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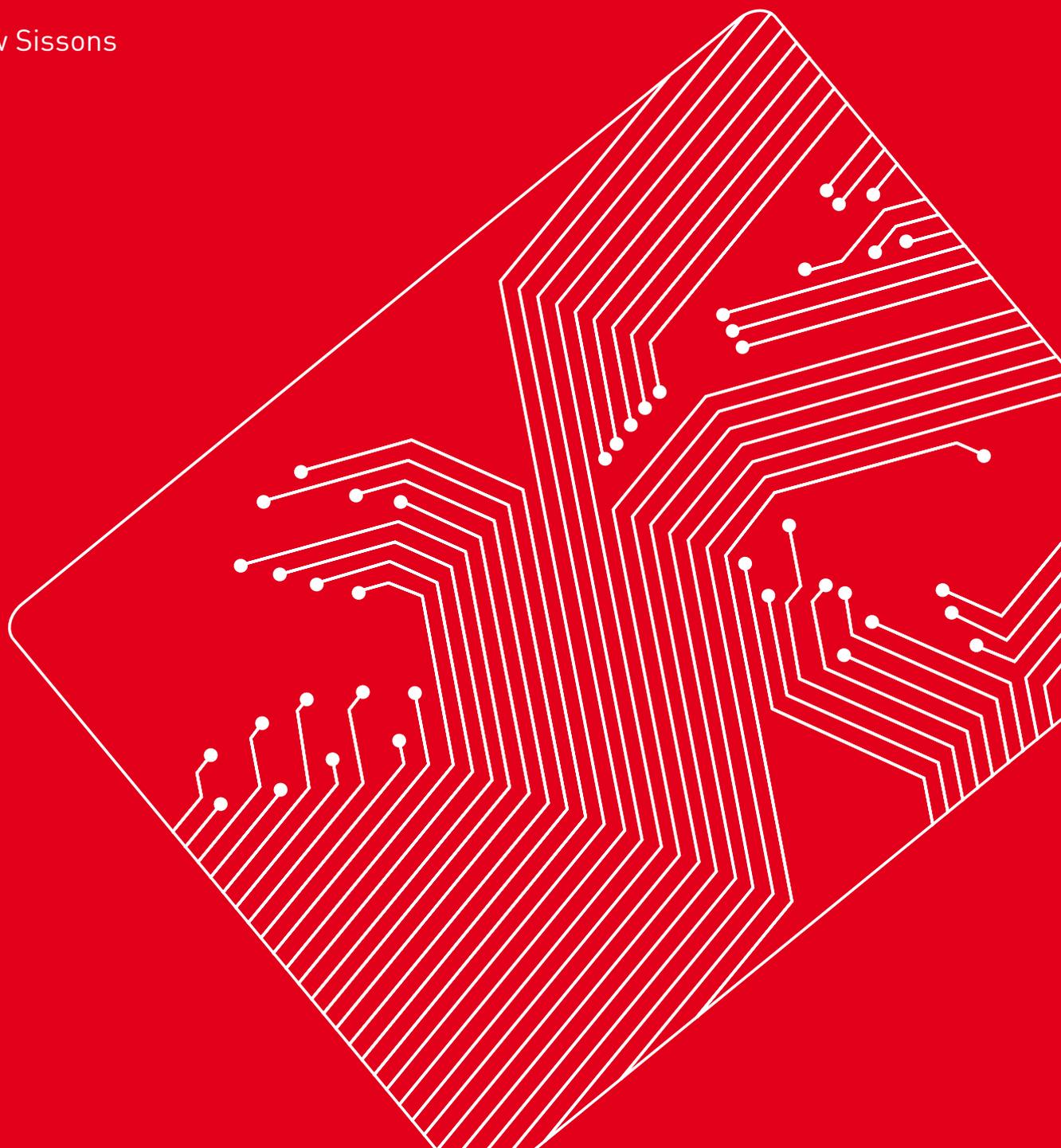


**BIG
INNOVATION
CENTRE**

The Big Digital Dilemma

How should we pay for the web?

