

The Economic Impact of the BBC: 2008/09.

A Report for the BBC

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BBC FOREWORD

The BBC's prime purpose is to provide quality programmes and content to inform, educate and entertain audiences and we will never lose sight of that.

But it is also important to recognise that the BBC's activities have a significant impact on the UK economy. The privilege of licence fee funding makes the BBC a major player in the UK's creative industries and we have a responsibility to ensure that our investment in the economy works as a force for good – supporting jobs and businesses across the UK.

This comprehensive study shows that the economic benefits of the BBC stretch far and wide, delivering real value to digital and creative businesses across the UK, which in turn spill over into the wider economy.

In total this contribution generates £7.7bn of economic value, meaning that at least two pounds of economic value is generated by every pound of the licence fee. Many private sector jobs are sustained by the BBC and every region of the UK benefits.

Like its predecessor Planet Earth (which is now the biggest selling HD DVD in the US), our groundbreaking natural history series Life required stable long-term investment which only the BBC can provide. By partnering with other producers nearly two-thirds of the funding for producing Life was generated from overseas.

That investment was then injected into local companies and freelancers who work closely with our Natural History Unit in Bristol. 350 people worked on the production and post-production and companies like BDH, the design company who produced the branding for the TV titles, book and DVD, also benefitted. The relationship with the BBC helps sustain jobs in these companies; meanwhile these companies themselves (and their employees) buy further goods and services, creating a positive "multiplier" effect of economic benefits for the regional economy.

Commissions like these have made Bristol the world centre of the Natural History film industry, with a quarter of the world's output now coming from the city.

Life is set to be a huge success with BBC Worldwide maximising its commercial potential in the UK and around the world, channelling the benefits back to UK licence fee payers. Having achieved some of the highest audience appreciation figures ever recorded on BBC One last autumn, Life has already sold 147,000 DVD boxsets and over 150,000 books in the UK through BBC Worldwide.

It is expected to reach huge audiences in the US this spring where it will be narrated by Oprah Winfrey, has premiered in Canada and been acquired by several Latin American broadcasters and others around the world.

This is not just a story about how an idea gets from a production meeting in Bristol to a TV screen in Brazil, it shows us that quality is key.

Providing quality content for audiences is at the heart of our future strategy. But it is not a question of either/or. What Life and many other success stories show is the twin aim of delivering excellence in programming and better spreading the benefits of the licence fee

can go hand-in-hand. Our BBC North project provides another great example – by better exploiting the creative talents and skills of the North, we can enhance programming for our audiences and provide a shot in the arm for the regional creative economy.

As we strive to ensure that every pound works hard for licence fee payers by investing in quality public service content, we also want to ensure that we secure the maximum benefit for UK PLC. It is therefore important that the BBC commissions research like this to produce evidence of its impact on the UK economy and monitors that evidence regularly. Such evidence will ensure that as we focus on creating quality programming we can also think about how best to spread the knock-on economic benefits to local and regional economies.

Our goal now is to ensure that whatever economic challenges we face in future, the BBC works hard to ensure the licence fee continues to benefit the creative and broader economy alike.

A handwritten signature in black ink, appearing to read 'Caroline Thomson', followed by a long horizontal flourish.

Caroline Thomson

Chief Operating Officer, BBC



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Executive Summary

This report – commissioned by the BBC - provides a measure of the economic impact of the BBC in 2008/09. Its focus is exclusively on the economic impact of the BBC and does not cover the performance of the BBC against its six Public Purposes. Specifically, this report does not include consideration of the value licence fee payers receive from BBC services.

Measuring the economic impact of the BBC

Measuring the economic impact of the BBC requires a definition of the scope of the BBC's activities to be included and a methodology for evaluating both the direct and wider consequential impact of these activities.

The scope of the BBC's economic activities

This report aims to include all the main economic activities of the BBC.

The BBC's principal public services comprise nine domestic free-to-air television channels, contributions to S4C and BBC Alba¹, 54 radio stations² and services online including BBC.co.uk and BBC iPlayer. Public service activities also include support for multiple orchestras, educational services (such as Bitesize) and many other initiatives.

The BBC's commercial activities include BBC Worldwide which comprises numerous broadcasting channels, sales & distribution and other activities, BBC Studios which is a production facilities provider and BBC World News, the BBC's international news and current affairs television channel.

Through these public service and commercial activities, the BBC has an economic impact both directly through its immediate expenditures on people, infrastructure and services as well as more widely through consequential effects both in the creative sector and beyond.

The methodological framework for assessing the BBC's economic impact

Our approach to estimating the economic impact of the BBC is in two parts.

In the first part, we estimate the gross and net value added of the BBC. Gross Value Added (“GVA”) is an estimate of value generated for the UK economy as a result of an organisation's activity. We apply standard economic impact analysis which distinguishes three types of GVA impact: direct value added and the wider indirect and induced impacts.³ The Net Value Added

¹ S4C is the Welsh language channel and BBC Alba is the Scottish Gaelic language channel.

² The BBC offers 10 national stations; 39 local stations in the English regions and 5 stations in the Nations.

³ Direct value added for an organisation is defined as the value of total sales or revenue less expenditure on goods or services purchased from other organisations. This is roughly equivalent to the wage bill and operating surplus of the organisation. Indirect impact is the impact of the organisation on the GVA of firms in the supply chain which supply goods and services purchased by the organisation in question. Induced impacts arise on the GVA of firms outside the

("NVA") is the difference between the GVA that we estimate for the BBC and the equivalent measure of GVA that we estimate for a Counterfactual BBC. In the counterfactual we assume that there is an advertising funded PSB that takes the place of the BBC. In this way the NVA represents the incremental value generated by a licence fee funded BBC relative to an advertising funded BBC.

We recognise that there are numerous possible counterfactual funding alternatives. However we were asked to follow the same counterfactual assumptions as previously used in analysis of the economic impact of the BBC commissioned by the BBC Trust.⁴ In our approach we also take into account the replacement of the licence fee by advertising funding by considering the wider impact on other advertising media, other commercial broadcasters, the independent production ("indie") sector and household disposable income.⁵ We also extend the counterfactual to include the BBC's commercial subsidiaries.

In the second part of our methodological framework, we estimate the impact of a number of 'spillover' effects. Spillover effects are by-products of an organisation's activity, experienced by other firms in the same sector or by the economy more generally. In the context of the BBC we consider spillovers relating in particular to the indie sector, the BBC's investment in regional clusters, the provision of training by the BBC, new digital markets and value created for others.

Part I - the BBC's GVA and NVA

We have estimated the BBC's GVA including Joint Ventures (UKTV and 2entertain) at £7,739m and the NVA after considering the consequential impact on the creative sector and on the economy from household disposable income more widely at £2,551m⁶.

Composition of the BBC's GVA and NVA

Television is the largest single contributor to the BBC's GVA at £4,497 m.

The counterfactual allows for a reduction in the revenues of not just the BBC but also other commercial broadcasters. This is because the advertising revenues available to fund television are assumed to be insufficient to fully replace the licence fee. Consequently the GVA of the creative sector falls in the counterfactual. And this effect is only partially offset by the release of the licence fee to fund alternative consumer spending because the multipliers used to estimate the wider GVA of this consumer spending are on average lower than the multipliers applied to the expenditure within the creative sector.

immediate supply chain, as a result of the expenditure of the organisation's own employees and those in the supply chain. The wider indirect and induced impacts are estimated by applying multipliers to the expenditure.

⁴ The economic impact of the BBC on the UK creative economy July 2008 PricewaterhouseCoopers

⁵ Households in the counterfactual in place of spending on the license fee have more disposable income to spend in other ways.

⁶ The GVA and NVA for the BBC's commercial subsidiaries excludes intra-Group transfer payments to avoid double-counting.

Table 1: BBC Net Value Add (2008/09)

	Factual - £m	Counterfactual - £m				Net - £m
		TV	Radio	Online	Other	
BBC Public Service – TV	4,497					
BBC Public Service – Radio	1,040					
BBC Public Service – Online	321					
BBC Public Service - Other (including tax)	534					
BBC Commercial Subsidiaries (including JVs)	1,348					
BBC GVA	7,739					7,739
BBC Counterfactual		2,336	327	126		(2,789)
BBC Counterfactual Commercial Subsidiaries (including JVs)					594	(594)
BBC NVA						4,356
Commercial subsidiary - third party					81	(81)
Other Commercial Broadcasters	7,890	4,321	662			2,907
Online and Other Media	19,777			5,793	12,981	1,003
Alternative use of Licence fee					5,634	(5,634)
Wider Creative NVA						2,551

Source: Deloitte analysis

We have estimated how the BBC's spend in the Nations and English Regions contributes to the UK's GVA through the use of UK-level multipliers applied to the BBC regionally allocated budget.⁷ This shows that the BBC's GVA is generated across the UK, as set out later in this report.

Part II - the BBC's spillovers

Spillover effects are by-products of an organisation's activity, experienced by other firms in the same sector or by the economy more generally. In the context of the BBC we consider spillovers relating in particular to the indie sector, the BBC's investment in regional clusters, the provision of training by the BBC, new digital markets and value created for others.

The BBC's impact on the indie sector

The indie sector in the UK is of substantial economic importance, generating some £2,160m of revenues in 2008/09⁸.

⁷ Actual expenditure in regions may be different from regionally allocated budgets but we have assumed that in practice it is closely correlated.

⁸ PACT policy survey and financial census 2009

The BBC and other broadcasters' commissions from the indie sector generate substantial GVA that would be reduced in the Counterfactual due to the fall in available revenues. We have estimated that this is worth some £893m in net terms (included in BBC NVA estimated above).

In addition, the BBC has spillover impacts first, from the ability of the indie sector to derive more secondary revenues from UK commissions than in the counterfactual and, second, as a result of the stability of funding that the BBC's licence fee provides. We have estimated the secondary revenue and stability of funding spillover effects generate additional NVA of £227m in aggregate compared to the Counterfactual.

Overall we have estimated that £1,433m indie sector GVA would be foregone in the Counterfactual in aggregate as a result of less UK commissions, spillover effects and lower multipliers on remaining spend. This would represent a loss of 33% of indie GVA, from an estimated total indie GVA of £4,320m (based on £2,160m indie sector revenues in 08/099).

The economic impact of the BBC's creative clusters

The BBC's presence outside London is generally recognised as having been critical to the formation of creative sector clusters in Bristol, Cardiff and Glasgow. The commitment to move nearly 2,500 staff to Salford will create another significant media cluster in the UK. Organisations in a cluster benefit from easier and cheaper communication and trade with each other, with their customers and with potential employees. Clusters bring particular benefits to the creative sector, in terms of innovations to products and business models.

Quantifying the benefits of BBC-driven creative clusters is not straightforward. Clusters develop over a long time period, which makes it hard to understand what would have happened in a counterfactual scenario with less or no BBC regional presence. But to provide some quantification, we assume a counterfactual scenario in which the BBC moves all its employees out of Bristol and Cardiff, and reduces its presence in Glasgow to levels consistent with its public service responsibilities in a "typical" region. We assume that this has knock-on effects on non-BBC creative sector employment in each city.

Overall, we estimate that the BBC's presence in these clusters generates higher employment (3,457 in Glasgow, 1,684 in Bristol and 1,763 in Cardiff) compared to the assumed Counterfactual. This is equivalent to 0.8%, 0.5% and 0.6% of GVA in each city-region respectively. In the Counterfactual we quantify the consequent reduction in productivity of the creative sector firms remaining in each of the three city-regions, as a result of the reductions in cluster size, to be around 3.5%. However this is offset by an increase in productivity arising from the assumed transfer of employment to a larger cluster, London.

Our estimates do not allow for any (regional) distributional weighting. It could be argued that a job or pound of GVA in less prosperous areas is "worth" more to society than an equivalent job or GVA in a more prosperous area. Our estimates also do not attempt to value the cultural and social benefits of the BBC producing content outside London.

⁹ PACT policy survey and financial census 2009, p7

The economic impact of BBC training

The BBC is the main provider of training services in the creative sector. It spent nearly £45m on training in 2008/09, which is substantially more than ITV and Channel 4. The cumulative impact of current and past BBC training on the productivity of the sector is likely to be significant. BBC training increases the productivity of its own staff, and raises the productivity of staff in the rest of the sector through training of non-BBC creative sector workers, and as a result of BBC-trained staff moving to other parts of the sector.

