

OXFORD ECONOMICS

The Economic Impact of the UK Film Industry

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DEFINITIONS

The UK film industry

The **'UK film industry'** is defined in this report to include those activities which arise in the UK from the companies and/or individuals employed in the:

- different stages of **film production in the UK** (including pre- and post-production)
- **distribution of films** (both UK and foreign-made); and
- **exhibition of films** (both UK and foreign-made).

This is the same definition of the UK film industry as used in our 2007 and 2005 reports.

The 'core' UK film industry

However, the focus of this report – like the previous studies – is on a narrower range of activities, which for clarity we term the **'core UK film industry'**. This includes companies and individuals involved in all film production in the UK. But it only includes the activities in the distribution and exhibition sector associated with UK-made films.

This means that the economic activity associated with the distribution and exhibition of films made abroad is not included in the estimates of the core UK film industry presented in this report. A UK film is defined as any film which is certified to be British by the Secretary of State for Culture, Media and Sport under Schedule 1 of the Films Act 1985.

1. Key points

- **The core UK film industry¹ is a substantial industry, directly employing 36,000 people in 2009 (up 7% from 33,500 in 2006) and supporting a total of 100,000 jobs**, taking into account those working in its supply chain and its contribution to UK tourism, trade and merchandise sales.
- **The industry has in general weathered the recession well, partly thanks to the emergence of 3D, and is strongly placed to continue its recent trend of growth and expansion.** With the right support, particularly in skills development, the sector will continue to make a major contribution to UK plc.
- **The film industry provides jobs for some of the UK's most highly qualified workers.** 58% of the production workforce are university educated, and at £33,700 the average salary is significantly above the national average.
- **UK films contribute substantially to British cultural life.** They are a key means of expression of UK identity and address issues of diversity that are critical to meeting the challenges of the 21st century.
- **Films depicting the UK are responsible for generating around a tenth of overseas tourism revenues**, totalling around £1.9 billion a year.
- **Exporters also benefit from the part films play in establishing and reinforcing the UK's image and 'brand'.** This is helped by around a quarter of the top worldwide films being premiered or co-premiered in the UK, which generates substantial media exposure.
- **Overall, the core UK film industry contributed over £4.5 billion to UK GDP in 2009, taking into account its multiplier impacts, and over £1.2 billion to the Exchequer** (gross of tax relief and other fiscal support).
- **The film industry is amongst the UK's more carbon-friendly sectors.** Emissions are below average in relation to GDP and the sector is taking proactive steps to measure, manage and reduce its carbon footprint.
- **The Film Tax Relief is vital to sustaining the competitiveness of film production in the UK.** Many highly competitive non-EU states are now increasing their levels of production tax relief towards 50% or more, and without the UK Film Tax Relief in place, we estimate that its film production would be around 75% smaller, reducing UK GDP by around £1.4 billion a year and Exchequer revenues by about £400 million a year. Since the Film Tax Relief costs HM Treasury around £110 million a year, this means it generates about £13 in GDP for every £1 invested.

¹ See definition on contents page

- **The growth of Video-on-Demand and other technological advancements will bring major changes to the way film is consumed.** Once properly rolled out, VoD could help increase total film video revenues from their current total of £1.5 billion.
- **But the economic benefits created by the core UK film industry are threatened by the rapid rise of audio-visual copyright theft and infringement.** This problem could cost the EU around 1.2 million creative industries jobs and €240 billion in lost retail revenues by 2015, and if not tackled effectively will jeopardise many of the economic benefits to the UK described throughout this report.

2. Executive Summary

- The support provided through tax relief to encourage investment in films in the UK, first established in 1992, has facilitated the development of a substantial UK film industry making a large net contribution both to the UK economy and to cultural life.
- Taking into account all of the ways in which the core UK film industry contributes to UK plc, we calculate that it contributed over £4.5 billion to GDP in 2009 and over £1.2 billion to the Exchequer in tax revenues (gross of tax relief and other fiscal support).
- The Film Tax Relief is vital to sustaining the competitiveness of film production in the UK. Without the Film Tax Relief, we estimate that film production would be 75% smaller, at a cost of around £1.4 billion of lost GDP a year and about £400 million lower Exchequer revenues.

The core UK film industry has become a substantial industry...

... directly employing 36,000 workers...

- The core UK film industry directly employed around 36,000 full-time equivalents (FTEs) in 2009 (including those self-employed). The growth and worldwide reputation of the sector, from its traditional strengths in acting, scriptwriting and film production through to more recent development in specialist post-production fields like visual effects, represents a real British success story.
- The UK is a major player in the global film industry. Its actors regularly scoop major international awards; its directors produce some of the most acclaimed and original content, like *Slumdog Millionaire*; its studio infrastructure and location crews are renowned the world over; its firms are recruited to provide cutting-edge visual effects on the biggest Hollywood productions like *Avatar*, and films like *James Bond* and *Harry Potter* are some of its most lucrative exports.
- While around three-quarters of the jobs in the core UK film industry are based in London and the South East, there are significant numbers of employees throughout the UK. For example, the industry directly supports around 2,200 jobs in the South West and 2,100 jobs in the North West, and supports many more in each of these two regions overall taking into account multiplier impacts.

... including some of the UK's most highly qualified and internationally mobile workers

- The film industry provides jobs for some of the UK's most highly qualified workers. For example, 58% of the production workforce are university educated, and a degree is increasingly seen as essential to getting a foot on the ladder. Furthermore, boosting and updating skills in the core UK film industry is a key priority of the UK Film Council and Skillset through their recently revised skills strategy. The core UK film industry also attracts many

highly skilled foreign workers to the UK: Skillset surveys suggest that around a tenth of all UK-based production staff are non-British, while in sub-sectors like visual effects this can rise to 30% or more.

- The skills of the core UK film industry's workforce are reflected in their average earnings. For example, the average gross income for workers in the UK production sector is £33,700 per annum, significantly above the UK average income. The occupations which earn the highest wages are in editing/post-production/visual effects, production/script and development, and sound/electrical, although it should be acknowledged that low-paid and low-skilled workers are also common in production as well as other parts of the film sector, such as cinema exhibition.
- The skills of those working in the core UK film industry are highly valued around the world. There is a clear danger that, if there were not a successful UK film industry, many of the most highly skilled people currently working in production and post-production in the UK – and therefore contributing to UK GDP and tax revenues – would move abroad.
- In particular, our discussions with UK production companies suggest that up to one-quarter of staff would eventually relocate if tax and other considerations meant that the UK was no longer attractive to investors in film. In value added terms, the impact could be even higher as this one-quarter would comprise the higher-skilled workers. Workers in the film industry are probably more likely to choose to work abroad than workers in other industries given the international nature of the film industry and its labour force.

... directly contributing around £1.6 billion a year to GDP...

- On a turnover of £3.4 billion, the core UK film industry directly contributed around £1.6 billion to UK GDP in 2009. This means that the core UK film industry contributed more than twice as much to GDP as, for example, the machine tools manufacturing industry, while film contributed three times as much to the economy as the designer fashion sector.
- The core UK film industry has undertaken a total of £1.1 billion of fixed capital investment in infrastructure and new technology since 2000.

... and over £440 million to the Exchequer

- The core UK film industry is estimated to have directly contributed about £445 million to the Exchequer in 2009 in income tax, national insurance contributions, VAT and corporation tax (gross of tax relief and other fiscal support). This is equivalent to 13% of the turnover in the core UK film industry.

The core UK film industry has a symbiotic relationship with other creative industries

- For every job supported in the core UK film industry a further job is supported through indirect and induced multiplier impacts. The core UK film industry therefore helps to support 72,000 FTE jobs when we include those people employed in companies supplying the film

industry and for the jobs dependent on the spending of film industry workers.

- In addition, the showing of UK films helps UK TV broadcasters to generate about £245 million of revenues.
- This 'multiplier' activity contributes a further £1.6 billion a year to UK GDP and £425 million a year to UK tax revenues.
- The core UK film industry has synergies with a wide range of other creative industries. Writers, actors, directors and others involved in production obviously work in a variety of other media. And two-thirds of firms involved in the film industry in the UK also work in at least one other screen industry.
- But there are also important spillovers from technical developments in the film industry to other media – most notably, computer imagery developed for films have been used to great effect in TV programmes and commercials.

The core UK film industry's impact is much wider...

- The core UK film industry contributes to the economy and Exchequer in a number of other ways not captured by standard multipliers – for example, by promoting British cultural life, attracting tourists to the UK, supporting UK exporters, and generating sales of DVDs, CDs and other merchandise.

...promoting British cultural life...

- The core UK film industry contributes substantially to the cultural life of the UK. Successful UK films are a means of expression of British identity. UK films also address the social challenges faced in the 21st century, including drug addiction, prejudice and race relations, as well as positive themes such as family values, friendship and triumph over adversity.
- Moreover, econometric evidence suggests that film audiences place a premium on indigenous films. Our estimates suggest that, all things being equal, a film shown in the UK can expect its box office revenue to be up to 30% higher if it is indigenous. On this basis, we calculate that the existence of UK films boosted the box office revenues of cinemas by an average of around £60 million a year over the last decade. As a result, employment in the exhibition sector of the core UK film industry has probably been around 350 higher than it would have been if cinemas had been showing only foreign films, with Exchequer revenues around £18 million a year higher through additional VAT, corporation and income tax contributions.
- But the support provided to the core UK film industry has also ensured that several film-makers have maintained a British setting for stories rather than translating them into the context of another country. For example, the film *Gulliver's Travels* was to be made in North America but came to the UK after considering the cost advantages of a UK shoot.

...attracting tourists to the UK...

- The presentation of UK life in films is not only important in sustaining our culture. It also has important impacts on UK tourism and trade.
- The impact of film on tourism is well-documented through a number of case studies and is recognised in the marketing campaigns of tourist boards around the world. For example, phone apps, podcasts and Movie Maps are available to direct tourists to key locations depicted in films such as *Sherlock Holmes*, *Miss Potter* and *Pride and Prejudice*, while many Indian visitors also tour the sites used by the large number of Bollywood productions shot in the UK.
- While there is limited robust statistical data quantifying the value of this impact, the available evidence suggests around a tenth of the value of foreign tourism to the UK may be attributable to the impact of UK films.
- On this basis we estimate that around £1.9 billion of visitor spend a year might be attributable to UK films.
- In 2009, this additional spending was estimated to be worth £950 million to UK GDP and £210 million to the Exchequer.

...supporting UK exporters...

- Exporters of other goods and services also benefit from the part films play in establishing and reinforcing the UK's image and 'brand'. This is helped by many of the top worldwide films being premiered or co-premiered in the UK, which has generated substantial media exposure.
- The role of film and other creative industries in trade promotion is reflected in the part-sponsorship by the Department for Culture Media and Sport (DCMS) of "*China-UK: Connections through Culture*" (CtC). This initiative aims to develop further cultural co-operation between the UK and China, including trade ties. And according to official UK representatives in China, films like *Harry Potter* and *Bend it Like Beckham* have significantly raised the UK's image in the Far East. The growing market in brand promotion in UK film also provides an outlet for exporters to advertise their products to a wider audience: these promotional benefits are estimated to be worth around £20 million in GDP.
- The core UK film industry is a significant contributor to export earnings in its own right. In 2008, total exports of the film industry were around £1.3 billion, with a net contribution of £494 million to the UK balance of payments.

...and generating sales of DVDs, CDs and other merchandise

- The core UK film industry also supports economic activity in sectors supplying associated merchandising. For example, sales of UK films on DVD and Blu-Ray were worth an

additional £124 million in 2009; rentals of UK films were worth an additional £33 million; sales of soundtrack CDs were £10 million; and sales of related computer/video games were £85 million. In addition, UK films support sales of books, toys, models and clothes, as well as many other products and services through special film-themed promotions.

- We estimate that the merchandising associated with UK films supported about 6,600 jobs in 2009, contributed about £237 million to UK GDP and £107 million to the Exchequer.

The core UK film industry generated in total over £4.5 billion of GDP in 2009 and Exchequer revenues of over £1.2 billion...

- Taking into account all of the ways in which the core UK film industry contributes to UK plc, we calculate that it contributed over £4.5 billion to GDP in 2009, paid over £1.2 billion to the Exchequer in tax revenues (gross of tax relief and other fiscal support) and supported a total of about 100,000 jobs.
- Within these totals, inward investment films generated about £3.6 billion to GDP in 2009 and about £960 million in Exchequer revenues.

Table 2-1: Summary of the economic contribution of the core UK film industry

Channel of impact	Total contribution to UK GDP in 2009	Total contribution to Exchequer revenues in 2009	Employment impact in 2009
Direct	£1,594 mn	£445 mn	36,000
Multiplier (indirect and induced plus TV)	£1,714 mn	£425 mn	36,000
British film box office effect	£59 mn	£18 mn	350
Tourism	£950 mn	£210 mn	20,000
Promotion/trade	£20 mn	£5 mn	700
Merchandising	£237 mn	£107 mn	6,600
Total	£4,574 mn	£1,210 mn	99,650

Note: The core UK film industry includes the activities which arise in the UK from the companies / individuals employed in the different stages of film production in the UK (including pre- and post-production); distribution of UK-made films; and exhibition of UK-made films. Economic activity associated with the distribution and exhibition of films made abroad is not included. £mn = £ million.

... with the Film Tax Relief vital to maintaining the competitiveness of the core UK film industry...

- Competition to attract film producers to shoot their film and undertake post-production work in a particular country is fierce. This competition partly focuses on the physical attributes of a country; the costs for labour and the renting of locations and sets; and the relative skills of the film production workforce. But a key element is the availability of tax relief and financial incentives, and the UK is now directly competing against nations and states – including those in established film-making locations such as the US and Canada – offering rebate packages worth more than 50% of qualifying expenditure.
- Taking account of the effects of the UK Film Tax Relief introduced in 2007, our estimates show that the costs of producing a film in the UK have fallen relative to those in its competitors, so that in 2010 UK film costs are around 40% lower than those in the US and 7% lower than even those in the Czech Republic, after accounting for the incentives on offer in both countries. The depreciation of the pound is a key factor behind the recent increase in UK cost competitiveness, but the Film Tax Relief is equally important.
- With the Film Tax Relief in place, we expect the core UK film industry to attract around 10-15% of global film production over the period to 2015, with spend on inward investment productions maintaining or bettering its record 2009 level of £750 million per year. This should underpin a continuation of the long-term trend expansion seen in the core UK film industry.

...facilitating £1.4 billion a year of GDP that would be lost with no tax credit

- The importance of the Film Tax Relief to supporting the continued success of the core UK film industry is clear when we consider how UK competitiveness would be affected if there was no tax relief in place. In this case, the UK's cost advantage vis-à-vis the US would fall significantly, and the UK would fall back behind the Czech Republic in terms of competitiveness.
- We estimate that this loss of competitiveness would reduce the UK's share of global film production by around 5-10 percentage points by 2015, to around 5%. That would be equivalent to a loss of inward investment of about £600 million a year by 2015. In addition, investment in domestic production and co-productions would also be seriously undermined by the loss of the tax relief and the knock-on benefits that inward investment films would have brought to the UK. Overall UK film production might be reduced by 75% were there no Film Tax Relief.
- A decline in film production of that scale would have substantial economic effects:
 - It would reduce the direct contribution of the core UK film industry to GDP by about £1.2 billion and by £2.45 billion taking account of impacts on the supply chain and on the spending of workers who lose their jobs. Similarly, employment in the core UK film

industry would be expected to fall by around 25,000 jobs directly and 50,000 taking account of multiplier effects.

- While many of those currently working in the core UK film industry could find jobs elsewhere and so continue to pay taxes, our research suggests that perhaps one-quarter of the most highly skilled would move overseas to be based in or near film production centres, having a detrimental knock-on impact on other parts of the film sector and audio-visual content production industries. As a result, UK GDP would be directly reduced by around £200 million a year.
- Over time, tourism and exports would be undermined as they lose the promotional support provided by UK films.
- In addition, the UK's cultural life would suffer as a result of the loss of UK films.
- Overall, UK GDP would in the medium term be reduced by around £1.4 billion a year. That compares with a current cost of the Film Tax Relief to HM Treasury of around £110 million a year, meaning that around £13 in GDP is generated for every £1 invested.
- These losses in turn would reduce Exchequer tax revenues by about £400 million a year, taking account of multiplier impacts and effects on merchandising.

Box 2.1: Tax relief for UK film production

Government support of the UK film industry has a long history, going back to the Cinematographic Films Act 1927. In the 1930s a quota system led to the establishment of UK studios, many of which – such as Ealing, Shepperton and Pinewood Studios – still operate today. Various other types of financial support were used in the post-War years. The system of tax relief for British film production dates from section 42 of the Finance (No.2) Act 1992. This was extended to a 100% first year write-off for films with budgets up to £15 million by section 48 of the Finance (No.2) Act 1997. Lottery funding began to be advanced to selected British films from 1995. In 2006, the section 42 and 48 reliefs were repealed and replaced from the beginning of 2007 with the Film Tax Relief referred to in this report.

3. Introduction

This report, prepared by Oxford Economics², provides a comprehensive evaluation of the economic contribution of the 'core UK film industry'. It provides an update and extension of our previous studies looking at the film industry published in 2005 and 2007³.

3.1. Study scope and objectives

The specific economic impacts we have focused on in this study are those which arise in the UK from the activities of companies and/or individuals employed in the:

- different stages of **film production in the UK** (including pre- and post-production);
- **distribution of UK-made films**; and
- **exhibition of UK-made films.**

The key point to note here concerns the distribution and exhibition categories – specifically, the economic activity associated with the distribution and exhibition of non-UK qualifying films is not included in our definition of the core UK film industry⁴. While the economic impacts associated with all of the activities of the film production sector in the UK – whether on UK or non-UK films – are set out in this report, we only include activity in the distribution and exhibition sectors related to UK qualifying films. A UK film is currently defined as any film which is certified British by the Secretary of State for Culture, Media and Sport under Schedule 1 of the Films Act 1985 (see Section 3.2 for a description of the full definition).

The reason for making this distinction is to focus on the benefits that follow from having a UK-based film infrastructure industry which would be lost if all films shown in the UK were made in other countries. The general approach we use in the study is, firstly, to present the economic impact associated with activity related to UK films only (ie after making suitable adjustments to remove the activity associated with the distribution/exhibition of films made abroad) and then, secondly, to present the figures for the overall activity from the film industry in the UK.

In conducting the study, we have been mindful of the different elements in the value chain of the film industry. In particular, we use a definition of the film industry which has been commonly used in other studies, surveys and literature, disaggregating the industry into the following three segments:

- **Production:** rights (eg IP creation); planning, writing, direction and casting; cast (eg costume, make-up, props sales/rental); location (eg stage and studio rental and equipment; location management and catering; set production, electrical skills); and film and sound (eg

² Appendix B gives a brief description of Oxford Economics, its services, capabilities and experience.

³ Oxford Economics, "The Economic Contribution of the UK Film Industry", September 2005 and July 2007.

⁴ For example, the activity in the distribution/exhibition sector associated with a film like *Quantum of Solace* is included but not the activity associated with *Avatar*.

equipment rental and sales, camera operations, sound recording and mixing, animation, visual effects); and post-production including editing, music, sound, and post-production computer generated imagery (CGI).

- **Distribution:** film duplication; secondary distribution of UK-made films (video, DVD, TV sales, online etc).
- **Exhibition:** cinema distribution of UK-made films.

3.2. Film Tax Relief and the definition of a UK qualifying film

New rules for the taxation of film production, and in particular a new enhanced tax relief (Film Tax Relief) for the production of British cinema films, were introduced by Finance Act 2006. They apply to films which commenced principal photography on or after 1 January 2007 and to films starting principal photography before 1 January 2007 but uncompleted then.⁵

The film tax relief is aimed directly at film production companies and is not available to those whose only involvement in film-making is confined to providing or arranging finance. In order to qualify, a film must meet three conditions. It must:

- Be made to be shown commercially in cinemas;
- Be certified as British either because it is an official co-production or because it satisfies a new cultural test administered by the Department for Culture Media and Sport; and
- Incur at least 25% of its total production expenditure on film-making activities in the UK.

British films costing £20 million or less are eligible for an additional tax deduction of 100% of qualifying UK expenditure and to surrender losses in exchange for a cash payment of 25%, amounting to a benefit worth a maximum of 20% of qualifying production costs. Other British films will receive an additional deduction of 80% of qualifying UK expenditure and will be able to surrender losses in exchange for a cash payment of 20%, amounting to a benefit worth typically 16% of qualifying production costs.

A British film is one which is given a certificate to that effect by the Secretary of State for Culture, Media and Sport under Schedule 1 of the Films Act 1985. Such a certificate may either be interim, if the film has not been completed, or final, if it has. The Secretary of State certifies films on the advice of the UK Film Council.

There are three ways in which a film can qualify as British. It may:

- Satisfy the cultural test in Schedule 1 of the Films Act 1985. This considers four aspects of the cultural contribution of a film:

⁵ Source: HM Revenue and Customs at <http://www.hmrc.gov.uk/films/guidance/index.htm>

- Cultural content (eg whether it is set in the UK or its lead characters are UK citizens or residents)
- Cultural contribution (eg whether the film represents/reflects a diverse British culture, British heritage or British creativity)
- Use of cultural hubs (eg in post-production or music)
- Use of cultural practitioners (eg the director, lead actors and so on)
- Meet the terms of one of the United Kingdom's bilateral co-production treaties; or
- Meet the terms of the European Convention on Cinematic Co-Production.

In all cases, the film must be formally certified to qualify for Film Tax Relief.

3.3. The channels of economic impact

There are many channels through which the core UK film industry makes a contribution to the UK economy. This contribution includes the following standard economic impacts:

- **Direct impacts** – employment and activity in the core UK film industry itself. As discussed above, this covers all stages of film production (pre-production, production and post-production) which physically takes place in the UK, together with the distribution and exhibition of UK qualifying films in the UK.
- **Indirect impacts** – employment and activity supported down the supply chain to the core UK film industry, as a result of UK film companies purchasing goods and services from UK suppliers. This includes, for example, jobs supported by the manufacture of production equipment sold to production companies; the manufacture of goods sold at cinemas; the spending of film crews in hotels, restaurants etc; business expenditure on TV, radio and other advertising; and a wide variety of activity in the business services sector (legal, accountancy, IT etc).
- **Induced impacts** – employment and activity supported by those directly or indirectly employed in the core UK film industry spending their incomes on goods and services in the wider UK economy. This helps to support jobs in the industries that supply these purchases, and includes jobs in retail outlets, companies producing consumer goods and in a range of service industries.

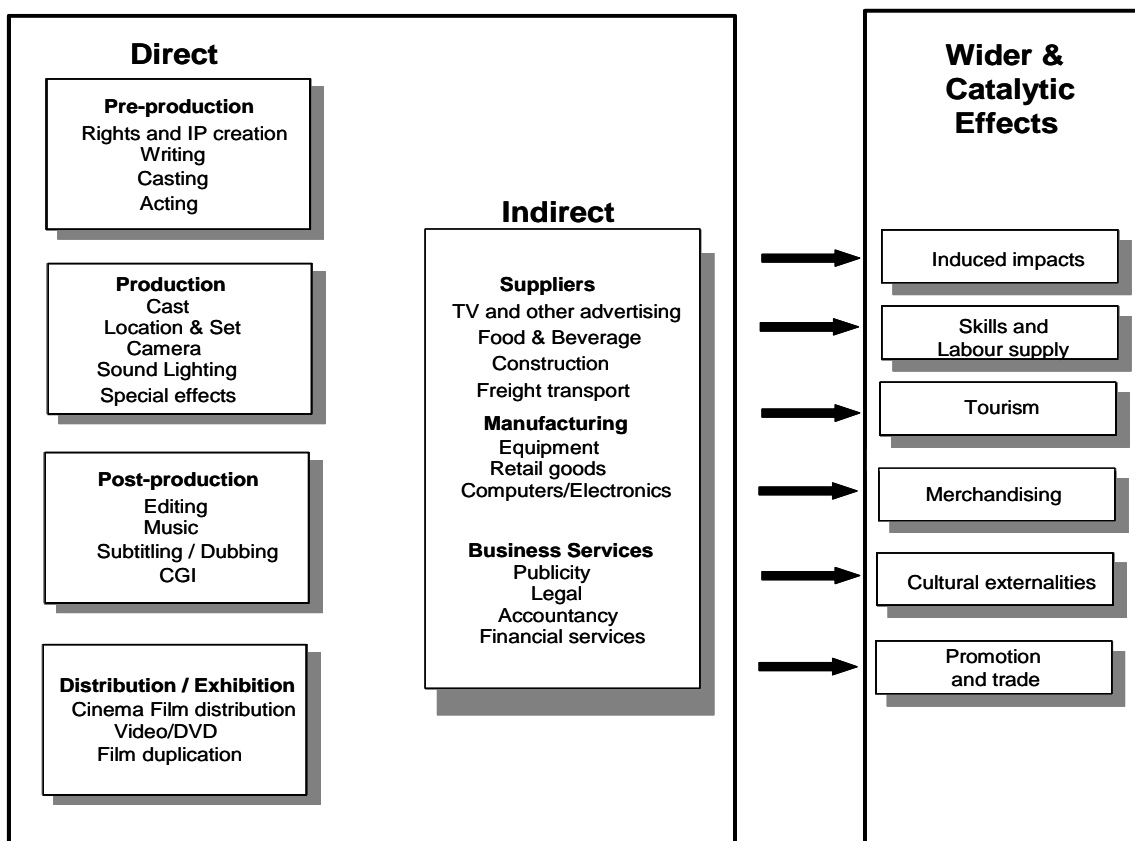
But there are also a number of additional economic catalytic impacts ('spillovers') which result from the wider role film has on:

- **Skills and the labour supply** – the core UK film industry improves skill levels in the UK economy by helping to retain highly skilled people who would otherwise go abroad or by attracting well-trained people from other countries to work in the UK. It also increases the pool of talent and skilled labour for other screen industries such as TV and commercials.

- **Tourism** – the core UK film industry indirectly enhances the UK tourist industry by encouraging more international tourists to visit the UK, and their spending supports a substantial number of jobs in the UK.
- **Culture** – A distinct UK film culture has the characteristics of a public good in the sense that all of the cultural/educational economic externalities (ie spillovers or benefits) are unlikely to be provided by an unaided market.
- **Merchandising** – sales of DVDs, books, CDs, video games, phone apps, toys, models and clothing are all increased as a result of a strong and successful core UK film industry.
- **Promotion and trade** – the core UK film industry has a role in facilitating trade into the UK. High quality films raise the awareness of the UK as a place to invest, not only in the film industry itself but also in other sectors.

The economic value of the direct, indirect and induced effects is related to the total revenues of the core UK film industry, while the catalytic impacts are ‘spillover’ benefits for other industries, consumers and the economy more generally (as shown in Figure 3-1 below).

Figure 3-1: The core UK film industry and its economic impacts



3.4. Report structure

The rest of this report is structured as follows:

- Chapter 4 focuses on the direct impact of the core UK film industry in terms of employment, GDP and investment.
- Chapter 5 assesses the productivity of the core UK film industry and related indicators such as average wages, education, and skills and training.
- Chapter 6 discusses the multiplier impacts of the core UK film industry – the so-called indirect and induced impacts.
- Chapter 7 covers the impact of the core UK film industry on tourism.
- Chapter 8 looks at the impact of the core UK film industry on the enhancement and appreciation of UK culture.
- Chapter 9 looks at the value of merchandising associated with the core UK film industry.
- Chapter 10 looks at the way the core UK film industry promotes the UK and its trade more generally.
- Chapter 11 looks at the growth of Video-on-Demand (VoD) as a new market for the UK film industry, and explores the threat of audio-visual copyright theft and infringement.
- Chapter 12 assesses the stimulus provided to the core UK film industry by the Film Tax Relief.
- Chapter 13 summarises the overall economic contribution of the core UK film industry.

4. Direct impact – Employment and GDP

The film industry in the UK has grown significantly over the last 25 years. On the production side, there has been a steady rise in the number of UK feature films made, from an average each year of 43 in the 1980s to 83 in the 1990s and to 120 a year since 2000⁶.