Andrew Sissons





The Big Innovation Centre is an initiative of The Work Foundation and Lancaster University. Launched in September 2011, it brings together a range of companies, trusts, universities and public bodies to research and propose practical reforms with the ambition of making the UK a global open innovation hub as part of the urgent task of rebalancing and growing the UK economy, and with the vision of building a world-class innovation and investment ecosystem by 2025.

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Executive summary

The digital economy – in which we upload and consume creative content over the internet – is one of Britain's biggest economic strengths. The rise of the internet has provided a new forum for creative industries of all types to reach new audiences and interact with them.

But the digital economy faces a serious problem: it is **very hard for creative firms to make money from the web**, because online content appears to have many of the characteristics of a public good. The internet works best when it is open and free, but it also needs good quality content, which costs money to produce. If creative firms can not make enough money from their content, they may not invest in it sufficiently, which may **hold back the growth of the digital economy**.

To date, the debate around this problem has tended to focus on copyrights, and how strongly they are enforced online. While this is clearly an important issue, **we cannot hope to recreate the rules of the physical economy in an online world**. The debate must move on to a broader range of issues; our aim should be to maintain an open and interactive internet, while enabling creative firms to make more money from their content.

In response to this challenge, content providers will need to **diversify their revenue streams** online, making money from a variety of sources. The internet has enabled a range of innovation business models, and firms must aim to take advantage of these.

But there may still be scope for coordinated action to support content providers. At a time where economic growth is so hard to come by, we must do everything we can to take advantage of the UK's genuine economic strengths. This paper introduces the concept of a **digital license fee** as a possible way of creating an additional revenue stream for online content providers. Such a scheme might work as follows:

- Internet users would be charged a monthly fee according to their internet usage;
- This fee would be distributed among online content providers according to people's choices – expressed through a 'recommend' button;
- This revenue would be open to any online content provider, from large, established companies to individual creators and entrepreneurs.

This digital license fee – or a similar mechanism that creates an artificial online market for content – could provide a range of benefits. It would help content providers to make money from their work, and thus create new jobs in the digital economy. It could also enable a wider range of people to make a living from their creative talents, broadening the scope of Britain's creative industries.

The digital license fee would need to overcome a number of conceptual and practical issues before it could be turned into a workable proposal. However, we believe that it is one of a number of options that merit further exploration.

Contents

1	The big digital dilemma	6
	The public good problem	7
	The role of advertising and online intermediaries	8
	Is the digital economy at risk of a downward spiral?	8
2	Business models in the digital economy	11
	Other social models for funding online projects	13
3	Introducing the digital license fee	14
	What would the benefits of a digital license fee be?	15
	What are the barriers to introducing a digital license fee?	16
4	Conclusion	18
5	Acknowledgements	19
6	Contact details	21

Chapter 1 The big digital dilemma

The internet has changed the economy – and our lives – in innumerable different ways. We use the internet to convey information about the ‘real’ world, by ordering our shopping or finding directions to a restaurant. But the internet has also spawned an economy of its own, a digital economy, in which everyone and anyone can produce and consume online content. This online content may range from a few hundred characters of text to a feature length film, or an immersive computer game. In the digital economy, everything is online; there need be no interaction with the physical world, save for the cables through which the information is delivered. This digital economy is growing and changing rapidly, and has spawned some of the world’s fastest growing and most innovative companies of the past decade – the likes of Facebook, Google and Twitter.

Despite this success, the digital economy faces a deep underlying problem: internet companies find it very hard to get customers to pay for online content. The majority of content available on the internet is free, and a large proportion of this is likewise provided for free by individuals – part of the explosion of innovation the internet has made possible. However, many organisations – including news outlets, magazines and music companies – invest heavily in generating quality content, while giving it away for free. In other words, content in the digital economy displays many of the characteristics of public goods. This means that online content providers face a dilemma: if they charge for content, they risk losing customers and degrading their product, but if they do not, they will find it hard to sustain investment in quality content. This dilemma has consequences for content providers themselves, but also for the digital economy as a whole; in the long term, an internet without top quality content may find itself stagnating rather than driving explosive growth.