To quantify the size of these impacts, we estimate the proportion of staff in the creative sector that would receive training in the counterfactual scenario. As the Counterfactual BBC would have lower and commercially-derived revenues, we have assumed that its training spend-per-employee would equate to existing average ITV levels. This implies a reduction in BBC training spend from £44m to £6m a year. ITV's training spend would also fall in the counterfactual scenario. We estimate the impact of this reduction in training on sector productivity using the results of a study of training in UK firms. Our central estimate is that sector productivity would be £59m a year lower in the counterfactual.

The BBC's impact on new digital markets

The BBC's remit includes "to deliver to the public the benefit of emerging communications technologies and services and, in addition, taking a leading role in the switchover to digital television".¹⁰ Consequently the BBC plays an important role in developing digital markets.

We consider the BBC's contribution to the developments of digital market in the UK by focussing on Freeview, the collection of free to air services on the Digital Terrestrial Television ("DTT") platform, and Video-on-demand ("VoD") services delivered through bbc.co.uk and iPlayer.

We estimate the economic impact that the BBC has generated from its contribution to accelerating digital switchover. We find that, for financial year 2008/09, the spill over effects from the BBC's contribution to accelerating DSO can be estimated to be in the range of £52m to £263m depending on the assumptions (at least £95m assuming that in the absence of the BBC's contribution, DSO would have been postponed to 2016). We were not able to quantify the impact of the iPlayer.

Other impacts of the BBC on creating value for others

¹⁰ Royal Charter for the continuance of the British Broadcasting Corporation, The Public purposes (f)

We consider spillover impacts of the BBC surrounding the creation of value for others. These comprise effects such as the impact of the BBC on the value of UK exports – through quality leadership and the impact of the BBC brand; the impact of the BBC's research and development activities on the economy; the creation of value for BBC Worldwide's Joint Venture (“JV”) partners, associates and high-street retailers; and the contribution of the BBC in encouraging interest in cultural products and events, in particular new UK music.

Two of these impacts – creating value for JV partners and associates, and expanding retail and other third party markets – are quantifiable. We assume that the profits accruing to JV partners as a result of BBC Worldwide's operations are incremental, and estimate the net spillover impact to be approximately £26m in JV profits. We estimate that the value created for associates and third parties is not incremental.

The other impacts – the effect of the BBC on the value of UK exports, the impact of the BBC's research and development activities, and the creation of interest in cultural products and events – are not quantifiable. We find evidence to suggest that incremental value is generated in these areas, and that there is a positive net impact, but are not able to quantify this impact.

Below is a summary of the spillover effects of the BBC which we have estimated. The 'Net Impact' indicates the size of the estimated spillover effect (the difference between the spillover effect in the Factual and Counterfactual scenarios). However it should be noted that a proportion of these net values are already included in our BBC GVA/NVA estimates presented above. For example, the benefit of the BBC employing highly trained and productive staff is reflected in its GVA. Similarly, of those non-BBC staff that the BBC trains, some will provide content or services directly to the BBC. Again, the benefits of these trained staff are captured in our BBC GVA figures. However, the productivity of non-BBC staff when they provide services to players beyond the BBC is not included in our BBC GVA and is therefore incremental.

The 'Incremental Impact' column indicates the amount of each spillover effect that is incremental to the BBC's NVA estimates.

Table 2: Summary of net spillover estimates(2008/09)

Spillover effects	Description	Net impact, £m	Incremental Impact, £m
Indie sector	The net impact on the scale of the sector as a result of the BBC's funding structure	1,433	333
Clusters (Bristol)	The net regional impact ¹¹ of the BBC locating its activities outside of London	51	19
Clusters (Cardiff)		53	12
Clusters (Glasgow)		105	64
Clusters (London) ¹²		-215	-98
Training ¹³	The net benefit of the BBC's current training spend portfolio	59	16
Opening up new markets ¹⁴	The net impact of the BBC acting as a spearhead to the UK's transition to digital switchover	95	95
Creating value for others	The incremental profit that accrues to BBC Worldwide JV partners	26	26
Creating value for others	Impact on UK exports, impact of R&D, creation of revenue opportunities for third parties, contribution to new music and cultural activities	Not quantified	Not quantified

Source: Deloitte analysis

Note: this table presents "central" estimates. The range estimates calculated for each spillover effect are presented in the relevant sections of the report.

¹¹ Regional cluster impacts are estimated using ONS 'direct' GVA data. This GVA excludes indirect and induced impacts.

¹² London Cluster figures are negative because we assume that in the counterfactual BBC employment and non – BBC creative sector employment would have been located in London instead of the other cluster cities. There is a small net increase in GVA in the Counterfactual compared to the Factual due to this assumption. This is because the move of employment from a series of smaller clusters to a larger cluster produces a small net increase in productivity in aggregate.

¹³ Training impacts are estimated using ONS 'direct' GVA data. This GVA excludes indirect and induced impacts.

¹⁴ These values are the total consumer and producer surplus. They are not GVA values, but are included in the table for completeness

1 Introduction

This report provides a measure of the economic impact of the BBC in 2008/09, including the BBC's Public Service and Commercial Subsidiaries. It assesses the economic impact of the BBC in terms of the BBC's Value Added, and the economic benefits that arise as 'by-products' of the BBC's activities ('spillover effects').

1.1 Aims

This report provides a measure of the economic impact of the BBC. Although the creation of economic value for the UK is not a primary purpose of the BBC, the Trust has set the BBC the challenge of ensuring that, wherever possible, it delivers positive benefits to other stakeholders in the sector¹⁵.

1.2 Scope

The focus of this report is exclusively on the economic impact of the BBC and does not cover the performance of the BBC against its six Public Purposes. Specifically, this report does not consider the consumer and citizen value generated by the BBC's services or the value for money delivered by the BBC in terms of the quality of its programming.

Measuring the economic impact of the BBC requires a definition of the scope of the BBC's activities to be included and a methodology for evaluating both the direct and wider consequential impact of these activities. This report includes the BBC Public Service and Commercial Activities:

- The BBC's principal public services comprise nine domestic free-to-air television channels, contributions to S4C and BBC Alba¹⁶, radio stations reaching two thirds of listeners and online services including BBC.co.uk, BBC iPlayer and other digital services. Public service activities also include support for multiple orchestras, educational services (such as Bitesize) and many other initiatives.
- The BBC's commercial activities include BBC Worldwide which comprises numerous broadcasting channels, sales & distribution and other activities, BBC Studios & Post-production which is a production facilities provider and BBC World, the BBC's international news and current affairs television channel.

This report does not include the activities of the BBC World Service and BBC Monitoring.

Our report assesses the economic impact of the BBC in the UK, including the impact on creative and non-creative sectors. Therefore our assessment includes the BBC's activities and expenditure across a variety of areas such as content, distribution, publishing, sales and marketing as well as infrastructure and overheads.

¹⁵ Annual Report 2008/09, Part One, page 54

¹⁶ S4C is the Welsh language channel and BBC Alba is the Scottish Gaelic language channel.

1.3 Report structure

Our report assesses the economic impact of the BBC in terms of the BBC's Value Added as well as spillover effects generated by the BBC's activities which benefit other industry players. The Value Added of the BBC comprises the value generated by the BBC for the UK economy as a result of its expenditure, as well as the resulting 'ripple' effects as the initial expenditure continues to flow through the supply chain and the UK economy. The Spillover Effects consist of the economic benefits that arise as by-products of the BBC's activity, experienced by other firms in the same sector or by the economy more generally.

The report begins by describing:

- the scope of the BBC's economic activities (Section 2); and
- the framework for assessing the BBC's economic impact (Section 3).

The body of the report is structured in two parts:

- Part I discusses the Gross and Net Value Added; and
- Part II contains our analysis of BBC spillover impacts.

Part I

In Part I we consider the Gross Value Add ("**GVA**") of the BBC in 2008/09 as a result of its expenditure on remunerating employees as well as on a range of third party suppliers across content, technology, publishing, marketing, and other. The estimated 'Factual' GVA impact is compared to a hypothetical 'Counterfactual' scenario in order to estimate the incremental UK GVA attributable to the BBC's activities, this is the UK economic activity that would not exist but for the licence-fee funded BBC. We refer to this as Net Value Added ("**NVA**"). This also takes into account the alternative use that the funds currently committed to the licence fee would have in the Counterfactual and the associated economic activity that would be generated.

Part I contains the following sections:

- Section 4 presents the GVA analysis; and
- Section 5 discusses the Counterfactual and NVA.

Part II

In Part II we analyse the spillover impacts of the BBC. Our report focuses on those BBC spillover impacts that we can quantify; namely impacts across the indie sector, the regional economies of cluster areas, BBC training, the opening up of new digital markets and additional value created for others across a range of activities.

Part II contains the following sections:

- Section 6 discusses our analysis of the impact of the BBC on the indie sector;

- Section 7 sets out the analysis of the impact of regional clusters on the sector's value added;
- Section 8 presents our analysis of the impact of BBC training;
- Section 9 sets out the estimated spillover impact from the BBC opening new digital markets; and
- Section 10 describes other spillover impacts of the BBC relating to creating value for others.

2 The scope of the BBC's economic activities

The BBC is the oldest and largest broadcasting corporation in the world. Funded by licence fee, it creates and distributes audio, visual and online content that aims to inform, educate and entertain UK citizens and promote its public purposes as set out in its Royal Charter.

The BBC plays an important role in the UK's creative economy: stimulating and supporting other creative organisations through investment, training and vigorous competition. It is partly because of the BBC that the UK creative sector is as vibrant, internationally recognised and profitable as it is today.

Although naturally UK-centric, the BBC is also a global brand, widely regarded for the quality and integrity of its content. It monetises this reputation and brand through its commercial holdings, providing additional funds to reinvest in content.

This section briefly describes the full scope of the BBC's economic activities that are included within our analysis in order to provide a comprehensive estimate of the economic impact of the BBC

2.1 The BBC's public service activities

2.1.1 Television

The BBC was founded in 1922 and became a national broadcaster, governed by Royal Charter, in 1927. It has historically been central to the development of broadcasting both in the UK and worldwide. Initially it offered radio broadcast services, but then commenced a regular television broadcast service in 1936.

In 1967, BBC2 became the first TV channel in Europe to regularly broadcast programmes in colour. In 1974 the BBC launched Ceefax, the world's first Teletext service. More recently, it has driven the development of Freeview digital terrestrial TV and Freesat, the free to air satellite service, and is moving to introduce both free HD channels and the hybrid on-demand/broadcast service known as 'Canvas'.

Today, the BBC has nine domestic free to air television channels and contributes substantially to both S4C, the Welsh language channel and BBC Alba, the Scottish Gaelic-language channel. Through these outlets the BBC distributes content created in-house and that created by numerous non-BBC producers – in 2008, 39% of output was produced by such companies.

The nature of this content is notable because, besides core entertainment and sports programming, the BBC is a major source of culturally vital but less economically viable genres such as natural history, religious, children's and educational programming. This contribution sustains the independence and uniqueness of British culture and in part accounts for the UK having substantially less foreign-produced content than other non-US countries.

It should also be noted that much of the BBC's TV output is produced outside London. Extra-London operations, as well as regional independents, accounted for 34.9% of output in 2008.

21.2 Radio

The BBC currently operates ten national analogue and digital stations, 39 local radio stations in England and 5 radio stations serving the Nations.

The BBC's radio properties promote diversity of content beyond that provided by commercial broadcasters, who rightly focus on purely-commercial genres such as popular music – Radio 4, for example, is the largest commissioner of original radio drama in the world. Furthermore, through the Asian Network, Radio nan Gàidheal, BBC Radio Cymru and local stations, the BBC promotes social inclusiveness and cultural distinctiveness that may otherwise not be represented. In 2008, the BBC spent £202m on programming in the Nations and Regions of the UK.

In addition to the above, the BBC has promoted digital radio in the UK, enabling an ecosystem of commercial and PSB channels to address and monetise niche and national markets.

2.1.3 Online

Online, the BBC has been a leader both amongst UK businesses and international media companies. First through bbc.co.uk – online since 1997 – and latterly the iPlayer, the BBC has contributed to the scope and depth of the UK's online media estate and has helped educate people of all ages through the Internet.