Similarly, on the exhibition side, the number of UK cinema admissions has grown, from an average of 78 million per annum in the 1980s to 119 million per annum in the 1990s, and to 163 million per annum since 2000. Cinema admissions peaked in 2002 but have been rising again since 2006, and strong performance in 2009 (the second highest admissions figure in 40 years) drove UK box office takings close to £1 billion for the first time.

This chapter details the trends in employment, GDP and investment directly supported by these activities, and by the activities specifically related to film production in the UK and the distribution/exhibition of UK qualifying films – referred to here as the ‘core UK film industry’. It also quantifies the direct contribution of companies and employees in the core UK film industry to the Exchequer through income and other taxes.

Key Points

- The core UK film industry directly employed around 36,000 full-time equivalents (FTEs) in 2009 (including those self-employed), up from 33,500 in 2006. It has weathered the recession well, though impacts have been hard felt amongst smaller independent producers.
- On a turnover of £3.4 billion, the direct contribution of the core UK film industry to UK GDP is estimated to have been around £1.6 billion in 2009, up from £1.5 billion in 2006.
- Capital investment in the core UK film industry is estimated to have been £147 million in 2009, with most of the investment undertaken in the production sector. Between 2000 and 2009, fixed capital investment in infrastructure and new technology has totalled almost £1.1 billion.
- The direct tax contribution of the core UK film industry via income tax, national insurance contributions, corporation tax and net VAT was about £445 million in 2009 (gross of tax relief and other fiscal support), up from £435 million in 2006.

⁶ Box office revenue figures and admission numbers are taken from the annual ‘UK Film Council Statistical Yearbook’ and from BFI.

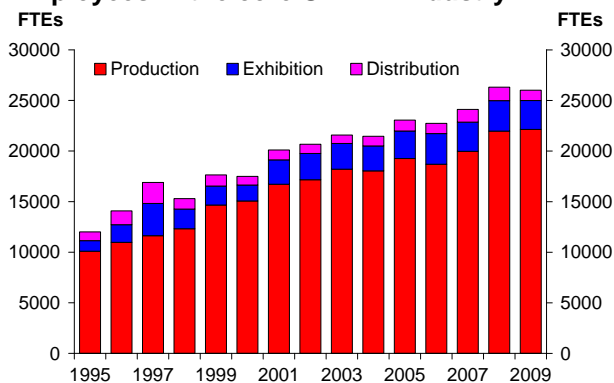
4.1. Direct employment

Employment in the core UK film industry has been rising steadily since the mid-1990s (Charts 4-1 and 4-2). Total direct employment is estimated to be around 36,000 in terms of full-time equivalents (FTEs)⁷. This means that the core UK film industry is of a similar size to, for example, the book publishing industry, and larger than the photography, fund management and pharmaceutical manufacturing sectors.

These estimates (and our estimates for the core UK film industry’s contribution to GDP and investment presented below) are based on the results for 2002 from a detailed survey of 400 companies in the screen industries for the Optima/CE study, updated for growth in employment in the industry over the past seven years⁸. We adjust the CE estimates for the distribution / exhibition sector to focus solely on activity associated with UK qualifying films on the basis of the proportion of box office admissions to UK films over the 1994-2009 period. Another more recent data source we use is the Skillset Employment Census, which released new estimates of the total workforce across the creative media industries – including film production, distribution and exhibition – corresponding to Census day on 1 July 2009. It is important to recognise that no single data source provides a comprehensive snapshot of employment in the UK film industry: even the Skillset Census struggles to capture the large proportion of freelance workers within the film production sector⁹.

Chart 4-1:

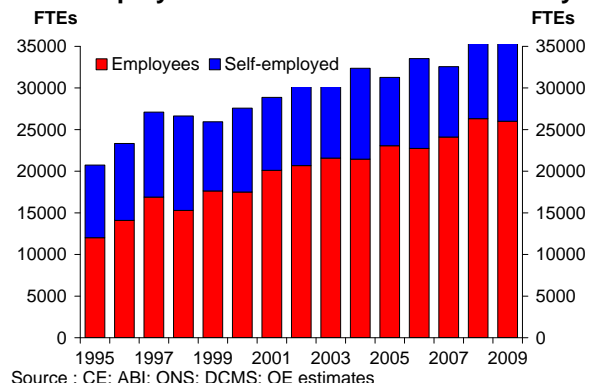
Employees in the core UK film industry



Source : CE; ABI; ONS; DCMS; OE estimates

Chart 4-2:

Total employment in the core UK film industry



Source : CE; ABI; ONS; DCMS; OE estimates

Table 4-1 details the size, in terms of employment, of the different areas of the core UK film industry. An estimated 22,100 FTE employees (or 61.5% of the total) work in the production sector; distribution supports 1,000 FTE jobs (2.8%); and exhibition supports 2,900 FTE jobs

⁷ Based on the assumption that one part-time job equates to 0.5 of a full-time job.

⁸ Using results from the Annual Business Inquiry and the Labour Force Survey.

⁹ However, a methodology for estimating the number of freelancers in UK film production has been developed in association with the UK Film Council. We use this as one input to our estimates of total employment in the UK core film industry, alongside growth rates in the different categories of film employment between the previous Skillset Census in 2006 and the most recent in 2009.

(7.9%). Self-employment of around 10,000 FTE jobs (27.8%) accounts for the remainder of the workforce.

Table 4-1: Employment in the core UK film industry, 2009

Film Sector	Employment		
	Total jobs	FTE jobs	FTE jobs including self-employed
Production	26,100	22,100	31,850
Distribution	1,100	1,000	1,100
Exhibition	4,400	2,900	3,050
Employees	31,600	26,000	36,000
Self-employed	11,700	10,000	-
Total	43,300	36,000	-

Source: CE; ABI; ONS; Oxford Economics estimates

The growth of core UK film industry employment over the past decade mainly reflects a doubling of employment in the production sector since 1996, creating an additional 11,200 FTE jobs, and a 64% increase in employment in the exhibition sector since 1996, creating an additional 1,100 FTE jobs. There has, however, been no significant increase in jobs in the UK film distribution sector over the same period, and self-employment, though often fluctuating quite heavily from year to year, has also remained close to its 2006 level.

Overall, the core UK film industry has created around 12,600 new FTE jobs since 1996, an increase of 54%, including more than 8,400 (30%) since 2000. A recent report into the effects of the recession finds that although smaller independent production companies have been hard hit, the film sector as a whole has weathered the storm well¹⁰.

4.2. Direct contribution to GDP

The standard method for calculating the direct contribution of an industry to GDP is to measure its so-called 'value added' – that is, to calculate the difference between the industry's total pre-tax revenue and its total bought-in costs (ie costs excluding wages and salaries) adjusted for any changes in stocks.

On this basis, we estimate that, on a turnover of £3.4 billion, the core UK film industry contributed around £1.6 billion to UK GDP in 2009. This means that the core UK film industry contributed slightly more to GDP than, for example, the manufacture of office machinery and

¹⁰ Source: Skillset, "From Recession to Recovery: An Overview of the Impact on the UK's Creative Media Industries and the Path to Recovery", September 2009.

computers, and more than twice as much as the machine tools industry. Film also contributed three times as much to the economy as the designer fashion sector. Table 4-2 shows the composition of core UK film industry value added. In 2009, the production sector accounted for around 69% of total value added, with the distribution/exhibition sector accounting for the remaining 31%.

A separate report on the UK's facilities sector – which provides equipment and services to TV, film and other audio-visual industries – estimated that film accounted for just over £400 million (18%) of the sector's £2.2 billion total turnover in 2008¹¹. This would be included within our estimates of the UK's film production turnover.

Table 4-2: Sales and value added in the core UK film industry, 2009

Film Sector	Sales £ million	Value added £ million
Production	2,450	1,100
Distribution	630	270
Exhibition	340	220
Total	3,420	1,590

Source: CE; ABI; ONS; Oxford Economics estimates

Value added in the core UK film industry has increased on average by 9.8% per annum over the 1996-2009 period in current prices (Chart 4-3) or 7.1% in real (ie inflation-adjusted) terms (Chart 4-4). This is faster growth than recorded by the overall economy, with the direct contribution of the core UK film industry to GDP increasing substantially in real terms since 1996.

The core UK film industry has shown repeatedly that despite some parts of the sector being vulnerable to downturns in the global economy, it has the ability to perform resiliently and demonstrate consistent growth – outstripping that seen in the UK economy as a whole (Chart 4.4). The industry recovered from the 2001 global downturn by growing at nearly 9% per annum between 2003 and 2007, and it reacted to a mixed year in 2008 by recording the second highest production spend on record in 2009, driven in particular by growth in the value of inward investment features.

¹¹ Source: UK Audio-Visual Facilities Economic Report, for UK Film Council and UKTI, 2009.

Chart 4-3:

Value added in the core UK film industry

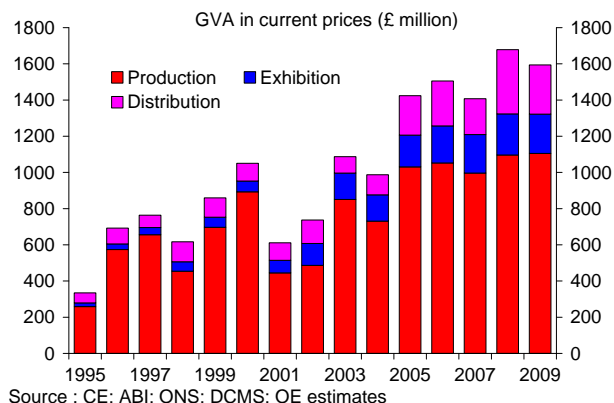
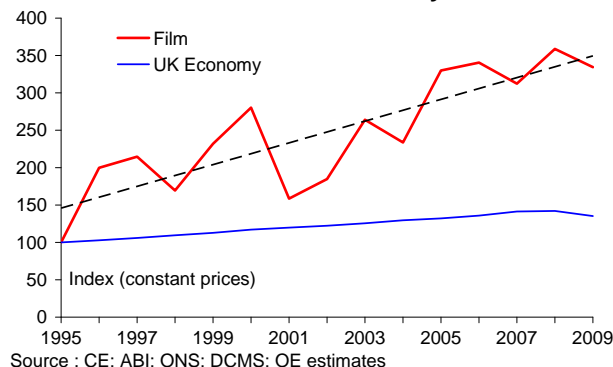


Chart 4- 4:

Growth (in real terms) in value added in the core UK film industry



Indeed, the trend in value added over time is driven to a significant extent by changes in the level of production spend in the UK. The high growth over the 1994-2003 period reflects an increase from a very low base of £242 million in 1994 to a peak of £1,130 million in 2003. Recent years have been more volatile, averaging around £800 million but falling as low as £582 million in 2005 (largely due, according to industry sources, to uncertainty over the future level of the Film Tax Relief) and £613 million in 2008 (due to a combination of a less favourable exchange rate and the impact of industrial action in the USA). But production recovered to £957 million in 2009 (see Chart 4-5).

The main cause of changes in UK production spend have been associated with inward investment productions¹², which rose fourfold in value between 1994 and 2003. They then dropped sharply in 2004 and 2005 to a low of £307 million, before recovering to £595 million by 2007 but then falling again to just £357 million in 2008 on the back of an unfavourable exchange rate and the Hollywood actors’ strike. Latest data show a very strong recovery in 2009 to more than £750 million, with inward productions now accounting for almost four-fifths of production activity in the UK.

4.3. Direct investment

Across the core UK film industry, fixed capital investment is estimated to have been £147 million in 2009 (Chart 4-6). A significant amount of investment is made in, for example, the development of studio locations and sets, the purchase of film equipment and computer systems, and in the building and refurbishment of cinema facilities.

¹² An inward investment film is defined by the UK Film Council as a feature film substantially financed and controlled from outside the UK where the production is attracted to the UK because of script requirements, the UK’s infrastructure or UK tax incentives.

Chart 4-5

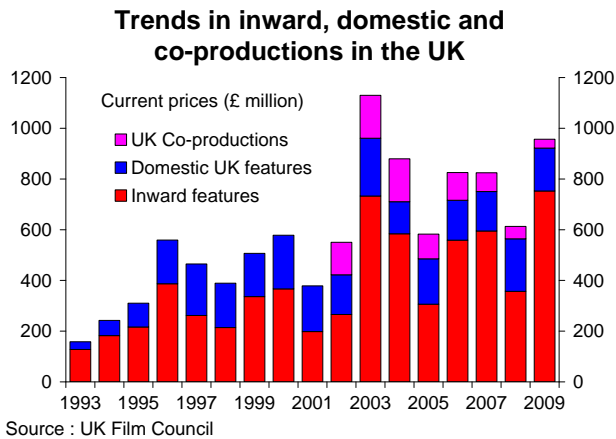


Chart 4-6

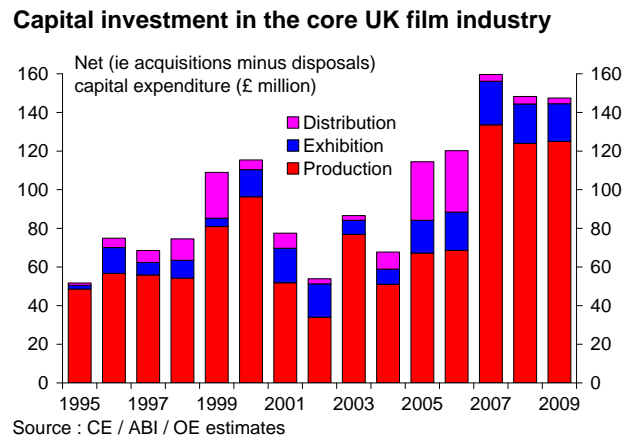


Table 4-3 shows average investment in each sector of the core UK film industry since 2000. Investment per FTE employee on average has been £4,900 per annum, with the highest investment in the distribution sector, at £9,700 per annum. In the production (including pre- and post- production) sector, investment per FTE worker has been around £4,400 a year since 2000. This means that the core UK film industry invests more per worker than, for example, the average across the all manufacturing industries (£3,500 per FTE worker); computing and related activities (£2,300); and hotels and restaurants (£2,500). The distribution sub-sector of the core UK film industry invests more per worker than the research and development sector (£4,700 per FTE worker in 2005).

The amount of capital investment per employee in a company/sector is often a good indication of the productivity of the workforce. The more capital intensive the industry, the higher the value added per worker is likely to be.

Table 4-3: Investment in the core UK film industry

Sub-sector	Net capital investment (per annum average for 2000-9)	
	£ million	£ per FTE employee
Production	83	4,400
Distribution	10	9,700
Exhibition	16	6,300
Total	109	4,900

Source: CE; Oxford Economics estimates

4.4. Research and development expenditure

Firms in the core UK film industry spend money on the development of new products, processes and technologies to give themselves a competitive advantage in the fierce global market for work. In particular parts of the industry, such as visual effects and post-production, there is a premium on innovation to land major contracts with the large production studios – impressive special effects, such as 3D and computer-generated imagery, is big box office, as demonstrated by the runaway success of *Avatar*.

Official data sources on research and development (R&D) expenditure do not provide enough sectoral detail to quantify levels of spending in the film industry. Nevertheless, it is clear from speaking to individual firms that R&D spending in many parts of the film industry is very significant – whether on new technologies for film production, distribution or exhibition. We know that the largest R&D projects, involving the creation of new content platforms or new ways of working, tend to be collaborative, and can involve several key industry players as well as traversing the boundary between film and TV: the MUPPITS project, for example, which is exploring ways of sharing physical and virtual resources to improve efficiency in the post-production sector, is co-funded by the Technology Strategy Board (a government agency) and involves organisations such as the BBC, Pinewood Studios, Southampton University and a number of London post-production houses. Similarly, the development of new Video-on-Demand platforms (see Chapter 11), for example by Project Canvas and its predecessor Project Kangaroo, were joint ventures led by the major TV channels.

London's post-production houses have a world-leading reputation, with a market share in the global film visual effects market, for example, of around 20%, a figure which has doubled since 2005. Its leading firms, such as MPC, Double Negative, Cinesite and Framestore, are trusted by overseas producers and known for their ability to take on complex sequences and indeed entire productions if needed. Much of this reputation can be traced to cutting-edge visual effects technologies developed in-house by independent firms, either individually or collaboratively. Their success at landing contracts for almost all of the major recent US-made visual effects blockbusters – such as *Avatar*, *2012* and *Cloverfield* – seems indicative of a highly successful innovation ecosystem within the UK.

4.5. Direct tax revenues

(a) Contribution to Exchequer

The core UK film industry is estimated to have contributed around £445 million to the Exchequer in 2009 (gross of tax relief and other fiscal support). This is equivalent to nearly 30% of value added in the core UK film industry. Almost half of the tax revenues raised for the Exchequer arise from corporation tax payments (gross of tax relief); most of the remainder is from income taxes and national insurance.

Table 4-4: Estimates of direct tax contribution from the core UK film industry, 2009

	Tax revenues (£ million)	Proportion of total
Income tax	98	22%
National insurance – employee	48	11%
National insurance – employer	41	9%
Value added tax	29	7%
Corporation tax (gross ¹³)	213	48%
Withholding tax	16	4%
Total	445	100%

Source: HM Revenue & Customs; ONS; Oxford Economics estimates

(b) Fiscal support to the core UK film industry

The core UK film industry receives funding from both central and local government, from the National Lottery and other public sector organisations, and from the European Union. Across all sources, total public funding for film was estimated to be £256 million in the financial year 2008/09. Of this, the largest single contributor was HM Revenue and Customs via the UK Film Tax Relief, which at £110 million accounted for 40% of the total.

DCMS is the government department with overall responsibility for setting policy in respect of Lottery and grant-in-aid support for film in the UK. The UK Film Council is responsible for the disbursement of the majority of DCMS funding for film, with the exception of funding for the National Film and Television School. The UK Film Council was established by the government in 2000 as its strategic agency for developing the film industry and film culture in the UK, with its aim being to deliver lasting benefits to the industry and the public alike.

After transfer of £5 million per year to the Olympic and Paralympic Games, the UK Film Council has an expected income of around £60 million per year between 2010 and 2013 (£26.9 million Lottery, £25.6 million DCMS grant-in-aid, nearly £4.9 million recoupment and £2.5 million in one-off DCMS project grants).

The UK Film Council's main initiatives to help build a stable and growing UK film industry and develop film culture in the UK include:

- **The Film Production Fund** which offers £15 million annually, focusing on creative excellence and supporting filmmakers aspiring to make quality British films.
- **The Innovation Fund** which will provide £5 million annually, to encourage innovation for a more digital world, helping the UK film sector to make a successful transition to a fully digital age.

¹³ Corporation tax (gross) is equal to the corporation tax liability without the government tax relief given under Section 42/48. See Appendix for detailed discussion.

- **The Film Skills Fund** will provide £3.25 million per year to develop workforce skills through investment in training schemes in line with market demand.
- **The Prints and Advertising Fund** with an annual budget of £2 million to support the distribution of a broader range of films to audiences across the UK.
- **International** – the UK Film Council’s international strategy encourages international productions from outside the UK to come and use Britain’s world-class production and facilities infrastructure, supports UK film export, develops international relations, and supports UK production infrastructure.
- **Diversity** – the UK Film Council’s diversity strategy aims to help the sector build a more diverse, inclusive workforce and film culture by nurturing film talent, integrating equality and diversity commitments into all UK Film Council activities, and providing practical tools to the industry to promote diversity.

In addition the UK Film Council distributes National Lottery and grant in aid funds to:

- **First Light** – a £1.1 million a year Lottery funded digital short filmmaking scheme aimed at helping young people to gain first-hand experience of filmmaking.
- **Skillset** – £3.2 million is being invested in initiatives to ensure a strong, consistent supply of skilled and talented professionals in line with market need.
- **BFI** – The British Film Institute receives £16 million per year from the UK Film Council to champion moving image culture, education and cinema heritage for the benefit of as wide an audience as possible and to encourage public debate about film.
- **National and Regional Screen Agencies** – £6.3 million a year is allocated to fund regional film bodies across England, all working with the UK Film Council and national agencies in Scotland, Wales and Northern Ireland to support production, screen commissions, cinema exhibition, archives and education.

There is, of course, also tax relief for film production. HM Treasury estimated that this cost around £480 million in 2006/07¹⁴, including the consolidation of future relief available under Section 42 and Section 48 legislation. But the Exchequer cost of tax relief has fallen to an average of around £100 million per year following the changes to the Film Tax Relief that came into force on 1 January 2007¹⁵ (for more on this, see Chapter 12).

The core UK film industry receives some support from the European Union, primarily via its MEDIA Programme to promote the creative industries. In 2008/09 this was worth around £3.9 million to the UK, with other sources such as the European Regional Development Fund and European Social Fund contributing a further £4.6 million. In addition, more modest public sector

¹⁴ Although because of overheads they were not worth that much to the film industry.

¹⁵ Source: HM Revenue and Customs press releases.

support for film is provided by many local authorities, the British Council, and the Arts Councils of Scotland, Wales and Northern Ireland. This is given to, for example, specialised films and art-house cinemas. DCMS has also contributed funding to the National Film and Television School located in Buckinghamshire.

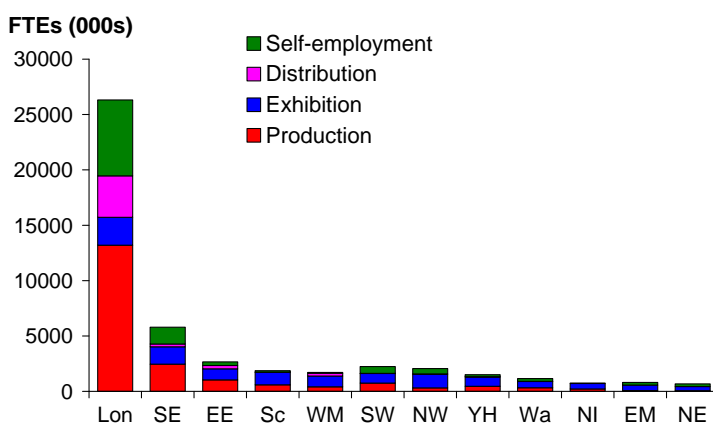
4.6. Direct regional impacts

The core UK film industry contributes particularly to employment in London and the South East, although there are also sizeable operations in a number of other regions. Around 26,300 jobs (including employees and self-employed), or 55% of the total, are concentrated in the London area, with a further 5,800 (12%) in the South East. This disproportionate concentration of film employment is common to most of the major film-producing countries, most notably of course the US which is clustered around Hollywood, but also countries like France, whose film industry is centred to a large extent upon Paris.

The East of England, South West and the North West are the regions where the next largest numbers of jobs are located, at 2,700 jobs, 2,200 jobs and 2,100 jobs respectively. Outside London there are centres of film production in Central Scotland, Cardiff, Manchester and Liverpool, Bristol and Nottingham. In addition, all regions host location shoots to a greater or lesser extent (for example, *Robin Hood* in Yorkshire and Derbyshire, *Looking for Eric* in Manchester, and *Harry Potter and the Half-Blood Prince* in Wiltshire, Gloucestershire, Scotland, Hertfordshire and Surrey).

Chart 4-7:

Employment in the UK film industry by region



Source : OE estimates /CE/LFS/ABI

It is difficult to say for certain whether or not the UK core film industry is becoming less ‘London-centric’ over time. The Skillset Census 2009, covering the whole of the wider creative media sector, found the only notable shift in regional employment patterns since its previous survey in

2006 was a modest increase in North West jobs. However, this trend is considered likely to reflect TV production employment rather than film, linked to the ongoing 'MediaCity' development in Manchester and increased regional commissioning from the BBC, which is soon to move several of its broadcasting departments there. Across the whole of the UK, it is probably fair to say that increases in regional funding for both TV and film production over the past decade have made locations outside London and the South East more viable bases for media firms – though there is little doubt that the UK's international competitiveness remains largely driven by its traditional strengths in business and infrastructure in and around the capital.

Box 4.1: The London film industry

From its rich film history to its West End musicals, and from world-leading artists and musicians to cutting-edge graphic design and video post-production companies, London is known around the world for its vibrant cultural and creative sector. Though the UK's primary film studios (such as Pinewood, Shepperton and Leavesden) are located just outside the city, London itself is still an important centre for film production, with a strong facilities base – including leading independent studios such as Ealing – international transport links and of course amenities to satisfy even the biggest of Hollywood stars.

London's attraction to film-makers is enduring: from LA to Mumbai and everywhere in between, the city's rich canvas of life provides the backdrop to feature filming by major production houses on every day of the year. In 2008, a total of 843 days of filming were undertaken, led by production on *Sherlock Holmes* (108 days), *Green Zone* (59) and *Dorian Gray* (39). Other major films dropped by for a smaller amount of time, including *Harry Potter and the Half-Blood Prince* (5 days) and *Nine* (7). London provides a diverse range of landscapes: filming for *Sherlock Holmes* was undertaken in ten separate boroughs.

According to a report by GLA Economics, London's film sector is one of the most 'creativity-intense' of all its culture and media sectors, with two thirds of its 17,000 employees having some form of creative remit. All of the London boroughs are home to a number of film or video-related companies, with the largest numbers found in places as diverse as Westminster (560), Camden (285), Hackney (175) and Islington (170). The film industry delivers economic benefits across the full breadth of the city.

As well as its use as a filming location, London's weight on the global corporate scene also helps it to make a key contribution to the core UK film industry. As a magnet for young talent and technology-savvy creative entrepreneurs, it has also become home to a cluster of leading visual effects studios, led by firms such as Framestore which now employs around 600 people and has a star-studded CV featuring major films such as *Avatar*, for which it produced several key sequences.

Sources: GLA Economics, "London's Creative Workforce: 2009 Update"; production data from UK Film Council; Film London; discussions with London post-production firms.

An important characteristic of the film industry is its propensity to cluster as geographical proximity brings significant benefits. Examples of key clusters include:

- Soho and Westminster – the core of film activity in the UK, where many production companies are located including the large US distributors as well as many UK independents.

The post-production and digital effects sectors are particularly concentrated in this locality¹⁶.

