from this proposal. Researchers in particular would benefit from being able to find the information they are after more quickly and efficiently. At an aggregate level, by making information search less laborious, this could translate into more research being undertaken and a higher quality of research emanating from a more complete information base, thereby increasing the probability of research breakthroughs. Overall, the copyright system would be less likely to restrict development of new technologies.

#### *Who is likely to lose and what are the risks?*

Given that future technological developments are as yet unknown, an exception related to this carries the risk of unintended consequences. These are difficult to quantify. The exception would only apply to non-consumptive uses of works which do not unduly harm the value of or market for a work, so uses which did cause that harm would not fall within the exception. Risks can be minimised by ensuring that the exception is sufficiently narrow and clear that it should apply to non-consumptive uses only.

### *What is the likely impact on productivity and growth?*

Given that future developments remain unknown, it is not possible to quantify their impacts. The impacts of enabling text and data analytics give a possible indication. Freeing up technological development from copyright constraints would be a longer term gain, both in terms of social innovation and economic gain.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Exception for new technologies	Not quantified	Social innovation, but longer term scope for major economic gains

**Recommendation: Limits to copyright.**

*Government should firmly resist over regulation of activities which do not prejudice the central objective of copyright, namely the provision of incentives to creators...The Government should also legislate to ensure that these and other copyright exceptions are protected from override by contract.*

Several respondents to the consultation made the argument that licences should not substitute for legislation on core matters such as exceptions and limitations. Preventing the override of exceptions by contracts is intended to ensure that the benefits of copyright exceptions analysed above can be realised in practice.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Preventing override by contract	Enabling measure	Enabling measure

## Chapter 6: Patents

### **Recommendation: Patent thickets and other obstructions to innovation.**

*In order to limit the effects of these barriers to innovation, the Government should:*

- work to ensure patents are not extended into sectors, such as non-technical computer programs and business methods, which they do not currently cover, without clear evidence of benefit;*

Extending patents to new areas such as computer program and business methods inevitably imposes costs on businesses, while available evidence suggests that the impact on growth is minimal.

Existing evidence on patents for software and business methods draws on the experiences of other countries where patents of this kind are allowed. The US is a notable example, for which evidence suggest that patent activity is indicative of firms “acting to protect their interests because the opportunity is there rather than because business method patents are seen as essential”, meaning that the availability of business model patents are likely to increase patent activity but not necessarily innovation.<sup>46</sup> In Japan, where the software patent system was reformed to allow patentability of software starting in the late 1990s, a recent study finds no direct impact of the software patent reforms.<sup>47</sup>

Other evidence<sup>48</sup> shows that for biotechnology and medical start ups, patents are the most important determinant of ability to capture competitive advantage, whereas for software firms they are the least important (behind speed to market, copyright, trademarks and a number of other factors).

Given that existing evidence suggests that computer program and business method patents do not add to growth, not introducing them does not create a new saving, but prevents additional transaction costs.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Patent scope extensions	£0 m	£0 bn

### ***Recommendation: Patent thickets and other obstructions to innovation.***

*In order to limit the effects of these barriers to innovation, the Government should:*

- *take a leading role in promoting international efforts to cut backlogs and manage the boom in patent applications by further extending “work sharing” with patent offices in other countries;*

#### *Why is it needed?*

The cost of backlogs is estimated by London Economics to be £7.6bn per extra year of global backlog held in the US, Japanese and European patent offices.<sup>49</sup> This impacts innovators and markets as unfinished patent applications create uncertainty and may grant monopoly powers to entities that have not innovated.

#### *Who should gain from the proposal?*

Reducing backlogs improves efficiency and market contestability, which in turn would lead to growth. In this sense it should be good for all firms that are innovative.

#### *Who is likely to lose and what are the risks?*

Firms who apply for patents looking to gain monopoly powers for inventions that are not novel, and trade on the uncertainty in the market would lose out. This is a positive effect as firms who are not making novel patent applications should not be able to exclude competitors from a market on the basis of spurious patent applications.