BBC.co.uk is the third most visited website in the UK and amongst the top 50 in the world; over four million people are regular users of BBC services on their mobile phones and the iPlayer received over 100 million programme requests per month by the end of 2009.

In addition to branded online and linear consumption, almost ten million people also use the 'Red Button' to enhance their viewing experience and access new services. BBC podcasts are regularly featured in the top-ten most downloaded items on Apple's international iTunes service.

2.1.4 Journalism and other activities

The BBC covers local, national and international news through radio, television and online channels. It provides a counterpoint to commercial and international news services and reaches a weekly average of 34m adults through TV news, 25m on the radio and 10m online.

Additionally, BBC Journalism is the only always-on conduit for political debates in the National and Regional Houses, through BBC Parliament, a service that is culturally important but commercially non-viable in the UK.

The BBC has five full orchestras within its organisation, performing a cultural function through year-round live performances as well as the enduringly popular Proms season at the Albert Hall. Its principal orchestra, the BBC Symphony Orchestra, rated as one of the best in the UK, employs around 100 performers at any one time and forms a key part of the schedule of Radio 3 as well as the lynchpin for the Proms.

The orchestras are just part of the BBC's contribution to music in the UK. Besides being a substantial publisher of music through BBC Worldwide, it plays host to, and promotes popular events such as Radio 1's "Big Weekend" and Radio 3's regular regional concerts.

In addition to the well-known public-facing activities, the BBC is a major stakeholder in drives to Digital Switchover of both TV and radio in the UK and is likely to take on a significant role in the Government's Digital Britain initiative.

2.2 The BBC's commercial activities

As we have seen above, the BBC is a large scale producer and acquirer of content on behalf of the British public. In order to ensure that public value is best served, the BBC seeks to monetise secondary rights to its content via a series of commercial ventures. Alongside content rights monetisation, the BBC's Commercial Subsidiaries invest in original content on audio, visual and print media, provide facilities through BBC Studios and Post Production that enable the BBC and other producers to create original programmes and undertake other value-additive activities. Finally, BBC World News provides an international news service.

2.2.1 BBC Worldwide

BBC Worldwide is the largest of the Commercial Subsidiaries, with annual revenues in excess of £1bn. Operating under a charter that ensures commercial efficiency, fit with public purposes and market fairness, it monetises BBC content assets through a number of operating units.

Notable amongst these operations are Channels, which manages a global portfolio of 44 wholly-owned and JV channels, including UKTV – a UK market JV with Virgin and Home Entertainment (which contains 2Entertain - the UK's largest producer and distributor of DVDs). Other interests include Sales & Distribution (responsible for content syndication) and Magazines, which produces high-volume titles such as Radio Times and Top Gear.

2.2.2 BBC Studios & Post production

BBC Studios & Post production (BBC S&PP) is a facilities house for the production of content, incorporating studio premises and production technology, which it leases to the BBC and other producers on a short-term basis. 75% of the business's £70m annual revenue comes from the public service side of the BBC, with the remainder sourced from outside. BBC S&PP is a significant and important part of the facilities industry in the UK.

2.2.3 BBC World News

BBC World News is the BBC's international news and current affairs television channel and is a key part of the UK's international marketing. Through operations and syndicates in major international markets, BBC World News provides an international conduit for the BBC's brand values and helps promote the UK overseas, thereby accentuating the success of other BBC commercial businesses and of UK content and non-media businesses (such as tourism).

2.3 The BBC's geographic and social reach

The BBC is primarily a buyer and employer of UK skills, not just in the creative hub that exists in London, but also in the Nations and Regions of the UK, where it spent nearly £1 bn in 2008/09. The BBC is therefore an employer of significant scale in the UK and outside of London, with all the associated benefits to regional skills and education.

The BBC continues to invest substantially in access services for deaf, blind and disabled consumers of its services, through persistent commitments to sign language, speech-to-text and other functionality.

Through its compliance with its statutory obligations, the BBC provides support to UK cultural diversity through providing a broad array of regional and national content. This includes minority language content such as Gaelic, Welsh and Irish.

Alongside direct TV, radio and online content the BBC provides Welsh services through the Welsh television channel (S4C). Under a strategic partnership with S4C, the BBC provides substantial programming investment. In 2008/09 this was £23.8m. The BBC manages a direct line to S4C to feed its live and pre-recorded content to the channel. Annually, the BBC provides over 520 hours of programming free of charge to the channel. Providing this core programming support, which includes some of the most popular programming such as Pobl y Cwm and the Newyddion news service, enables S4C to invest more in independently produced, locally sourced programmes.

The BBC provides substantial Gaelic-language content through its partnership with the Gaelic Media Service (BBC Alba) and through its own Gaelic radio services and online Gaelic language presence. At least 50% of BBC Alba's content budget is spent in the independent sector. As the Ofcom Market Impact Assessment notes¹⁷, there are numerous potential dynamic benefits to the local areas where content is provided.

¹⁷ Market Impact Assessment of the BBC/Gaelic Media Service BBC Alba

3 The framework for assessing the BBC's economic impact

3.1 Introduction

This section sets out our overall approach to assessing the economic impact of the BBC. We consider two main types of economic impact: Gross Value Added (“**GVA**”) and Spillover effects. We then go on to estimate the Net Value Added (“**NVA**”) of the BBC; a measure of the incremental economic impact of the BBC relative to a Counterfactual estimate of the value added in the absence of a licence fee funded BBC.

We begin this section by explaining these measures of economic activity in general terms and then go on to describe our approach to estimating them in respect of the BBC.

3.2 Measuring economic activity

Our overall approach to assessing and quantifying the economic impact of the BBC is based on estimating GVA and Spillover effects.

Gross Value Added

GVA is an estimate of value generated for the UK economy as a result of an organisation's activity, in this case the BBC. Standard economic impact analysis distinguishes three types of GVA impact:

- the organisation's own or **direct value added**, defined as the value of its total sales or revenue less its expenditure on goods or services purchased from other organisations, roughly equivalent to its wage bill and operating surplus;
- **the indirect impact** on the GVA of firms in the supply chain, whereby these firms add value to the goods and services purchased by the organisation in question and in their further transactions with other firms in the supply chain; and
- **induced impacts** on the GVA of firms outside the sector or supply chain, as a result of the expenditure of its own employees and those in the supply chain.

Multipliers – combining GVA impacts

The combined GVA impact of the direct value added and second-round or ‘ripple’ effects through the economy can be measured by applying multipliers to expenditure. For instance, a multiplier of 1.7 would imply that £100m of activity by the organisation in question results in a total GVA impact of £170m.

The appropriate size of a multiplier applied to an organisation's GVA depends on the extent of linkages between the organisation and its supply chain. The greater the linkages between the organisation and its supply chain the larger the multiplier will be. However, though the expenditure of the organisation will re-circulate through the supply chain and other sectors of the economy, the

impact on overall GVA tapers off in each successive round as it is subject to varying forms of leakages.¹⁸

The magnitude of these effects depends crucially on the spatial unit, the nature of the supply chain under consideration and on the degree of spare capacity in the sector or wider economy. Accordingly, as we discuss further below, for the purposes of our analysis it is necessary to estimate multipliers that are as far as possible specific to the BBC.

Spillover effects

Spillover effects are by-products of an organisation's activity, experienced by other firms in the same sector or by the economy more generally. In the context of the BBC we consider spillovers relating in particular to the indie sector, the BBC's investment in regional clusters and the provision of training by the BBC.

Some spillover effects generated by an organisation over the past (such as its impact on the competitive environment of the sector) will have influenced the structure of the supply chain and therefore should be already reflected in indirect and induced value-added impacts. However, other spillover effects will not be reflected in GVA estimates and can therefore be added to those GVA estimates.

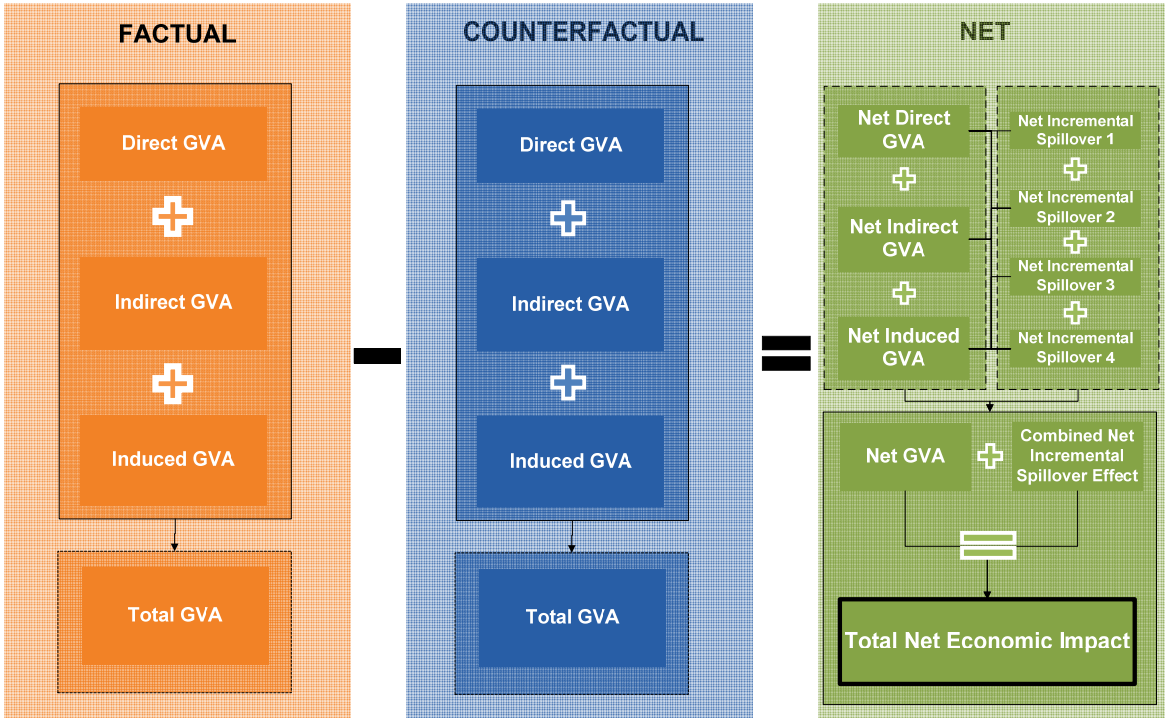
Estimating Net Value Added – using a Counterfactual

For both GVA and spillovers, the estimated 'Factual' impacts can be compared to impacts estimated in a hypothetical 'Counterfactual' scenario. The difference between the GVA and spillover impacts in the Factual and Counterfactual scenarios provides a measure of the incremental economic impact of an organisation. In our analysis of the economic impact of the BBC the use of a Counterfactual allows us to take into account the likelihood that in the absence of a licence fee funded BBC, there would be an alternatively funded Public Service Broadcaster.

Figure 1 below illustrates these concepts.

¹⁸ This may be through the employees of the organisation and in the supply chain spending some of their income on imports such as foreign goods or on overseas holidays. Similarly, firms in the supply chain may import some proportion of their inputs (where imports could be from outside the local area or region, as well as from overseas) which will diminish the subsequent knock-on effects for the economy.

Figure 1: Overview of approach to estimating economic impact



Source: Deloitte Analysis

4 Part I: The BBC's Gross Value Added

4.1 Summary

BBC total operating expenditure for 2008/09 was £4,088m (excluding BBC/JV re-charges); this includes £3,398m spent by the BBC Public Service Broadcasting Group in 2008/09. This expenditure was incurred in paying wages to employees, taxes, as well as expenditure with the supply chain across content (in-house, indie and acquisitions), distribution, infrastructure and overheads.