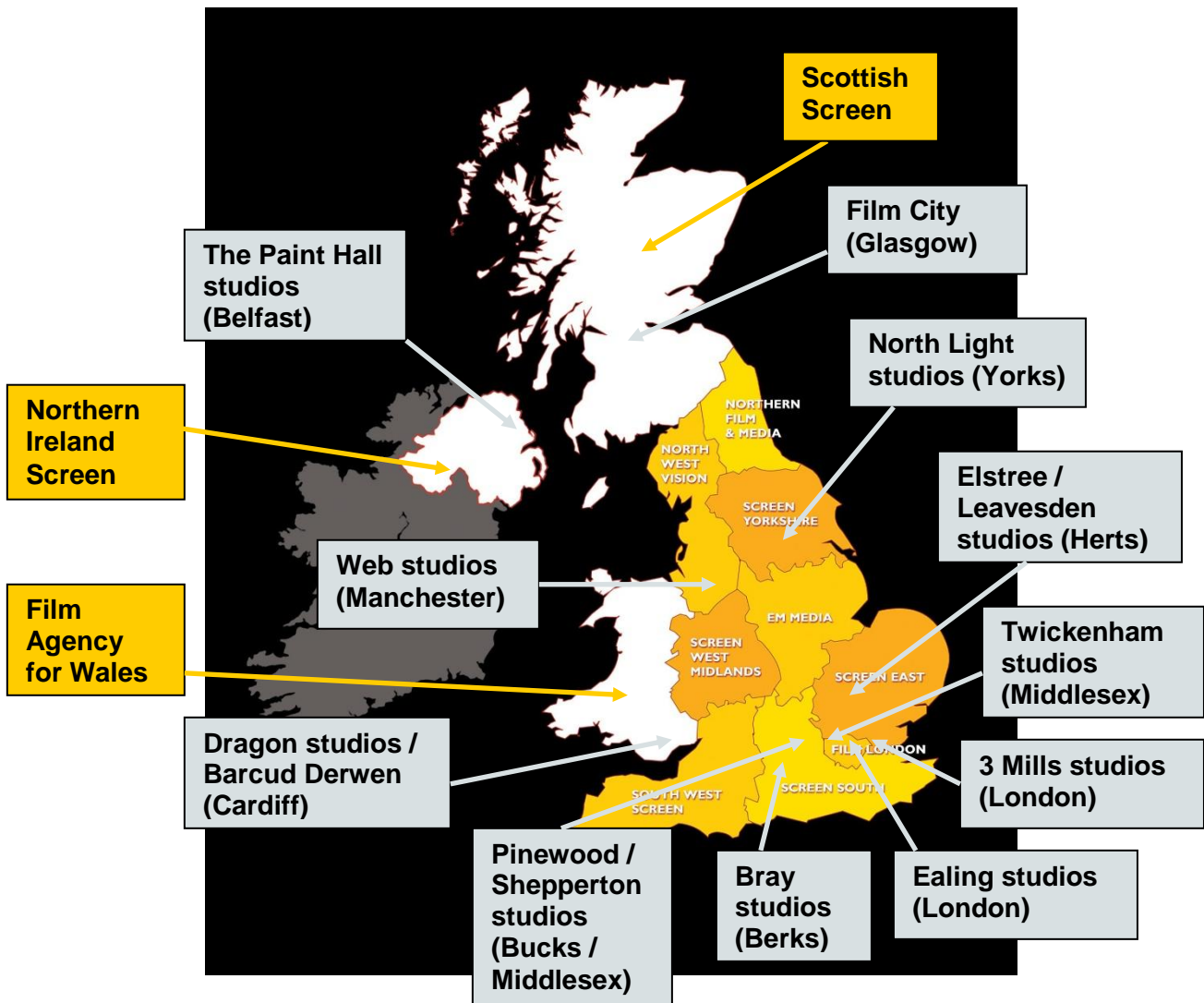
- Pinewood-Shepperton – one of the UK's and world's leading studio companies, located on the outskirts of London in Buckinghamshire and Middlesex, providing studio and related services to the film and television industries. Accommodation is provided to over 300 businesses which benefit from being located at Pinewood or Shepperton Studios, and large numbers of film-linked businesses have clustered in a wide geographical area around the site. Recent big-budget films made at Pinewood have included *Prince of Persia: The Sands of Time*, *Nanny McPhee and the Big Bang*, *Clash of the Titans*, *Robin Hood*, *Quantum of Solace*, *Mamma Mia!* and *Nine*.
- Elstree and Leavesden studios – two major studios located in Hertfordshire, in Borehamwood and Leavesden respectively. The studios service many US-funded film productions such as *Harry Potter*. Many small companies exist around these studios supplying services to those companies located onsite at the studios. In early 2010 Leavesden was the subject of a major investment proposition by its owner Warner Brothers – believed to total £100 million in new and expanded production facilities¹⁷ – which is currently the subject of a local planning inquiry.
- Ealing studios – based around the studio is a wide range of companies in the media and technology sector providing a full range of production services to the core UK film industry. The studio is one of the oldest film studios in the world and was responsible for many British films during the golden era of the UK film industry in the 1930s, 40s and 50s. Ealing studios returned to film in 2005 after a gap of many decades with the making of high-profile films such as *Notting Hill* and *Dorian Gray* and more recently *Nowhere Boy*, *St Trinians 2* and *Burke & Hare*. It is also the base for TV shows such as the BBC's *Cranford* and *Let's Dance*.

The UK Film Council has invested almost £8 million a year into regional film activities through the Regional Investment Fund for England (RIFE) which supports the nine Regional Screen Agencies in England providing a variety of resources aimed at developing public access to, and education about, film and the moving image. There are also national screen agencies for Scotland, Wales and Northern Ireland (Figure 4-1).

¹⁶ GLA Economics, "London's Creative Workforce: 2009 Update", February 2010.

¹⁷ Source: local media reports.

Figure 4.1: The National and Regional Screen Agencies, and regional production studios



The film industry is part of a wider screen industry cluster (ie film, TV, corporate video, commercials and interactive media). Indeed, multi-sector working is particularly widespread, with two-thirds of firms in the screen industries operating in more than one screen industry sector (see Chapter 6). Removing one screen industry sector such as the film sector would therefore impact on a much larger proportion of firms than that represented by the share of the film sector within the total screen industry (these multiplier impacts are covered in Chapter 6).

A wide literature has developed on the benefits of economic clustering, recognising the mutual advantages that occur in some cases when firms in similar or related industries cluster together. Concentration of both labour and demand for specialist services leads to agglomeration economies (ie benefits from related economic activities taking place close together) and economies of scale.

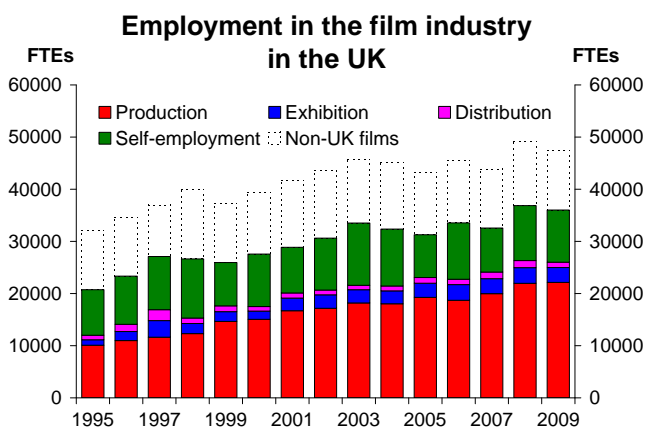
The existence of clusters boosts growth through a variety of ways. Clusters raise productivity by allowing access to specialised inputs and employees, and increase firms' capacity for innovation by diffusing technological knowledge and innovations more rapidly. They also stimulate higher rates of new business formation, as employees become entrepreneurs in spin-off ventures. In addition, clusters may increase the attractiveness of UK locations to inward investment by leading edge companies in the film industry (see Chapter 10 on the promotional benefits of film).

4.7. Economic impact from non-UK films

The above sections provide estimates of employment and value added for the core UK film industry only. A further 11,000 people (FTE-basis) are directly employed in the film industry supported by the distribution and exhibition of foreign-made films.

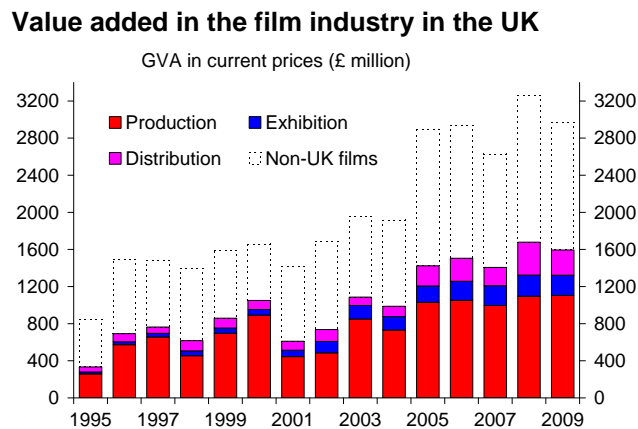
In the whole of the film industry in the UK (ie including the activity associated with the distribution/exhibition of films made abroad), the total employment supported is therefore around 47,000 FTE jobs, with a GDP contribution of £2.9 billion in 2009. Charts 4-8 and 4-9 illustrate the trend in employment and value added over the 1995-2009 period.

Chart 4-8



Source : CE; ABI; ONS; DCMS; OE estimates

Chart 4-9



Source : CE; ABI; ONS; DCMS; OE estimates

One of the features of foreign-led film production within the UK is its tendency to reflect cultural or economic linkages between the UK and overseas. For example, the large population of South Asian origin living in the UK has proved attractive to Bollywood film-makers, as Box 4.2 explores. Foreign-led production also reflects acknowledged UK strengths in specific technical fields such as Computer Generated Imaging (CGI), for example with director James Cameron contracting some key scenes in the 3D blockbuster *Avatar* – now the highest grossing film of all time – to London company Framestore.

Box 4.2: The UK's "Bollywood Connection"

As India's economic growth has accelerated and its international profile has increased, there has been a rapid rise in interest and awareness of the Bollywood film scene (and indeed the wider Indian film industry*) outside of Asia. Driven by rising economic confidence at home – and the domestic box office appeal of films shot abroad – Indian film-makers have for a number of years sought to increase the volume of production undertaken overseas, including in European locations such as Switzerland (which regularly doubles as the off-limits Kashmir) and the UK. More than 1,000 Bollywood films are produced every year, and it is estimated that at least half of major productions are now filmed partially or fully outside of India.

For the UK, strong cultural ties in many regions with South Asia, including large local populations of South Asian origin, have helped to attract a significant share of the market. Whilst the mountain scenery may not rival Canada, New Zealand or Switzerland, the supply of quintessentially British landscapes and historic buildings prove a lure to top Indian film-makers. For example, the most successful Bollywood film of all time in the UK and one of the top 30 worldwide, the 2001 release *Kabhi Khushi Kabhie Gham (Sometimes Happiness, Sometimes Sorrow)*, featured the backdrop of a number of British locations including Blenheim Palace in Oxfordshire and several well-known London landmarks. In total, 74 Indian films were made either in whole or in part in the UK between 2003 and 2009, spending a total of £122 million (70% of their combined budgets) within Britain.

The "Bollywood Connection" with the UK in fact dates back as far as the 1960s, when recently-arrived South Asian entrepreneurs in cities such as Bradford bought up cinemas destined for closure following the rapid growth of television, and screened the latest Indian films. Many of Bollywood's best known stars visited to launch their new films in the UK, and a link was born that continues to generate sizeable and now increasing economic returns, as the global profile of Bollywood and the creative ambition of its directors continues to rise. In addition to production spending within the UK, the link generates economic benefit through other channels, including for example the combined £50 million (via additional media exposure and tourism) through Yorkshire's hosting of the prestigious International Indian Film Awards in 2007, and the reported £20 million annually that film-loving Indian tourists generate in London as they trace the steps of their official Bollywood movie maps.

Today, Bollywood films are a growing hit at the UK box office, with some 560 Indian films taking over £100 million since 2000. Hindi films dominate the list of foreign language productions screened in the UK, with the 51 titles released in 2008 being more than the total for French, Spanish and Italian films combined. Though audiences remain Asian-dominated, Indian films' market share in the UK is growing: revenues have doubled over the last decade, and the success of the December 2009 release *3 Idiots* – which quickly became the highest grossing Bollywood film of all time – was driven in no small part by takings abroad, including in the US and UK. In fact, globally no fewer than nine of the all-time top ten Bollywood films at the box office have been released since 2006, and there can surely be no better illustration of the huge potential for spin-off benefits to be generated far from Mumbai.

Whilst Indians living overseas remain the primary target for Bollywood film-makers – not least because they pay up to 20 times more than Indian residents for their ticket – the unquestionable mainstream success of so-called 'cross-over' films, such as the 2004 release *Bride and Prejudice* (filmed in large part in the UK but featuring authentic Bollywood themes and styles alongside a largely Indian cast) clearly demonstrates the commercial potential for Indian film in the UK when adroitly marketed to a wider audience. This type of film also generates notable social impacts: as we note in Chapter 8 of this report, film can be a powerful vehicle for changing perceptions and broadening knowledge, and the popularity of titles such as *Bride and Prejudice* and its star Aishwarya Rai – if not quite a British household name then certainly well recognised and admired – serve as a significant positive force for cultural integration and understanding.

Of course, the UK-Bollywood relationship generates benefits in both directions, and with such a large population of film-loving consumers – including so many in the free-spending, burgeoning middle

classes – India is likely to represent a major growth market for the UK film industry over the coming years. To complement the opportunities from big-budget releases, the UK Film Council is promoting a number of British independent films in India during 2010 to explore the wider potential of selling British-made film to an Indian audience.

Sources: EDI; UK Film Council; “Bradford City of Film: History and Heritage”; Cinema Business magazine; BBC News; Deloitte report on economic impact of IIFA awards. **Note: the term ‘Bollywood’ traditionally refers to the Hindi-language film industry, and does not include films made in English by Indian producers either in India or overseas.*

4.8. The carbon footprint of the UK film industry

In line with the greater emphasis on sustainability within wider political and social agendas across the world, the UK film industry has begun to take proactive steps to measure and reduce its carbon footprint. As David Parfitt, a producer for Trademark Films, put it: *“The film industry has never been noted for its green credentials and no industry can afford to ignore environmental sustainability if it is to survive”.*

No single UK-wide benchmarking of the film industry’s carbon footprint has been undertaken. In our previous report, applying a figure for emissions per dollar of GDP taken from a study of the US motion picture industry, and subsequently figures from a separate study looking at production of the film *The Day After Tomorrow*, we suggested that the UK core film industry might emit around 530,000 tonnes of carbon per year. This actually made the sector slightly more carbon-friendly than the UK average.

A 2009 study for Film London estimated the city’s total screen production industry’s carbon footprint at 125,000 tonnes per year, excluding international and employee travel and emissions from the sales, distribution and exhibition of films and TV shows. This was made up of 40% from studio emissions, 28% from TV and film production, 17% from location shoots and 15% from post-production activities¹⁸.

But quantifying the total amount of carbon produced is less important than developing ways to improve sustainability and reduce it. Recent strategies produced by the UK Film Council, Film London and other partners have attempted to identify such measures, including more efficient sharing of resources, implementation of low carbon building standards, and the reduction of unnecessary travel – part of Pinewood Studios’ recent development proposals, for instance, involve the creation of permanent ‘cityscapes’ for the most popular filming locations such as New York, Venice and Paris to reduce the need to travel overseas to shoot smaller sequences. The UK Film Council is working with the British Standards Institution (BSI) to develop a recognised industry standard for sustainability, focusing on the industry’s environmental as well as its wider social and economic impacts, while the practice of set recycling is becoming more

¹⁸ Source: “Green Screen: Helping London’s Film and TV Industry Take Action On Climate Change”, report for Film London and the Mayor of London.

commonplace, facilitated in part by the emergence of specialised firms supplying the necessary equipment. The UK Film Council has launched a website to advise industry participants on carbon reduction strategies (<http://www.greenfilm.info>).

4.9. Summary

The core UK film industry makes a substantial direct contribution to UK GDP, employment, taxation and investment. GDP and employment have increased over the past decade through the expansion of the production sector, particularly from inward investment features, and an increase in film exhibition. The recession has had hard impacts on the smaller independent film production sector, though as a whole the core UK film industry has weathered the storm well and is well positioned to continue its strong growth.

5. Productivity – skills, education and training

This chapter looks at productivity in the core UK film industry through analysis of key indicators such as average wages, educational attainment, skills and training.

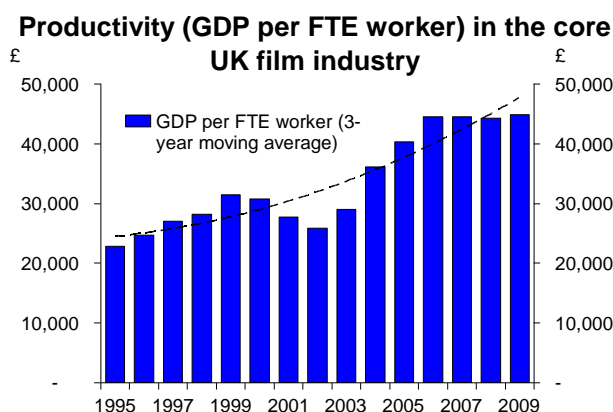
Key Points

- Overall labour force productivity, as measured by GDP per full-time equivalent worker, has been rising steadily across the core UK film industry since the mid-1990s, and now stands at around £45,000, well above the UK average.
- In the production sector, the workforce is well qualified. Some 58% of the workforce are graduates in the production sector as a whole (including pre- and post-production), rising to 74% in the post-production sector and over 80% among those who work in costume. Average gross wages in the UK production sector as a whole are around £33,700 per annum.
- Highly skilled workers in computing/technology-related occupations command the highest wages. For example, average wages in the post-production/editing/visual effects sector are around £42,700 per annum.
- A key feature of the core UK film industry's workforce is flexibility. Workers not only have to contend with frequent periods of unemployment but also, when actually working, with long hours per day – with people working an average of 10.8 hours per day and often more than 5 days per week on their most recent film production.
- The recession has reduced the provision of training for film industry workers, with the financial crisis causing firms to reduce their training budgets and raising concerns whether investment in skills development is sufficient to preserve the UK's global competitiveness.

5.1. Productivity

Overall, there has been a clear upward trend in productivity across the core UK film industry since 1995, as measured in terms of GDP per FTE worker (Chart 5-1). In 2009, each employee generated around £45,000 in GDP, well above the UK average, and approximately double the corresponding figure of the mid-1990s.

Chart 5-1



5.2. Qualifications and demographics

A detailed survey of the workforce in the UK film production sector (ie excluding exhibition and distribution) has recently been undertaken by Skillset¹⁹, with the objective of understanding in detail the working patterns, skills and training within the industry.

One of the key findings from the survey is that people working in the production sector of the core UK film industry have on average a higher level of qualifications than the population at large. In particular:

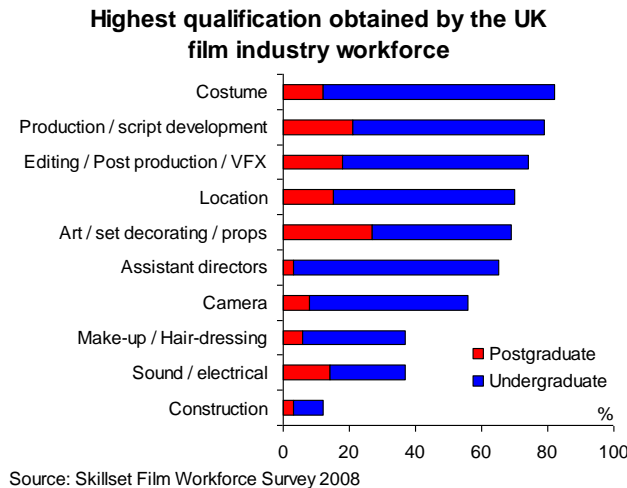
- 58% of the workforce are university educated with either a postgraduate qualification (15%) or an undergraduate qualification (43%). This compares with, for example, 31% of the population of working age in England who are educated to degree level or above²⁰. In some film sub-sectors, such as visual effects, an undergraduate qualification is considered essential even at entry level.
- There has been a notable reduction in the proportion of workers with degrees in media-related subjects since 2005. So although the proportion of graduates in the industry is increasing, this is being driven by a rise in the number of new entrants holding non-media degrees.
- The production/script development, editing/post-production/visual effects and costume sectors are the most qualified parts of the workforce, all of which contain more than 70% graduates (see Chart 5-2).
- The lowest income group includes some of the most highly qualified people. Around 68% of

¹⁹ Source: Feature Film Production Workforce Survey 2008, Skillset, The Sector Skills Council for the Audio Visual Industries.

²⁰ Source: The Level of Highest Qualification Held by Adults: England 2007, Office for National Statistics, June 2008. Level 4 and above qualifications include first and higher degrees, NVQ level 4 and 5, teaching or nursing qualifications, HE diploma, HNC/HND or equivalent vocational qualifications.

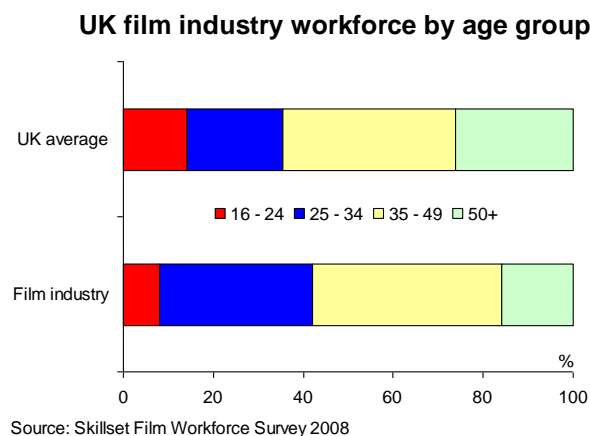
people who earn less than £15,000 per annum are educated to degree level. Undertaking unpaid work is increasingly seen as the way to enter the film industry from university – around half of people who entered the industry between 2000 and 2007 did unpaid work first before securing paid employment.

Chart 5-2



The average age of the workforce in the production sector, at slightly under 40, is a little above the average for the UK economy, going somewhat against the common perception that the film industry is a young person’s industry. However, the majority of people do not enter the film industry until after they have secured a degree qualification (ie their early to mid-20s), and only 8% of the people working in the film industry are in the 16-24 age group compared to the UK average of 14%. The film industry is over-represented in the 25-34 and 35-49 age groups (see Chart 5-3).

Chart 5-3

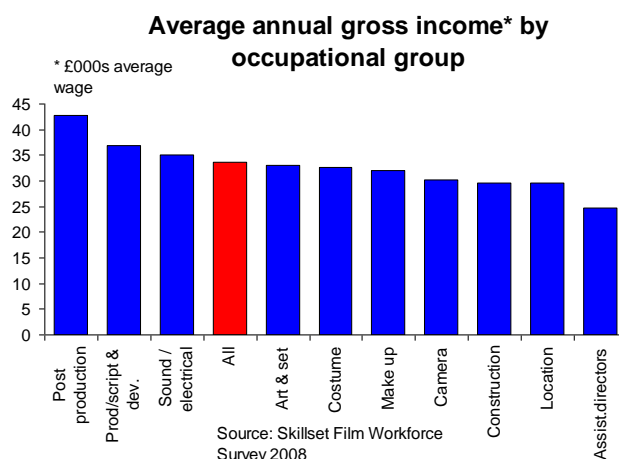


5.3 Wages and salaries

According to the Skillset 2008 survey, the average gross income per annum for workers in the UK production sector was just over £33,700, which is significantly higher than the 2008 UK average for full-time employees of around £31,500, and also higher than the £32,300 average for workers in the creative industries²¹ It is lower, however, than the average of more than £37,000 reported by the same survey in 2005, which suggests increasingly tough competition for production jobs. Value added per FTE worker (including self-employment) is estimated to be around £45,000 in 2008, although this figure fluctuates significantly as a result of UK film production spend changing from one year to the next.

The occupations which earn the highest wages are in editing, post-production and visual effects; production, scriptwriting and creative development; and sound and electrical.

Chart 5-4



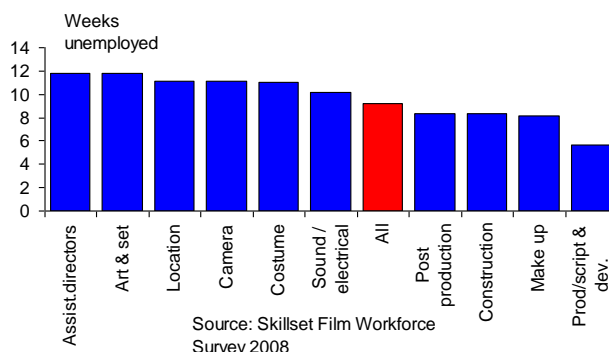
Although the average wage in the industry is above the UK economy-wide average, the film production sector's workforce typically faces a difficult and uncertain working environment. Levels of unemployment are higher than for many other occupations, with 74% of people working in the production sector claiming they had experienced a spell of unemployment in the past year *during which they were seeking work* (with more than a third, 35% being in this category for more than 10 weeks)²². Unemployment is most common in areas such as make-up, art and set decorating, and props and costume, as well as some more technical areas such as camera operators.

²¹ Source: 2008 Annual Survey of Hours and Earnings, Office for National Statistics

²² Note: The Skillset survey involved only those people working on at least one feature film production during the year, so the estimate of unemployment is inherently low because it will not include those people out of work for the whole year.

Chart 5-5:

Average length of unemployment by occupational group in the production sector



Evidence from the Skillset survey suggests that the film production sector's workforce is flexible. Working long hours is the norm – respondents reported that they worked an average of 10.8 hours per day on their most recent film production. The 2007 survey showed that:

- 23% of people worked on average 9-10 hours per day.
- 42% of people worked on average 11-12 hours per day.
- 23% of people worked on average 13 hours or more.

In addition, over three quarters (78%) of the film production workforce worked on average for 5 or 6 days a week, while 7% worked '11-day fortnights'. Long hours are not only required to meet the urgent deadlines essential for film production but also, perhaps, to make up income following previous bouts of unemployment. The intensive work schedule and the demand for frequent travel have been linked to a relatively high rate of attrition for women in their early to mid-thirties, who find it difficult to reconcile the demands of working in film production with starting a family²³.

5.4 Skills and mobility

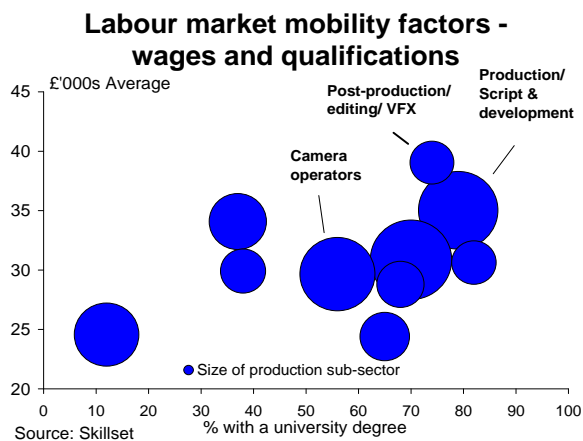
The core UK film industry is increasingly competing in a global market, not only for the top performing actors to star in the latest UK blockbusters but also in the international labour market for production (pre-production/production/post-production) workers themselves. So, if limited opportunities exist in the UK for people to work in the film industry, there is a risk that the labour force will move abroad for better prospects and careers – the skills used in the core UK film industry are inherently transferable to companies in other countries. In fact, 39% of respondents to the Skillset survey indicated that they had spent time working outside the UK over the last year in the film industry or related sectors.

²³ Source: Skillset, "Balancing Children and Work in the Audio-Visual Industries", February 2008.

The workforce has a number of attributes to suggest a high degree of international mobility. Although the workforce is not younger than the UK average, it is significantly over-represented in the 25-34 age group. This group probably has a higher propensity to travel to work abroad than say over-35s, who may have family ties, or under-25s, who may not have the skills, training and experience required by companies in other countries.

One factor which may have an influence on the mobility of labour in the film industry is average wages. People who earn higher wages are more likely to have higher levels of skills and more easily transferable skills, and therefore companies have a greater incentive to recruit them in an international market. Another factor could be internationally recognised qualifications such as undergraduate and postgraduate degrees. The chart below plots the relationship between average wages and university qualifications in the film industry. It shows that the post-production segment is ranked highly across these indicators and therefore may well have the most internationally mobile workforce.

Chart 5-6



Another factor which affects mobility is nationality. The core UK film industry attracts many highly skilled foreign workers to the UK, particularly in sectors such as visual effects, where firms compete internationally for the best talent and the proportion of foreign workers, at up to 30%, is around triple the average for the audio-visual industries as a whole²⁴ (consultations with the leading firms in this sector suggest that workers from other EU countries, such as France and Germany, account for the majority of overseas labour). Overall, the Skillset survey suggests that around a tenth of all UK-based production staff are non-British.

Taking into account all of these factors, our discussions with UK production companies suggest that up to one-quarter of staff would eventually relocate if the tax and other considerations meant that the UK was no longer attractive to investors in film. In value added terms, the

²⁴ Source: UK Audio-Visual Facilities Economic Report, for UK Film Council and UKTI, 2009.

proportion could be even higher as this one-quarter often represents higher-skilled and higher-waged individuals.

While the core UK film industry employs many highly skilled workers, there is widespread acknowledgement within the UK Film Council and the film industry itself that these skills need to be continually updated and developed to stay on the knowledge frontier. Indeed, boosting and updating skills in the core UK film industry is a key priority within the UK Film Council (see Box 5-1). As in many sectors of the economy, the evidence suggests that firms across the film and wider creative media sectors have cut their training budgets as a response to increased business uncertainty during the recession²⁵. This means that the volume and quality of training provided to film professionals has come under further pressure over the last two years and potentially represents a threat to the UK's long-term competitiveness.

Box 5.1: UK Film Skills Strategy – Three-Year Plan 2010-2013

The UK Film Council has provided funding for Skillset to start on the second phase of its skills strategy *A Bigger Future*, which will span three years from April 2010.