In the past, this challenge has focused attention on copyrights, and how they are enforced on the internet. Most prospective solutions to this dilemma have revolved around strengthening online property rights, and thus boosting the ability of traditional ‘rights holders’ to make people pay for their content. Much of this has involved tackling internet piracy, and was enshrined in the Digital Economy Act of 2010.

However, this view runs into two key problems. First, as the government has recently acknowledged¹, it is almost impossible to police piracy and uphold all rights on the web. Second, and more seriously, it ignores the realities of how the internet works. The internet has an expansive power to spread information and give people access to huge, interactive networks of content, but this means that it works by different rules to

¹ HM Government (August 2011) The Government Response to the Hargreaves Review of Intellectual Property and Growth

the rest of the economy. Rather than trying to replicate the conditions of the physical economy in the online market, the debate must move on to wider questions about how creative businesses of all kinds can make money on the internet.

The public good problem: why is it so hard for content providers to make money?

In the physical economy, it is easy for firms to get people to pay for their products. Each product can only go to one buyer, and the firm can charge that buyer at the point of sale. Content – the products of the digital economy – do not work in this way; they have many of the features of public goods, making it hard for firms to charge for them, and easier for customers to access them for free.

The definition of a public good is that it is non-rivalrous (i.e., an infinite number of people can use it without it running out) and non-excludable (i.e., it is hard for firms to stop people gaining access to it). Like all intangible goods, online content is non-rivalrous; once it has been produced, it can be shared by millions of people without having to be remade. This makes it very powerful – it can reach huge audiences cheaply – but makes it harder to prevent it being shared freely. The shift from analogue to digital technology has made creative content interactive, and far more easily shared and reproduced.

Online content is not non-excludable as such, since firms can put a firewall around their content relatively easily. But content in the digital economy benefits enormously from being part of a network; free sharing of information, links from one website to another and user interaction can significantly increase the value of much web content. Putting content behind a pay barrier significantly reduces these activities, and can therefore reduce the value of the content. Added to this, it has proven difficult in practice to prevent widespread sharing of online content for free, despite laws forbidding it. So while online content is not a pure public good, in practice it has many of the features of one. The upshot is that content providers find it very hard to make money, even if their content is highly valued by customers. It may also mean that, collectively, we invest less in producing online content than is beneficial to society.

The aim of this paper is not to push for stronger or weaker rights for creative industries and content providers. It is to move beyond that debate, and to look for solutions that preserve the freedom of the internet, while enabling creators to make money and sustain investment in quality content. Our sole aim is to create a digital economy that works effectively, has a wealth of quality content, and acts as an engine of innovation, growth and job creation.

The role of advertising and online intermediaries

Although content providers find it hard to charge their customers directly, many have been able to sustain themselves on revenue from online advertising – just as many newspapers and broadcasters did before the rise of the internet. Online advertising provides content providers with a means of turning people’s attention – broadly the number of clicks – into cash. This provides an incentive for content providers to attract as many users to their websites as possible, and thus to invest in their content.

This role of advertising in the digital economy has been partly enabled by the rise of a new type of company: the online intermediary. These companies – which include hugely successful firms like Google, Facebook and Twitter – generate enormous value by making it easier for internet users to find and share information. By making it easier for consumers to find what they’re looking for (Google especially), and by creating large networks for exchanging content (Facebook, Twitter and Youtube especially), these online intermediaries have created new, more efficient ways for content providers to connect with their audiences, and thus enabled new business models. Online intermediaries have generated huge economic benefits by making online markets work far more efficiently, and by unlocking the power of online networks. And because a large proportion of internet traffic goes through these intermediaries, they are also able to streamline advertising revenue, allowing them to generate significant revenues, but also enabling other companies to generate revenue.

Is the digital economy at risk of a downward spiral?