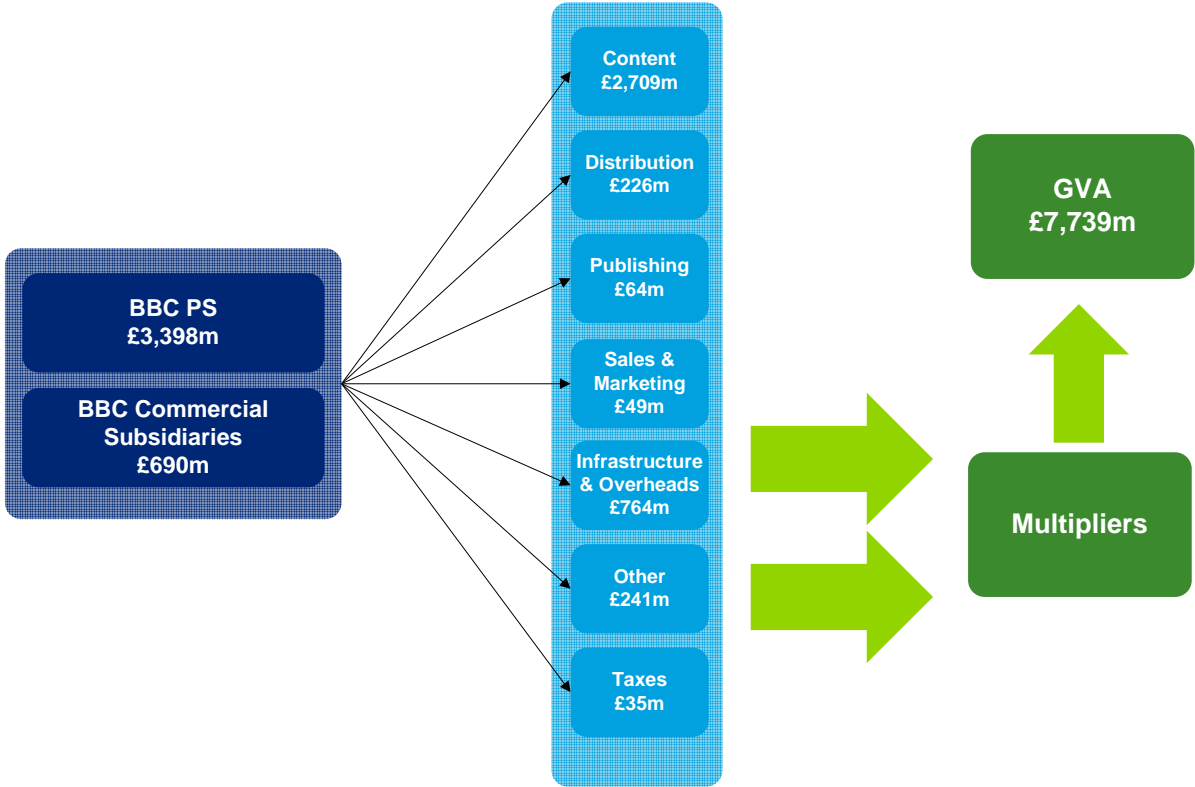
The Commercial Subsidiaries BBC Worldwide, Studios & Post-production, BBC World News and JVs - UKTV and 2entertain - spent an additional £690m on employee wages and the external supply chain (excluding BBC/JV internal re-charges and non-UK expenditure). This included expenditure with the supply chain on content, distribution, publishing and sales and marketing.

We have estimated that the Public Service and Commercial subsidiaries generated a GVA of £7,258m. If the JVs (UKTV and 2entertain) are included then the total Gross Value Add is £7,739m.

4.2 Our approach

The BBC's earnings stem primarily from the licence fee, income from sales by the Public Service, and commercial revenues generated by the Commercial Subsidiaries. These earnings are used to: remunerate BBC employees; pay for the provision of goods and services from the other players in the supply chain and beyond; and, contribute to government finances (through the payment of taxes). Other industry participants in the BBC's supply chain in turn will use money from the BBC to pay taxes and wages to purchase goods and services from the wider supply chain. The following figure provides a simplified representation of the BBC's supply chain.

Figure 2: BBC's GVA Flow



Source: Deloitte

In calculating the economic impact of the BBC we first focus on the BBC's direct value added which comprises:

- Wages and employee benefits; and
- Taxes (including taxes paid by and on behalf of employees).

We then assess the indirect and induced value added that the BBC generates through the payments that the BBC makes to third parties and in particular in relation to:

- Programming– both in terms of originated content (in-house or indie) and acquisitions;
- Distribution – including platform services, transmission and multiplexing services, playout and uplinking services;
- Publishing – relating to spend on print and digital publishing across magazines, books and CDs/audiobooks; and
- Sales and Marketing – including Commercial Subsidiaries' expenditure related to advertising and the sales and marketing of BBC content;

- Infrastructure and Overheads – relating to payments to suppliers of different support services such as finance, market and research, HR services, etc

We have measured the impact of the BBC on the UK economy. Value added that is created outside the UK is excluded from our estimates.

We have estimated the GVA of the BBC by applying estimated multipliers to the main categories of 2008/09 expenditure. These multipliers – known as Type II multipliers – result in estimates of combined direct, indirect and induced effects.¹⁹ Where possible separate multipliers have been estimated to allow for the effects of different types of activity, such as TV and Radio, and different types of expenditure, such as content and infrastructure. For each type of activity and expenditure we estimate a UK-wide multiplier (at both a national and regional level).

We have three main sources of multiplier estimates which we use to calculate our suite of UK multipliers:

- a study of the economic impact of UK screen industries by Cambridge Econometrics (“CE”, 2005) which uses a fully specified regional input-output model²⁰ to estimate a consistent set of UK Type II multipliers for activity by TV companies;
- ONS Type I UK-level multipliers, estimated separately for 123 sectors/product groups in the economy using detailed input-output data; and
- Scottish Government Type II Scotland multipliers for the same 123 sectors/product groups

4.2.1 TV Multipliers

The CE TV sector multiplier of 2.0 is applied to BBC TV content and distribution expenditure. Adapted ONS multipliers²¹ are applied to TV-related infrastructure, overhead and other expenditure.²² The overall TV multiplier is then an average of these component multipliers, weighted by the shares of the different types of expenditure. This is consistent with our approach to calculating multipliers for other types of BBC activity, as described below.

For the impact of TV spend in and on particular regions, we adopt the CE regional TV multipliers for content and distribution spend and for other categories of spend we use adapted ONS multipliers weighted on the basis of the average of the UK to regional differentials of the four CE multipliers covering Film, TV, Video and Advertising.

¹⁹ Type I multipliers exclude induced impacts.

²⁰ Supplementing ONS input-output data with additional data on the detailed trade patterns of the screen sector

²¹ We take the UK-wide Type I multiplier and update to a UK-wide Type II equivalent, using the ratio of the Scottish Type I and II multipliers for the equivalent sector/product group

²² The detailed construction of multipliers for infrastructure, overhead and other expenditure is provided in Appendix A.

4.2.2 Radio Multipliers

For the UK-level multiplier for radio expenditure, we use a weighted average of a number of multipliers. We combine the multipliers by using weights related to shares of expenditure in total BBC radio expenditure.

- For content expenditure, we use the CE TV multiplier, adjusted downwards to reflect the smaller range of inputs which have to be sourced from outside the BBC in the case of radio content compared to TV.²³
- For distribution expenditure, we use an adjusted ONS multiplier for the “transmitter” sector
- For infrastructure, overhead and other expenditure we use adjusted ONS multipliers for corresponding sectors²⁴

In estimating regional multipliers for radio content, distribution and other categories of spend, we apply adjusted CE regional multipliers for TV expenditure.

4.2.3 Online Multipliers

We follow a similar approach as for radio multipliers, except that for content expenditure, we use an adjusted ONS multiplier for the “computing services” sector and for distribution expenditure, we use an adjusted ONS multiplier for the “telecommunications” sector.

UK multipliers at the Regional level

UK GVA multipliers capture the amount of GVA that results from a specified increase in final demand in a particular industry. These UK GVA multipliers, which are specific to each region reflect the impact of spend in the particular region on the UK as a whole.

BBC Public Service multipliers

Table 3 below summarises the multipliers used to estimate UK GVA for various categories of BBC Public Service Expenditure.

²³ More specifically, we adjust the TV multiplier down by the ratio 1.5/1.7. These are the “reference” or regional multipliers for industries with “average” and “strong” regional supply linkages respectively, as provided in the English Partnerships Additionality Guide. This follows Treasury Green Book supplementary guidance for assessing spatial interventions.

²⁴ See Appendix A for details on adjustments

Table 3: Summary of multipliers for public service BBC

REGIONS	TV	Radio	Online	Infrastructure	Overheads
Scotland	2.1	1.9	2.0	2.1	1.8
Northern Ireland	2.2	1.9	1.8	1.9	1.6
Wales	1.8	1.6	2.0	2.1	1.8
North East	1.8	1.6	1.8	1.9	1.7
North West	2.0	1.8	1.7	1.8	1.6
Yorks & Humber	2.4	2.1	1.8	1.9	1.6
West Midlands	2.0	1.8	1.6	1.7	1.5
East Midlands	2.1	1.9	1.6	1.6	1.4
South West	2.2	1.9	2.1	2.2	1.9
East of England	2.3	2.0	2.1	2.2	1.9
London	1.9	1.7	1.8	1.9	1.7
South East	2.0	1.8	2.0	2.1	1.8
Unallocated	2.0	1.8	1.8	2.0	1.7
UK	2.0	1.8	1.8	2.0	1.7

Source: Office of National Statistics (ONS), Cambridge Econometrics, Scottish Government Statistical Service, Deloitte Analysis

Commercial Subsidiaries multipliers

For BBC Worldwide expenditure, we use the relevant UK multipliers described above. In addition, we calculate three other multipliers as follows.

- For digital publishing, we use a composite of an adjusted ONS multiplier for the print and publishing sector, and a (Type II) CE multiplier for the computing services industry;²⁵
- For print and publishing, we use an adjusted ONS multiplier for the print and publishing sector.
- For sales and marketing, we use a (Type II) CE multiplier for the advertising services industry.²⁶

Table 4 below shows the UK multipliers for these three types of expenditure.

²⁵ A value of 2.2 is provided in Cambridge Econometrics (2005)

²⁶ A value of 2.0 is provided in Cambridge Econometrics (2005)

Table 4: Digital, publishing and sales & marketing multipliers

REGIONS		Digital Publishing	Print Publishing	Sales & Marketing
Nations	Scotland	2.0	2.2	2.2
	Northern Ireland	1.8	2.0	2.0
	Wales	2.0	2.2	2.1
English Regions	North East	1.8	2.0	1.9
	North West	1.7	1.9	1.8
	Yorks & Humber	1.8	2.0	1.7
	West Midlands	1.6	1.8	1.5
	East Midlands	1.6	1.7	1.4
	South West	2.1	2.2	2.2
	East of England	2.1	2.2	2.3
	London	1.8	2.0	2.1
	South East	2.0	2.2	2.5
	Unallocated	1.9	2.0	2.0
Implied UK	UK	1.9	2.0	2.0

Source: Office of National Statistics (ONS), Cambridge Econometrics, Scottish Government Statistical Service, Deloitte Analysis

Table 5 shows the type of multiplier used for the expenditure of each of the BBC Worldwide Divisions.

Table 5: Multipliers for BBC Worldwide Expenditure

Division	Multiplier		Source/method
	Value	Type	
Global Ad Sales	2.0	Advertising	Cambridge Econometrics
Channels	2.0	TV	Cambridge Econometrics
Sales and Distribution	2.0	Advertising	Cambridge Econometrics
Content and Production	2.0	TV	Cambridge Econometrics
Magazines	2.0	Print Publishing	ONS with type II weighting
Children	2.0	Advertising	Cambridge Econometrics
Home Entertainment	1.9	Digital Publishing	ONS with type II weighting
Digital Media	1.8	Online	Composite
Global Brands	2.0	Advertising	Cambridge Econometrics
Lonely Planet	2.0	Print Publishing	ONS with type II weighting
Corp and RegServ	1.7	Overheads	Composite
UKTV	2.0	TV	Cambridge Econometrics
2 Entertain	1.9	Digital Publishing	ONS with type II weighting

Source: Cambridge Econometrics, ONS, Deloitte analysis

Finally, for BBC World News and BBC S&PP expenditure we use the CE TV multipliers (UK and Regional).