A Bigger Future is a training and education strategy for improving skills in the core UK film industry, originally launched in 2004. It builds on the key strengths of the industry and is aimed at people right across the sector – from those who are yet to enter the industry, who need help in acquiring valuable qualifications and experience, to those already working who need career development and further technical training.

The key objective of the strategy is “to ensure that the UK industry is able to compete successfully in the European and global marketplace on the basis of world beating skills”²⁶, and is focused on four key areas: careers information, advice and guidance; further, higher and postgraduate education; new entrants, professional and company development; and collecting and analysing information.

The implementation of the strategy has been handled by Skillset (the Sector Skills Council for the Audio Visual Industries) with guidance from a Film Skills Strategy Committee (which has representatives from the UK Film Council, Skillset and the UK film industry). Each year, Skillset works closely alongside producers, directors, writers, technicians, actors, distributors and exhibitors to identify the training priorities for the year. This includes providing:

- Advice and information about careers to people hoping to enter, or already in, the industry
- Advice on the industry for careers advisers
- Support to film academies, the Film Business Academy and other education providers to deliver high-level qualifications for the industry
- Investment in digital skills, such as visual effects
- Support to professional development and training
- Support for emerging talent
- Bursaries for freelancers
- ‘Apprenticeships’ with established professionals.

²⁵ See for example the House of Lords Communications Committee report into the UK film and television industries (January 2010), the Skillset report “From Recession to Recovery” (September 2009), and the Skillset Census 2009 report which compares the volume of training provided to employees in 2006 and 2009.

²⁶ Source: *A Bigger Future - The UK Film Skills Strategy*, UK Film Council and Skillset.

The strategy is funded mainly by National Lottery money (allocated by the UK Film Council) and the Skills Investment Fund (a training levy on UK film production which is expected to become mandatory by the summer of 2010). Additional funding comes from other sources, including the London Development Agency and the Higher Education Funding Council for England.

The achievements of *A Bigger Future* between 2004 and 2009 included the funding and/or provision of:

- 14,000 places on training courses as Continuing Professional Development for industry professionals
- Over 1,400 bursaries to freelancers, employees and new entrants to attend training courses
- Over 300 apprentice-style schemes which include on-the-job learning.

Sources: UK Film Council; Skillset

According to recent Skillset research based on interviews with employers in the film production sector, there are a number of acknowledged skill shortage areas where many employees are not considered to have adequate skills. These include 'soft skills' such as negotiation and diplomacy, management and leadership, and commercial acumen; as well as more specific business skills such as production accountancy (thought to be driven by the lower wages on offer than in the financial services sector) and knowledge of new legal developments. Craft and technical skills, such as model-building, are another recognised skill shortage area within the UK film industry, with the existing workforce in this area tending to have a relatively high average age. The research also suggests that a key skills gap for the future is in "*new and digital technology, particularly managing the change from traditional to digital media*"; while numerous employers also expressed concern about the potential drain on the availability of construction and lighting crew arising from the 2012 Olympics and Paralympics²⁷.

5.5 Summary

Many people employed in the core UK film industry are highly qualified and have valuable and specialist skills of great benefit to the UK economy. Without a robust UK film industry there is a risk that, in an increasingly global market, these productive skills would be lost as people migrate to work in other countries. Recent research has also identified that despite high average levels of worker qualifications in film production, there are a number of important skill shortage areas that threaten the UK's competitiveness. With the recession further reducing investment in skills and training across the industry, there is clearly a premium on the successful implementation of new skills strategies to preserve and enhance its pool of human capital.

²⁷ Source: Skillset, "Film Sector Employers: Skills and Training Needs in Production, Distribution and Exhibition", June 2009.

6. Multipliers and linkages with other creative industries

As well as the direct contribution of the core UK film industry to the economy, there are indirect impacts on employment and output through the supply chain of the film industry, and induced impacts from those directly and indirectly employed in the core UK film industry using their earnings to buy other goods and services. This chapter summarises these different multiplier impacts.

The multiplier impacts also depend on the symbiotic relationship between the film industry and other creative industries, and those linkages are also examined in this chapter.

Key Points

- The core UK film industry helps to support 72,000 FTE jobs allowing for those directly employed, for those employed in companies supplying the film companies and for the jobs dependent on the spending of film industry workers.
- The core UK film industry contributes overall around £3.2 billion a year to UK GDP, taking into account direct, indirect and induced impacts – equivalent to 0.2% of UK GDP.
- For every job supported in the core UK film industry, a further job is supported through indirect and induced multiplier impacts.
- In addition, the showing of UK film on television helps to generate about £120 million of GDP in the TV broadcasting industry.
- The core UK film industry and its employees direct and multiplier contribution to UK tax revenues was over £870 million in 2009.
- The core UK film industry has synergies with a wide range of other creative industries. Writers, actors, directors and others involved in production obviously work in a variety of other media. And two-thirds of firms involved in the film industry in the UK also work in at least one other screen industry.
- There are also important spillovers from technical developments in the film industry to other media – most notably, computer imagery developed for films has been used to great effect in TV programmes and commercials.

6.1. Estimates of the multiplier for the core UK film industry

The multiplier for the core UK film industry is estimated to be around 2.0. This means that for every 10 jobs directly supported by the core UK film industry, another 10 are supported indirectly in the supply chain and from the induced spending of those directly or indirectly

employed by the core UK film industry. The multiplier value is similar to the value estimated for the other screen industries, TV, corporate video and advertising industries.

The figure of 2.0 is derived from a detailed survey of firms in the UK film industry by Optima/CE²⁸, which asked companies about their turnover, employment, wage costs and profits, and also about how much they spend buying goods and services from their suppliers. This is a 'combined' multiplier impact representing the sum of the so-called 'indirect' and 'induced' impacts of the core UK film industry on the UK economy. In particular, it includes both the employment/value added of the sectors in the supply chains of the core UK film industry (eg manufacture of film equipment, manufacture of consumer goods sold in cinemas, the TV and media industry, the advertising industry and other business services etc) and also the employment/value added induced by the spending of those either directly or indirectly employed in the core UK film industry.

A similar estimate of the multiplier for the core UK film industry can be derived from the Annual Business Inquiry (ABI) conducted by the ONS²⁹. This shows that between 2000 and 2007, spending on goods and services from suppliers by the film and video production sector (SIC 92.11) averaged £1.2 billion compared with the sector's average gross value added (GVA) of £1 billion. Similarly, purchases from suppliers by the film and video production sector (SIC 92.12) averaged just over £1 billion compared with GVA of £830 million; while purchases by the film exhibition sector (SIC 92.13) averaged £450 million compared with GVA of £460 million. Clearly, some of these purchases will be from foreign-based suppliers, so will not contribute to UK GDP and employment, and therefore the level of UK purchases probably indicates an indirect multiplier of slightly less than 2.0. However, allowance also needs to be made for the induced multiplier associated with spending by workers employed in the film industry. Estimates based on Oxford Economics' detailed econometric model of the UK economy suggests that the induced multiplier is 1.25 – ie every 10 jobs in the film industry support a further 2.5 jobs in the rest of the economy as workers spend their earnings on other goods and services. Combining the information on the indirect multiplier from the ABI and the induced multiplier from the Oxford Economics model suggests that the multiplier for the core UK film industry is consistent with the Optima/CE estimate for the UK film industry as a whole.

Comparisons of multipliers across sectors are complicated by the outdated data published by the Office for National Statistics (ONS)³⁰. However, analysis of these data suggests that the film multiplier is lower than the economy average and is comparable with, for example, hotels, catering, pubs etc; computer services; and legal services.

²⁸ Source: "Economic Impact of the UK Screen Industries", Optima/Cambridge Econometrics, May 2005. In the terminology this is a "Type II" multiplier and in formula terms is equal to (direct impact + indirect impact + induced impact) / direct impact.

²⁹ See "The Contribution of the Film Industry to UK GDP", Cambridge Econometrics, June 2007

³⁰ The latest published data refer to 1995 and only cover the indirect impacts.

Table 6-1: Examples of multipliers in other sectors of the UK economy

Sector	Indirect multiplier	Induced multiplier	Total
Electricity production and distribution	2.2	1.25	2.8
Construction	2.1	1.25	2.6
Iron and steel	2.0	1.25	2.5
Motor vehicles	1.9	1.25	2.4
Sports goods and toys	1.9	1.25	2.4
Machine tools	1.9	1.25	2.3
Hotels, catering, pubs etc	1.7	1.25	2.1
Computer services	1.5	1.25	1.9
Legal activities	1.5	1.25	1.9
Education (pt)	1.5	1.25	1.8

Source: ONS, Oxford Economics

6.2. Value added and employment

Including direct and multiplier (indirect and induced) impacts, we estimate that the core UK film industry supported around 72,000 FTE jobs in 2009 with a value added contribution to GDP in the region of £3.2 billion. This is equivalent to just over 0.2% of UK GDP.

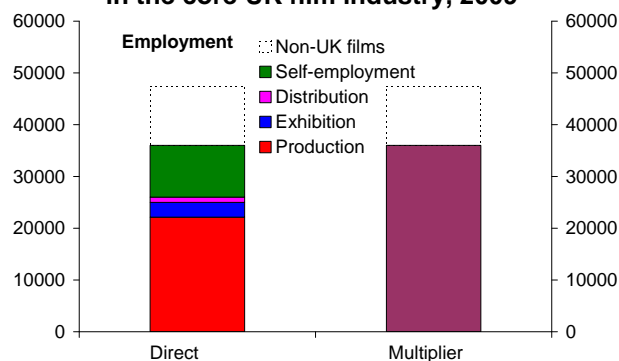
This impact comprises:

- **Direct** employment in the core UK film industry of around 36,000 FTEs in 2009, contributing value added of £1.6 billion to GDP in the UK economy.
- **Multiplier** employment in other industries of 36,000 FTEs supported through purchases of goods and services by companies in the film industry, and from employment supported by employees in the film industry (whether direct or indirect) using their income to purchase goods and services for their own consumption. The value added contribution to GDP from these supported jobs is estimated to be a further £1.6 billion in 2009.

Indirect jobs supported include those in the retail sector generated from the consumer purchases of goods at cinemas, in the TV/ media industry, the advertising industry, in the financial and business services sector, or the workers required to manufacture production equipment and videos. Induced jobs are likely to include jobs in retail and a range of service industries (see Box 6-1 for a case-study analysis of the links with other sectors).

Chart 6-1

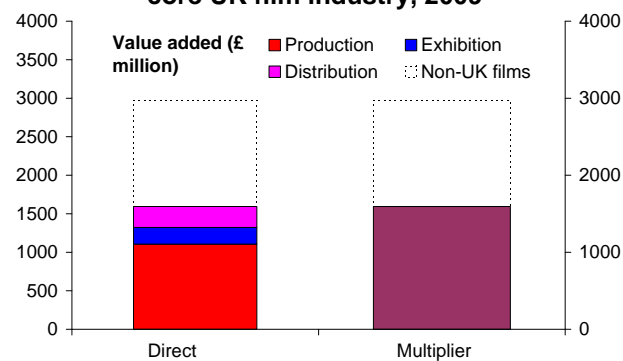
Direct, indirect and induced employment in the core UK film industry, 2009



Source : CE; ABI; ONS; DCMS; OE estimates

Chart 6-2

Direct, indirect and induced value added in the core UK film industry, 2009



Source : CE; ABI; ONS; DCMS; OE estimates

6.3. Linkages between the core UK film industry and other creative industries

The core UK film industry is part of the broader 'creative industries' that now account for around 6% of the UK economy in terms of GVA and are a rapidly expanding sector³¹. Moreover, there is clearly a symbiotic relationship between film and the other creative industries.

These interactions are most obvious in the case of writers, actors and directors who also work in, for example, the theatre, TV and commercials – for example, both Dame Judi Dench and Dame Helen Mirren enjoy successful TV and theatre careers, as well as working in film; similarly, Sam Mendes has directed both stage and film productions; and Alan Bennett and Michael Palin have written scripts for TV and radio, as well as for the stage and for film. Similarly, not only have many successful TV series or plays been made into films – as in the case of, for example, TV's *Sex and the City* and the West End's *Mamma Mia!* and *The Phantom of the Opera* – but films represent a significant proportion of television programming and some have moved in turn to become successful stage plays, such as *Billy Elliot* and *The Lord of the Rings*. Extending the theme further, the film *Atonement*, based on the book by British author Ian McEwan, is now also to become an opera.

But the relationship between film and other creative industries is much deeper than even suggested by these examples. Most of the companies involved in the core UK film industry are also involved in other creative industries and are dependent on both to provide a sustainable revenue stream. This multi-sectoral involvement also means that the fixed costs of infrastructure and studios are shared, enabling economies of scale and economies of scope to be better exploited. (See Box 6-1 for a case study analysis of such links with other sectors.)

The involvement of firms and employees in the core UK film industry in other creative activities

³¹ Source: DCMS, "Creative Industries Economic Estimates", February 2010.

is clearly illustrated by recent surveys. Skillset's Feature Film Production Workforce Survey, for example, found that in 2008, 73% of people working on feature films had also worked in other audio-visual industries during the same year, with the most popular alternative sources of work being TV programmes (51%) and commercials (34%). Previously in 2005, a detailed survey of 400 firms across the creative industries by Optima/CE showed that:

- Only 38% of firms in the core UK film industry worked only on film.
- 62% of firms in the film industry also worked in TV.
- Of these, a little over half worked only in film and TV. The others also did a mix of work in commercials and/or corporate video and interactive media.

There are other synergies between the core UK film industry and other creative industries. An important one is technology transfer. The film post-production sector in the UK, for example, has developed a number of techniques in computer-generated imagery (CGI) initially for use in films that have then found application in TV and other media. For example:

- **Harry Potter** – The investment generated by the *Harry Potter* films enabled UK visual effects company Framestore to make significant investment into new CGI technology. This technology was then offered to the BBC at a far lower rate than would otherwise have been possible so that they could make *Walking with Dinosaurs*. The investment in the equipment was originally made possible by work generated by a US studio but ultimately enabled the BBC to produce a widely acclaimed TV series which enhanced the BBC's international reputation and also generated considerable income for the Corporation.
- **Avatar** – As the first major 3D film to use CGI technology, *Avatar* placed heavy demands on the global team of visual effects companies that worked to create it. The fact that action scenes needed to be shot and rendered twice – once for each eye of the viewer – led to the creation of numerous new technologies that are now being applied elsewhere. Soho-based firm The Foundry developed software called Ocula, which ensured the twin camera shots were fully compatible and which is now helping to drive development in the application of so-called 'stereoscopic imagery' across film and TV; elsewhere, stereoscopic pre-visualisation tools developed by Framestore have since enabled the firm to win contracts for new TV commercials in the US.
- **ALICE** – This high-end crowd simulation package was developed by MPC R&D following nearly three years of research and development. Initially developed to create over 150,000 rampaging soldiers for Wolfgang Petersen's *Troy*, it has been extensively developed for use on other projects. The software has cross-fertilised into MPC's commercials division where it has been used, for example, to re-create the Rio Carnival for a mobile telephone ad. MPC was able to offer the product to the UK commercials industry, at a lessened price, as both risk and R&D costs were underwritten during development for the film industry.

These examples illustrate the benefits of investment by firms in the core UK film industry – often

spurred by work for inward investment films – for other creative industries, enhancing the competitiveness of the UK creative industries sector as a whole. The cutting edge VFX work undertaken for big-budget international productions such as *Avatar*, also helps raise the profile and reputation of the UK's technical screen production sector and secure spin-off benefits elsewhere.

6.4. Economic impact from film on TV

There were 2,218 film transmissions on terrestrial channels in 2009, a figure virtually unchanged from 2008 and equivalent to an average of 6 films per day. In 2009, popular films shown on TV included *Pirates of the Caribbean: At World's End* (the top ratings puller, watched by 6.4 million BBC viewers), *Becoming Jane*, *Miss Potter*, *United 93*, *The Da Vinci Code* and *Casino Royale*. Of all films shown on terrestrial TV, 487 (22%) were UK films and 154 (7%) were 'recent' UK releases, defined as having been launched theatrically in the previous eight years.

Based on a model developed by Attentional, the UK Film Council estimated the value of feature film to UK broadcasters to be approximately £1.1 billion in 2009. This figure was derived from the annual revenue per channel – ie net advertising revenue for the commercial channels, subscription revenues for the pay-TV channels and the proportion of licence fee applied to television programmes on the BBC channels multiplied by the percentage of broadcast hours for feature film.

Of this £1.1 billion, around £245 million could be attributed to the core UK film industry on the basis of the proportion of films shown on TV that were UK films. However, about half of that contribution would already be included in our estimates of the direct impact of the core UK film industry, which takes account of revenue from TV broadcasting rights. We therefore estimate that UK film helped to generate about £120 million of GDP in 2009 by supporting the TV industry.

6.5. Direct and multiplier tax contribution

To the extent that the film industry supports the employment and value added activities of other firms in its supply chain and from induced spending, it also supports tax contributions from those firms and employees. Assuming that the tax multiplier is the same as the employment multiplier then multiplier tax contribution is estimated to be approximately £425 million³². Overall, the total tax contribution – including direct, indirect and induced impacts – to the Exchequer was £870 million in 2009.

³² The tax multiplier is applied to income tax, national insurance and corporation tax, with an allowance for the tax associated with the use of film on TV. No tax multiplier is applied to VAT and the withholding tax (see Appendix for a more detailed discussion).

Table 6-2: Estimates of the total tax contribution, 2009

Impact	£ million
Direct	445
Multiplier	425
Total	870

Source: Oxford Economics estimates

Box 6-1 : Linkages with other sectors – a case study of the Pinewood Studios Group

The Pinewood Studios Group is one of the world's leading studios companies, created from the merger of Pinewood Studios Limited and Shepperton Studios Limited in 2000, and is at the forefront of the UK film industry. Over its 73-year history the constituent companies have handled over 1,500 films. Facilities across its sites include 34 stages, 10 television studios, water filming facilities, audio post facilities, preview theatres, backlots, manor houses, and gardens and woodland. The group's proposed development *Project Pinewood* would double the existing footprint of the site and create new offices, workshops, production space (including 16 permanent 'cityscapes' re-creating Paris, New York, Prague, San Francisco and Venice, amongst others) and post-production studios.

The Pinewood Studios Group is a key part of the film industry but its economic impact goes much further than this one sector. It provides studio and related services to the global film and television industry. Additional revenues accrue from television services, commercials and pop promos, and from TV dramas or special productions. For example, a Nivea commercial made use of Pinewood's globally unique underwater stage, in which the lead character's bedroom was hand-built to allow the director to create the impression of the actress 'floating' through it. The studios have also recently been home to Ant and Dec's new Saturday night TV show *Ant and Dec's Push the Button*. Its core film activities therefore support economic activity in other sectors, notably media and TV. This is an economies of scope benefit arising as film contributes to an element of fixed overhead operating costs for the studios. Without this contribution from film, the Pinewood Studios Group would not be able to deliver these other services at the same cost (or at all).

The group has a significant influence on the local, regional and UK economy. In terms of the key economic impacts, a 2009 study³³ reported that Pinewood Studios has on-site employment in the region of 1,800 people at any one time:

- Some 150 people are employed directly at Pinewood Studios
- Around 750 employees work in approximately 200 tenant companies located on-site
- A further 800 people typically come to Pinewood Studios each day to work on specific productions (this can rise by an additional 1,000 during major films).

The impacts of *Project Pinewood* would potentially create at least another 960 permanent jobs, including approximately 400-500 in a serviced workspace facility for creative sector businesses. The £350 million, 10-year construction phase would create an additional 500 jobs per year (approximately), with the workforce and the local economy benefiting from a temporary building skills academy located on-site for the duration of the building works. The new production and post-production facilities would be used for film, TV, commercials, video games and other media development.

³³ Source: DTZ, "Economic Impact of Project Pinewood", DTZ Consulting, May 2009.

6.6. Summary

The contribution of the core UK film industry from direct and multiplier impacts is estimated to be around 72,000 FTE jobs, with a value added contribution to GDP in the region of £3.2 billion.

The core UK film industry supports other industry through its purchases of goods and services. But its links with other screen industries – television, corporate video, commercials/ advertising and interactive media – go much deeper than just a supplier relationship. The core UK film industry also has a symbiotic relationship with a wide range of other creative industries, both as those who work in film also work in TV, theatre, commercials etc and as technical developments in the film industry are transferred to other media.

7. Tourism

7.1. Introduction

The phenomenon of films encouraging viewers to visit the country or site where they were shot – often labeled ‘film-induced tourism’ or ‘movie-induced tourism’ – has been widely discussed in academic literature and is now both well-documented and well-evidenced as a concept. Tourism authorities across the world are now firmly aware of the role of film as a catalyst for tourism and have strategies that both actively encourage the shooting of films in their country or city as well as the promotion of tourism following the release of such films.

This chapter focuses on the ways in which film plays a part in the choice of places people visit, and considers the likely scale of the impact in the UK.

Key Points

- The impact of film on tourism is well-documented through a number of case studies and is recognised in the marketing campaigns of tourist boards around the world. Films can increase visitor numbers and support investment in refurbishments and expansion at specific attractions.
- While there is limited robust statistical data quantifying the value of this impact, the available evidence suggests around a tenth of UK tourism may be attributable to the impact of UK films.
- On this basis we estimate that around £1.9 billion of visitor spend a year might be attributable to UK films.
- In 2009, this additional spending is estimated to be worth £950 million to UK GDP and £210 million to the Exchequer.

As one example of the efforts of tourism authorities to capitalise upon the potential of film tourism, so-called ‘Movie Maps’ are now commonplace in visitor centres around the world, making it easy for tourists to find the locations of scenes shot locally in famous films. More broadly, film-induced tourism is now a firm part of local visitor strategies, with advertising campaigns running slogans such as “*You’ve seen the movies, now see the set*” (previously a US tourism tagline), and the Spanish city of Cadiz, for example, recently offering support to the Tom Cruise film *Knight and Day* in anticipation of its effect on overseas visitor numbers. City authorities in Barcelona were also happy to offer direct assistance to the makers of the Woody Allen film *Vicky Cristina Barcelona*, featuring Scarlett Johansson, which showcased the city in a

manner its tourist agencies could hardly have improved on. And hotel operators themselves also recognise the role of film in attracting visitors, with, for instance, Radisson Edwardian currently teaming up with VisitBritain to offer *Sherlock Holmes* packages.

7.2. Channels of impact

There are a number of channels through which film can affect tourism. The most direct is the promotion of trips to specific sites where films were shot, which can in turn trigger investment in refurbishments and expansion at specific attractions. However, the role that films play in promoting a country or a region rather than a specific shoot location is also important. Films not only generate interest in a country but also act to remind people about what the country has to offer – for example by showcasing scenery and the cultural offer. Indeed, just as product placement of cars, computers, jewellery and so on in films and television programmes has grown, it is not surprising that ‘places’ are also being featured in film on the same basis. According to Miles Morgan, Thomson’s Marketing Director, with “*films effectively acting as ‘virtual brochures’, they can do much more for bookings than a large scale advertising campaign*”³⁴.

The overall impacts that film makes to tourists’ choices of destination can be significant. For example, in Britain, according to research conducted by Thomson Holidays, more than 80% of people plan their holidays after seeing a location on the big screen. And one in five admits to having made a pilgrimage to a destination they’ve seen on film.

7.3. Global examples

There are many case studies from around the world demonstrating the impact that a film has had on visitor numbers either to a specific shoot site or more generally to the country in which the film was shot or that it represented (see Figure 7-1). Perhaps the longest running example is the Hollywood classic *The Sound of Music*. Even 40 years after the film’s release, an estimated 300,000 fans visit Salzburg every year on the strength of the musical, with 40,000 taking the official *Sound of Music Tour* at £35 a time.

The most famous example of a more recent film helping to promote tourism is in New Zealand – which has become synonymous with Tolkien’s ‘Middle Earth’ following its use for the filming of the *Lord of the Rings* trilogy. According to Tourism New Zealand, the films not only showcased the country’s dramatic scenery and landscapes but also helped position it as a more ‘mainstream’ destination for international visitors, overcoming a considerable barrier in the minds of many prospective holidaymakers. New Zealand experienced a 17% increase in visitor spend the year after the release of the first *Lord of the Rings* film in 2001, and the acclaimed trilogy is credited as playing a significant part in the 40% rise in average annual visitor numbers

³⁴ Source: TRI, “*Tourism: Keeping up with the Indiana Jones’s*”

witnessed since the late 1990s. This example also serves to illustrate how tourism authorities can use film as a strategic weapon in their efforts to increase visitor numbers, with Tourism New Zealand pumping millions of dollars into global marketing and promotion around the films.

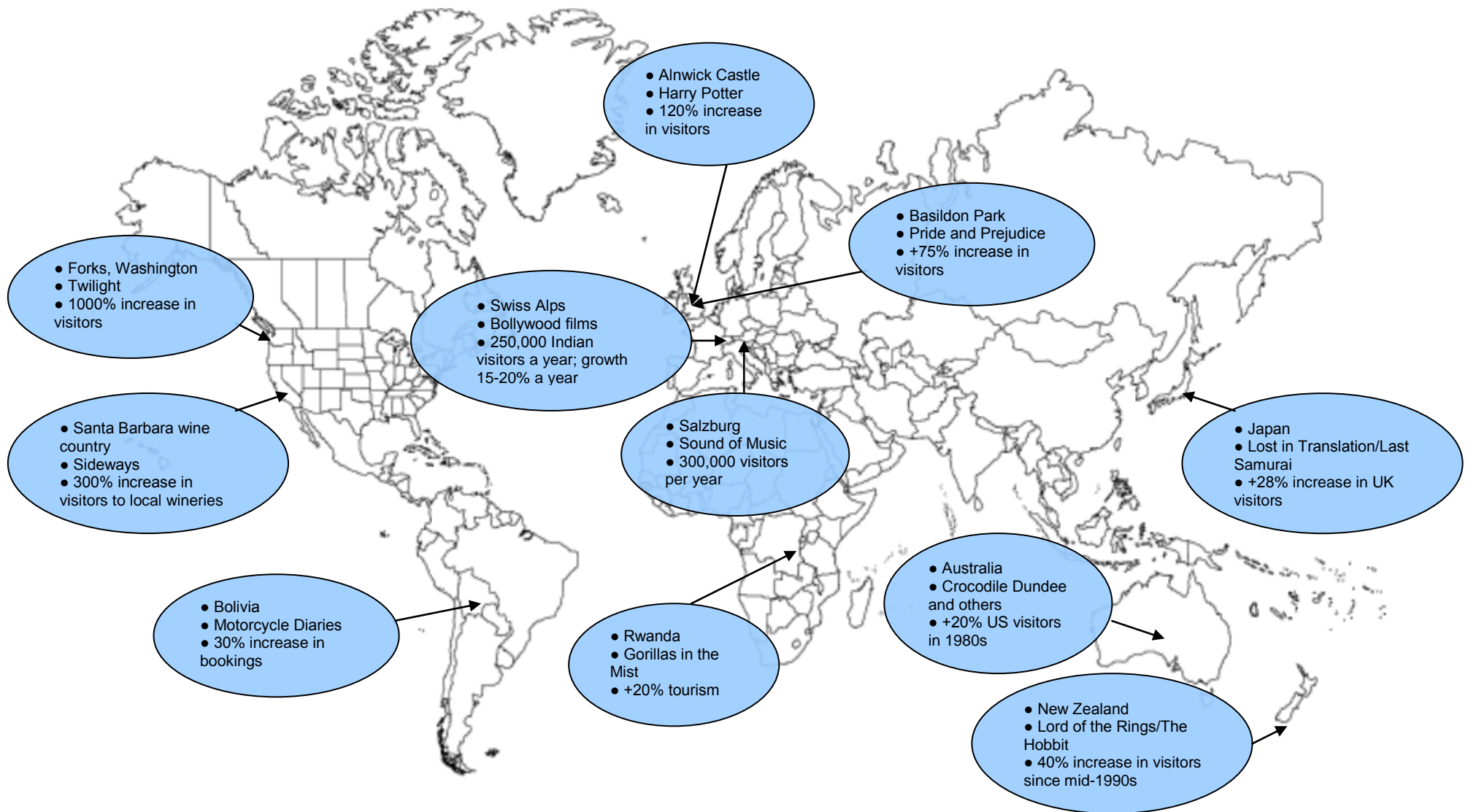
Other examples of substantial numbers of tourists visiting sites where film have been shot include the Swiss Alps, whose use for location filming in many Bollywood films has inspired more than 250,000 Indian tourists a year to visit (the main restaurant at the Jungfrauoch, the highest railway station in Europe and the top tourist attraction in Switzerland, is now an Indian curry-house); the town of Forks in Washington, USA, which saw a tenfold increase in visitor numbers after the vampire film *Twilight* was made there; wineries in the Santa Barbara region of California, which were promoted via a detailed map of locations from the film *Sideways* that successfully increased tourist numbers by 300%³⁵; and also Ireland, where survey research suggests that 18% of overseas tourists in 2009 were influenced to some extent in their decision to visit by films they had seen³⁶ (indeed, the popular image of Ireland packaged and sold for many years by the Irish tourist board has been traced back to the way it was presented in iconic films such as John Ford's *The Quiet Man*).