#### *What is the likely impact on productivity and growth?*

Of the applications to the big three patent offices from where the £7.6bn is calculated, about three per cent are from UK applicants.<sup>xiii</sup> This implies that for every year of global backlog that is reduced, the UK would benefit around £200m. We would expect that only a fraction of this, perhaps £2m could be achieved through IPO work sharing directly. Firstly this is because only a percentage of the global backlog can be shared as only that percentage will have been made in multiple jurisdictions. Secondly the patent examination capacity of the IPO is very small compared to these three large offices that together employ more than 20,000 examiners. Therefore the direct contribution of worksharing is very low.

If the UK continues to lead, and is seen to lead, in efforts to reduce and understand backlogs, it may over time reap the full benefit of backlog reduction in the major offices and across the world. It is worth noting that the IPO is already on target to reduce its maximum pendency times, and are actively researching backlogs which may allow it to lead this effort. If over the next decade the UK is successful in pushing this forward, it is not unreasonable to assume that it will benefit by at least half of the aggregate growth dampening caused by backlogs.

xiii Using PCT applications to national offices from the UK as a proxy (World Intellectual Property Indicators 2010, table A.4.2)

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Workshare to reduce backlog	£2 m	£0.1 bn

***Recommendation: Patent thickets and other obstructions to innovation.***

*In order to limit the effects of these barriers to innovation, the Government should:*

- investigate ways of limiting adverse consequences of patent thickets, including by working with international partners to establish a patent fee structure set by reference to innovation and growth goals rather than solely by reference to patent office running costs. The structure of patent renewal fees might be adjusted to encourage patentees to assess more carefully the value of maintaining lower value patents, so reducing the density of patent thickets.*

*Why is it a problem?*

As more and more patent applications enter the system and more patents are renewed, the transaction costs of innovation rise as firms must navigate an ever expanding landscape of IP rights. Patent applicants have to wait longer for their applications to be processed, competitors have more uncertainty about what is allowed while patents are pending, and the space for innovation may be clogged up by patents that are maintained for the purposes of lawsuits, rather than new goods and services.

The Review recommends investigation of ways to limit adverse consequences of patent thickets, and specifically mentions one example, adjusting patent renewal fees. The assessment below considers that example.

The EU PatVal survey tells us that approximately 50 per cent of patents are estimated to have zero value by their inventors, but they must – to their owners – be worth at least the renewal fee. To target these patents could be a national effort, but the below calculations suggest it requires an international coordinated effort, which is the Review's recommendation. If targeting these patents were the aim, it would require a six fold increase in UK renewal prices or a heavy increase in early renewal fees, as younger patents make up the bulk of UK patents.

*Who should gain from the proposal?*

The main beneficiaries would be firms wanting to undertake innovation, who wished to compete with non-innovative firms who were applying for patents and exercising monopoly powers on the basis of pending patents. It should also benefit firms who are currently paying to maintain patents that are only marginally valuable. The main aim is to free up space for firms to launch and create products and services without concern for patent thickets and patent crowding where little innovation has been undertaken by patent holders.

### *Who is likely to lose and what are the risks?*

If a uniform pricing policy was introduced across all firms, this may disadvantage SMEs for whom the costs would represent a larger share of their budgets. Additionally, a potential adverse issue could arise if patent thickets are worth more as blocking mechanisms than patents which directly support innovation. This is a possibility in some circumstances.

Increased prices would be a cost to patent holders who choose to renew their patents, and save money for those who do not renew. While we cannot directly quantify the cost to the economy of thickets, we can estimate the impact that raising renewal fees will have on the propensity to renew patents. This gives an indication of how much of the problem new prices would address.