Our assessment

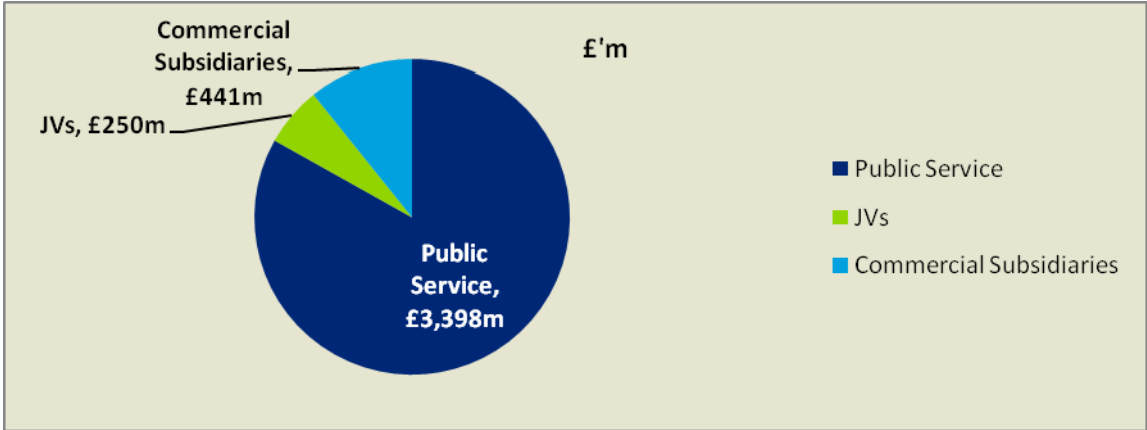
The BBC’s total direct and supply-chain spend and GVA

The BBC’s total direct and supply-chain spend

BBC total operating expenditure for 2008/09 was £4,088m (excluding BBC/JV re-charges, inclusive of tax), of which the BBC UK Public Service Broadcasting Group²⁷ accounted for £3,398m. This compares with ITV’s reported expenditure for 2008 of £1.8bn.²⁸ This substantial difference in scale of expenditure compared with ITV, as well as other broadcasters, emphasizes the importance of BBC’s spending power in the creative industries.

Figure 3 sets out the expenditure for the BBC Public Service, Commercial Subsidiaries and JVs (UKTV and 2entertain).

Figure 3: BBC expenditure (2008/09)



Source: BBC annual accounts 2008/09, Deloitte analysis

Note: Commercial Subsidiaries and JVs expenditure excludes intra-BBC Group recharges

The BBC employed an average of 22,874²⁹ employees for the year 2009.

This is a small decrease of 1% compared to the 23,101 average employees in the previous year. In comparison, ITV employed an average of 5,597 employees in 2008³⁰.

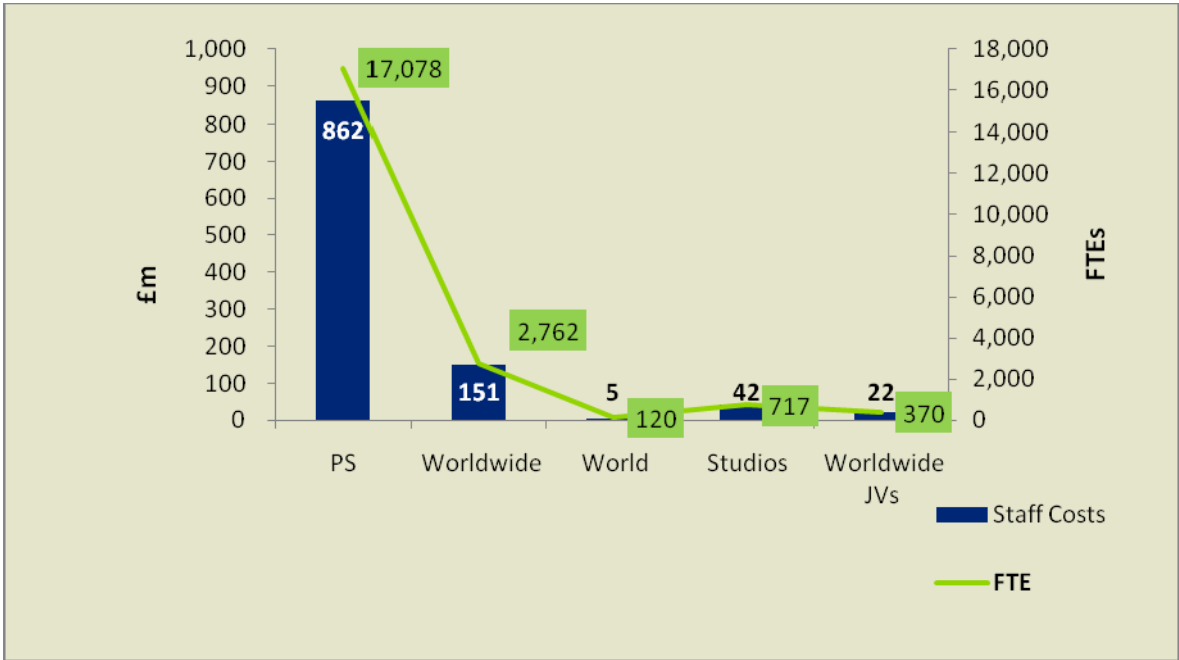
²⁷ As per the BBC Annual Accounts, BBC UK Public Service Broadcasting Group includes UK public services and digital switchover spend (hereafter 'BBC Public Service').

²⁸ Amounts quoted are operating costs before amortisation and impairment of intangible assets and exceptional items. ITV 2008 annual accounts, viewed on 3rd November 2009, <http://www.itvplc.com/investors/reports/?year=2009>

²⁹ This employee figure includes BBC World Service and BBC Monitoring

³⁰ Hemscott research

Figure 4: BBC breakdown of staff costs and FTEs (2008/09)



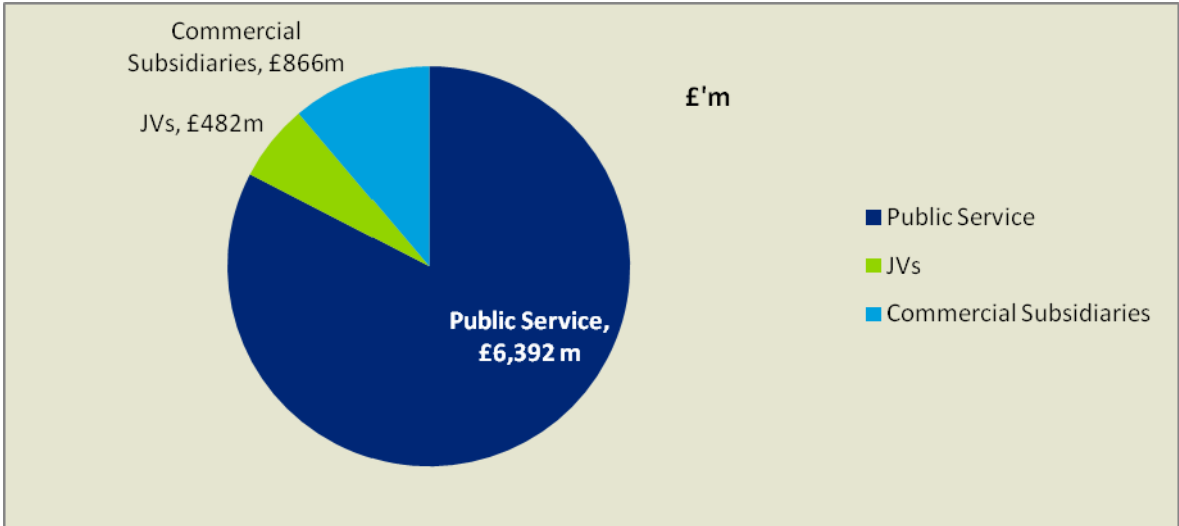
Source: BBC, Deloitte analysis

Note: BBC Worldwide JVs include UKTV and 2entertain

BBC Public Service and Commercial subsidiaries GVA

Figure 5 below shows the GVA of each part of the BBC. The Public Service, Commercial Subsidiaries and JVs generated a GVA of £6,392m, £866m and £482m respectively. In total, the aggregated GVA is £7,739m. Excluding the JVs, the BBC's GVA is £7,258m.

Figure 5: GVA breakdown of the BBC (2008/09)



Source: Deloitte analysis

BBC GVA – Nations and Regions

Table 6 below shows a regional breakdown of BBC expenditure and the associated UK GVA. We have been provided with data identifying how budgets are allocated across regions. We assume that expenditure by region is closely correlated with this budget allocation but recognise that this may not always be the case.

London accounts for the largest share of BBC GVA with 74%.

Table 6: BBC expenditure and UK GVA generated in the various Nations and Regions (2008/09)

Regions	Expenditure - £m	GVA - £m
Scotland	161	330
Northern Ireland	62	131
Wales	138	248
England	3,523	6,612
North East	18	31
North West	100	195
Yorkshire & Humber	35	80
West Midlands	78	147
East Midlands	17	32
South West	294	614
East of England	28	60
London	2,888	5,323
South East	66	129
Unallocated	203	418
Total	4,088	7,739

Source: BBC, Deloitte analysis

The UK GVA estimates above result from applying UK-level multipliers to BBC budget allocations across regions. UK multipliers represent the degree of economic stimulus that occurs due to an increase in final demand for a good or service. They consider the effect on the UK economy of an increase in demand for a good or service and capture UK GVA resulting from spend in a given location. £1m spent in Wales or £1m spent in the North West of England will be dispersed to businesses and individuals throughout the UK. The particular businesses and individuals that are impacted will vary by the location of spend and it is this variation that requires multipliers for each region. When intermediate goods and service are purchased from overseas in order to support UK output, this reduces the size of the multiplier as it provides stimulus to areas outside the UK. These benefits are not included in UK-level analysis and are deemed to be leakages from the system.

BBC Public Service Television expenditure and GVA

BBC Television expenditure and GVA

BBC expenditure on television for 2008/09 was £2,334m, accounting for 69% of BBC's UK Public Service expenditure.

Content and programming costs in 2009 for television services amounts to £1,854m – which is approximately four fifths of UK Public Services television spend. Distribution expense and infrastructure support costs/overheads make up the rest comprising £124m and £356m respectively.

The BBC's expenditure on content and programming includes expenditure on commissioning content from production companies outside the BBC. This has grown and in 2008, the BBC commissioned 39% of qualifying television content³¹ from external production companies. This underscores how critical the BBC is to overall investment in the creative industries and the independent production sector.

Nations and Regions

The BBC aims to increase the amount of network television made outside London by 2016³². Pivotal to achieving that objective is the move to Salford. Currently, in terms of expenditure on television, the BBC is still concentrated in London. London spend for Television is £1,571m, 67% of the total.

Table 7 TV expenditure by nations/regions (£m) (2008/09)

Nation/Region	Expenditure £'m
Scotland	117
Northern Ireland	42
Wales	68
North East	10
North West	82
Yorkshire & Humber	21
West Midlands	42
East Midlands	8
South West	132
East of England	12
London	1,571
South East	50
Unallocated	179
Total	2,334

Source: BBC

BBC Television GVA

The GVA of BBC Public Service Television activity for 2008/2009 was £4,497m. This is estimated by applying the TV multiplier³³ to content and distribution expenditure while the other categories of spend have different multipliers applied. This is shown in Table 8 below.

³¹ BBC full financial and governance statements 2008/09

³² BBC full financial and governance statements 2008/09

³³ The TV multiplier used is the multiplier estimated by Cambridge Econometrics for the Screen industries paper

Table 8: GVA of BBC Television (2008/09)

	Content & Distribution	Infrastructure/Support	Overheads	Total
Expenditure (£m)	1,978	76	280	2,334
Multipliers	2.0	2.0	1.7	
GVA (£m)	3,878	149	469	4,497

Source: Deloitte analysis

Content and distribution expenditure accounts for £3,878m of the total GVA of television. Of this total, content and programming expenditure by itself represents 85% and comprises expenditure on independent producers, in-house spend, acquisitions and 'Other'.

BBC Public Service Radio expenditure and GVA

BBC Radio expenditure

In 2008/09, BBC expenditure on Radio was £589m, accounting for 17% of the BBC's Public Service expenditure.

Nations and Regions

The table below shows the breakdown of Radio expenditure for the various regions for 2008/09. Network radio stations make up ten of the 54 BBC radio stations and account for a significant proportion of BBC radio expenditure. In addition there are 39 local radio stations in the English regions and 5 stations serving the Nations.

Table 9: Radio expenditure in 2008/09

Nation/Region	Expenditure £'m
Scotland	33
Northern Ireland	16
Wales	29
North East	7
North West	17
Yorkshire & Humber	13
West Midlands	25
East Midlands	7
South West	19
East of England	14
London	379
South East	14
Unallocated	15
Total	589

Source: BBC annual accounts 2008/09, Deloitte analysis

BBC Radio GVA

The GVA of Radio is £1,040m. It is based on not just lower absolute level of expenditure relative to BBC Television but also the application of a lower multiplier to content and distribution expenditure categories. Content and distribution comprises some 86% of total Radio GVA.