This model for funding the internet, based on advertising revenue, has some extremely attractive features. It enables consumers to gain huge consumer surpluses for free (McKinsey estimates that each British internet user gets €20 per month of consumer surplus from the digital economy²), while still providing funding for content providers. Even the advertisers, who effectively subsidise the digital economy, get a good return on their investment, through increased sales of their products. But there are some inherent problems with this unusual market structure.

First and foremost, the size of the digital economy is broadly limited by the total value of advertising revenue (unless content providers find new ways to get customers to pay for content *en masse*). Broadly speaking, content providers in aggregate can only make more money if the advertising market grows. While there have been some significant breakthroughs in raising advertising revenues by making advertising more targeted,

2 McKinsey Global Institute (2011) Internet matters: The Net’s sweeping impact on growth, jobs and prosperity

this growth in advertising revenue must be sustained over time if the digital economy is to achieve its full growth potential. If the number of content providers exceeds growth in advertising revenues, the revenue per user may even fall over time. More seriously, relying on advertising revenue may result in total funding for the digital economy being well below its optimal level, a common problem for quasi-public goods. We may simply be diverting too little money towards online content providers, and therefore failing to take advantage of one of the UK's genuine economic strengths.

Second, and more subtly, attention is an inefficient mechanism for allocating resources within the digital economy. Advertising revenues are allocated based on a website's ability to make someone click on it, not according to how much that person actually values the content they view. The payment mechanism does not reflect how much the user would be willing to pay for the content – a decent proxy for its value – but how well it grabs their attention. This stands in contrast to the physical economy, where customers normally pay for the goods they want most, rather than those that first catch their eye. This may lead to websites focusing more on eye-catching features rather than investing in content that users actually value.

Taken together, these problems may have serious consequences for the future of the digital economy. For a start, it means that a large and growing area of economic activity may not be captured by the market. This means losing out on GDP growth, and potentially on job creation. It may also mean that firms do not invest in high quality content that consumers value, either because their revenues are too low to sustain the investment, or because they fare better by focusing on attention-grabbing ahead of quality content. If this is the case, and investment falls, the consumer surplus in the digital economy will fall. This may in turn reduce advertising revenues, and could lead to a vicious cycle that shrinks the online market. (Of course, lower investment in content will also mean fewer jobs for journalists and other creative professionals). This downward spiral would also affect online intermediaries; without demand for content, they could see traffic shrink. Intermediaries also benefit from having authoritative, professional sources on the internet to help users judge the quality of different types of content. A Twitter without professional journalists might suffer from a larger number of unsubstantiated rumours, making it harder for users find information they can trust.

But the digital economy presents opportunities as well as threats for content providers. The power of the internet – and especially the growth of online networks – makes it possible for content providers to reach a much wider range of users rapidly. And it is not just large, traditional firms that can access this market; individual creators and entrepreneurs also have far greater prospects for reaching a mass audience. At the

same time, the internet may offer some firms a wider range of options for generating revenues, such as providing services or selling spin-off products. For many innovative firms, the internet provides opportunities to put in place new business models.

Two recent books – *The Cult of the Amateur* by Andrew Keen, and more recently *Free Ride* by Robert Levine – have raised similar concerns about the future of the web, and warned about a general dumbing down of the internet. Both authors attribute these problems to the weakness of online rights, and largely blame online intermediaries for undermining large, professional media companies. However, this view falls into the familiar trap of trying to impose the rules of the physical economy on the web, and overlooks the economic power of a free internet.

Chapter 2 Business models in the digital economy

The digital economy clearly throws up both challenges and opportunities for firms. The key question is how they adapt their business models in response to this challenge. In order to understand the different options available to businesses, it is worth considering the different components of a modern firm's business model.