The IPO estimates that in 2008 there were approximately 400,000 patents valid in the UK. Available econometric modelling suggests that the price elasticity of demand for patent renewals lies between 0.02 per cent<sup>50</sup> and 0.3 per cent.<sup>51</sup> The 0.3 per cent seems to be an outlier and is calculated as a single elasticity for both application and renewal fees, while application fee elasticities can be even higher.<sup>52</sup> Most estimates for renewal fees are below 0.1 per cent.<sup>53</sup> This means that for every one per cent increase in renewal price, patent renewals fall by 0.1 per cent.

Because patent renewal fees in the UK are annual from the fifth year, any increase in renewal fees would be cumulative as patents get older but upon introduction there would be no cumulative effect. So, a patent in its 16<sup>th</sup> year when fees go up only experiences the new fee at year 16, while a patent that is five years old today will by the 16<sup>th</sup> year have paid the extra cost each year.

	Patents in Force		
	UK-IPO	EPO (UK)	Total
2005	92,200	271,300	363,500
2006	92,276	286,200	378,476
2007	92,543	303,900	396,443
2008	90,293	311,700	401,993

Presumably there is a local maximum price which UK fees could be set, which would be around the highest renewal fee setter from a similar economy. Total UK renewal costs over 20 years are approximately the same as the Spanish and American fees, but lower than the French, Japanese and German fees. This suggests that there is scope for raising prices and remain attractive for patenting activity, in comparison with other similar jurisdictions. If we set UK renewal fees per annum at the highest comparable office (this excludes the US which does not do annual fees), and then add 10 per cent, we are probably at the higher end of what is possible for a unilateral UK fee change. This raises the 20 year cost of renewal from the UK's current £4,550 to £13,432 (which is around £2,000 more than German fees). However the recommendation is that this is not just done on a national level, but an international one.

Such a price schedule means that annual renewal fees increase between 24 per cent and 288 per cent, depending on the year. The expected outcome is that the stock of live UK patents would fall by 14 per cent, although the surrounding range suggests drops in stock from between 43 per cent and three per cent and the lower ranges are much more likely.

The impact is a net cost between £13m and £132m to the IPO, with the central estimate net cost of £98m. This should be compared to the IPOs 2009/10 total earnings from patents of £42m.

*What is the likely impact on productivity and growth?*

A unilateral price setting exercise by the UK would not impact enough patent holders to diminish patent holdings to an extent where thickets were addressed. International collaboration, which is what the Review envisages, would be needed for this to impact growth.

Moreover, one would expect that firms will choose to renew their higher value patents while dropping the low value patents, so higher prices would address the growing number of patents. The nature and extent of impact on the thicketing problem is difficult to predict.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Renewal fees and thickets	Not quantified	Marginal without international cooperation

## Chapter 7: Designs

### ***Recommendation: The Design Industry.***

*The role of IP in supporting this important branch of the creative economy has been neglected. In the next 12 months, the IPO should conduct an evidence based assessment of the relationship between design rights and innovation, with a view to establishing a firmer basis for evaluating policy at the UK and European level. The assessment should include exploration with design interests of whether access to the proposed Digital Copyright Exchange would help creators protect and market their designs and help users better achieve legally compliant access to designs.*

The UK design economy is one of the strongest internationally. However the UK designers have a very low usage of registered rights. At present there is little evidence surrounding the reasons for this, this issue needs further research before any recommendations are made. As there is no recommendation apart from this research, no impact assessment can be done on the effects.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Design	-	-

## Chapter 8: Enforcement and Disputes

### ***Recommendation: Enforcement of IP rights.***

*...In order to support IPR holders in enforcing their rights the Government should introduce a small claims track for low monetary value IP claims in the Patents County Court.*

### *Why is it needed?*

Resolving infringement disputes can involve considerable litigation costs. Individual rights holders, micro businesses and SMEs are less able to absorb high costs compared to large firms and therefore are likely to be disproportionately affected by litigation costs. In some cases, high litigation costs may prevent individuals or small organisations from pursuing cases where their IP has been infringed.

Introducing a small claims track within the Patents County Court would address this issue by enabling claims relating to IP that are of very small monetary value to be made simply, quickly and without legal representation. This would help to simplify the claims process for small claims and make it easier and more cost effective for individuals and small firms to protect their IP rights. The economic impact would be strengthening the ability of young innovative firms to grow by exploiting IP.