Other global examples of the film tourism effect include Bolivia, which experienced significant increases in tourist numbers following the release of *Motor Cycle Diaries*; Australia, which saw *Crocodile Dundee* and other films boost visits to the country in the 1980s; and Japan, which benefited from the popularity of *Lost in Translation* and *The Last Samurai*. Even the recent Sacha Baron-Cohen comedy *Brüno*, which pokes gentle fun at Austria and its people, triggered a 120% increase in searches for Viennese hotels, according to the website hotels.com.

³⁵ Source: MPAA, "The Economic Impact of the Motion Picture and Television Industry on the United States", April 2009.

³⁶ Source: Fáilte Ireland Visitor Attitudes Survey

Figure 7-1: Eleven global illustrations of the impact of films of tourism



7.4. UK examples

But it is not just the rest of the world that benefits from film tourism – so does the UK. For example, Alnwick Castle in Northumberland saw a 120% increase in visitors following its appearance in a *Harry Potter* film. Basildon Park near Reading saw a 75% increase in visitor numbers following its use in *Pride and Prejudice*, while Chatsworth House in Derbyshire added 10% to its annual haul of 500,000 visitors following the same film. On a wider scale, the release of *Miss Potter* saw visits from Japanese tourists to the Lake District increase to the extent that the Cumbrian Tourist Board employed a permanent Japanese tour guide. Films such as *Harry Potter* have also raised the profile of the UK in the Far East; movies like *Kabhi Kushi Kabhie Gham* helped raise awareness of the huge potential for Bollywood tourism; and the *James Bond* films have enhanced the image of the UK overseas for many years. Within the UK, films like *The Duchess*, *Pride and Prejudice* and *Brideshead Revisited* always increase interest in the many National Trust properties used for filming, while the film *Bright Star* has recently increased visits to Keats' House Museum in Hampstead.

Although it is difficult to extrapolate the results from anecdotal examples to calculate the overall impact of UK films on visitor numbers to the UK, these case studies do represent a considerable body of evidence supporting the view that the effect is substantial³⁷. It is now also commonly acknowledged that film plays a major role in shaping external perceptions and the 'brand' of individual destinations, for example in Yorkshire, whose popular image mirrors its rich history in film, from *Jane Eyre* and *The Railway Children*, which evoke its famous rolling scenery, all the way to *The Full Monty* and *The Damned United* which reflect its dominant working class culture³⁸.

Tourism authorities in the UK are aware of this potential and seek to exploit it in numerous ways. For example, VisitBritain has recently launched a dedicated website to promote tourism based on the new *Sherlock Holmes* film, pointing out filming locations, themed hotel packages and related attractions such as the *Sherlock Holmes* museum on Baker Street. A new iPhone app provides users with details of many film locations across the UK, while themed podcasts can be downloaded from agencies such as Visit London. And the now traditional Movie Map is still extremely popular with tourists – VisitBritain currently offers maps and even multi-day travel itineraries based around *Pride and Prejudice* (Peak District, Bakewell and Stamford), *Miss Potter* (Lake District) and the *James Bond* films (London, Chippenham and the New Forest), while Film London offers maps for *Bridget Jones* and *Love Actually*, amongst others, as well as broader themed itineraries such as the 'South Bank Movie Trail' and the 'Bollywood Trail'.

As a marketing tool, the Movie Maps have been hugely successful: surveys have previously

³⁷ For more evidence of the "substantial" if "diffuse" effect, see Young and Young (2008), *Measuring the Effects of Film and Television on Tourism to Screen Locations: A Theoretical and Empirical Perspective*, Journal of Travel and Tourism Marketing, June 2008

³⁸ See O'Connor, Flanagan and Gilbert (2008), *The Integration of Film-Induced Tourism and Destination Branding in Yorkshire, UK*, International Journal of Tourism Research, Vol 10, 2008.

shown that they effectively turn possible visits into certainties, encourage people to visit parts of England that they had not previously considered, and generate impressive returns to investment.

7.5. How much is film tourism worth to the UK?

It is clear that there is a well-documented impact of film in encouraging tourism. However, the overall value of this contribution to the UK economy is not something that has often been quantified. Total tourism spending by the 30 million overseas visitors to the UK amounted to £16.4 billion³⁹ in 2009, and this is estimated to have directly supported 170,000 jobs⁴⁰. But how much of that tourism activity can be attributed to UK films?

In our previous reports for the UK Film Council, on the basis of extrapolating results from detailed case studies that assessed the impact of two particular films, we estimated the impact of UK film on tourism may have risen from £400 million to £1.6 billion over the decade to 2005. These figures equated to between 4% and 12% of the value of total international tourism.

A study by Riley, Baker and Van Doren (1998), in which they review the impact of 12 US films on visits to specific locations of attractions popularised by the films, provided statistical evidence on the value of the impact of film on tourism. They examined data on visits to each site for ten years prior to a film's release and, where available, for five years following the release. Their results are presented in Figure 7-2. They showed that there is a statistically significant difference⁴¹ between the increases in visitors that a location experiences and what might have been expected by extrapolating previous trends in visitor numbers. They concluded that "...the span of movie inducement lasted for at least 4 years and increased between 40 and 50%."

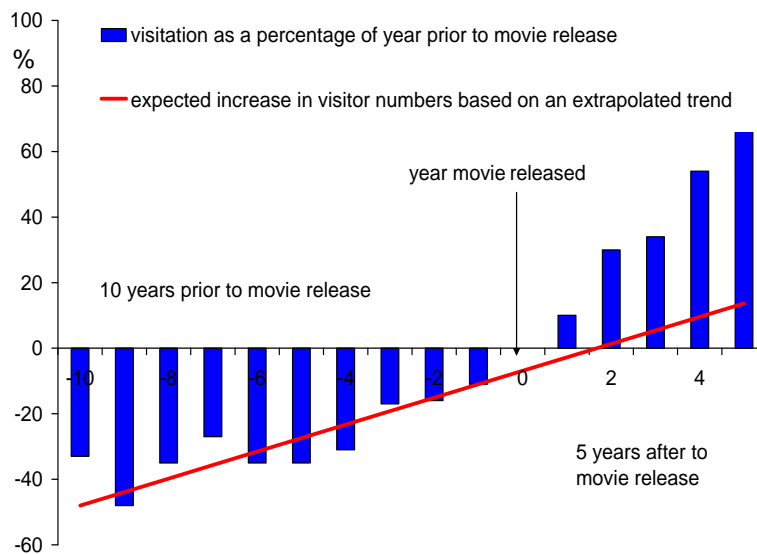
Taking the anecdotal evidence and the results of Riley *et al* presented in Figure 7-2 perhaps suggest that the estimates of the impact of film tourism in our 2005 and 2007 reports are conservative. However, the 12 movies in the Riley *et al* study were chosen specifically because they were a box office success and the movie had an icon clearly associated with an accessible destination. This implies that they are exactly the type of films that will have the greatest impact on tourism and so cannot be considered as representative of all movies. Given this, we consider the figure used in our previous report to be a reasonable estimate of the impact. However, we would recommend that primary research is undertaken in the future to provide the robust statistical evidence required to verify these estimates.

³⁹ Source: ONS travel and tourism statistics

⁴⁰ Source: Oxford Economics estimate based on share of overall tourism demand in the UK (derived from WTTC 2009 Travel & Tourism Economic Research).

⁴¹ Significant at the 95% level

Figure 7-2: Impact of movie releases on visitation to public parks and private attractions (median of 12 sites)



Source: Riley, Baker and Van Doren (1998)

Using the results from our previous report and applying them to the latest tourism statistics, we estimate that the impact of the UK film on tourism could have been as much as £1.9 billion of visitor spending in 2009.

In calculating the overall impact of this additional visitor spending on GDP in UK, the leakage of some of this into imports needs to be taken into account. While all of the visitor spending may occur in UK, many of the goods purchased will have been imported. And even some of the tourism services in UK (for example, accommodation) will use imported inputs (such as linen and food). These imports need to be netted off in order to calculate the additional value added in UK as a result of the additional spending. We do this using our detailed model of the tourism sector in the UK economy.

Our model suggests that visitor spending of nearly £1.9 billion in 2009 produced a contribution of around £950 million a year to UK GDP and £210 million to the Exchequer (including impacts on air passenger duty).

7.6. Is UK film tourism at risk?

While an estimated £1.9 billion of visitor spending in the UK in 2009 may have been the result of the impact of UK films, that does not necessarily mean that spending would fall by this amount if UK films were no longer made. In the first place, films might continue to be made about the UK, even if they were no longer made in the UK. Furthermore, there would still be an existing stock of films about the UK even if the new ones ceased to be made.

However, as discussed in our previous reports, there is an increased risk that films that would have been set in the UK if made here will be transplanted elsewhere if made somewhere else. For example, the film *Gulliver's Travels*, based on the work of classic British literature, was to be made in North America before coming to the UK after considering the cost advantages of a UK shoot.

The impact of a historical legacy of films about the UK would gradually decline over time if it were not reinforced by new UK films. After one year, the impact on visitor numbers might be quite small, but after four or five years we would expect the impact to build up as other potential destinations were increasingly uppermost in people's minds. The modern-day tourist dollar is sought after by more competing locations than ever before, and with future growth in tourism spending set to be driven predominantly by the rising incomes of Asian travellers – who we already know can be heavily influenced by film locations, such as Switzerland, in their vacation decision-making – the UK is likely to need to remain highly visible to international audiences to maintain its share of the global film tourism market.

In the medium term, therefore, we regard most of the impact of UK film on UK tourism as vulnerable if UK films ceased to be made.

7.7. Summary

Around a tenth of the value of foreign tourism in the UK probably comes as a result of visitors seeing the UK depicted in film. And in 2009, as a result of their spending, more than 20,000 jobs were supported in the UK, contributing an additional £210 million to the Exchequer and £950 million to GDP. With the continued success of UK films and actors at international award ceremonies such as the Oscars®, the contribution of film to tourism in the UK looks set to increase further in the coming years.

8. Culture

As a leading component of popular culture and a powerful means of expression and comment for filmmakers on the world around them, film has the ability to make people see things differently, question long-held perceptions and feelings, broaden knowledge and enrich lives. In a globalised and digital world, it also plays an important role in social communications and relationships.

On many occasions, the cultural benefits a film delivers will be open to all. But there are times when the messages of a film speak loudest to those who share its nationality. Indigenous films may help inform British people about who they are, how they fit in to the world and what they share with other nationalities. Successful UK films therefore play an important role in defining our national identity and self-confidence. Moreover, they also influence how the nation is perceived abroad.

This chapter explores the cultural benefits of the core UK film industry. It estimates the value that British cinema audiences are willing to pay for the cultural value UK film provides.

Key Points

- The value that people attach to film culture should in part be reflected in box office takings. But indigenous film has a number of other facets – for example, as a key means of expression of UK identity – that are likely to mean the total social valuation exceeds box office takings.
- UK films address the social challenges that the country faces in the 21st century, including drug addiction, prejudice and race relations, as well as positive themes such as the benefits of the UK's diverse multi-cultural population, family values and friendship.
- Culture also benefits from the educational component of UK films.
- We estimate that the presence of UK films boosts total box office revenues by around £60 million a year. This is one estimate of the private cultural value of UK film as shown in cinema.
- Sales and rental of UK films on DVD earned over £320 million in 2009. If the same premium for watching UK films applies in these media, the private cultural value of watching UK film may be boosted by an additional £100 million.
- The government is now explicitly recognising the public value of culture through the cultural test for identifying whether a film is British.

8.1. Film and UK culture

Film can affect a country's culture in many ways. The best films can articulate new ideas, forcing the audience to reassess their existing views, assumptions and prejudices. As a mass media, with fewer constraints about impartiality than some television channels, film can also articulate existing ideas and viewpoints. These may reflect society or be a criticism of it. The communication of new and existing ideas can lead audience members to change the way they view the world and their place within it.

The ability of films to influence culture means that they can influence national identity. A film from any country can potentially shape the UK's culture, but it is more likely that an indigenous film will have such an impact. UK films are much more likely to involve places, people or issues that British people instinctively recognise and value. UK film affects how the British see themselves and how they are viewed by others – for example, a recent study commissioned by the UK Film Council on the cultural impact of British cinema around the world found that UK films “are particularly appreciated for their social realism and ability to show ordinary people undergoing profound changes in life with resilience and humour”.⁴²

The core UK film industry's ability to influence national identity is the main reason the government seeks to promote the production of culturally British films by providing tax relief. In describing the change to the cultural test for British films, HM Treasury commented “*Cinematic film provides a universal and readily accessible medium for the expression and representation of British culture and national identity. Films can help reflect, explore and challenge our diverse history, cultural beliefs and shared values. In doing so, the best British films not only help us to reach a better shared understanding of Britain and its place in the world, but are also instrumental in spreading awareness and appreciation of British culture around the world. As such, British films are an important part of our cultural heritage and a significant channel for the continuing expression and dissemination of British culture.*”⁴³

Examples of recent UK films that have addressed social issues that are important challenges in the 21st century include:

- *Harry Brown* – which addresses themes of public safety, the elderly, drugs and vigilantism
- *Nativity* – equality/inequality of educational opportunity
- *In the Loop* – contemporary political culture in the UK
- *Looking for Eric* – the impact on ordinary people's lives of celebrity role models
- *The Boy in Striped Pyjamas* – ethnic cleansing
- *Adulthood* – life on the edge of society

⁴² Source: Narval Media, Birkbeck College and Media Consulting Group, “Stories We Tell Ourselves: The Cultural Impact of UK Film 1946-2006”, June 2009.

⁴³ HM Treasury (2005), ‘Reform of film tax incentives: Promoting the sustainable production of culturally British films’, July.

- *Notes on a Scandal* – transgressive teacher-student relationships
- *Amazing Grace* – the campaign against slavery

UK films' ability to advertise the British brand around the world also has a monetary pay-off. It supports the competitiveness of UK exports (see Chapter 10). It has an important role to play in attracting people to the UK and supporting inward tourism (as discussed in Chapter 7). It also attracts business, influencing levels of inward foreign direct investment.

There are also public benefits from the educational component of films. For example, since 1985 Film Education has developed a range of publications and services to supply educational material on film. This in turn helps young people develop a broader cultural appreciation for art and society, which may have further positive spin-offs through the encouragement of good citizenship.

In addition, the introduction of popular culture, media and/or new technologies into the communications, language and literacy curriculum has motivated and engaged children in learning. Practitioners report that it has a positive impact on children's progress in speaking, listening and literacy. Teachers who acknowledge and seek to build on children's film-related literacy skills consistently report overall gains in attainment⁴⁴.

There is a growing body of evidence that demonstrates film's ability to raise standards across the curriculum. Moving Literacy On, Ffilmschool 2 (Dr. Aparna Sharma, University of Glamorgan) and the 2005 Boys' Writing Project (Diane Evans, Leeds Education) demonstrate how using film can raise standards of reading and writing. This is also evidenced in the Moving Image Education project in Angus, Scotland – evaluation at <http://www.scottishscreen.com>.

Furthermore, over 80% of teachers involved in a recent 21st Century Literacy pilot project in the East Midlands felt that film could be used to engage with difficult or hard-to-reach young people.

These so-called 'externalities' that arise from the characteristics of indigenous film imply that the overall social value of UK film may well exceed the price that consumers pay to see it at the cinema. They also mean that there is a risk that the film industry, which is dominated by US majors, will not produce as many UK films as would be socially desirable. That is a key justification for the Film Tax Relief in the UK.

8.2. A monetary estimate of the cultural value of UK film

To see a film at the cinema, an individual has to purchase a ticket. By doing so, the person signals he or she expects to get benefits from viewing the film that are at least as great as the admission price. A movie's box office revenue is therefore a guide to the monetary value of the total benefits the film delivers to the audience. It is a 'guide' as the prospective audience will not

⁴⁴ Marsh, J. and Bearne, E. (2007), "Moving Literacy On", UK Literacy Association.

have a true view of the satisfaction they derive from seeing the film until after they have seen it. But advertising, trailers and reviews should help inform the prospective audience about the film's contents.

One approach to assessing the value people place on UK film is therefore to look at box office data to see if there is evidence that UK films attract higher revenues simply for being indigenous. The UK Film Council maintains detailed databases that allow for a comparison of the effects of country of origin on box office revenues (see Box 8-1 for more details).

We focus here on the subset of films released in both the UK and US between 2000 and 2009. We begin our analysis of UK film-goers' valuation of UK films by looking at how large each film's UK box office receipts are as a share of its US box office earnings. Table 8-1 shows various points in the distribution of all films' UK box office receipts as a share of their US earnings.

We might generally expect each film's UK box office receipts to be a small fraction of what it earns in the US. And this is what the data in Table 8-1 show – the typical film earns in the UK just 16% of its US box office receipts. This is partly because the potential audience in the US is substantially larger than in the UK: there are over 300 million people in US compared to just over 60 million people in the UK. But Americans also typically go the cinema more frequently than British people (5 times a year as opposed to less than 3 times a year).

Table 8-1 also shows it is rare for a film to earn more box office revenue in the UK than in the US. In only 10% of cases⁴⁵ (the 90th percentile in Column 1) does a film earn more this side of the Atlantic.

But Table 8-1 also shows that the probability of a film earning more in the UK than the US changes markedly once the country of origin of the film is taken into consideration. For foreign films, the probability is small: in only 10% of cases has a foreign film earned more box office revenue in the UK than in the US (the 90th percentile in Column 2). But for UK films, the probability increases markedly. For all films where there was some UK involvement, 30% (the 70th percentile in Column 3) earned more in ticket sales in the UK than in the US. And for films which were solely UK productions (as opposed to a co-production between the UK and another country or countries), the proportion earning more box office receipts in the UK than the US increases to 55% (45th percentile in Column 5).

⁴⁵ The cells shaded grey indicate where films earn more at the UK box office than the US box office.

Table 8-1: Films' UK box office receipts as a proportion of its US box office receipts (2000-09)^{1,2}

Selected points in the distribution of UK box office receipts for a film as a proportion of its receipts in the US	UK earnings relative to US earnings for all films	UK earnings relative to US earnings for films split by country of origination			
		Non-UK films	UK films		
			Total	Of which:	
				UK co-productions	UK domestic
	<i>Col. 1</i>	<i>Col. 2</i>	<i>Col. 3</i>	<i>Col. 4</i>	<i>Col. 5</i>
Minimum	0.00	0.00	0.00	0.00	0.00
5 th percentile	0.01	0.01	0.04	0.04	0.09
10 th percentile	0.03	0.02	0.08	0.07	0.19
15 th percentile	0.04	0.04	0.12	0.10	0.24
20 th percentile	0.06	0.05	0.14	0.13	0.41
25 th percentile	0.07	0.06	0.17	0.15	0.48
30 th percentile	0.09	0.07	0.21	0.18	0.62
35 th percentile	0.11	0.09	0.25	0.21	0.79
40 th percentile	0.12	0.11	0.30	0.25	0.91
45 th percentile	0.14	0.12	0.34	0.30	1.27
50 th percentile (median)	0.16	0.14	0.41	0.33	1.42
55 th percentile	0.19	0.16	0.54	0.37	1.61
60 th percentile	0.22	0.18	0.64	0.47	1.97
65 th percentile	0.26	0.21	0.83	0.61	2.72
70 th percentile	0.33	0.25	1.08	0.75	3.48
75 th percentile	0.44	0.31	1.45	1.01	8.51
80 th percentile	0.62	0.43	2.00	1.32	13.14
85 th percentile	0.94	0.63	3.53	2.02	16.74
90 th percentile	1.46	1.06	6.29	4.39	34.91
95 th percentile	3.45	2.06	17.84	7.59	225.84
Maximum	1401.55	121.13	1401.55	513.18	1401.55

Sources: UK Film Council and Oxford Economics.

¹ In common currency (sterling).

² Cells shaded grey where UK box office receipts exceed US box office receipts.

These results suggest that UK cinema-goers have a greater propensity to watch UK-made films than their US counterparts. To isolate the extent to which UK films' better performance at the UK box office is due to domestic audiences' preference for indigenous films, we have undertaken some econometric analysis, updating an exercise reported in our 2007 study. This is explained more fully in Appendix B.

Our analysis seeks to identify whether the UK box office receipts for a film are statistically significantly higher for UK films compared with foreign films. In conducting this analysis, it is necessary to take account of the fact that films differ in popular appeal – it is difficult to be sure when looking for the effects on box office revenue of indigenous films whether this is simply

because particular films have more widespread popular appeal. The way we control for popular appeal of a film, in order to get at the true value placed on indigenous film, is to use another country's box office return as a 'control' factor. If, for example, a film yields a higher box office in, say, the US then this may be taken as some evidence that that particular film might also be expected to perform well in the UK.

Our results suggest that a film's box office receipts in the UK will be 30% higher than otherwise would be the case given its general appeal if it is UK-made. Most of this extra premium can be expected to reflect the 'cultural' value domestic cinema audiences place on seeing a UK production. So for example a film like *The Boat That Rocked*, which earned £6.2 million at the UK box office, is estimated to have attracted £1.4 million of those receipts because it was UK-made.

Applying this premium to the total box office revenue for UK films each year allows us to derive an annual estimate of the private cultural value of UK films. Chart 8-1 shows this measure of additional private cultural value of UK film ranges between £29 million and £87 million a year between 2000 and 2009. Over the ten years as a whole, it averaged £59 million per year. This equates to an average of £646,000 per UK film since the turn of the millennium (Chart 8-2).

Chart 8-1

Estimate of the total extra UK box office receipts earned by UK film

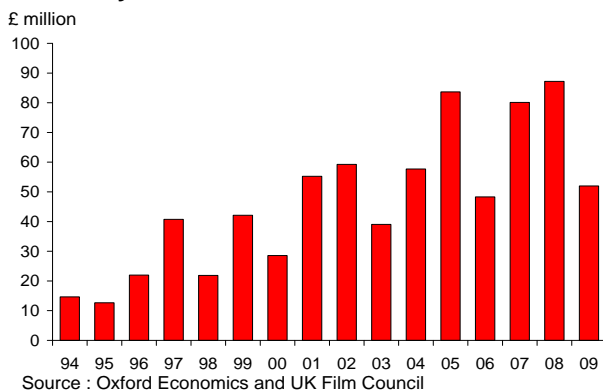
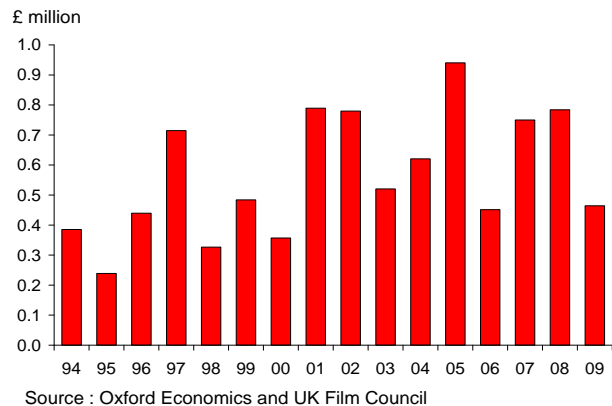


Chart 8-2

Estimate of the average extra box office receipts earned by each UK film



There are other implications from finding that UK films tend to earn higher box office receipts for given popular appeal. For example, the additional £59 million earned by UK films on account of being indigenous means that VAT receipts from cinema ticket sales are around £10 million higher than otherwise. Firms in distribution and exhibition pay an additional £6 million in corporation tax receipts on their extra profits from showing UK-made films. Furthermore, the extra revenue from UK films implies that employment in the film distribution and exhibition industries may be around 350 higher than if there were no indigenous films. These additional

employees in distribution and exhibition pay an extra £2 million in employment taxes. In total, the distribution and exhibition of indigenous films is estimated to earn an extra £18 million a year in tax receipts compared to showing foreign films with the same popular appeal.

After theatrical release, audiences can also see films through DVD sales and rentals. In 2009, sales of DVDs of feature films earned £1.31 billion, of which UK films accounted for £275 million (21%). The value of the rental market for films in 2009 was £221 million. If the 30% premium for UK films holds for these media, the cultural value film-watchers place on seeing a UK film is worth an additional £100 million a year. In addition, there will be cultural value associated with the showing of UK films on TV.

8.3. Other evidence on the cultural value of UK film

Looking at box office revenue data therefore suggests that films with UK content are valued significantly by the film-going public. But, as discussed above, the full cultural value that people place on UK film may not be reflected in box office revenues. It is conceivable that the total cultural value placed on film could exceed that reflected in box office revenues owing to significant so-called 'consumer surplus' – where consumers value a service more highly than the price they have to pay for it – and externalities from such things as national self-esteem and identity. The incorporation of the production, distribution and broadcasting of *“feature films that reflect cultural activity in the United Kingdom”*⁴⁶ into the public service remit of Channel 4, via the UK's Digital Economy Act 2010, is clear evidence of a recognition of the cultural value of film to the UK.

Quantifying this cultural value, however, is more challenging. One common approach to establishing the total value of cultural activities is to conduct surveys that ask people directly. A traditional survey was commissioned by the UK Film Council from Omnimas on 'Public Attitude to Film on TV'. Over three-quarters of the sample indicated that they consider films on television an enjoyable activity, with younger groups more likely to agree. Over one-third of the sample thought there should be more films on television, with only 5% believing there were too many. So, the survey found people placed a high valuation on film relative to other forms of visual entertainment. But, further to this, the survey found clear support for UK film. About 81% of the survey agreed that television companies should support the British film industry by showing more UK-made films, and 77% agreed that UK films are an important part of British heritage. This is clear evidence that people place an extra value on the cultural content of UK film.

Another, more sophisticated, approach to establishing value involves conducting 'contingent valuation' surveys. These surveys vary in form but, in essence, ask people a structured set of questions that seek to draw out of them the cash value they attach to a particular subject. There has not been a large survey on the value of the core UK film industry of this sort. But there have

⁴⁶ Source: UK Digital Economy Act 2010 (also see the DCMS "Response to the House of Lords Select Committee on Communications Report on the British Film and Television Industries", March 2010).

been a number of other studies that may help inform an estimate of the overall cultural value of the industry:

- The BBC is a similar institution to the core UK film industry in that it provides a key outlet for UK-originated cultural content. The Corporation undertook a contingent valuation study⁴⁷ using a variety of survey types in its submission to the Independent Panel on its charter review in October 2004. The study revealed an overwhelming support for the BBC across the UK, with 81% of the population agreeing that the BBC is worth the licence fee cost of £121 per year. On average, people valued the BBC at around twice the rate of the licence fee, that is £20 a month or £240 a year. Given the concentration of UK-specific content on the BBC compared to that available on other broadcasters, this provides evidence of the high valuation placed on UK-originated audiovisual content. In fact, the highest valuation on the BBC was placed by those with multi-channel television – suggesting that UK cultural content was particularly highly valued where there were alternatives.
- Another contingent valuation study⁴⁸ looked at the benefits that the Australian community derived from having the mandatory transmission of Australian-originated programmes on their television stations. The Australian system requires that 55% of airtime on television between 6.00am and midnight be locally produced. This therefore provides another test of the cultural valuation people place on domestic audiovisual media. The study found widespread positive views about the likely cultural benefits of Australian film and television. By contrast, the view that Australian films and television were of higher quality was less widely held. Hence, there was some evidence of discrimination between the value people placed on national-originated culture in principle and that that was actually delivered. Some 65% of respondents approved of the level of expenditure committed to supply Australian programming, with only 15% wanting a decrease. The mean and median values placed on Australian television output broadly equated to its current costs.
- Other studies of domestic television have found equally supportive results. A contingent valuation analysis⁴⁹ on Irish Public Service Broadcasting found that the annual willingness to pay for the Irish public service broadcaster significantly exceeded the current fee. Another study, undertaken to value the Canadian Broadcasting Corporation⁵⁰, found that local Canadian content had a relatively high value placed upon it relative to the current level of hours it received.