At its heart, a successful business model must enable a firm to do two things: create something valuable; and persuade customers to pay for it. It is the latter of these factors that is particularly challenging for online content providers. There are many different business models that firms can adopt to solve this problem – a few of these are discussed below. These options draw heavily on examples from the news industry, since firms in this area have adopted a wide range of models:

- 1. The open model at scale:** Many digital content providers have embraced the open structure of the internet, and offer all their content for free, seeking to embed it within online networks as extensively as possible. The aim is to maximise the number of users, and thereby to generate sufficient advertising revenue to employ professional staff and invest in content. Organisations that have embraced this model include the Guardian and the Huffington Post. However, while the Guardian employs large numbers of staff and invests heavily in content, the Huffington Post invests less in content, and draws heavily on a range of contributors. This model can only work where organisations achieve enormous scale, since the advertising revenues needed to sustain high investment in content require millions of users. As a result, it is very hard for organisations to make this model work while investing heavily in content;
- 2. The paywall model:** Some organisations have chosen put a paywall around their content, charging users subscription fees to access their content. While this generates direct revenue, it poses two problems. First, it tends to drastically reduce the number of users, which reduces advertising revenues as an alternative source of income. Second, it cuts off content from much of the interactivity that makes the web so attractive to users. Paywalls reduce the number of people linking to content from social networks and other websites. It also reduces the number of users who can post comments and contribute to the website. The most high profile adopter of this model in the UK has been The Times, which saw user numbers drop by roughly 87 per cent in the four months after introducing a paywall:³

³ BBC website, 2 November 2010; Times and Sunday Times readership falls after paywall

3. The metered paywall model: The metered paywall option provides a middle ground between the open and paywall models. Under this system, users are allowed a limited number of free hits on a website per month, after which they must pay a subscription fee. The rationale is that casual users (who make up the majority of users⁴) will still visit the site, maintaining advertising revenue, while many of the most regular readers are prepared to pay for a subscription. This model has been adopted by publications including the Financial Times, The Economist and The New York Times. However, there is a danger that this model may work well for more specialised, well-known content providers, but may prove problematic for more general-interest content providers that rely more heavily on connections to the rest of the web.

4. Using online profile to sell complementary products and services:

Some content providers are able to use their online profile to cross-sell complementary items that people will pay for. For instance, many musicians provide access to their material for free, but can attract fans to pay for their concerts. Equally, some news websites offer specialised services (such as recruitment) based on their profile and reputation. These complementary sales can supplement advertising revenues.

5. Adapt to different technological platforms: While a large amount of content in the digital economy is consumed for free, it is more common for consumers to pay for content on newer devices, such as smartphones and tablet computers. The rise of the 'app' has bred to a new industry of app developers, and the introduction of numerous different mobile devices for accessing the internet has created more opportunities for content providers to make money. However, in many ways the discrepancy between content consumed through mobile devices (which consumers often pay for) and that consumed through PCs (which is often provided free) highlights the distortions created by different market platforms.

This list of potential funding models is not exhaustive, but it demonstrates the breadth of different approaches that businesses and social projects have adopted to fund themselves. One of the internet's great strengths is that it is constantly enabling new business models, which can be a major driver of innovation. Given the pressure placed on some content providers, we can expect to see digital firms attempt to diversify their sources of revenue in the future. By seeking to generate revenue from a number of

⁴ According to research by Pew Research Centre and Nielsen, only 6.5% of users for the USA's most popular new websites were regular users (i.e., visited the site more than 10 times per month). Quoted in The Economist (7 July 2011), Making news pay: Reinventing the newspaper

different sources, online content providers may be able to make the web pay. However, it is unclear whether these models will provide sufficient overall funding to sustain growing investment in digital content.

Other social models for funding online projects

Besides these business models, there are other social models for allocating funding towards content creation on the internet. These include:

- 1. State funding:** Many countries, including the UK, have long had state-funded media organisations, which have made the transition to the web. The license fee that funds the BBC enables it to invest heavily in content development, but this type of funding tends to be limited to a few organisations;
- 2. Charitable funding:** Some websites, most notably Wikipedia, have funded themselves through donations of cash and content. This model can enable some charitable websites to fund themselves without adverts. However, charitable funding is unlikely to be a viable model for many websites, due to the scale required to generate sufficient funding.