### *Who should gain from the proposal?*

Individual rights holders, micro businesses and SMEs stand to gain most from a small claims track, as they would have a simpler and more affordable means of protecting their IP rights, particularly where the claims are of low monetary value and legal representation is not necessary. A simple, cost effective small claims procedure would enable more cases of IP infringement of this nature to be pursued, thereby helping to ensure that rights holders are duly rewarded for their work.

Additionally, the courts are likely to gain in terms of a faster and more streamlined procedure for dealing with small claims. This would likely enable a larger number of claims to be resolved more quickly, thereby increasing efficiency of the system overall.

### *Who is likely to lose and what are the risks?*

There is a risk that simplifying the process of making small claims and reducing associated costs could encourage proliferation of unnecessary claims. This would increase the total number of claims made but may not necessarily increase the effectiveness of the enforcement of IP rights overall. Additionally, users of IP may be unduly affected when unfounded infringement claims are brought against them. This would create inefficiencies and be potentially detrimental to growth. This risk can be minimised by making the small claims process as streamlined and automated as possible.

### *What is the likely impact on productivity and growth?*

There should be minimal implementation cost to introducing a small claims track, given that arrangements are already largely in place in the form of the small claims procedure in the general County Court and it would be a case of mirroring these practices in the Patents County Court. There is likely to be some positive impact on efficiency of the courts in dealing with IP claims since they are able to process small claims more quickly and efficiently.

There is likely to be a positive impact on diversity in the market for IP assets. A survey of SMEs commissioned for the Review<sup>54</sup> suggests that having been involved in IP disputes had discouraged only a small proportion of firms from innovating, however those organisations affected were likely to be the smallest of firms.<sup>xiv</sup> A small claims track would therefore likely encourage more individual rights holders and micro firms to make use of IP rights, adding to the variety of products and services available that are based on IP.

Furthermore, the availability of a small claims track is also likely to be a positive signalling device in improving confidence in the IP regime and encouraging more firms to make use of IP overall. This is likely to have a positive effect on growth given that IP active firms generally grow faster than non-IP active firms.<sup>55</sup>

While there are likely to be positive benefits to the economy in introducing a small claims track, no data is available to quantify the impacts on growth at present with sufficient confidence to quote.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
IP Small Claims track	-	-

xiv The survey shows that 18 per cent of organisations with two to nine employees indicated that disputes had stopped them trying to produce innovative products or services compared to 6 per cent of organisations with 10 or more employees. Similarly, 20 per cent of organisations with a turnover of less than £1 million were discouraged from innovating compared to 5 per cent of organisations with over £1 million in turnover. It is important that these figures be treated cautiously, as broadly indicative findings rather than precise estimates, as the differences in results between firm types are statistically significant but the confidence intervals associated with each measure are relatively large. The primary purpose of the survey was to assess issues relating to the provision of IP services and therefore the sampling frame consisted of SMEs who had applied to the IPO to register a right in the last five years. In particular, copyright-related disputes may be under-represented because copyright is not a registered right.

## Chapter 9: SMEs and the IP Framework

### ***Recommendation: Small firm access to IP advice.***

*The IPO should draw up plans to improve accessibility of the IP system to smaller companies who will benefit from it. This should involve access to lower cost providers of integrated IP legal and commercial advice.*

### *Why is it needed?*

The Review has sought evidence on how user friendly the IPR framework is to SMEs. There has been feedback from SMEs that they do not have access to reliable, affordable advice. This is demonstrated throughout Chapter 9 using data from the Survey of SMEs commissioned for the Review <sup>56</sup>:

Two thirds (66 per cent) of surveyed SMEs indicated that they would be interested in having access to an intermediary who can provide basic advice on IPR (applications, maintenance, licensing, disputes or enforcement) in place of a legal advisor or attorney – with interest even higher amongst the smallest firms who had started trading recently.