Table 10 below provides a breakdown of the GVA of Radio expenditure.

Table 10: GVA of Radio (2008/09)

	Content & Distribution	Infrastructure/Support	Overheads	Total
Expenditure (£m)	505	14	70	589
Multipliers	1.8	2.0	1.7	
GVA (£m)	894	27	118	1,040

Source: Deloitte analysis

BBC Public Service Online expenditure and GVA

BBC Online expenditure

Online spend for 2008/09 was £177m, accounting for 5% of BBC's UK Public Service expenditure. Of this total, content and programming expenditure was £112m and distribution costing £19m.

BBC Online GVA

The total GVA estimated for online activities is £321m. Table 11 shows the expenditure disaggregated into different categories, their relevant multipliers and the GVA.

Table 11: GVA of Online activities (2008/09)

	Content & Distribution	Infrastructure/Support	Overheads	Total
Expenditure (£m)	131	9	37	177
Multipliers	1.8	2.0	1.7	
GVA (£m)	241	18	62	321

Source: Deloitte analysis

Other Public Service expenditure and GVA

Other expenditure

BBC expenditure outside the service licences of TV, Radio and Online include such activities as:

- Licence fee collection costs
- Orchestras and performing groups
- S4C
- Digital Switchover expenditure
- Development spend

Other costs total £291m in 2008/09 with about £123m spent on licence fee collection and £80m on content. £50m was expended on leading digital switchover.

Other GVA

The BBCs 'Other' expenditure has a GVA of £523m, with content and distribution accounting for £177m of the total.

Table 12: GVA of Other (2008/09)

	Content & Distribution	Infrastructure /Support	Overheads	Other	Total
Expenditure (£m)	97	12	63	119	291
Multipliers	1.9	2.0	1.7	1.9	
GVA (£m)	177	25	105	216	523

Source: Deloitte analysis

BBC Worldwide expenditure and GVA

BBC Worldwide expenditure

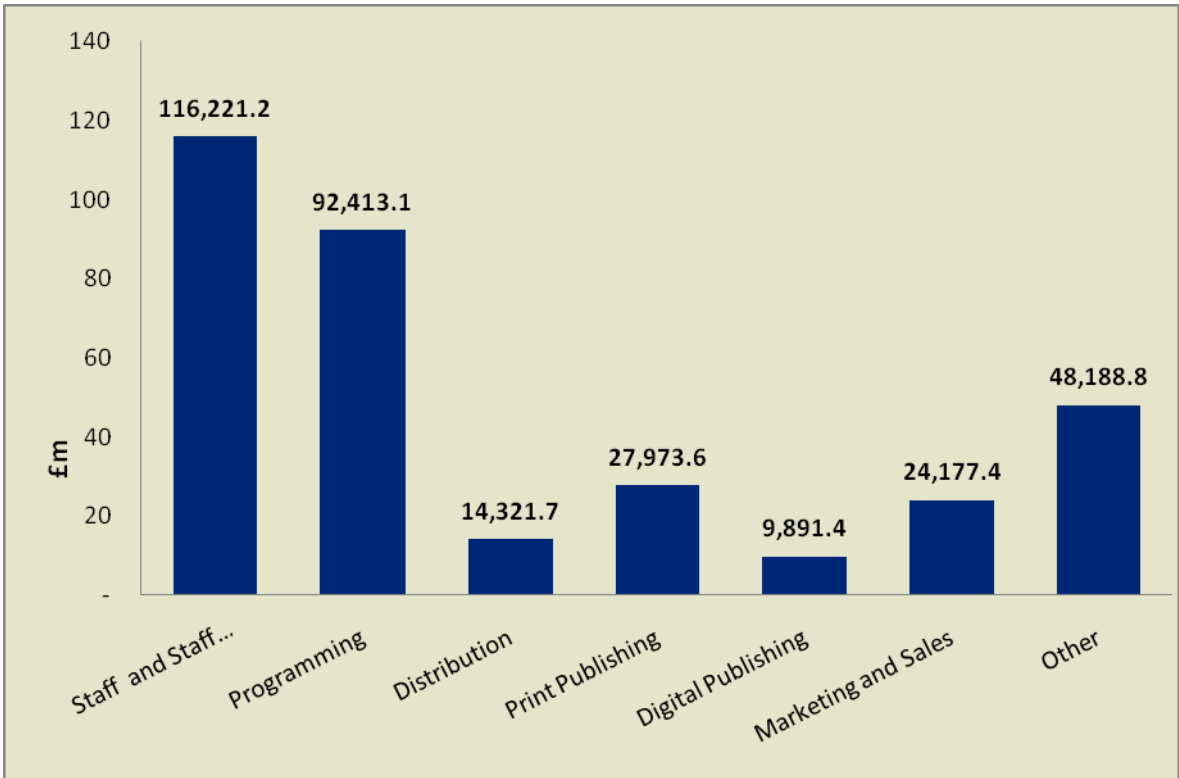
BBC Worldwide expenditure excluding non UK, JVs and recharges from other BBC entities was £333m in 2008/09, split across a number of different divisions. BBC UK expenditure for all divisions including the UK expenditure of its JVs (UKTV and 2 Entertain) amounts to £583m. As a consequence of its global nature and its objective of *“taking the best of British creativity to the world”*, 41%³⁴ of BBC Worldwide expenditure is spent outside the UK and so contributes only indirectly to UK economic activity.

³⁴ This analysis excludes BBG Group and JV recharges and expenditure on the BBC Worldwide JVs

Content and programming costs excluding recharges account for over a quarter of BBC Worldwide's UK expenditure. The majority of BBC Worldwide's UK expenditure, 35%, is staff and staff related costs.

BBC Worldwide employed an average of 2,762 employees in 2008/09, 1,872 of which were employed in the UK.

Figure 6: 2008/09 BBC Worldwide UK expenditure breakdown excluding BBC Group and JVs by type of spend (2008/09)



Source: BBC Worldwide, Deloitte analysis

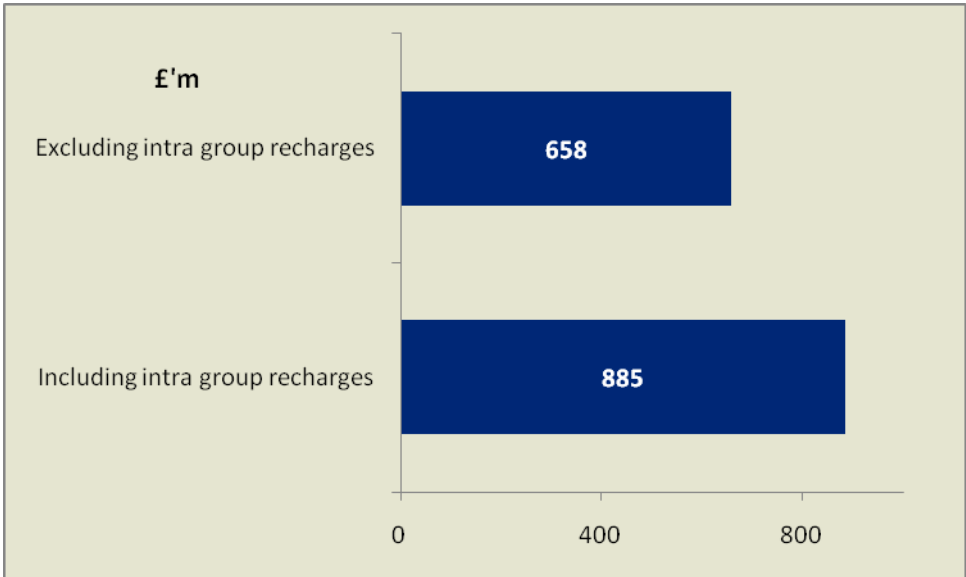
BBC Worldwide's UK activities are mainly carried out in London, although it spends some £135m in the South West at its Audio books business (in Bath) and its Magazines division (in Bristol).

BBC Worldwide GVA

BBC Worldwide's economic impact on the UK is in the first instance limited to the proportion of their expenditure which is incurred locally within the UK. As shown in Figure 7, in 2008/09, the GVA of this expenditure is £658m. This increases to £885m if purchases from other BBC entities and JV partners are included³⁵.

³⁵ This additional GVA amount has been reported in the GVA figures of the BBC Public Service and so is shown separately here.

Figure 7: BBC Worldwide UK GVA comparison including and excluding intra-Group purchases (2008/09)



Source: Deloitte analysis

BBC World News and BBC Studios and Post-production expenditure and GVA

BBC World News and BBC Studios and Post-production expenditure

The combined expenditure of the BBC on World News and BBC S&PP in the UK in 2008/09 (excluding intra-Group recharges) was £108m. 86% of BBC S&PP expenditure was spent in London.

BBC World News and BBC Studios and Post-production GVA

BBC World News and BBC S&PP GVA is estimated at a combined £208m.

BBC World News and BBC S&PP carry out their activities in four regions within the UK, hence GVA reported are aggregated across those regions.

This additional GVA amount has been reported in the GVA figures of the BBC Public Service and so is shown separately here.

Table 13: BBC World News and BBC S&PP regional GVA breakdown (2008/09)

Nations and Regions	World - £m	Studios - £m
West Midlands		10
South West		12
London	58	123
South East	0.2	
Unallocated	6	
Total	64	145

Source: Deloitte analysis

5 Part I: The BBC's Net Value Added

5.1 Summary

The Gross Value Added estimates need to be compared against a hypothetical 'Counterfactual' scenario as some of the Factual Value Added may be generated elsewhere in the absence of the BBC licence-fee funded BBC.

The estimated 'Factual' GVA impact is therefore compared to a 'Counterfactual' scenario in order to estimate the incremental GVA attributable to the BBC's activities.

We assume in the Counterfactual that the licence fee funded BBC is replaced by a generic commercial PSB which uses the same spectrum as the current BBC for similar purposes (for radio, terrestrial and digital broadcasting rather than say mobile telephony and wireless). This Counterfactual PSB BBC is commercially funded through advertising revenues rather than by subscription. Total revenues of the Counterfactual PSB BBC amount to £1,648m. The Counterfactual PSB BBC also has an impact on the activities of the BBC's Commercial Subsidiaries, which are overall of a smaller scale than in the Factual case.

The Counterfactual PSB BBC has a negative impact on the potential revenues available to the BBC's competitors. As a result, the viability of some commercial PSB broadcasters is threatened. For example, we have estimated that under some scenarios none of the PSB channels are able to meet the costs of fulfilling the original productions quota in the Counterfactual.

As the licence fee is no longer used to fund the BBC in the Counterfactual, we assume that it is retained by households to be saved or spent on different consumer goods and services in line with typical household spending patterns.

We have estimated that if the BBC was a commercially funded PSB, £4,356m of the BBC's contribution to the UK economy would be lost. The economy overall would lose value added of over £2,551m. The latter includes the reduction in other commercial broadcasters' value added as a result of the activities of a commercially funded BBC Counterfactual as well as the impact of the alternative use of the licence fee. The alternative use of the licence fee by households does not fully compensate for the decline in the BBC GVA because on average, household expenditure is characterised by lower multipliers than are relevant to the creative sector.

5.2 The Counterfactual Gross Value Added

The estimated 'Factual' GVA impact can be compared to a hypothetical 'Counterfactual' scenario in order to estimate the incremental GVA attributable to the BBC's activities. This section sets out how we have defined the Counterfactual BBC Public Service and Commercial Subsidiaries.

5.2.1 The BBC's Public Service Counterfactual – an advertising funded BBC

We assume in the Counterfactual a generic commercial broadcaster which uses the same spectrum as the current BBC for similar purposes (for radio, terrestrial and digital broadcasting rather than say mobile telephony and wireless)³⁶. This Counterfactual BBC is commercially funded through advertising revenues rather than by subscription. However, while we assume an increase in overall TV Net Advertising Revenue (“**NAR**”), this is not sufficient to replace the existing licence fee revenues. Consequently the Counterfactual BBC is smaller than the licence fee funded BBC and its public service obligations are reduced.