Chapter 3 Introducing the digital license fee

There is also another way in which the government might be able to help move the UK's digital economy onto a more sustainable footing: putting in place an artificial market mechanism. This would mean forcing internet users to make a financial contribution towards content in the digital economy, but letting those users decide how this funding should be allocated. If such a system could be made to work effectively, it could allow the digital economy to grow, while rewarding the most innovative and highly valued content providers. This section outlines one way in which an artificial market mechanism might work; we call it the 'digital license fee'. At this stage, this digital license fee is just an idea; there are a number of outstanding issues with it, and it would need significant development before it could be considered as a viable policy. Our aim is not to advocate the introduction of a digital license fee, but to promote debate about alternative models for funding the digital economy.

Under a digital license fee system, internet users would be charged a monthly fee based on their internet usage. This fee could be levied in a number of ways, including through internet service providers. The fee could be a flat monthly rate, or could be linked to the amount of data consumed per month.

This money would be re-distributed directly to online content providers; it would be allocated according to expressions of preference from the user.⁵ In practice, this system would involve all participating websites featuring a button that enables users to signal a preference for it (akin to the recommendation buttons commonly used in social networks). The monthly fee paid by each user would be divided between each site or piece of content they had clicked on, so that users could not distort the system by clicking on multiple sites. In this way, the digital license fee would be distributed to content providers according to their preferences, giving a reasonable approximation of a market.

Although the proposal below may seem radical to some, neither of the central concepts are new. The idea of a license fee is well established; it was first introduced to fund the BBC. In Germany, the notion of a 'culture flat-rate' is currently being debated; that idea would involve everyone being charged a flat fee that was distributed among cultural industries. Equally, the technology to allocate funding through a series of user recommendations already exists, and has been put into commercial practice by organisations like Flattr. Given the right infrastructure, this type of user-allocated funding system could be workable. The only new suggestion in our digital license fee model is to combine a fixed charge with a system that distributes that revenue according to user preferences.

⁵ A model allowing this to happen has already been pioneered by Flattr, a micro-donation system that enables people to voluntarily pay for content on the internet

A worked example of how a digital licence fee might be distributed

- We have two users, Animal and Bert, who both have a license fee of £10 a month to distribute among websites.
- Animal hits the recommend button nine times for The Muppets website, and once on the Sesame Street website – as a result, The Muppets receive £9, and Sesame Street receives £1 from Animal.
- Bert clicks once on the Sesame Street website, and does not click on the Muppets website – as a result, Sesame Street receives £10, and The Muppets receive nothing from Bert.

The digital license fee would complement rather than replace advertising revenue, and indeed it may help to boost advertising revenue by improving the overall quality of content on the internet. The fee would sit alongside advertising revenue as a key pillar of the digital economy, providing a number of different potential revenue streams for content providers.

What would the benefits of a digital license fee be?

A digital license fee of this type could transform the digital economy, benefiting consumers and online intermediaries as well as content providers. By creating a new revenue stream for creative businesses, which would be allocated towards the content that customers value most highly, the digital license fee could raise the standard of content across the internet, and create new jobs in the creative industries.

The benefits of a digital license fee would not just accrue to large, established companies; it could enable independent artists and entrepreneurs to make a living by creating digital content. That could transform Britain's creative industries, making them much more open to talented individuals, and ultimately opening up a new type of job for those in creative professions. The idea of making a living by uploading videos onto YouTube may seem strange, but there is no reason that it should do. Most jobs exist because they provide things that people want or need, and the digital economy is no different to any other industry in that respect.

Of course, individuals hoping to make a living through the digital economy would still need to use intermediary sites to help attract users to their content. To make this possible, the digital license fee would need to be allocated towards specific pieces of

content, rather than websites; even if you view a blog through Google, the revenue (or at least a portion of it) should still go to the blog's author. This would require a significant amount of coordination with online intermediaries.

What are the barriers to introducing a digital license fee?

The concept of a digital license fee has a lot of theoretical appeal. If successfully implemented, it could make available another source of revenue to support the digital economy. However, introducing a mechanism like a digital license fee would not be a straightforward undertaking. There are likely to be a range of practical issues that need to be addressed. This section sets out a few of the most significant challenges.