One quarter (27 per cent) of surveyed SMEs agreed that “*there are too many services available – it’s difficult to choose the right one.*”

Two fifths (39 per cent) of surveyed SMEs agreed that “*you cannot tell which services are reliable or trustworthy.*”

In order to resolve this problem the Review recommends improving the accessibility of the IP system to SMEs, involving access to lower cost providers of integrated IP legal and commercial advice. There is no specific method of achieving this specified in the Review.

### *Who should gain from the proposal?*

The primary beneficiaries of the proposal are SMEs seeking to grow, as they would gain access to reliable, affordable advice on how to exploit the value of their IPRs. There will be three categories of businesses affected by this:

- SMEs who are currently using the IPR system well, but pay for expensive advice,
- SMEs who currently use the IPR system poorly with little/no guidance; and
- SMEs that would benefit from IPRs but do not currently use them.

The objective of the service is not necessarily to get people to use more IPRs, but to use the IPR framework more effectively.

## Patents

If SMEs seeking patents are directed effectively, they may be pointed in one of three directions:

- to a patent attorney (or other existing legal service provider);
- to a lower cost IP advisor; or
- told a patent is not appropriate for them.

The primary benefit to SMEs using patents is the money saved during the application process. There were 15,490 patents applied for in 2010,<sup>57</sup> 50 per cent of these are SMEs<sup>58</sup> and roughly 50 per cent of those use attorneys, the average difference in cost between a patent attorney and a business advisor is £5,600.<sup>58</sup> Therefore if 20 per cent (a demonstrative figure) of SMEs who currently source advice from attorneys no longer need to use this service due to improved access to guidance from a business advisor type system there would be a saving of approximately £4.5 million per year.<sup>xv</sup>

The Intellectual Property Office (IPO) patent system will also benefit. Within the IPO there is a private applicant unit responsible for assisting private applicants. A reliable initial source of advice would improve the quality of applications received by the unit.

Internal experience suggests that a well structured patent application can be processed two to four times faster than one constructed without the appropriate expertise. The direct costs of a processing a patent application (i.e. excluding overheads) are £1497 per patent. If we assume that low quality patents take three times longer to process than high quality patents,<sup>59</sup> then if just 500 of these patents are avoided it will save the IPO £1.5million.

Benefits will also be felt by the IPOs Information call centre through reductions in unnecessary contact. Evidence suggests that around 11 per cent of all calls to the IPO are “unnecessary”.<sup>60</sup>

Taken together these cost savings give a gross benefit of approximately £6 million per annum

## Other IPRs

There are strong potential benefits regarding the use of other IPRs. We do not currently have the evidence to quantify the benefits of these; however they should not be disregarded. Studies of UK firms show that 30 per cent of IP active SMEs fall in the high growth upper quartile, as opposed to 25 per cent of IP inactive SMEs. Research for IPO shows a strong link between effective use of trademarks and the subsequent success and growth of a business.<sup>61</sup> Given the barriers to use of the IPR system, overcoming some of them should help replicate the success of IP efficient companies shown in studies. If the proportion of SMEs able to use IP to grow could be raised by a thousand or more each year, the probability is that some of them would create disruptive innovation and real additional value.

xv This is based on the difference between the costs of attorneys and business advisors from a very small sample, which is not robust enough to be used as anything other than a very rough guide.

### *Who is likely to lose and what are the potential risks?*

There will be a financial cost to the IPO of setting up a system to better support SMEs. The method of delivery may involve supporting a system of private sector advisors. Whatever the solution adopted IPO will need to ensure a level of professionalism and reliability to maintain good will with its customers. Any shortfall may hamper attempts at similar exercises in future, so there are reputational risks for Government.

Another risk is that SME users find it difficult to translate the advice they receive into effective business plans which they can use to raise funds for business expansion. This would be analogous to the failure of the Home Information Pack System in the housing market, when building societies failed to recognise HIPS as a basis for funding. So if the IPO implemented a policy to improve the advice to SMEs it must work with the market to ensure it is getting through and being used appropriately.