⁴⁷ Source: Fauth, R, Horner, L, Mahdon, M and Bevan, S, (2006), 'Willingness to pay for the BBC during the next Charter period: A report prepared for the Department of Culture, Media and Sport', September 2006.

⁴⁸ Source: Papandrea, F, (1999), 'Willingness to pay for domestic television programming', *Journal of Cultural Economics*, Vol. 23, No. 3, pages 147-164, August.

⁴⁹ Source: Delaney, L and O'Toole, F (2004), 'Irish public service broadcasting: A contingent valuation analysis', Department of Economics mimeo, University of Dublin.

⁵⁰ Source: Finn, A, McFadyen, S and Hoskins, C, (2003), 'Valuing the Canadian Broadcasting Corporation', *Journal of Cultural Economics*, Vol. 27, No. 3, pages 177-192, November.

Contingent valuation studies have generally therefore found evidence that people value the cultural content of indigenous audiovisual content highly, and often significantly more than the price they pay for it.

8.4. Conclusion

Our estimates suggest that, on average, the presence of UK films boost UK cinemas' box office receipts by nearly £60 million a year over-and-above the level we would expect if all films shown were foreign made. This is equivalent to 6% of UK cinemas' total gross box office receipts in 2009. It provides an estimate of the monetary value UK audiences place on watching movies at the cinema which inform them about some aspect of UK culture. If those that rent and buy DVDs of feature films pay the same premium to watch an indigenously produced film at home, the private cultural value of UK film could increase to around £180 million a year.

In addition, the core UK film industry generates a range of wider cultural benefits, through, for example, improved understanding of British life and education.

9. Merchandising

It is not just the box office that generates revenues for the film industry, particularly for major films. There is a whole range of related products that can be sold off the back of interest in a film, which may be a critical part of making the film financially viable and enhance the contribution that the film industry makes to the UK economy. Films also interest the biggest retail, hotel and restaurant chains who appreciate their potential as marketing tools: McDonalds has recently signed a deal to offer merchandise related to the new Dreamworks 3D film *How to Train Your Dragon*, for example.

This chapter looks at the most important types of different products whose sales are related to films, and estimates the 'additional' economic impact of the merchandise sales that are generated by UK films.

'Additional' means merchandise sales that are not already counted in our estimates of the direct contribution of the core UK film industry in Chapter 4. For example, revenues from DVD sales, and to a lesser extent DVD rentals, are significant to many UK film companies and viewed as an important part of the value chain in the industry. These revenues will already be covered in our direct estimates, but the revenues which occur to the retailers will not and this is the focus of this chapter.

Key Points

- The commercial opportunities from film merchandising are numerous and growing – from traditional DVD, book and toy sales through to video games, music downloads, Blu-Ray discs and phone apps.
- Turnover from merchandise associated with UK films but outside the film industry - predominately in the retail sector - was about £352 million in 2009.
- DVD sales were worth about £124 million, DVD rentals were about £33 million, soundtrack CDs were about £10 million and sales of related computer/video games were about £85 million.
- These sales supported about 6,600 jobs in 2009, contributed about £237 million to UK GDP and £107 million to the Exchequer.

9.1. DVDs and Blu-Rays

The film industry earns more through sales and rentals of DVDs and other types of 'video', such as Blu-Ray, than it does through cinema box office receipts, so it is important to include these

channels when looking at the economic significance of the industry. However, with DVD and Blu-Ray sales we have to be careful to include only the additional revenues and value added which is not already covered in the direct contribution of the core UK film industry.

The average person buys at least as many film DVDs or Blu-Rays as they buy cinema tickets. Cinema admissions in 2009 (a record year at the box office) averaged 2.8 per head of the population, whereas film DVD or Blu-Ray purchases averaged 2.9 per head.

The overall retail market for DVDs and Blu-Rays was worth just under £2.2 billion in 2009 (92% of it DVDs and much of the remainder Blu-Rays, which typically retail at a higher price). Within this figure, sales of *film* DVDs and Blu-Rays accounted for £1.31 billion. UK films accounted for approximately 21% of DVD and Blu-Ray film sales, so the value of combined video sales of UK films was about £275 million in 2009. The top ten best-selling DVD and Blu-Ray films in 2009, of which three are UK films, are shown below (Table 9.1). Previously in 2008, no less than half of the top ten best-sellers were UK films, with the most popular by far being *Mamma Mia!*, which is the fastest-selling DVD ever in the UK and owned by one in four British households.

Table 9-1: Top 10 films in 2009 (DVD/video retail)

Rank	Title	Country of origin
1	<i>Harry Potter and the Half-Blood Prince</i>	UK (with USA)
2	<i>Quantum of Solace</i>	UK (with USA)
3	<i>Twilight</i>	USA
4	<i>Transformers: Revenge of the Fallen</i>	USA
5	<i>Slumdog Millionaire</i>	UK
6	<i>Madagascar: Escape to Africa</i>	USA
7	<i>Angels and Demons</i>	USA
8	<i>High School Musical 3</i>	USA
9	<i>Ice Age III</i>	USA
10	<i>The Dark Knight</i>	UK (with USA)

Source: BVA/Official UK Charts

A proportion of DVD and Blu-Ray sales revenue is already captured in our estimates of the direct contribution of the core UK film industry. We estimate that around 55% of sales⁵¹ are counted already in the direct impact, so this means that additional merchandise sales in the retail sector amounted to about £124 million in 2009.

DVDs of films also generate significant economic activity through the rental market, although this is now in fairly rapid decline with the growth of multi-channel television, copyright theft and

⁵¹ Using the cost structure of a typical CD as a proxy for videos/DVDs. The Monopolies and Mergers Commission report "The Supply of Recorded Music" estimated that 15% of the retail price was VAT, 30% was retailer's gross margin and 55% was passed on to the record company.

infringement and in particular the falling cost of retail DVDs. From a peak of £476 million in 2002, the total video rental market was estimated to be worth £221 million in 2009. The most popular over-the-counter rental during the year was the film *Taken*, with *Slumdog Millionaire* the most popular online rental. Overall, films accounted for 89% of the DVD rental market, and UK films for around 20% of rentals.

We estimate that one-quarter of the DVD rental revenues are already counted in the direct impact. This is a somewhat lower figure than the 55% for DVD sales. A rental outlet, compared to retail, is likely to capture proportionately more of the total value added created in getting the product from the film company to the final consumer. This is because a rental business is often thought of as a low turnover/high margin business, whereas retail is a high turnover (derived from high footfall) but low margin business⁵². A rental outlet is also likely to account for a proportionately greater part of the total cost involved in getting the product to market. Additional costs include information technology and administration systems to keep track of videos rented (likely to have risen with the growth in online rental purchases subsequently delivered by post) and a significant amount of shop space to keep a wide selection of videos available.

Deducting one-quarter of revenues, and using the 20% share for UK films in rentals, implies that additional merchandise rental sales from UK films amounted to about £33 million in 2009.

Taken together, the combination of both retail and rental of DVDs of UK films generated sales of £157 million in 2009. In terms of value added, this implies a contribution to UK GDP of around £110 million, and the activity associated with this is estimated to have employed around 3,000 people.

9.2. Music and soundtracks

Music is inextricably associated with film: leading international artists have always been in heavy demand to write and perform signature tracks for individual productions, and in some cases – perhaps most famously with stars like Céline Dion (*Titanic*) and Bryan Adams (*Robin Hood: Prince of Thieves*) – their careers have become closely associated with the hit songs they produced. There is also a strong demand from consumers to own soundtracks as pieces of film-related merchandise, even when the songs are not necessarily unique to the film: in the UK, the *Mamma Mia!* soundtrack, featuring cast members such as Pierce Brosnan and Meryl Streep performing well-known ABBA songs from the film, achieved triple platinum status within a year of going on sale in 2008.

Overall, sales of original-film soundtracks make up a relatively small part of the market for recorded music. But since 129 million albums were sold in the UK in 2009 (hard copy and download sales combined)⁵³, this still amounts to an appreciable level of spending – over £1

⁵² See 'Brand Health Check: Blockbuster', Marketing, 8 Jun 2005.

⁵³ Source: BPI/Official Charts Company.

billion in total, assuming an average retail price of £8. The market share of film soundtracks amongst all album sales varies from year to year, peaking of course when a popular song appears on the soundtrack of a blockbuster film. In 2006 we estimated that sales of UK film soundtracks were worth £5.5 million; in 2008, sales of the *Mamma Mia!* soundtrack alone would probably have been double this figure – not including the effect it had on sales of the West End stageshow soundtrack (which immediately went back into the UK Top 20) or sales of ABBA's greatest hits collection (which re-entered the UK Top 10 after a break of four years)⁵⁴.

But the commercial relationship between film and music goes beyond the traditional soundtrack. In the age of the download, single sales are now outstripping album sales for the first time (153 million versus 129 million in the UK in 2009⁵³) and this creates new opportunities for marketing film music outside of soundtracks. For example, one of the most popular and successful singles of the 2000s, Take That's million-selling hit *Rule The World*, was written for the major UK-US film *Stardust* and was used heavily to promote the film (as well as featuring in its closing credits) despite not appearing on the official soundtrack album. This song alone would have added almost another £1 million to the total for UK film-related music sales.

9.3. Books

There are a number of ways in which book sales can be influenced by films. In many cases, of course, films re-tell the story of a book, providing an immediate link between the two media, with obvious examples among recent major films including the *Harry Potter* series, based on the novels of JK Rowling; *The Lord of the Rings* trilogy and *The Hobbit*, based on the books by JRR Tolkien; *Stardust*, originally a fantasy novel by Neil Gaiman; and in a wider sense films such as *Bright Star*, which chronicles the final years of the life of poet John Keats and which has resulted in a direct increase in sales of his books.

In these sorts of cases, the films have almost certainly inspired additional sales of the books. But they were often already very successful books in their own right and, indeed, the success of the books contributed to the success of the films, not just vice versa. In other cases, the impact of a film release can more obviously be seen as responsible for sales of a book – for example, the Brad Pitt film *Seven Years in Tibet* on the various real-life stories (including that of the same name) by Austrian adventurer Heinrich Harrer; and possibly also the classic works of authors such as Jane Austen, the Brontë sisters and Beatrix Potter, for which big-budget remakes involving stars like Keira Knightley (eg on *Pride and Prejudice*) can draw a new younger audience to the originals.

More obviously within the scope of merchandising, though, are books spun off from the film itself, rather than the original novel. These would include books about the making of the film, using cartoon characters from the film, or telling additional stories about the characters.

⁵⁴ Source: BBC News online, 20 July 2008.

9.4. Video games and phone apps

For blockbuster films, in particular, there is a significant overlap between the film market and the games market. Films are of wider significance to the games industry in developing techniques that are originally used in film but later transferred to games, and in providing a skilled workforce that can be a source for games companies to enhance their skills base (see Chapter 5). But they are also important in terms of direct sales of games.

As in the case of books, the direction of influence is not entirely one-way. Big-budget films like *Prince of Persia* and *Tomb Raider*, for example, started out as video games. The other large film-related franchises in the games market, though – *Harry Potter* and *James Bond* – both moved from films to games rather than vice versa, and both are derived from British-made films.

This is an important market – overall sales of UK video game software in 2009 totalled £1.7 billion, with unit sales of 74.6 million equivalent to more than one game for every person in the UK⁵⁵. A 2008 report by Oxford Economics on the UK games development industry estimated that the sector supported a total of almost 30,000 jobs (including 10,000 game developers) and over £1 billion in GDP⁵⁶. The market share of games inspired by UK films varies significantly from year to year – for example, it will be much higher in a year when a *James Bond* and/or *Harry Potter* game is released – but in previous years it has been around 5%. Applying this broad estimate to the 2009 UK video games market would imply sales of about £85 million.

The popularity of Apple's iPhone and other third generation mobile phones has created a new market for downloadable applications which further broadens the potential for film-related electronic merchandising. For example, the official *Harry Potter* iPhone app offers customers the chance to “transform your phone into a magic wand”, while Sony released two separate game apps for fans of the big-budget disaster thriller *2012*. Retailing at around £5 each, these products also offer a potentially significant revenue stream for film producers.

9.5. Toys and models

Some of the more popular children's films generate large sums from sales of toys and models linked to the film. Although the bulk of these items are manufactured abroad, particularly in China, this does not apply to other elements of the value chain, such as design, distribution, etc. Since the actual manufacturing costs are a relatively small part of the final price (perhaps 20%), the majority of the value added, employment, tax revenues and so derived from the merchandising of toys and models will benefit the UK economy.

In the UK in 2009, just over a quarter of all sales of toys and models (£730 million out of a total £2.7 billion) involved products made under license to a marketed entertainment product, such

⁵⁵ Source: The Entertainment & Leisure Software Publishers Association (ELSPA), reported by www.mcvuk.com

⁵⁶ Source: Oxford Economics, “The Economic Contribution of the UK Games Development Industry”, October 2008

as animated films and children's TV shows⁵⁷. In 2009, best-sellers included merchandise related to the films *Star Wars*, *High School Musical* and the Disney/Pixar films *Cars* and *WALL•E*. Although these are all US-made films, with the majority of profits accruing to their American producers, there will also be some financial benefit to UK retailers and licensees from each sale made in the UK. It is likely that 2010 will be a strong year for UK film-related toy sales on the back of the new *Harry Potter* release⁵⁸.

9.6. Clothing

Commentators have pointed in the past to the links between films and fashion. The popularity of a star's 'look' in a film can lead to increased popularity for clothes that help create a similar look. And UK films are more likely to help promote a British 'look'. Chapter 10 comments on the way in which British film can help stimulate demand for British goods more generally.

Merchandising, though, really refers to a more specific link between a film and clothing than simply a particular look or style. Rather, it covers the sale of particular items of clothing directly based on those worn in the film – a Superman cape, for example – or souvenir ranges produced under license to a particular film. Warner Brothers, for instance, offer almost a hundred different clothing and accessory products (such as T-shirts, hats, bags and neckties) in their online store's *Harry Potter* range.

9.7. Brand associations

Aside from the merchandise specifically produced for a film, many companies selling other well-known products and services will often sign deals to use films for limited-time promotional purposes. These might involve competitions themed on the movie, free gifts on the collection of tokens saved from the product, or simply the reproduction of imagery from the film on the product packaging. Such 'brand associations' may be formed after particular products were featured directly within the film itself (see the section on product placement in Chapter 10), or simply, perhaps more often, because the film has been popular with the product's target audience and the association is therefore considered to offer a potential sales boost.

We have already noted the recent alliance between McDonalds and the children's film *How to Train Your Dragon*, and previously (in Chapter 7) that between Radisson Edwardian hotels and the film *Sherlock Holmes*, through which themed hotel packages are offered. Elsewhere, successful marketing associations have recently been formed between car-maker Volvo and the film *The Twilight Saga: New Moon*, (the cars were driven by characters in the film, and an online competition to win one was entered by some 300,000 people); the children's cereal Shreddies and the film *Fantastic Mr Fox* (coupons from cereal packs can be exchanged for the original Roald Dahl Book); and the dog food Pedigree Chum with the film *Marley and Me* (the target

⁵⁷ Source: NPD retail tracking group.

⁵⁸ Source: Reuters, "Studios descend on Toy Fair with movie merchandise", 11 February 2010.

audience of course being dog owners having seen the film). In each case, the association helped to boost sales of the product⁵⁹.

So a successful UK core film industry can also help to boost sales of UK products and services through brand association effects exploited by limited-time sales promotions.

9.8. The overall value of merchandising

Not all aspects of merchandising are easily quantifiable, and in some cases films will stimulate sales of products that cannot reliably be pinpointed as being all due to the film. And, as discussed above, there are examples where the success of other products (eg books, video games) stimulates the market for a film, rather than vice versa.

But it is also possible to look at the value of sales generated through merchandising from the other end of the process, so to speak. Since major film companies have merchandising divisions whose aim is to generate revenues through licensing others to sell products related to their films, it is also possible to get an impression of the value of merchandising through its importance to the film distributor.

Film distributors active in the UK typically earn in aggregate about £17 million per year from the sale of licensed film merchandise in the UK⁶⁰. More generally, discussions with companies in the film industry suggest that a successful 'merchandisable' film might generate sales in the UK of around £50 million in a year, through perhaps 35 different licensees. Only a limited number of films are suitable for this sort of treatment, with perhaps six to eight such releases this year. But if two of these are UK films, they might generate sales in the UK of £100 million. Of course, merchandising is not limited to the year in which a film is released – sales can continue for a number of years afterwards. But it can become increasingly a challenge to maintain interest if new films in the same series are not released, and we have therefore based our calculations on the conservative assumption that the value of merchandising is adequately illustrated by the first-year effect.

The merchandise revenue estimates in the paragraph above do not include DVDs and Blu-Rays, soundtracks or computer games, which therefore need to be added to estimate the overall economic impact of merchandising based around British films.

Overall, we estimate (Table 9-2) that through these forms of merchandising UK films generated sales of £352 million in 2009, and value added of £237 million. The employment associated with this contribution to GDP amounted to around 6,600 jobs, and £107 million of extra tax revenues were generated through additional VAT, income tax, national insurance contributions and corporation tax.

⁵⁹ Source: Film Distributors Association, "FDA Yearbook 2010", March 2010.

⁶⁰ Source: NPD License Tracker.

⁴⁸ Source: "Harry's Magic Strikes Home", The Scotsman, 15 July 2005.

Merchandising can also have a wider role in promoting the UK. For example, Gordon Brown noted on a visit to China that what Chinese school children wanted most from Britain was more *Harry Potter* merchandise. He went on to say that *Harry Potter* is “one of our greatest exports, one of our greatest success stories, and I think JK Rowling has done more for literacy around the world than any single human being”⁴⁸.

Table 9-2: The value of UK film merchandising in 2009

	Sales (£ million)	GVA (£ million)	Employment (‘000s)	Taxes (£ million)
Video/DVD sales	124	82	2.3	37
Video/DVD rental	33	28	0.7	11
Soundtracks	10	6	0.2	4
Computer/video games	85	57	1.6	26
Other merchandise	100	65	1.8	30
Total	352	237	6.6	107

Source: Oxford Economics estimates

9.9. Summary

Taking into account that some merchandise sales will already be counted in our estimates of the direct impact, we estimate that the core UK film industry generated additional merchandise sales worth around £237 million to UK GDP in 2009.

Without a UK film industry, consumers may simply switch some spending to other merchandise associated with non-UK films. However, as shown in Chapter 8 on culture, indigenous British films mean that the UK box office is higher than it would otherwise be if the core UK film industry did not exist. If the effect of UK films on merchandise sales is similar to its effect on box office revenues, then the net impact would be worth about £60 million to UK GDP in 2009.

10. Promotion and Trade

10.1. Introduction

The film industry also contributes to the UK economy through its impact on UK overseas trade. We can distinguish here between two different channels. The first, direct impact occurs because the core UK film industry earns export royalties and fees for the production of films. But there is also a second, 'indirect' effect, because the core UK film industry helps to promote the 'UK brand', which in turn helps other UK exporters to sell their products. The rest of this chapter explores both of these points.

Key Points

- The UK film industry is a significant contributor to the UK net trade position, with export earnings averaging over £865 million a year since 2000, and over £1.3 billion in 2008.
- The film industries' share of total export earnings is higher than the industries' share in UK GDP – so in this sense it 'punches above its weight' in export markets.
- Moreover, UK films help to boost the demand for UK products by promoting the 'UK brand'. The growing market for product placement in UK films also provides an outlet for exporters to advertise their specific products to a wide audience. These promotional benefits are estimated to be worth around £20 million a year to UK GDP.

10.2. Direct UK trade in film

The film industry is a significant contributor to UK export earnings. In 2008 (the most recent data) total exports of the film industry were £1.34 billion (Chart 10-1), up by almost £300 million from 2007. UK film export earnings are comparable to those from major industries such as software consultancy and accountancy. And, importantly from an economic point of view, the value of film imports in 2008 was only £846 million – so UK film made a very healthy net contribution of £494 million to the UK trade position. The average net trade contribution since 2000 is £191 million.

The largest contribution to UK film export earnings comes from royalties, which were £792 million in 2008. Production revenues are also important, however, with exports of almost £550 million in 2008 (Chart 10-2). Looking at the geographical split of film trade, the UK has a large net trade surplus in film with the USA, with non-EU Europe, and with Asia (Chart 10-3).

Chart 10-1

Exports and imports of UK film companies



Indeed, the core UK film industry’s share of total UK exports (over 0.3% in 2008) is around 50% greater than its share of total UK GDP. In this sense, the film industry makes a disproportionately large contribution to exports for a sector of its size. The rise in exports seen in 2008 was only partially due to favourable movements in the exchange rate – it reflected strong underlying demand for UK goods and services in equal measure.

Chart 10-2:

Exports by type of transaction

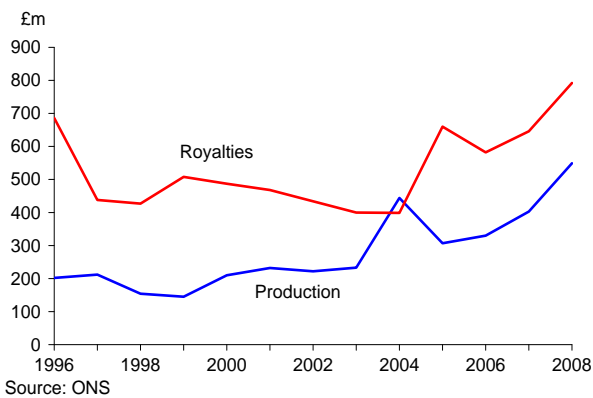
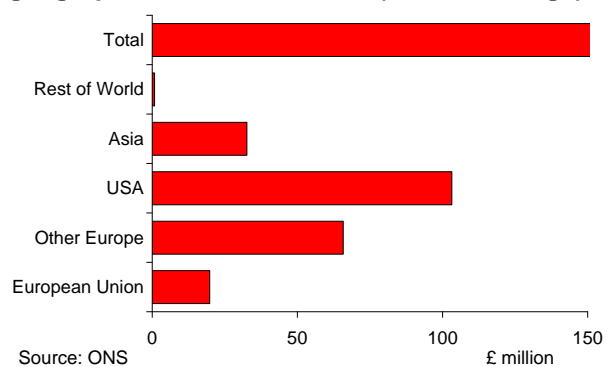


Chart 10.3

Net international film transactions by geographical area, 2004-2008 (annual average)



10.3. The indirect effects on trade from UK film

It is likely that the demand for some products will be influenced by an overall impression of the country from which they come, so that alongside the importance of product brands, ‘country brands’ will also be a factor in determining overall demand. For example, Italy has a particular reputation for sports cars and fashion, Japan has a reputation for consumer electronics, while France has a reputation for fine wine.

There is an extensive academic literature that finds ‘product-country image’ or ‘country of origin’

effects in trade. These studies suggest that the source of a particular product is important in determining its overall demand. For example:

- Ahmed et al (2002)⁶¹ studies the effect of country of origin (CO) and brand effects on consumers' quality perceptions, attitudes, and purchase intentions, finding that country of origin effects were found to be stronger than brand effects for quality and attitude ratings, while brand was more significantly correlated with purchase intentions.
- Verlegh and Steenkamp (2004)⁶² found evidence of country of origin effects, through their influence on perceived product quality.
- Heslop et al (2005)⁶³ found that country image and product beliefs jointly affect product evaluations regardless of consumers' level of familiarity with a country's products. Their findings also indicated that the nature of country image influences product evaluations both directly and indirectly through product beliefs.
- Arpan and Sun (2006)⁶⁴ investigated how country-of-origin effects help consumers form impressions of countries and their major exports over time. These general evaluations can serve as stereotypes or judgement shortcuts invoked by consumers when they consider a product purchase or their attitude toward a given product. The study found that evaluations of an organisation and its behaviour were based more on overall evaluations of the country in which the organisation was headquartered.
- Verlegh (2007)⁶⁵ found evidence of home country bias in product evaluation, in part driven by a need for self-enhancement. This influence is stronger for consumers who identify more strongly with their own country, and is complementary to the effect of consumer ethnocentrism, which provides an economic motivation for home country bias.

Film plays an important role in establishing and reinforcing country brands, which may then have positive spillovers or 'externalities' on trade in general. In this regard, UK film has a particularly important role in shaping and reinforcing notions of UK identity that may then in turn help to underpin overseas sales of UK products. UK film may also be important in helping to replace out-moded notions of 'Britishness' with more modern ones, that in turn will help UK exporters face up to new challenges and expand new markets. For example, according to official UK representatives in China, *Bend it Like Beckham* has significantly changed and redefined the UK's image in the Far East with knock-on effects for trade and exports.

⁶¹ Source: Ahmed Z.U.; Johnson J.P.; Ling C.P.; Fang T.W.; Hui A.K. , (2002) International Marketing Review, Volume 19, Number 3, pp. 279-302(24)

⁶² Source: P.W.J. Verlegh & J.-B.E.M. Steenkamp (1999). A review and meta-analysis of country-of-origin research. *Journal of Economic Psychology*, 20 (5), 521-546.

⁶³ Source: Laroche, Michel, Nicolas Papadopoulos, Louise Heslop and Mehdi Mourali, "The Influence of Country Image Structure on Consumer Evaluations of Foreign Products," *International Marketing Review*, 22(1), 2005, 96-115.

⁶⁴ Source: Arpan, L. and Sun, H., (2006), "The Effect of Country of Origin on Judgements of Multinational Organizations Involved in a Crisis", *Journal of Promotion Management*, Volume 12, Issue 3, pp 189-214.

⁶⁵ Source: P.W.J. Verlegh (2007). "Economic and Socio-Psychological Motives for Home-Country Bias in Consumer Product Evaluations", *Journal of International Business Studies*, 38(3), 361-373.

The role of film and other creative industries in trade promotion is reflected in the part- sponsorship by the Department for Culture Media and Sport (DCMS) of “*China-UK: Connections through Culture*” (CtC). This initiative aims to develop further cultural co-operation between the UK and China, including trade ties. Describing the programme, DCMS states that it is: “*keen to maximise the impact of [the UK] cultural sector’s international work, both in cultural product and public diplomacy...the Connections initiative ...can contribute to the government’s broader international priorities.*”

For the UK, one of the most important areas that benefits from these sorts of brand effects is tourism (covered in Chapter 7). But UK exports of manufactures and other services may also benefit from a UK brand effect. Particular films can have an influence on UK trade in general – for example, one study noted how Gwyneth Paltrow in *Sliding Doors* had an impact on fashion in the 1990s⁶⁶. More recently, the film *Slumdog Millionaire* has further boosted interest in the *Who Wants to be a Millionaire?* TV show, already a successful British export.

UK trade is likely also to have benefited from the media exposure associated with London’s position as a key location for the launching of films. Many of the top worldwide films – around 25% in 2008 and 2009 – have either been premiered or co-premiered in the UK.

A related role for UK film in helping overall UK trade comes from product placement. This is a more product-specific effect, where the demand for specific UK products actually on display in UK films (usually at cost to the manufacturer) may be boosted. The importance of this channel is underlined by the amount companies are prepared to pay for it: it is estimated that film product placements cost \$885 million in 2006 – equivalent to 3.4% of global box office receipts – and was set to grow by some 20% a year thereafter⁶⁷. Of course, it could be the case that being on display in a non-UK film may still boost a UK product, but its overall impact is arguably likely to be larger when it is shown in a UK film. For example, in a consumer survey by the website brandchannel.com, the most positive and ‘convincing’ brand association within any film worldwide in 2008-09 was found to be that between *Quantum of Solace* and British sports car firm Aston Martin⁶⁸.