How would you decide who is eligible to receive the digital license fee?

Content providers that wished to receive revenues from a digital license fee would (presumably) need to sign up with the administering scheme. However, this throws up questions about whether certain websites or content providers – such as pornographers or extremist political movements – would be excluded from the market. There may also be concerns about fraud, and fake websites abusing the system to make money. In a broader sense, there are also questions about whether the digital license fee would be used to 'regulate' the web in any way. Of course, there would be nothing to stop the digital license fee being introduced without any regulation, but this may not be politically or ethically palatable. Finding a satisfactory resolution to this issue would be a key prerequisite for the introduction of any mechanism like the digital license fee.

How would the size of the digital license fee be determined?

While a digital license fee might be allocated in line with consumer preferences, it would be much harder to determine how big the fee should be. While each user could be charged according to their broadband usage (or another proxy measure), it is almost impossible to assess how much each customer values the content they view on the web. As a result, the size of the digital license fee would have to be based on a judgement about the overall amount of resources that should be diverted to the digital economy. Getting this right would be extremely important; if the fee is too high, it could overburden consumers, but if too low it would fail to provide sufficient support to the digital economy.

Of course, introducing a digital license fee would also impose an additional cost burden on consumers. While this may prove controversial, it would not operate like a conventional tax, in that it would be redistributed directly to content providers. In

addition, this fee would be likely to have significant economic benefits, and it may well make consumers better off if the standard of content on the digital economy increases substantially.

Can we adopt a UK-only policy on a global internet?

A digital license fee would (initially at least) be introduced in Britain, be paid for by British consumers, and would benefit companies with a presence in Britain. However, many people in other countries consume online content from UK digital companies, just as people in the UK consume content from around the world. In effect, British consumers would be subsidising overseas consumers to some extent.

However, this position may well strengthen the global position of the UK's digital economy. If the digital license fee were only available to companies or individuals with a presence in the UK, it may encourage more creative companies to move to Britain. Equally, content providers would still be able to generate advertising revenue from overseas users. The likely increase in the quality of online content may also help to boost the international standing of the UK's digital economy, helping to turn it into a much important export sector.

Would this affect the television license fee?

There would be no reason for the digital license fee to replace the existing television license fee. The two fees would serve entirely different purposes; the television license fee supports the BBC as an independent public service broadcaster, while the digital license fee would be a mechanism for allocating more resources towards private content providers. However, the financial burden imposed by a new type of license fee may have implications for the size of the television license fee.

Chapter 4 Conclusion

It is clear that there is a problem with how the digital economy works at present; if there weren't, there would not be such a heated debate about the problem. But the debate must move beyond strengthening copyright enforcement; the challenge is far more wide-ranging than that. The fact that online content providers find it hard to get people to pay for their content is a problem, but strengthening copyright enforcement alone cannot solve this problem. A free and open internet is an extraordinarily powerful force, which greatly improves the ability of content providers to reach their audiences. The rise of online intermediaries has enabled a range of new business models, which may help some content providers make money in the digital economy. This wave of business model innovation in the digital economy has created enormous benefits, but it also risks degrading the overall quality of the content we can find online.

In response, content providers need to diversify their revenue streams from the web in future. The digital license fee that is introduced in this paper may provide another revenue stream to support this diversification. In doing so, it could support a digital economy that remains open and interactive, while sustaining greater investment in content. By forcing internet users to make a contribution for the content they consume on the web, while allocating that money to the websites that those consumers like best, it may have the power to unlock new investment in our creative industries. Of course, this remains a tentative proposal. There is much work to be done to turn a concept like the digital license fee into a workable solution, but it at least provides another option. What is needed is a more wide-ranging debate that moves beyond the question of copyrights alone, and stops pitting content providers against online intermediaries; in fact, these two groups can benefit from each other a lot. The Big Innovation Centre exists to lead this type of debate, and we will be exploring many challenging issues like this over the coming months.

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