Public Service obligations of the Counterfactual BBC

We assume that the Counterfactual BBC is subject to the minimum obligations of analogue terrestrial broadcasters; in terms of TV this is equivalent to the obligations of Channel 3 regional licences or the Channel 5 licence. Radio obligations are limited to relevant service-type obligations (such as popular and classical music). The broadcaster is subject to the same advertising rules for digital-only channels as apply to current digital broadcasters.

We assume that no additional public service requirements are placed on other broadcasters in the absence of the licence fee funded BBC.

Independent production and production outside the M25

We assume that TV production from outside the M25 is set at the minimum required by the Channel 5 licence, at 10% of value and time.

The tables below summarise the key characteristics of the Counterfactual BBC in TV, Radio and Online.

³⁶ This approach is consistent with that adopted by PWC in The economic impact of the BBC on the UK creative and broadcasting sector, July 2008 (at http://www.bbc.co.uk/bbctrust/assets/files/pdf/review_report_research/economic_impact.pdf). We were asked to adopt this approach in order to remain consistent with PwC's counterfactual.

Table 14: TV Counterfactual Characteristics

	Factual BBC	Counterfactual BBC
PSB Obligations	Public Purposes as defined in the BBC Charter	Minimal PSB requirements commensurate with ITV or FIVE
Funding Method	Licence fee	Advertising, subject to restrictions imposed on ITV and FIVE in reality
Size	TV expenditure of £2,334m	TV revenues of £1,368m
PSB Policy for Other Broadcasters	Channel 4, ITV and FIVE subject to PSB requirements	As in Factual, although we note that UK originations and indie quotas may not be binding
Legal and Regulatory Restrictions	As define in Communications Act, BBC Charter, etc	Subject to same legal and regulatory restrictions as commercial broadcasters
Location in the Nations and Regions	At least 30% of qualifying programme spend and at least 25% of qualifying programme hours	Minimum presence outside London, as per restrictions of the Channel 5 licence

Source: PwC, Deloitte Analysis

Table 15: Radio Counterfactual Characteristics

	Factual BBC	Counterfactual BBC
PSB Obligations	Public Purposes as defined in the BBC Charter	Minimal PSB requirements as apply to commercial radio
Funding Method	Licence fee	Advertising
Size	Radio expenditure of £589m	Radio revenues of £210m
PSB Policy for Other Broadcasters	Relatively few requirements applied to commercial radio	As in Factual
Legal and Regulatory Restrictions	As define in Communications Act, BBC Charter, etc	Subject to same legal and regulatory restrictions as commercial broadcasters
Location in the Nations and Regions	Local radio stations present across UK	Local radio stations present across UK

Source: PwC, Deloitte Analysis

Table 16: Online Counterfactual Characteristics

	Factual BBC	Counterfactual BBC
PSB Obligations	Public Purposes as defined in the BBC Charter	None
Funding Method	Licence fee	Advertising (and cross-subsidisation from primary broadcasting activity)
Size	Online expenditure of £177m	Online revenues of £69m
Legal and Regulatory Restrictions	As define in Communications Act, BBC Charter, etc	Subject to same legal and regulatory restrictions as commercial broadcasters
Location in the Nations and Regions	No requirements	No requirements

Source: PwC, Deloitte Analysis

5.2.2 Wider Counterfactual considerations

The elimination of the licence fee and its substitution with advertising revenues has wider implications in the Counterfactual than just for the scale of the BBC and its commercial subsidiaries.

Licence fee revenues

As the licence fee is no longer used to fund the BBC in the Counterfactual, we assume that an equivalent amount is retained by households to be saved or spent on different consumer goods and services in line with typical household spending patterns. This spending serves to promote economic activity that needs to be taken into account in considering the overall different levels of economic activity in the Factual and Counterfactual scenarios.

Print and other advertising media

We assume in the Counterfactual that the increase in TV impacts while driving an increase in TV NARs does not drive an overall increase in expenditure on advertising in the UK economy. Accordingly we assume that while TV broadcasting benefits from an increase in NARs, this is at the expense of print and other advertising media which needs to be taken into account in our assessment of the overall level of economic activity in the Counterfactual.

Impact on non BBC TV broadcasters, Indies and Others

While we assume that there is an increase in TV NAR in the Counterfactual, it is not sufficient to replace the full £3,494m 2008/09 licence fee. In consequence, we assume that the allocation of TV NARs across the Counterfactual BBC and its rival commercial broadcasters results in reduced revenues for all relative to the Factual scenario. As a result, there is also less expenditure in the Counterfactual on commissioning from independent production companies.

We note that in the Counterfactual some assets or opportunities (such as magazines, books or learning) may have been developed by third parties, instead of being developed through the commercial subsidiaries.

5.2.3 Revenues of the Counterfactual public service BBC and its competitors

Table 17 shows the change in total revenues that have been hypothesised in comparing the Factual with the Counterfactual. In order to calculate the size of the Counterfactual public service BBC we have broadly followed the approach adopted by PwC. This is explained further below.

Table 17: Total size of Counterfactual Broadcaster and competitors (2008/09)

	Factual BBC NAR (£m)	Counterfactual BBC NAR (£m)	Factual NAR of other commercial broadcasters (£m)	Counterfactual NAR of other commercial broadcasters (£m)
TV revenue	-	1,368	3,470	2,449
Radio revenue	-	210	529	425
Online Revenue	-	69	3,660	3,496
Total	-	1,648	7,659	6,371

Source: Deloitte analysis

In addition to advertising revenues, the Counterfactual BBC would enjoy the profit returned by the commercial subsidiaries. The profit returned has been estimated at £42m.

Television

We have estimated the size of the BBC and other commercial broadcasters TV activities in the Counterfactual as follows.

- In line with PwC, we have assumed that TV NAR in the Counterfactual increases by 10% as a result of the increase in the volume of commercial impacts. TV NAR would increase from £3,470m to £3,817m;
- We have calculated the viewing shares of the Counterfactual BBC and other commercial broadcasters by assigning each BBC channel an equivalent commercial channel. We proxy the viewing share of each BBC channel by the viewing share of its commercial equivalent;
- We have adjusted the viewing shares of each broadcaster in order to reflect advertising premiums, and assigned the BBC a similar premium to ITV; and

- TV NAR is allocated to the BBC and other broadcasters in proportion to their viewing share, adjusted to reflect premia and the mix of funding of some broadcasters (combining advertising and subscription). The BBC is estimated to earn TV NAR of £1,368m and therefore other broadcasters' TV NAR decreases in relation to the factual 2008/09 situation. The total crowding-out of other commercial broadcasters TV revenues is estimated to be £1,021m.

The resulting Counterfactual BBC and other broadcasters' TV NAR in the Counterfactual is set out in Table 18 below.

Table 18: BBC / other commercial broadcasters TV NAR (2008/09)

Broadcaster	Factual NAR - £m	Counterfactual NAR - £m	Crowding out - £m
Counterfactual Broadcaster	-	1,368	
ITV	1,550	1,066	-485
Channel 4	793	545	-248
FIVE	317	236	-81
Other	810	603	-207
Total Non-BBC	3,470	2,449	-1,021
Total	3,470	3,818	

Source: Deloitte analysis

Radio

We have estimated the size of the BBC and other commercial broadcasters radio activities in the Counterfactual as follows;

- In line with PwC, we have assumed that radio NAR in the Counterfactual increases by 20% as a result of the increase in the volume of commercial impacts. Radio NAR would increase from £529m to £635m in the Counterfactual;
- We have assumed the split of listening between BBC and other radio broadcasters in the Counterfactual to be 33:67³⁷; and
- Radio NAR is allocated to the BBC and other broadcasters in proportion to their listening share. The BBC would earn radio NAR of £210m and therefore other broadcasters' radio NAR decreases in relation to the factual 2008/09 situation. The total crowding-out of other commercial broadcasters' radio revenues is £104m.

The Counterfactual BBC and other broadcasters' radio NAR in the Counterfactual is set out below.

³⁷ In line with PwC's 'Central Scenario'

Table 19: Radio revenue of Counterfactual broadcasters and other radio broadcasters (2008/09)

Broadcaster	Factual Radio NAR (£m)	Counterfactual Radio NAR (£m)	Crowding out (£m)
Counterfactual BBC		210	
Others	529	425	-104
Total	529	635	

Source: Deloitte analysis

Online

Following PwC we assume that the online revenue of the Counterfactual Broadcaster is equal to joint online income of ITV and Channel 4, at £69m.

Table 20: Factual and Counterfactual online NAR for BBC and other broadcasters (2008/09)

Broadcaster	Factual Online NAR (£m)	Counterfactual Online NAR (£m)	Crowding out
Counterfactual BBC		69	-
Others	3,660	3,496	164

Source: Deloitte analysis

5.2.4 Impact on commercial PSB broadcasters viability as PSBs

We have assessed the impact of the Counterfactual on PSB broadcasters' viability as PSBs. The Counterfactual may also impact on some commercial PSB broadcasters' overall commercial viability.

Commercial Viability

We have sought to understand the impact on commercial viability of the Counterfactual by considering whether broadcasters are able to maintain profit margins consistent with investors' expectations. We look at historic profit margins and on the basis of these make conservative assumptions about the minimum margin required to remain viable. We then look at how Factual profit margins change in the Counterfactual, before considering the extent to which broadcasters might be able to cut costs while maintaining current programming in order to recover lost margins. Finally, we consider the possibility that broadcasters may change the nature of their programming output in order to remain viable.

We assume that commercial viability is linked to a broadcaster's ability to maintain a profit margin on advertising revenues consistent with investors' expectations. Over the last five years, ITV's profit margin has been between 10% and 21%³⁸, while Channel 4's profit margins have been lower, between 0% and 10%. We were unable to obtain separate cost and revenue data for FIVE, which is part of the RTL group. On the basis of these past profits we consider for illustrative purposes whether ITV is likely to be able to exceed a minimum profit margin of 5%, and whether Channel 4 is able to exceed a minimum margin of 0%. These thresholds are lower than historic margins and are conservative benchmarks for the Counterfactual.

The Counterfactual assumes that the programming output and viewing hours of commercial broadcasters remains the same; the TV NAR accruing to each broadcaster is reduced as a result of each having a smaller share of total commercial impacts. The loss of TV revenue in the Counterfactual is estimated to be £485m for ITV and £248m for Channel 4 (given in the 'crowding out' column of Table 18).

Since output is assumed not to change, we can estimate Counterfactual profit margins by subtracting 2008 operating costs from 2008 revenues less the crowding out above. ITV's Counterfactual profit margin is estimated at -18% (a £274m loss), compared to 10% in the Factual. Channel 4's Counterfactual profit margin is estimated at -36% (a £240m loss), compared to 1% in the Factual. Both of the counterfactual margins are well below the indicative thresholds identified above.

Broadcasters might be able to recover lost profits in the Counterfactual by reducing costs. If output is to be maintained at Factual levels, broadcasters must recover profit by reducing fixed costs (as opposed to reducing variable costs which would require changes in output); this can be achieved by increasing operating efficiency. In order to meet the assumed threshold of a 5% margin, ITV would have to reduce operating costs from 2008 levels by 19%. Channel 4 would have to reduce its costs by 27% from 2008 levels in order to meet the threshold of 0% in the counterfactual.

In the absence of efficiency gains large enough to remain viable at current levels of output, there are other options that broadcasters might be able to pursue. Some broadcasters might be able to remain viable by adjusting output mix (for example focusing only on the most profitable genres) and/or change the volume of output (for example moving to a smaller scale business model). It is beyond the scope of this report to assess the feasibility of such alternatives. It is also possible that some broadcasters may move some or all of their channels to a pay-TV model³⁹.

³⁸ Revenue, operating cost, and profit data taken from annual reports. Profits taken before interest, taxation and amortisation.