### *What are the likely impacts on productivity and growth?*

If SMEs have easy access to good advice they are more likely to use the IPR system to greater effect, and to become more involved in creating and innovating. NESTA's report on business dynamics in the UK shows that six per cent of firms, largely SMEs are responsible for much of the growth in output and employment.<sup>62</sup> Ideally the advice given would target that six per cent to assist them in their growth, as well as targeting SMEs who are not currently high growth but have high growth potential given the correct advice.

Work by OECD shows that countries whose population of businesses contains higher proportion of high growth SMEs also have higher productivity growth across their economies.<sup>63</sup> This comes not only from the direct output effects of the growing firms, but also from the competitive spur they bring to the wider economy. This will have a positive effect on innovation and consequently growth, as better access to advice and protection would reduce the market failure of SMEs not innovating due to inability to navigate the IPR system. Studies also show that IP active firms are more likely to grow than inactive ones.<sup>64</sup> Thus SMEs which are encouraged to use IP due to the easy access advice will have a higher chance of survival and growth.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Small firm access to IP advice and protection	£6m	Not quantified, but positive

## Chapter 10: An Adaptive IP Framework

***Recommendation: An IP system responsive to change.***

*The IPO should be given the necessary powers and mandate in law to ensure that it focuses on its central task of ensuring that the UK's IP system promotes innovation and growth through efficient, contestable markets. It should be empowered to issue statutory opinions where these will help clarify copyright law...*

As explained in previous sections, the Review recommends certain narrow exceptions to copyright law. While these are likely to have a positive impact on growth, these exceptions could create uncertainties around the application of copyright law. This recommendation enables the IPO to clarify any uncertainties which may arise. Additionally, this measure would provide clarity around the application of copyright law to new technologies.

By helping to provide clarity around copyright law and improve its adaptability to new technologies, this measure provides certainty in the copyright framework and encourages firms to invest in IP research and to develop products and services relating to IP. This is likely to have a beneficial impact on innovation and growth, and support other copyright measures recommended by the Review.

Recommendation	Cost Saving, per annum	Growth Impact, per annum
Statutory Opinions	Enabling measure	Enabling measure