Quantifying the impact of these promotional benefits is extremely difficult, given the multitude of both quantitative and qualitative factors that affect purchasing decisions. However, the value attached by companies to product placement provides a clue. Assuming that product placement in UK films similarly costs 3.4% of their box office and that companies will not pay any more for it than the profits of extra sales generated, we would expect such additional sales to have generated at least £5 million extra profits in 2009. With gross trading profits across UK companies averaging about 25% of value added⁶⁹, this implies additional value added of at least £20 million a year.

⁶⁶ Source: Sarah Gilligan (2001) in Engelmeier and Engelmeier, “Fashion in Film”.

⁶⁷ Source: PQ Media, <http://www.prwebdirect.com/releases/2007/3/prweb511540.htm>

⁶⁸ Source: Brandchannel.com, http://www.brandchannel.com/features_effect.asp?pf_id=489

⁶⁹ Source: Annual Business Inquiry, ONS.

10.4. Summary

The core UK film industry is a significant contributor to the UK net trade position, with a trade surplus averaging £191 million a year since 2000. Indeed, the film industries' share of total export earnings is higher than its share in UK GDP. Alongside this direct effect on trade, UK film helps boost the demand for UK products by promoting the 'UK brand'. And through the growing market in product placement, UK film also provides an outlet for exporters to advertise their specific products to a wide audience. The impact of these promotional benefits is estimated to be in the region of £20 million a year.

11. Video-on-Demand and Digital Copyright Protection

The film industry, like the music industry, is changing. Rapid and mutually-reinforcing shifts in technology and consumer preferences, coupled with a rise in the level of international competition for film production, have created a number of critical challenges and opportunities for the UK film industry to consider. The sector's future will depend in many ways on its ability to react to, manage and exploit these changes, and succeeding in its efforts to reconcile the many emerging forms of content distribution and consumption with robust means of securing and appropriating the associated revenue streams. As the DCMS recently stated: "...as the markets for audio-visual products and services change, businesses will have to adapt – often rapidly and radically – to ensure that they are able to survive and flourish".⁷⁰

In this chapter we consider two of the most important ongoing issues in the UK and indeed global film industries: the opportunities surrounding Video-on-Demand (VoD) and other aspects of new market development, and the threats to exploiting the commercial potential of these arising from the truly global problem of audio-visual copyright theft and infringement.

Key Points

- Video-on-Demand, whether accessed through TV or online delivery channels, is likely to replace the DVD rental market for films and a significant proportion of the film DVD sales market within a few years.
- It is likely that the UK film VoD market, worth around £115 million in 2009, will expand quickly and significantly over the coming years as new services are rolled out to consumers. Coupled with the potential to increase sales of 'back catalogue' releases, as has been seen in the music industry with the growth of the download market, we believe VoD has the potential to increase total film video revenues, which currently stand at around £1.5 billion.
- Much of this potential, however, depends on successfully implementing measures to combat audio-visual copyright theft and infringement. A new report suggests this could cost the EU €240 billion in lost retail revenues and 1.2 million creative industries jobs by 2015, in the absence of effective new policies to tackle it.

11.1. Video-on-Demand

Video-on-Demand brings films direct to television and computer screens – and increasingly to mobile devices such as iPods – whenever the consumer wishes to view them. Currently the VoD market is small, and its expansion has been somewhat inhibited by the failure of flagship

⁷⁰ Source: DCMS, "Government Response to the House of Lords Select Committee on Communications Report on the British Film and Television Industries", March 2010.

industry projects such as the ill-fated Project Kangaroo (a joint venture by the BBC, Channel 4 and Channel Five to provide TV programmes via a VoD platform), which was blocked by the Competition Commission in 2008⁷¹. Nevertheless, growth is accelerating fairly rapidly from year to year in line with technological advances and changing consumer habits, and momentum is building on a number of new industry ventures (such as Kangaroo's successor Project Canvas) that could unlock a market share for VoD on a much larger scale. By the end of 2009, around 50% of UK households with TV sets were able to access an on-demand video service of some kind via one of the available TV platforms – including 4 million households able to access a 'true' VoD service (eg Virgin Media via cable or BT Vision via internet protocol TV), and a further 8.7 million households able to access so-called 'near VoD' services (ie movies with staggered start times on different channels) via BSkyB satellite⁷².

There are no official statistics on the size of the VoD market, although reports from Screen Digest suggest that the **TV-based** VoD market was worth £274 million in 2009, and the **online-based** VoD market around £10 million (up from £114 million and £6 million respectively in 2008). This means that in total, VoD accounted for around 6% of the UK filmed entertainment market in 2009, and the same proportion of the global market for VoD (this made it the second biggest national market in the world, though still dwarfed by the US which accounted for 61%). In terms of film VoD, estimates suggest that 2009 revenues from pay-per-view movie viewings totalled £113 million in the UK⁷².

Technological limitations are a primary constraint to the growth of VoD. In the TV market, for example, the leading satellite broadcaster BSkyB is only currently able to offer 'near VoD' services; cable TV operators such as Virgin and various internet protocol TV providers, led by BT Vision, are the only firms at present able to offer the true 'on demand' service by allowing viewers to download films directly from an external server to their viewing device and watch them immediately. In the online market, broadband speeds remain stubbornly low in many parts of the UK and represent a clear barrier to the evolution of VoD. The main players are currently Apple's iTunes, which introduced its film store in 2008 enabling customers to download films to their video iPods, and the Xbox Live Marketplace which allows for viewing via the popular games console.

VoD services in the UK employ four basic types of commercial model:

- Rental VoD – one-off rental, also known as 'download to rent'
- Subscription VoD – unlimited access to content for a fixed monthly sum

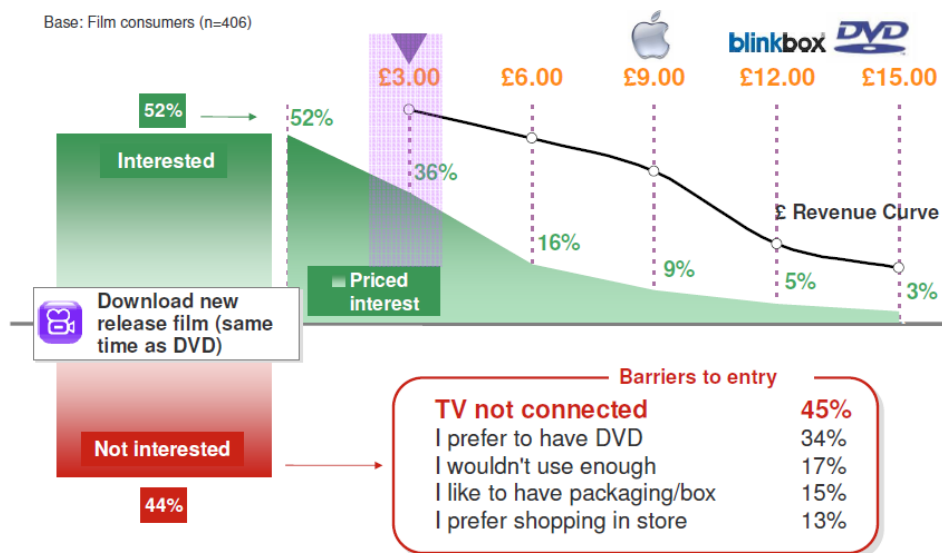
⁷¹ The technological platform behind this venture was re-acquired by a private firm and developed into the 'SeeSaw' online VoD service which launched in February 2010. Initially offering free-to-view TV programmes from the major channels (similar to the BBC iPlayer), this service was expected to begin charging for premium content later in the year.

⁷² Source: BSAC (December 2009), "TV Platform Video-on-Demand: Market Status Update", BSAC briefing paper.

- Retail VoD – in other words ‘download to own’ onto a computer or portable device such as an iPod⁷³
- Free or advert-supported VoD.

Recent research studies have identified that the UK VoD market remains blighted by “*fragmented delivery technologies, confusing rights restrictions and expensive download charges*”⁷⁴. Cost is clearly a major issue: market research has shown that three quarters of existing VoD users expect to pay less for a film via VoD than they would for the equivalent DVD, and a 2009 survey of film consumers by Ipsos suggested that the price at which revenue would be maximised for vendors of new-release ‘download to own’ VoD films was just £3 (Chart 11.1)⁷⁵.

Chart 11.1: Consumer willingness to pay for new-release films via a ‘download to own’ retail VoD model



Source: Ipsos MediaCT, online survey of 406 film consumers in May 2009

Given the uncertainties surrounding future market development, it is difficult to estimate the market potential of film VoD over the coming years. Its growth trajectory is highly uncertain, not least because it may be artificially restricted by commercial providers as they look to extract maximum value from other markets, such as DVDs, before strategically shifting focus to VoD as the preferred film viewing technology of the future. Pricing for VoD films and growth in levels of

⁷³ Download to own (DTO) is sometimes considered a separate model from VoD, but for the purposes of this report we include it in our definition as ‘retail VoD’.

⁷⁴ Source: Essential Research (January 2008), “Video-on-Demand State of Play”, market research report.

⁷⁵ Source: Ipsos MediaCT (May 2009), “Opportunities for Digital Distribution: Assessing Models in the Music, Film and Games Markets”.

competition within the industry are also uncertain: the future number of VoD content providers is clearly a major unknown at present, though it is currently growing and likely to continue to do so.

Assuming that the film VoD market will eventually replace much of the film DVD sales and rental market but will not directly damage box office revenues – itself based on the simplifying assumption that the ‘window’ between cinema release and DVD/VoD release will not shrink far enough to damage box office revenues – the first port of call as an estimate of potential film VoD market size is obviously the current size of the film DVD market. As noted in Chapter 9, film DVD sales were worth £1.31 billion in 2009 with UK films responsible for £275 million of this, while the film DVD rental market was worth an additional £221 million in 2009 with UK films accounting for around £33 million. It seems reasonable to assume that the film DVD market will gradually be eroded by film VoD, though the demand to own souvenir hard copies of ‘mega-films’ like *Mamma Mia!* may leave a residual niche in the market for some time.

But the story is not that simple – the availability of films on VoD may lead to the average consumer purchasing more films per year than they currently buy on DVD, particularly if, as has been the case with music downloads, digital films are priced lower than the equivalent hard copy versions available to buy from Amazon or the high street. The technology adoption curve is also a major factor, while a further unknown is the trajectory of the market for DVD successors such as Blu-Ray, which remains embryonic and could feasibly be usurped altogether by the emergence of VoD. And furthermore, as has also been the case with music downloads, one of the main impacts of film VoD will almost certainly be an increase in sales of classic ‘catalogue’ productions from the past. According to the Ipsos pricing study, film consumers are willing to pay almost the same for a catalogue film under the ‘download to own’ model as they are for a new release, and this hints at a significant potential source of additional revenue for the industry.

Overall, the market for film VoD can be expected to grow significantly once delivery platforms are rolled out more widely to consumers and content libraries increase in size. More than half (52%) of film consumers are interested in VoD as a replacement for buying DVDs, according to the Ipsos survey, so a significant chunk of future growth in the VoD market is likely to come at the expense of retail DVD sales; it is also reasonable to assume that VoD will completely replace the existing film rental market once comprehensively rolled out to consumers. Importantly, there is significant potential for VoD to increase both sales of catalogue films and the average number of recent release films people purchase in a year simply through the ‘convenience factor’ – indeed, both of these seem quite realistic scenarios and it is not difficult to foresee a situation where they could combine to drive up total yearly film video revenues across the UK from their current total of around £1.5 billion. Market analysts estimate that around 70% of current film VoD viewings are on an entirely free-to-view basis, with very few supported by any advertising content, so once the market develops revenues are likely to increase quickly and significantly.

11.2. Digital Copyright Theft and Infringement

Unlocking the economic potential of VoD for the UK film industry (and indeed other industries) will depend to a large extent upon developing robust and effective methods to tackle copyright theft and infringement. Indeed, the most salient point from the previous section is that the industry's ability to appropriate any significant share of the revenues mentioned will rely on its ability to successfully combat this threat. Succeeding here is almost certain to require a co-ordinated joint effort between content producers, distributors and the providers of TV and online viewing platforms; the potential involvement of internet service providers (ISPs) as direct shareholders in initiatives such as Project Canvas is a recognition of this.

Theft of copyright and/or intellectual property occurs and damages the core UK film industry in a number of ways. It is estimated that illegal streams and downloads account for around 40% of the global film industry's copyright theft and infringement problem⁷⁶, and with the UK having a similar level of internet connectivity to other developed nations, its own rate of online copyright abuse is likely to be similar. Other forms of copyright theft and infringement include the production and distribution of hard-copy counterfeit DVDs, and the so-called 'secondary market effects' arising from additional people (such as friends and family of the perpetrator) viewing illegal film recordings and by consequence not purchasing a legal copy of the product when they may otherwise have done so. A 2009 study estimated that the UK's £530 million of lost audio-visual industry revenues through copyright abuse are comprised of around £90 million from physical counterfeit products, £235 million from illegal digital file sharing and a combined £205 million from secondary market effects across both forms of activity⁷⁷.

Film is of course not the only audio-visual sector under threat from copyright theft and infringement. In the music industry, where the impacts of illegal file sharing and downloading on global revenues have been well-documented for a number of years, several hundred new licensing deals with internet service providers, mobile networks and other partners were important factors helping digital sales rise 12% to \$4.2bn in 2009, allowing the online market to account for more than a quarter of all industry revenues for the first time. However, a new IFPI report suggests copyright theft and infringement continues to severely damage both investment in artists and the number of new music releases in many parts of the world: although digital download sales have risen ninefold since 2004, illegal file sharing has been the dominant factor behind an overall decline of 30% in global music industry revenues during this time⁷⁸.

From a position several years ago where the adverse economic impacts of audio-visual copyright theft and infringement were questioned by some sources on the grounds that it only related to films and music that individual consumers would not have bought anyway, there is now an overwhelming consensus amongst researchers that its impacts are negative, profound

⁷⁶ Source: MPAA, cited in IFPI Digital Music Report 2010.

⁷⁷ Source: Oxford Economics, "Economic Impact of Legislative Reform to Reduce Audio-Visual Piracy", report for BVA, March 2009

⁷⁸ Source: IFPI, "Digital Music Report 2010", January 2010.

and directly related to ineffective copyright law enforcement. For example:

- Vany and Watts (2007)⁷⁹ undertake a direct quantitative analysis of a first run theatrical release in the UK, US, Spain and Argentina with its pirated competitor which was available two weeks before opening in theatres. They find a clear revenue loss to cinema exhibitors, including a direct loss in US theatrical revenue over a 14-week run of between \$30-50 million.
- Khouja and Rajagopalan (2008)⁸⁰ find no evidence that so-called ‘beneficial’ copyright infringement – in the form of network externalities – that has sometimes been discussed in the software industry applies to either the film or music industries.
- Walls (2008)⁸¹ undertakes a 26-nation cross-country quantitative analysis of film theft, and finds that the cost of enforcing legal contracts is a statistically significant dependent variable – that is, the less effective are copyright laws, the greater the theft and infringement problem.

A number of studies have estimated the current and potential economic impacts from copyright theft and infringement in the audio-visual industries. A new report for the International Chamber of Commerce⁸² suggests that across Europe in 2008, physical and digital copyright abuse combined cost the creative industries €10 billion in retail revenue and 185,000 jobs – by 2015, the cumulative effects could be as much as €240 billion and 1.2 million jobs, the report authors said, under a continuation of current trends and in the absence of significant policy changes. As a result, the report called copyright theft and infringement “*a major threat to the EU’s economic performance*” and said that “*stemming the rising tide of digital piracy should be at the top of the agenda of policymakers in the EU and elsewhere*”. In the UK, a total of €1.4 billion (around £1.3 billion) in revenue was said to have been lost to copyright abuse in 2008 (including software); of this, around €670 million (£610 million) was lost in direct commercial revenues from audiovisual products, including:

- €308 million (£280 million) in films
- €282 million (£256 million) in music
- €78 million (£71 million) in TV series.

The lost film revenues are broken down across product type in Table 11.1 below. Based on the typical proportion of DVD film sales that are UK films (around 20-25%), this would imply a direct retail revenue loss of around £70 million to the core UK film industry in 2008.

⁷⁹ Source: Vany, A. and Watts, W. (2007), “Estimating the Effects of Movie Piracy on Box Office Revenues”, Review of Industrial Organisation, Vol 30, pp291-301.

⁸⁰ Source: Khouja, M. and Rajagopalan, H. (2008), “Can Piracy Lead to Higher Prices in the Movie and Motion Picture Industries?”, Journal of the Operational Research Society, January 2008.

⁸¹ Source: Walls, W. (2008), “Cross-Country Analysis of Movie Piracy”, Applied Economics, Vol 40, Issue 5.

⁸² Source: TERA Consultants, “Building a Digital Economy: The Importance of Saving Jobs in the EU’s Creative Industries”, report for the International Chamber of Commerce, March 2010.

Table 11.1: Total revenue loss due to counterfeit and copyright infringed audiovisual products in the UK film industry, 2008 (€ million)

	Digital copyright theft and infringement	Physical counterfeit products	Total combined impact
Theatre	32	40	73
DVD sales	112	35	146
DVD rental	-	11	11
Official download	-	-	-
VoD/pay-per-view	74	2	77
TV	1	1	2
Total film	219	89	308

Source: TERA Consultants, March 2010

These losses were said to have cost the UK a total of 30,400 direct and indirect jobs across the creative industries – a figure which would include almost 14,000 direct and indirect jobs in the film industry, based on the share of lost revenue as shown above. Of course, the effect of audio-visual copyright theft and infringement on the core UK film industry is not limited to the distribution of counterfeit films – it will also be damaged by pirate copies of soundtracks, other film-related music, and video games. The knock-on impacts of a loss in revenue in any of these industries may also be felt in terms of reduced investment in new technologies, such as 3D or motion capture, and by a reduction in the number of new titles being released.

A recent Oxford Economics study⁸³ looked at the potential economic benefits to the UK audio-visual industries of implementing measures to tackle the estimated £500-600 million worth of copyright theft occurring every year. These measures included:

- Anti-camcording legislation for UK cinemas, subjecting offenders to unambiguous criminal prosecution
- Implementation and enforcement of an Occasional Sales Act, to curb the sales of fake goods at markets and car boot sales
- Co-operation with internet service providers to identify and prosecute online copyright offenders
- Enforcement of an effective damages regime to act as a strong general deterrent to copyright theft.

⁸³ Source: Oxford Economics, "Economic Impact of Legislative Reform to Reduce Audio-Visual Piracy", report for BVA, March 2009.

The Oxford Economics report found that successful implementation of these measures could add around £615 million in revenues to all industries across the UK economy, through direct and multiplier effects, creating over £300 million in GDP, an additional 8,000 jobs, and £155 million in taxes to government. More generally, the study found that effective measures to combat audio-visual copyright theft and infringement would:

- **Create many jobs across numerous sectors of the UK economy, not just the audio-visual industries** – other sectors standing to gain include a variety of financial and business services (such as market research, advertising, accountancy, research and development, financial management and legal services); transport and communications; wholesale and retail; and hotels
- **Benefit the UK film industry and UK filmgoers in a variety of ways** – for example through generating an additional £40 million per year for every high-grossing production targeted by copyright theft (often UK/US co-productions), and an additional £50 million per year for cinema exhibitors, which could be reinvested to upgrade and refurbish existing cinemas, rollout new technologies such as digital and 3D, and prevent adverse community impacts caused by the loss of local cinemas.

The UK's new Digital Economy Act, formally implemented in April 2010, sets out a course of action to substantially reduce audio-visual copyright theft and infringement affecting the UK. Successfully tackling the problem will be an extremely challenging task requiring the support and co-operation of stakeholders across the creative industries, but it will in our view be crucial to preserving many of the economic benefits generated by the UK core film industry as described throughout this report.

12. The Impact of Film Tax Relief

The value of the film industry to the UK culturally and economically was recognised by the government when it reviewed the Film Tax Relief in 2006, and subsequently by the House of Lords Select Committee on Communications when it reviewed the UK film and television industries in 2010⁸⁴. The initial government review led to the replacement of the previous tax relief for film (Section 42 and Section 48), while the recent House of Lords report suggests that the new system has been successful in attracting big-budget films, but recommends adjustments to provide more support to smaller budget films.

By March 2009, the scheme had provided a total of over £200 million of tax relief, supporting production of around 270 films. This chapter considers the importance of the tax credit to the sustainability of the core UK film industry and to achieving the economic and cultural benefits set out in this report.

Key Points

- The film tax credit is vital to sustaining the competitiveness of the core UK film industry. With the incentive in place, we expect the UK to attract at least £750 million a year of inward investment productions to 2015, supporting a continuation of the long-term trend expansion of the core UK film industry and its contribution to UK plc.
- The film tax credit is important in putting the UK film industry on a level playing field with its competitors, enabling it to generate the economic and cultural benefits highlighted in this report.
- Without the film tax credit, we estimate that the core UK film industry would be around 75% smaller, at a cost of around £1.4 billion of lost GDP a year and about £400 million lower Exchequer revenues.

The current UK Film Tax Relief came into force on 1 January 2007 and is based on an enhanced deduction from taxable income for film production companies that can be converted into a payable tax credit. For UK films with production budgets up to £20 million, the value of the tax relief increases to a maximum of 20% of production costs where 80% or more of the budget is spent in the UK. For films with production budgets of £20 million or more, the maximum value of the tax credit is 16%. To qualify for the tax credit, at least 25% of qualifying expenditure must be spent in the UK, and films must pass a 'cultural test' administered by the UK Film Council on behalf of DCMS which considers the nature of the film's story, setting, characters and contribution to cultural diversity (see Section 3.2 for more details). Films can also qualify as

⁸⁴ Source: House of Lords Select Committee on Communications, "The British Film and Television Industries: Decline or Opportunity?", 1st Report of Session 2009/10, January 2010.

British if they are certified under the various official UK co-production agreements: once certified, a film counts as a national film in each of the territories and may qualify for public support on the same basis as national films in that territory⁸⁵.

12.1.1. The rationale for the Film Tax Relief

In reviewing the Film Tax Relief, the Treasury considered carefully the rationale for particular support for the film industry. It noted two main justifications:

- **The cultural benefits of UK film** – as highlighted in Chapter 8, the Treasury considers that: *“Cinematic film provides a universal and readily accessible medium for the expression and representation of British culture and national identity. Films can help reflect, explore and challenge our diverse history, cultural beliefs and shared values. In doing so, the best British films not only help us to reach a better shared understanding of Britain and its place in the world, but are also instrumental in spreading awareness and appreciation of British culture around the world. As such, British films are an important part of our cultural heritage and a significant channel for the continuing expression and dissemination of British culture.”*⁸⁶ Since these cultural benefits are unlikely to be fully reflected in the price that cinema-goers are likely to be willing to pay to see a film, there is potential for a market failure which would result in too few UK films being produced if the government did not provide support to the core UK film industry.
- **The economic benefits generated by the film industry** – as highlighted in this report, these benefits include not only the direct impacts of the film industry but also the multiplier effects through the supply chain and the role of film in attracting tourists and helping to promote UK trade.

In addition to these factors, we would highlight that the Film Tax Relief can be justified by the absence of a level playing field in the international film industry. Competition to attract film producers to shoot their film in a particular country, and also to undertake post-production work in fields such as sound and visual effects, is fierce. This competition partly focuses on the physical attributes of a country; the costs for labour and the renting of locations and sets; and the relative skills of the film production workforce. But a key element is the availability of tax relief. As Boxes 12.1, 12.2 and Appendix A highlight, the use of the tax system to support film production is widespread, including in countries which benefit from low labour and other costs, such as Hungary. Given that the film industry is highly internationally mobile and dominated by the US major studios, the Film Tax Relief is important in levelling the terms on which the UK can compete with other countries, including many non-European jurisdictions, in attracting both inward investment productions and subsequent post-production work.

⁸⁵ At the end of 2009 the UK had seven active bilateral treaties with Australia, Canada, France, India, Jamaica, New Zealand and South Africa.

⁸⁶ Source: HM Treasury (2005), “Reform of film tax incentives: Promoting the sustainable production of culturally British films”, July 2005.

Given this context, the Treasury's aims in designing the new Film Tax Relief are:

- Encouraging the production of films that might not otherwise be made;
- Promoting sustainability in British film production; and
- Maintaining a critical mass of UK infrastructure, creative and technical expertise, to facilitate the production of culturally British films.

Box 12.1: Rising competition for the UK film industry – the case of Hungary

The UK film production industry has seen increasing competition from overseas in the past decade, as film producers take advantage of favourable tax incentives, lower operational costs and high quality infrastructure in numerous countries and states around the world. The rising prominence of lesser known and lower cost film locations is perhaps characterised by the example of Hungary.

Hungary has developed what is essentially a three-pronged approach to luring foreign film producers: a significant tax incentive scheme is supplemented by a high quality infrastructure – spearheaded by the 50% state-funded Korda Studios, which opened in 2007 – and aggressive promotion of its offer in Hollywood. Through practical advantages such as 12-hour working days, English-speaking local crews and a variety of favourable urban and rural landscapes in which to film, Hungary has developed an attractive proposition to sell overseas.

Hungary pioneered its tax incentive scheme for local and international co-productions in 2004. The system has seen considerable success, offering a 20% tax shield with money paid through a local third party sponsor, and the flexibility to be able to spend part of their film budgets outside Hungary without suffering a reduction in state aid. Despite the programme being halted for part of 2008 while it was investigated by the European Union on antitrust grounds, it has now been reinstated until 2013 after agreeing to implement “cultural eligibility tests” on prospective productions.

The results of the scheme speak for themselves: overall spending on film productions has increased significantly and now Hungary is among the top countries in central Europe to host international productions. National Film Office figures show 11 co-productions in 2004, 13 in 2006, 25 in 2007, and 48 in 2008. Recent productions shot in Hungary include John Madden's *The Debt*, starring Helen Mirren and Tom Wilkinson; Italo project *Memories of Anne Frank* at Budapest's Mafilm Studios; and Good Films' comedy *The Great Ghost Rescue*.

With other eastern European countries (such as Romania, Bulgaria and the Czech Republic) looking to emulate the success Hungary has achieved, and in some cases bounce back to production levels that were even higher than Hungary's before the global downturn, the UK is likely to be exposed to further intense competition for film production budgets.

Sources: Hungarian National Film Office; *Variety* magazine; Korda Studios

Box 12.2: Rising competition – the case of New York and other non-EU states

Another large and growing source of competition for the UK comes from outside the EU. This includes many US and Canadian states who are continuing to increase basic levels of tax relief on film production towards 50%, and offering further bonuses of 5-10% for rural filming and use of local visual effects houses; countries like Australia, New Zealand and South Africa, which have all made their own incentive schemes more generous in the last few years, with ever-growing success; and also Asian nations such as Taiwan, Singapore and South Korea, which are offering more and more financial support to international co-productions with both public and private funds.

Amongst the plethora of US states offering packages of support to film-makers are long-established production locations such as California and New York. The New York state programme provides a refundable 30% tax credit – increased from 10% in April 2008 – on qualified production costs incurred by features, TV movies or series which shoot at a qualified local production facility. To be eligible, a production must shoot 75% of its location days in the state or spend \$3 million or more locally. Additionally, the 'Made in New York' programme provides an additional 5% refundable credit for productions shooting within the five boroughs of New York City.

Although the credit is applied retrospectively via tax returns rather than up-front at the start of a production, and despite the fact it must be obtained in separate instalments where the total spend is greater than \$5 million, there are numerous other advantages. For example, no restrictions apply on combining the incentive with the many others on offer across the US states, and of course New York already has an established and reliable infrastructure of studio space, equipment suppliers, crews and locations. Furthermore, unlike in the UK, no cultural tests are required to access funds – the incentive is motivated by economic rather than cultural benefits to New York. Given the restrictions on providing similar incentives in the EU, this perhaps serves to illustrate the level of competition the UK and other EU states now face in attracting film productions.

The New York scheme proved such a success that its allocated state funding for the period up to 2013 was exceeded by 2009. Amongst the big-budget films to benefit in recent times is *Sherlock Holmes*, which was also part-filmed in the UK.