- 1 See ONS, 2010, *Blue Book*, page 33 for data, [http://www.statistics.gov.uk/downloads/theme\\_economy/bluebook2010.pdf](http://www.statistics.gov.uk/downloads/theme_economy/bluebook2010.pdf)
- 2 Clayton T, 1999, *Behaviour and margin performance in Europe-wide businesses*, London Business School Strategy Review
- 3 Clayton T and Turner G, 1996, *Building business; evidence from Europe & North America on growth competitiveness and jobs*, Panorama of EU Industry
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- 5 Atkinson S, Marco A and Turner L, 2008, *The Economics of a Centralized Judiciary, Uniformity, Forum Shopping and the Federal Circuit*, Journal of Law Economics
- 6 London Economics, 2010, *Patent Backlogs and Mutual Recognition*, Report for the Intellectual Property Office, <http://www.ipo.gov.uk/p-backlog-report.pdf>
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- 8 Von Pottelsberghe B and Danguy J, 2009, *Economic cost/benefit analysis of the community patent*, EC
- 9 [http://documents.epo.org/projects/babylon/eponet.nsf/0/ED4AEC31E831BE24C125755B005DDE5C/\\$File/applications\\_2009\\_per\\_origin\\_and\\_technology\\_en.pdf](http://documents.epo.org/projects/babylon/eponet.nsf/0/ED4AEC31E831BE24C125755B005DDE5C/$File/applications_2009_per_origin_and_technology_en.pdf)
- 10 [http://documents.epo.org/projects/babylon/eponet.nsf/0/ED4AEC31E831BE24C125755B005DDE5C/\\$File/applications\\_2009\\_per\\_origin\\_and\\_technology\\_en.pdf](http://documents.epo.org/projects/babylon/eponet.nsf/0/ED4AEC31E831BE24C125755B005DDE5C/$File/applications_2009_per_origin_and_technology_en.pdf)
- 11 Nordhaus WD, 2007, *Two Centuries of Productivity Growth in Computing*, Yale University
- 12 Copenhagen Economics, 2010, *The Economic Impact of a European Digital Single Market*, Copenhagen Economics report for the European Policy Centre, March 2010
- 13 Farooqui S, *Productivity, ICT Capital and Fast Internet Adoption in the UK and the Netherlands*, UK Office for National Statistics, 2008, in ICT impact assessment by linking data from different sources, Eurostat
- 14 IFPI, 2010, *Annual Recording Industry in Numbers 2010*
- 15 PricewaterhouseCoopers, *An economic analysis of copyright, secondary copyright and collective licensing*, March 2011, report for the Copyright Licensing Agency, <http://www.pwc.co.uk/eng/publications/an-economic-analysis-of-copyright-licensing.html>
- 16 <http://www.consumerfocus.org.uk/files/2011/03/Consumer-Focus-consultation-competition-copyright-and-collective-rights.pdf>
- 17 The report by Pinsent Mason for BECTA on copyright licensing schemes in education provides a useful overview of that sub-sector, available at: <http://www.ipo.gov.uk/ipreview-c4e-sub-becta.pdf>
- 18 Company accounts, number 3003569
- 19 Company annual report: [http://www.dacs.org.uk/pdfs/K214\\_DACs\\_FinReport2009.pdf](http://www.dacs.org.uk/pdfs/K214_DACs_FinReport2009.pdf), p.6
- 20 Company annual report <http://www.ppluk.com/en/About-Us/Annual-reports/> and <http://content.yudu.com/Library/A1o1ey/PPLStatutoryAccounts/resources/index.htm?referrerUrl=>, PPL were ordered to repay £18.1m by the Copyright tribunal for over-charging, and put that money aside in its accounts, with the note that "You will only be entitled to a refund if you make a claim to PPL for repayment" see <http://www.ppluk.com/en/music-users/copyright-tribunal-refunds/>. If this is excluded, they collected £111m and had a cost/income ratio of 16.2 per cent
- 21 Company accounts, number 5856314. Calculated on the basis of ACS's income in 2008-09, based on the 15 per cent fee that ACS charges, as the amount collected is not disclosed in the annual accounts.
- 22 Company accounts, number 00134396 & 00199120
- 23 Company annual report: [http://www.cla.co.uk/data/corporate\\_material/annual\\_review.pdf](http://www.cla.co.uk/data/corporate_material/annual_review.pdf), p.13
- 24 Company annual report: [http://www.equitycollecting.org.uk/downloads/newsitems/BECS\\_AnnualReport\\_2010.pdf](http://www.equitycollecting.org.uk/downloads/newsitems/BECS_AnnualReport_2010.pdf), p.1 & p.15, the total is based on distributing £7.76m and earning £700,000 for administrative functions.
- 25 Company accounts, number: 2685120
- 26 Company accounts, number: 2423219
- 27 Company annual report: <http://www.alcs.co.uk/CMSPages/GetFile.aspx?nodeguid=3a1b2df3-3602-4514-b2e3-59554bd512c8>, p.11

- 28 Company annual report: [http://www.pls.org.uk/about/plsnewsletters/Pages/PLS%20Annual%20Report%202010\\_web.pdf](http://www.pls.org.uk/about/plsnewsletters/Pages/PLS%20Annual%20Report%202010_web.pdf), p.8
- 29 Company accounts, number: 2790268
- 30 Phonographic Performance Limited financial statements for the year ending December 2009: <http://content.yudu.com/Library/A1o1ey/PPLStatutoryAccounts/resources/index.htm?referrerUrl=http%3A%2F%2Fwww.ppluk.com%2Fen%2FAbout-Us%2FAnnual-reports%2F>
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- 32 British Library submission to the Review
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