Source: Screen International, "Global Soft Money Guide 2010".

12.1.2. The importance of the Film Tax Relief to the competitiveness of the core UK film industry

A 2008 report for the UK Film Council⁸⁷ helped to shed light on the relative cost competitiveness of the UK for film production against other locations around the world. This suggested that, based on a professional budgeting exercise using 2007/08 data, the Film Tax Relief made the UK a highly competitive choice for international film-makers. Without the relief in place, the UK was more expensive than a significant number of competitors to make a high-budget film, including Ireland, Australia and South Africa as well as Los Angeles, Connecticut, Canada and Germany. With the relief in place, however, only Hungary and the Czech Republic were less expensive than the UK.

Of course, film production budgeting is not an exact science, and since 2008 the UK's

⁸⁷ Olsberg SPI, "A Comparison of the Production Costs of Feature Films Shot in Ten Locations Around the World", report for the Office of the British Film Commissioner, September 2008.

competitiveness has come under new threat from a series of increasingly generous incentives offered by non-EU territories, particularly those in Canada and the US. A similar analysis in 2010 would be likely to find the advantage provided by the UK Film Tax Relief to be smaller than in the past, given the more generous schemes now on offer elsewhere.

Repeating an exercise we undertook in the previous version of this report, we have updated and extended the detailed modelling involved in the Olsberg/UK Film Council study referenced above. We have extended the competitiveness comparisons by projecting the estimates of cost differentials in 2008 both back over time and forwards to 2015 using Oxford Economics' global forecasts. As before, we focus on the US and the Czech Republic as comparator countries, and our projections are based on average earnings in each country, movements in exchange rates over time, and the same proportions of local and overseas production spend in each country as assumed in the original modelling.

In the UK, we have used the ONS series for average earnings in the private service sector rather than more specific data for earnings in the film industry, as the latter are very volatile from year-to-year reflecting the small size of the data sample on which they are based. For the US, we have used data for average earnings in the motion picture and video production industry. For the Czech Republic, we have used data for average wages in the recreational, cultural and sporting activities sector. Tests suggest that our results are not particularly sensitive to the use of alternative earnings measures.

Chart 12.1

UK-US relative film costs and UK's share of global MPAA film production

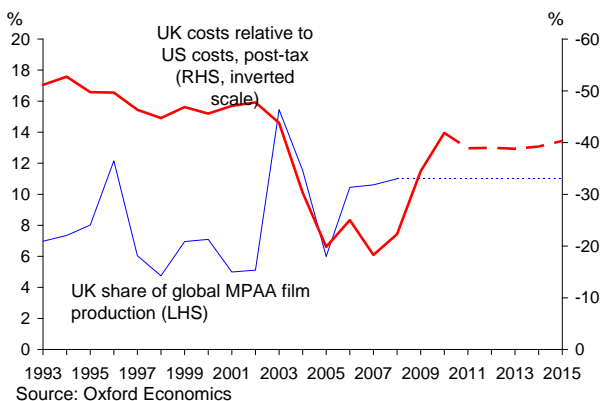
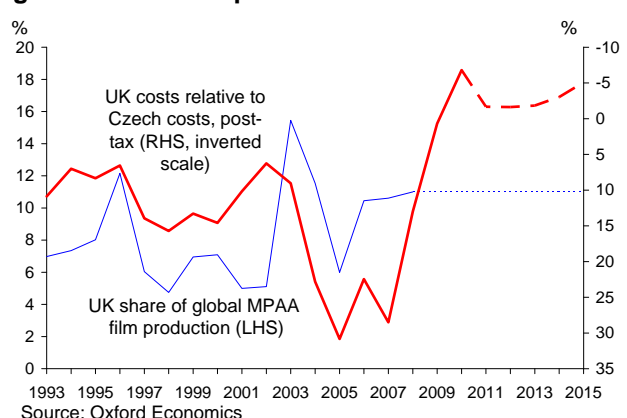


Chart 12.2

UK-Czech relative film costs and UK's share of global MPAA film production



Charts 12.1 and 12.2 show the relationship between the measures of post-tax cost competitiveness we have developed and the UK's share of global MPAA film production (up until 2008, when the MPAA discontinued its statistics on total production). While there are clearly a number of factors that influence the decision of studios over where to locate production for particular films, the charts do suggest that cost factors play an important role. For example:

- The upward trend in the UK's production share in the early 1990s coincided with a period of improving competitiveness, which was then followed by a period when UK costs rose relatively strongly and the UK's production share fell back.
- The Section 42 tax relief helped to improve UK competitiveness in the late 1990s/early 2000s, and this was followed by the sharp rise in the UK's production share in 2003/4.
- A combination of reduced tax relief via Section 42, the marked appreciation of sterling vis-à-vis the dollar and uncertainty over the future of film tax relief in the UK served to undermine the UK's competitiveness severely. That was associated with a marked fall in the UK's share of global film production in 2004 and 2005.
- More recently, film production has recovered in the UK, supported by the new Film Tax Relief and also since 2008 by the weakened value of the pound, which has significantly increased the UK's cost competitiveness relative to elsewhere.

In our 2007 report, we showed how the Film Tax Relief would reduce the costs of producing a film in the UK relative to those in its competitor countries. Our updated analysis shows that in 2010, the effect of the Film Tax Relief has been strongly augmented by the depreciation of the pound to make UK film costs some 41% lower than those in the US, and 7% lower than even those in the Czech Republic (the first time this has occurred). Our projections suggest that these cost differentials could remain fairly stable until 2015, and on this basis we expect the core UK film industry to attract around 10-15% of global film production over the period to 2015, with spend on inward investment productions remaining at or above its 2009 level of £750 million per year. This should underpin a continuation of the long-term trend expansion seen in the core UK film industry, a trend reflected in the current proposals by the Pinewood Studios Group and Warner Brothers to expand the studios at Pinewood Shepperton and Leavesden.

Chart 12.3

UK-US relative film costs and UK's share of global MPAA film production - no tax credit

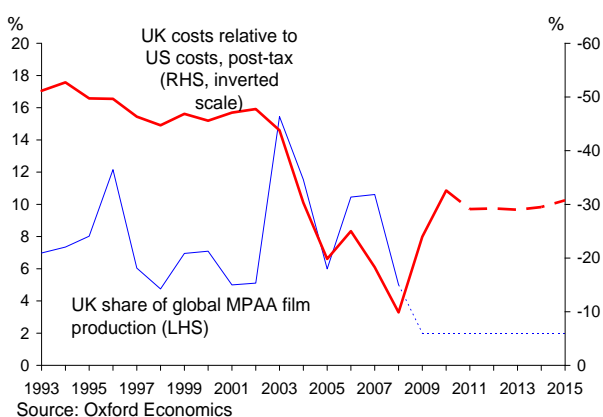
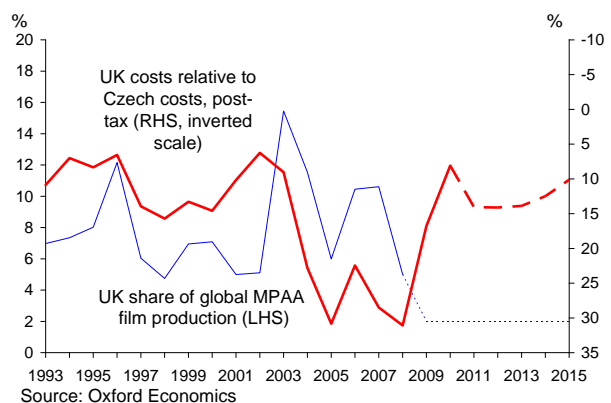


Chart 12.4

UK-Czech relative film costs and UK's share of global MPAA film production - no tax credit



Although the exchange rate is perhaps the key factor behind the recent increase in competitiveness of the UK as a place to film, our analysis also makes clear the importance of the Film Tax Relief to supporting the continued success of the core UK film industry. In the case of the Film Tax Relief being abolished, the UK's cost advantage vis-à-vis the US would be less than 30% up until 2015, and UK costs would be almost 15% higher than those in the Czech Republic over the same period (Charts 12.3 and 12.4). Perhaps even more importantly, the UK would almost certainly lose its image as a credible film-making destination in the eyes of foreign directors if it did not attempt to match the increasingly aggressive approaches to capturing production spend adopted by many non-EU states, particularly those in Canada and the US, through the deployment of financial incentives.

We estimate that a loss of competitiveness of this nature could reduce the UK's share of global film production by around 5-10 percentage points by 2015, to less than 5%. That would be equivalent to a loss of inward investment of up to £600 million a year by 2015. In addition, investment in domestic production and co-productions would also be seriously undermined. Overall UK film production might be reduced by at least 75% by the abolition of the Film Tax Relief.

12.1.3. The economic impact of the abolition of Film Tax Relief

A decline in film production of that scale would have substantial economic effects:

- It would reduce the direct contribution of the core UK film industry to GDP by about £1.2 billion and by £2.45 billion taking account of impacts on the supply chain and on the spending of workers who lose their jobs. Similarly, employment in the core UK film industry would be expected to fall by around 25,000 jobs directly and 50,000 taking account of multiplier effects.
- While many of those currently working in the core UK film industry would find jobs elsewhere and so continue to pay taxes, our research suggests that perhaps one-quarter of the most highly skilled would move overseas to be based in or near film production centres. This is perhaps even a conservative estimate, given the standard of living on offer in many emerging film-making destinations, such as Vancouver. As a result of this, UK GDP would be directly reduced by around £200 million a year.
- Over time, tourism and exports would be undermined as they lose the promotional support provided by UK films.
- In addition, the UK's cultural life would suffer as a result of the loss of UK films.
- Overall, UK GDP would in the medium term be reduced by around £1.4 billion a year.
- These losses in turn would reduce Exchequer tax revenues by about £400 million a year, taking account of multiplier impacts and effects on merchandising. That compares with an estimated cost of the new Film Tax Relief to HM Treasury of around £100 million a year.

12.1.4. Conclusions

The Film Tax Relief is vital to the continued success of the core UK film industry in a global environment characterised by stiff tax competition as countries seek to attract inward investment because of the economic and cultural benefits that the film industry generates. This level of competition is increasing, and encompasses both location filming and subsequent post-production work in fields such as sound and visual effects. The UK Film Tax Relief provides the basis for the continued growth of the core UK film industry: without it, the core film industry could be expected to be around 75% smaller, at a cost of £1.4 billion of lost GDP a year and around £400 million a year of reduced Exchequer revenues.

13. Conclusions – summary of overall impact

This report sets out the contribution of the core UK film industry to the UK economy. Taking into account the direct impact, the supply chain impact and the contribution to UK tourism, trade and merchandise sales, we estimate that the core UK film industry in total:

- Supported 100,000 jobs in the UK in 2009.
- Contributed over £4.5 billion to UK GDP in 2009.
- Contributed over £1.2 billion to the Exchequer (gross of tax relief and other fiscal support).

The breakdown of the employment, value added and tax contribution to the UK economy is summarised by the different channels of impact below. The direct and multiplier impacts account for 70% of the total, with the remainder of the contribution accounted for by wider impacts such as tourism, trade and merchandising.

Table 13-1: Summary of the economic contribution of the core UK film industry

Channel of impact	Total contribution to UK GDP in 2009	Total contribution to Exchequer revenues in 2009	Employment impact in 2009
Direct	£1,594 mn	£445 mn	36,000
Multiplier (indirect and induced plus TV)	£1,714 mn	£425 mn	36,000
British film box office effect	£59 mn	£18 mn	350
Tourism	£950 mn	£210 mn	20,000
Promotion/trade	£20 mn	£5 mn	700
Merchandising	£237 mn	£107 mn	6,600
Total	£4,574 mn	£1,210 mn	99,650

Note: The core UK film industry includes the activities which arise in the UK from the companies / individuals employed in the different stages of film production in the UK (including pre- and post-production); distribution of UK-made films; and exhibition of UK-made films. Economic activity associated with the distribution and exhibition of films made abroad is not included.

Production spend on inward investment films accounted for 79% of total UK production spend in 2009. Assuming that value added and employment and tax revenues flow in a similar proportion, this would mean that global inward investment in UK films supported around 79,000 jobs, contributing about £3.6 billion to UK GDP and £960 million to Exchequer revenues (gross of tax relief and other fiscal support).

Appendix A: Tax incentives provided for the film industry in a selection of non-EU countries

	NAME OF SCHEME	TYPE OF TAX SYSTEM	WHAT IT SUPPORTS	HOW DOES IT WORK?
AUSTRALIA	Location offset; Post, Digital and Visual Effects (PDV) offset; Producer offset.	Tax credit (tax offset).	Production and post-production.	<p>Location offset: The producer claims 15% of what is spent in Australia, providing at least \$12.1 million (A\$15 million) is spent and this represents at least 70% of the budget. The 70% condition does not apply if the spend is more than \$40.3 million (A\$50 million).</p> <p>PDV offset: since 1 July 2007 there is a 15% rebate on qualifying Australian Post/Digital/VFX (PDV) spend of more than A\$5 million (regardless of where the project was shot).</p> <p>Producer offset: a 40% tax credit can be claimed by eligible Australian films and co-productions, where spend exceeds A\$1 million.</p>
NEW ZEALAND	Large-Budget Screen Production Grant (LBSPG); Post, Digital and Visual Effects Grant (PDVG); Screen Production Incentive Fund (SPIF)	Grant.	Production only.	<p>LBSPG: the producer claims a 15% return for productions. Spend in NZ must exceed 70% of the total for productions with budgets over NZ\$15 million. It also allows several productions costing a minimum of \$3 million each to "bundle" to meet the requirement for qualifying expenditure of \$30 million.</p> <p>PDVG: another 15% incentive to use New Zealand-based post-production digital and visual effects services with qualifying expenditure of over NZ\$3 million.</p> <p>SPIF: a 40% return on spending over NZ\$3 million is provided to NZ films and official co-productions, up to a maximum of \$NZ6 million.</p>

Economic Contribution of the UK Film Industry

June 2010

	NAME OF SCHEME	TYPE OF TAX SYSTEM	WHAT IT SUPPORTS	HOW DOES IT WORK?
SOUTH AFRICA	DTI Film and Television Production Incentive Scheme	Two-tier tax rebate.	Production.	New scheme launched in 2008. South African films and co-production treaty films get a 25-35% rebate (35% on the first R6 million or \$0.8 million local spend, and 25% on the remainder) and foreign films get a 15% rebate (minimum local spend R12 million or \$1.6 million) of what they spend in South Africa. Producers need to provide evidence at the outset that they have at least 25% of their budget in place. International producers receive their funds on completion of the movie; local producers can choose to be paid in 'milestones' spanning the production period.
US FEDERAL	Section 181 (of the American jobs Creation Act).	Tax allowance.	Production only.	Film and TV productions costing \$15 million or less (\$20 million or less if made in "distressed" areas of the country) and spending at least 75% of that amount on services performed in the US can immediately write off their entire production costs for tax purposes. Deductions can in some circumstances be taken by institutional or individual investors in projects. Money is raised by producer or financial middleman.
CALIFORNIA	California Film & Television Tax Credit Program	Tax credit.	Production.	Provides two levels of tax credits – a 20% credit on qualified expenses for feature films budgeted between \$1 million and \$75 million, and a 25% credit on independent films budgeted between \$1 million and \$10 million. All projects must spend at least 75% of their production days or total budgets in the state, and above-the-line salaries are excluded.

Economic Contribution of the UK Film Industry

June 2010

	NAME OF SCHEME	TYPE OF TAX SYSTEM	WHAT IT SUPPORTS	HOW DOES IT WORK?
CONNECTICUT	Connecticut Digital Media & Motion Picture Tax Credit.	Non-refundable transferable tax credit.	Pre-production, production and post-production.	Qualified productions spending in excess of \$100,000 in Connecticut on pre-production, production or post-production receive tax credits of up to 30% of qualified Connecticut spending on goods, services and labour. Productions must apply for eligibility certificate no later than 90 days after first qualified production expense and for tax credit certificate no later than 90 days after last qualified production expense.
LOUISIANA	Louisiana Motion Picture Incentive Program.	Transferable tax credits.	Production only.	Investors in certified productions – which require expenditure to be audited by a Louisiana accountant – spending \$0.3 million or more in Louisiana get a transferable 30% tax credit on in-state spending. The state will purchase the credits for 85 cents on the dollar. An additional 5% credit applies to payroll costs for state residents (with individual payments over \$1 million excluded).
MASSACHUSETTS	Massachusetts Motion Picture Tax Incentive.	Transferable tax credit.	Production only.	25% tax credit on a production's total payroll in the state, where local production spend exceeds \$50,000. Additional 25% tax credit based on all production expenses in Massachusetts, provided at least half the film is shot in the state or half of the budget is spent there. Credits can be carried forward for up to five years or sold to another corporate taxpayer. Eligible productions also exempt from paying sales tax in the state.

Economic Contribution of the UK Film Industry

June 2010

	NAME OF SCHEME	TYPE OF TAX SYSTEM	WHAT IT SUPPORTS	HOW DOES IT WORK?
NEW MEXICO	Film Production Tax Rebate.	Tax rebate.	Production, pre- and post production, as long as expenditures are subject to state taxation.	25% tax rebate on all production expenditures that are subject to taxation by the state (including New Mexico labour). Film investment loan programme offers loans, with participation in lieu of interest, of up to \$15 million per project for qualifying features and TV projects with budgets of at least \$2 million.
NEW YORK	New York State Film Production Credit (New York State) and Made in New York (New York City).	Refundable tax credits.	Production (including post-production if done in the state or city).	Empire State Film Production Credit: refundable 30% tax credit (increased from 10% in April 2008) for film and TV productions doing at least 75% of their studio work in qualified state facilities (total studio work could be as little as one day). For location work, post-production and costs of other work done in New York State outside the facility, must either do 75% of its location shooting in the state or spend at least \$3 million on work done at the qualified facility. Made in New York: additional 5% credit for productions based in NYC.
PUERTO RICO	Puerto Rico Law 362	Tax credit.	Pre-production, production, post-production and wider expenses.	Offers a 40% transferable tax credit on a project's payments to Puerto Rican entities or residents, including spending on equipment, crew, travel, hotels and any other above-the-line or below-the-line costs with the exception of non-resident lead actor salaries. Projects must spend at least \$1 million locally or at least 50% of production time on the island. Producers must set up a "licensed film entity" to make payments to Puerto Rico residents.

Economic Contribution of the UK Film Industry

June 2010

	NAME OF SCHEME	TYPE OF TAX SYSTEM	WHAT IT SUPPORTS	HOW DOES IT WORK?
CANADA FEDERAL	Film or Video Production Services Tax Credit (PSTC) and Production Tax Credit (PTC).	Tax Credit.	Production only.	Production establishes Canadian corporation; budget to Canadian Audio Visual Certification Office (CAVCO) and Canada Revenue Agency (CRA). CAVCO issues certificate for estimate of the tax credit. On delivery, entity submits certificate with its tax return. PTC: 25% of qualified labour expenditures up to 60% of the cost for Canadian productions and co-productions; PSTC: aimed at all prods, 16% of salaries paid to Canadian residents, no limit on amount claimed.
ALBERTA	Alberta Film Development Program (AFDP).	Tax rebate.	Production, post-production and wider expenditure.	Grant programme that returns 25% of all eligible expenses incurred in Alberta including post-production, special effects, rentals, set construction and props, labour services and food and accommodation. Applicants must provide written evidence of 65% confirmed financing for productions over C\$1 million, and establish an Alberta-based corporation.
BRITISH COLUMBIA	Film Incentive BC (FIBC); Production Services Tax Credit (PSTC).	Tax credits.	Production only.	FIBC: film incentive available to qualifying Canadian productions and co-productions, offers 35% credit on qualified BC labour expenditures. Additional 12.5% regional bonus for productions outside Vancouver, and 15% bonus for using BC-based digital animation and VFX facilities. PSTC: aimed at all productions, regardless of nationality, offers 25%, plus regional bonus of 6% for productions outside Vancouver and 15% for using digital animation and VFX.

Economic Contribution of the UK Film Industry

June 2010

	NAME OF SCHEME	TYPE OF TAX SYSTEM	WHAT IT SUPPORTS	HOW DOES IT WORK?
MANITOBA	Manitoba Film and Video Production Tax Credit.	Tax Credits.	Production only.	Basic tax credit of 45% on eligible Manitoba labour expenditures. Bonuses for frequent filming (10%), rural filming (5%) and use of local producers (5%) can take total credit to 65%. Available to all productions. Production incorporates in Manitoba, submits budget to Manitoba Film & Sound (MFS), which administers credits. MFS issues production certificate which provides an estimate of the tax credit based on budget, which production can use to raise finance. On delivery of the film, incorporated entity submits certificate with its tax return.
NOVIA SCOTIA	Nova Scotia Film Industry Tax Credit.	Tax Credit.	Production only.	Projects that qualify as Nova Scotia productions or co-productions can claim 50% of eligible labour costs, capped at 25% of the production budget. Bonus of 10% for productions shooting outside Halifax area. On delivery of the completed film, the final budget is audited for eligible Nova Scotia labour costs and a certificate issued for submission with the production's tax return.
ONTARIO	Ontario Film and TV Tax Credit (OFTTC). Ontario Prod Services Tax Credit (OPSTC).	Tax Credit.	Production only.	OFTTC: offers a 35% tax credit on eligible Ontario labour costs (40% on the first \$240,000 is available to first-time producers). Additional 10% bonus for filming outside Greater Toronto. OPSTC: available to all productions and offers 25% tax credit on eligible Ontario labour costs. Additional 20% bonus for using Ontario-based digital animation or VFX.

Economic Contribution of the UK Film Industry

June 2010

	NAME OF SCHEME	TYPE OF TAX SYSTEM	WHAT IT SUPPORTS	HOW DOES IT WORK?
QUEBEC	Quebec Film Production Tax Credit (QFPTC); Quebec Production Services Tax Credit (QPSTC).	Tax credits.	Production only.	QFPTC: provides return of 35% of labour expenditures for eligible co-productions shooting with a local producer. Additional 10% bonuses for shooting outside Montreal and using local visual effects houses. QPSTC: available to any production, regardless of nationality, and provides a base rate of 25% of eligible labour expenditures. 5% bonus for visual effects expenditure.
SASKATCHEWAN	Saskatchewan Film Employment Tax Credit (SFETC).	Tax credit.	Production only.	Producers can claim a credit of up to 45% of total eligible salaries, not exceeding 50% of the budget. Available to all productions, with additional bonuses for rural shooting (5%) and using 6 out of 10 local staff in designated positions. Production incorporates in Saskatchewan, submits proposed budget and receives tax certificate from SaskFilm. On delivery of the completed film, the incorporated entity submits the certificate along with its tax return.

Source: www.ScreenDaily.com Global Tax Guide 2010; UK Film Council

Appendix B: Econometric analysis of the cultural value of UK film

To estimate the private cultural value of UK film, we used data from the UK Film Council's database containing information on each film released in the UK. The data recorded include the film's release date, distributor, certificate, country of origin, language and genre. The database also includes financial information on each film's box office takings (to date and on the opening weekend) in the UK and United States. Data are also available on each film's advertising spend in the UK.

Regression analysis

Our initial approach is to investigate a statistical relationship between film j 's box office receipts in the UK (BO_{jUK}), its box office receipts in the US in sterling (BO_{jUS}) and a dummy variable taking the value 1 if it is of UK origin ($UK\ Film_j$) and zero if from elsewhere. A film's box office receipts in the US (BO_{jUS}) is included to control for its general appeal to cinema audiences. A film's appeal is made up of many attributes including its stars, the director, plot, reviews and ratings, awards etc. This leaves the dummy variable $UK\ Film_j$ to potentially capture the extra box office revenue UK audiences pay to see an indigenous film.

$$(1) \quad \ln(BO_{jUK}) = \alpha + \beta * UK\ Film_j + \delta * \ln(BO_{jUS})$$

A problem with this approach is that if UK audiences have a preference for watching indigenous films, then so might US audiences. If true, the US box office earnings of a UK-made film will understate its general appeal. This is liable to bias the estimates of the β coefficient in Equation 1 upwards. We therefore expand the model by modifying the equation for UK box office receipts and adding another for US ticket sales:

$$(2) \quad \ln(BO_{jUK}) = \alpha + \beta * UK\ Film_j + \delta * \ln(UK\ Film_j * \exp(\gamma) * BO_{jUS} + (1 - UK\ Film_j) * BO_{jUS})$$

$$(3) \quad \ln(BO_{jUS}) = \zeta + \gamma * US\ Film_j + \mu * \ln(UK\ Film_j / \exp(\beta) * BO_{jUK} + (1 - UK\ Film_j) * BO_{jUK})$$

The objective of this system of equations is to the adjust box office revenue of each film to reflect its general appeal, ignoring each country's audiences' preference for indigenous films. The US box office receipts for UK-made films in Equation 2 are therefore scaled upwards by the premia US audiences pay to see US-made films (γ). Similarly, the UK box office receipts of UK-made films are adjusted downward in Equation 3 by the premia (β) UK audience pay to see an indigenous film.

We then sought to improve on the performance of Equations 2 and 3 by introducing a number of

other variables. Robertson (2003)⁸⁸ finds that the size of advertising spend promoting a film has a significant impact on the revenue it earns at the box office. We therefore include the value of a film's advertising in the UK in Equation 2. We also experimented with dummies for ten film genre types (taking the value 1 if a film was, for example, a comedy, and zero otherwise). Virtually all of the film genre type dummies proved statistically insignificant and we therefore dropped them from the final specification.

Our preferred equation is shown below. Its' overall performance is good, being able to explain three-quarters of the variation in films' box office receipts in the UK. It confirms that cinema audiences are prepared to pay more to see a film produced domestically. The β coefficient, which is statistically significant, suggests that UK films' box office receipts are around 30% higher than if the same film was made elsewhere.

UK Box Office Revenues (2000 to 2009)

Dependent Variable: $\log(BO_{jUK})$

	Coefficient	Std. Error	t-Statistic	Prob.
α	-6.2	0.3	-19.1	0.0
β	0.3	0.1	5.0	0.0
δ	0.3	0.0	22.4	0.0
γ	1.9	0.1	27.3	0.0
λ	0.6	0.0	30.4	0.0

where:

$$\ln(BO_{jUK}) = \alpha + \beta * Film\ UK_j + \delta * \ln(Film\ UK_j * \exp(\gamma) * BO_{jUS}) + (1 - Film\ UK_j) * BO_{jUS} + \lambda * \ln(Advertising\ Expenditure_j)$$

Observations: 2185

R-squared	0.78	Mean dependent var	13.20
Adjusted R-squared	0.78	S.D. dependent var	2.38
S.E. of regression	1.11	Sum squared resid	2671.48
Durbin-Watson stat	1.88		

⁸⁸ Source: Robertson, T, (2003), 'Advertising effectiveness in UK film distribution', A report for the UK Film Council, September 2003.

Appendix C: Oxford Economics

Oxford Economics – formerly Oxford Economic Forecasting – was founded in 1981 to provide independent forecasting and analysis tailored to the needs of economists and planners in government and business. It is now one of the world's leading providers of economic analysis, advice and models, with over 300 clients including:

- International organisations
- Government departments in many countries
- Central banks around the world
- A large number of multinational blue-chip companies.

Oxford Economics commands a high degree of professional and technical expertise, both in its own staff of over 70 professionals based in Oxford, London, New York, Paris, the UAE, Singapore, Belfast and Philadelphia, and through its close links with Oxford University and a range of partner institutions in Europe and the US.

Oxford Economics' services include:

- International macroeconomic, sectoral and regional forecasts – with country briefing reports covering 190 countries; detailed projections for 85 sectors; and forecasts for local areas throughout the EU and cities in Asia.
- Bespoke econometric modelling – building detailed forecasting and simulation models and training clients' staff to use them to support budget planning and policy decision-making.
- Detailed market analysis – translating our economic forecasts into forecasts for market segments and providing advice on market opportunities.
- Briefings for ministers, senior officials and executives – both presentations and tailored written reports on key economic issues.
- Outsourced economics support – providing on-call advice, data, modelling, briefing and policy advice.
- Economic impact assessments – analysing the economic and social contribution of particular sectors, investment projects or tax proposals.

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