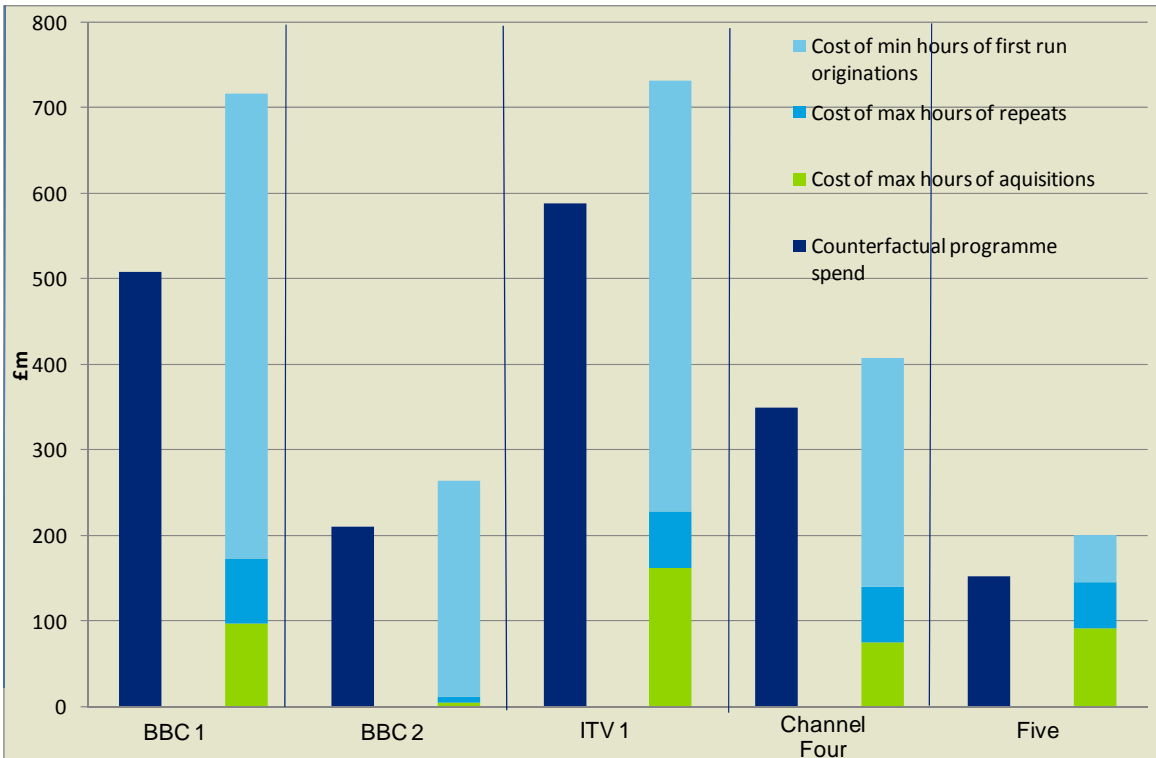
³⁹ ITV is reported to have held talks with BSkyB about adopting a pay-TV model for ITV2, ITV3 and ITV4 Source: The Guardian (see <http://www.guardian.co.uk/business/2009/jun/01/itv-bskyb-pay-tv>)

PSB viability

We have assessed the impact of the Counterfactual on PSB broadcasters' viability as PSBs by analysing the impact on their ability to continue to meet their original production⁴⁰ quotas. In practice, the Counterfactual may have an impact on different dimensions and obligations related to the PSB status, such as the regional news requirement or the requirements for spend outside of London.

Figure 8 below compares the reduced programme spend with the costs of meeting the original production quota obligation in the Counterfactual. We assume that channels show the maximum number of hours of acquired programmes possible, given the quota. If we assume that each channel's current ratio of first-run originations to repeats continues to be shown, then Figure 8 shows that none of the PSB channels are able to meet the costs of fulfilling the original productions quota.

Figure 8: Counterfactual programme spend and original production quotas, assuming current proportion of repeats and first-run originations (2008/09)



Source: Ofcom; Deloitte analysis

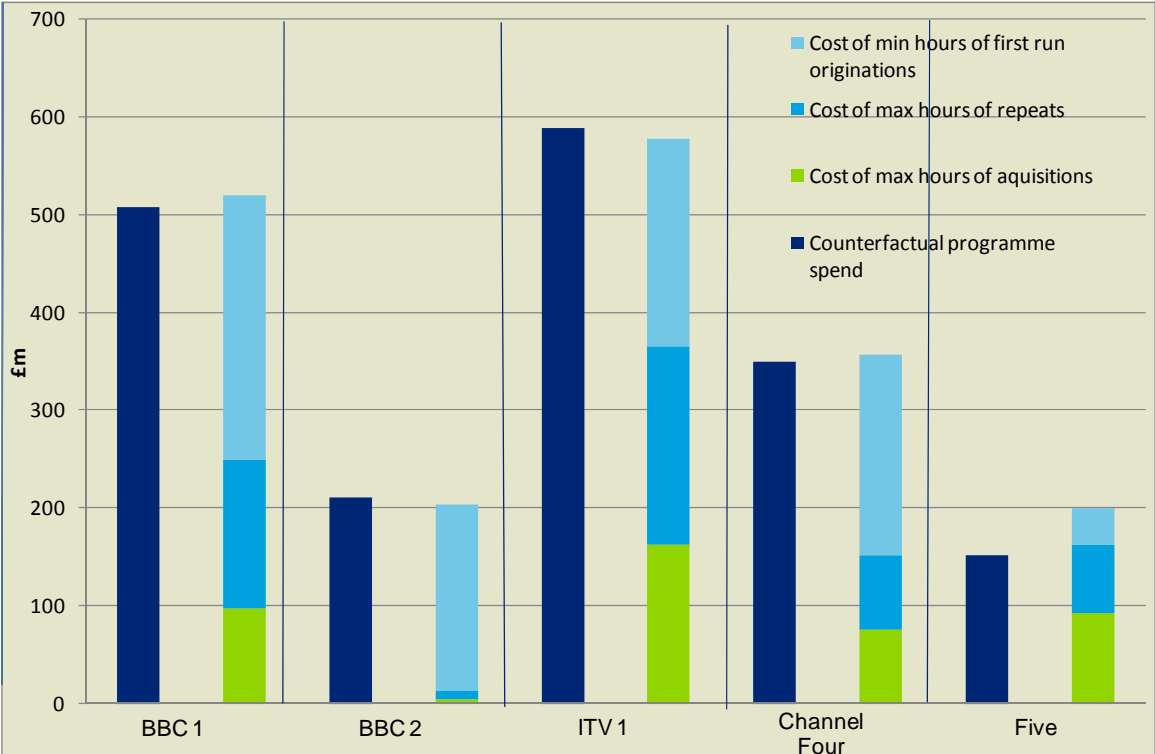
Note: cost/hour of first-run originations is based on 2007 spend on first-run commissions and hours of first-run programming, by channel. An average cost/hour for repeats and acquisitions, by channel, has been based on 2007 hours of repeats and acquisitions shown and 2007 spend on non-first run originations.

In response, broadcasters could increase their number of repeats and decrease first run originations. Accordingly we have flexed the assumption above and assumed that the ratio of first run originations to

⁴⁰ Proportion of qualifying hours that need to be UK originations

repeats is 1:3. This is a conservative estimate as most PSB channels currently show a higher proportion of first run originations, as is shown in Figure 10 below. However, as can be seen from Figure 9, available programme spend is still inadequate to meet the costs of fulfilling the original production quota for BBC 1, Channel Four and Five. Furthermore, increases in the number of repeats can be expected to have an impact on advertising revenues. Increasing repeats significantly beyond current levels may be detrimental to audience share, and therefore drive PSB broadcasters towards a negative spiral of decreasing audience share and decreasing advertising revenues.

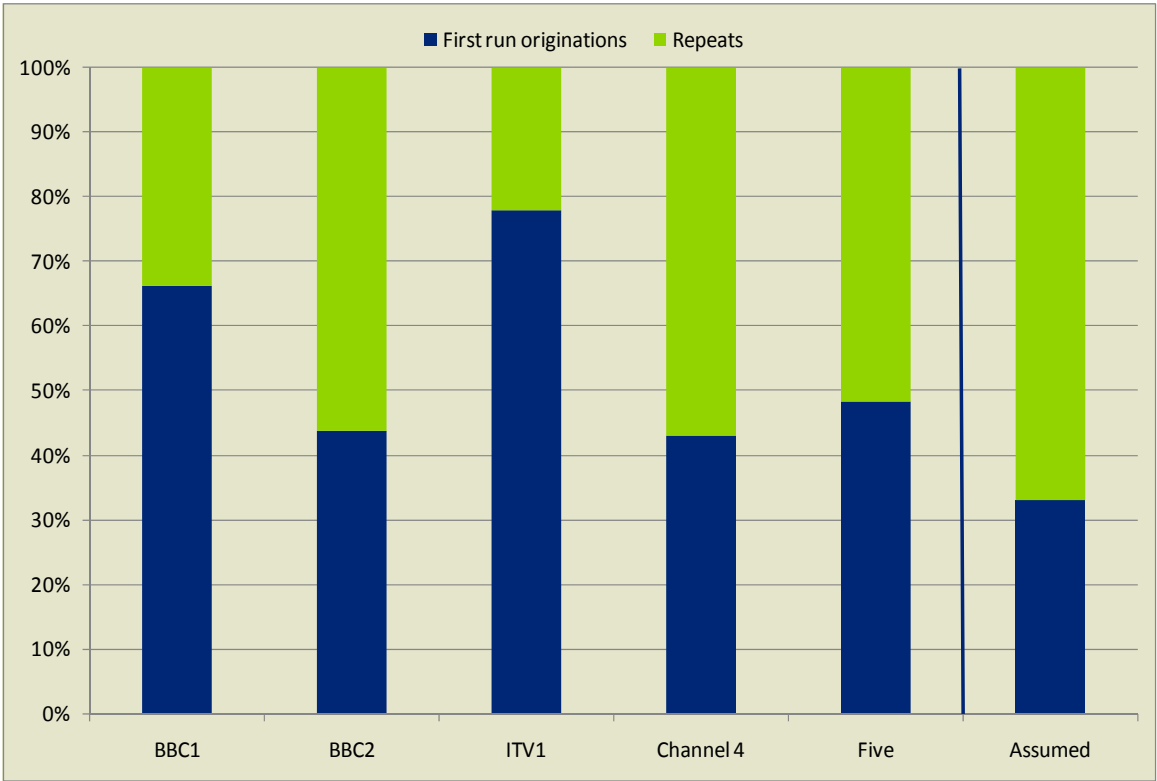
Figure 9: Counterfactual programme spend and original production quotas (2008/09)



Source: Ofcom; Deloitte analysis

Note: cost/hour of first-run originations is based on 2007 spend on first-run commissions and hours of first-run programming, by channel. An average cost/hour for repeats and acquisitions, by channel, has been based on 2007 hours of repeats and acquisitions shown and 2007 spend on non-first run originations.

Figure 10: Ratio of first run originations to repeats (2008/09)



Source: Ofcom

The analysis above suggests that in the Counterfactual there is likely to be pressure on the ability of PSBs to continue to meet their remit. In some scenarios, none of the PSBs are able to meet their quotas with the funding available for content. In other scenarios, where the PSBs shift towards cheaper repeats programming, BBC1, Channel 4 and Five are by a small margin still not able to continue to meet their originations quotas. The scenarios highlight the risk that in the Counterfactual some channels may need to stop being PSBs, or the quotas would have to be altered. PSBs could also adopt other courses of action such as trying to force a decrease in the cost per hour, although this would have a further detrimental effect on the indie sector unless additional co-funding spend could be raised elsewhere. Alternatively they could reduce the number of channels that they have today. Some of the options available however may have a further detrimental effect on their ability to raise advertising revenues, such as increases in repeats or the closure of channels.

5.2.5 The Counterfactual BBC’s Commercial Subsidiaries

We have developed the Counterfactual for the Commercial Subsidiaries by considering what impact the advertising-funded Counterfactual BBC would have on the activities and scale of its commercial subsidiaries. We have assumed that the Counterfactual BBC’s Public Service activities have *always* been advertising-funded (as opposed to switching to advertising funding in 2008).

In determining the size of the Counterfactual Commercial Subsidiaries, we have used as a primary reference point the scale and success of ITV’s Global Content activities as a comparator, adjusted

for the size of revenues of the Counterfactual BBC. This may be a conservative assumption because it could be argued that the licence fee funded BBC has set a benchmark that has raised the quality standard of UK television generally and by contributing in this way to the enhanced quality of content of other UK broadcasters has assisted them to gain revenues internationally. In the Counterfactual, other UK broadcasters may have been less successful at exploiting their content abroad.

However, we have also taken into consideration that:

- there is likely to be less quality content in some of the highly successful genres currently exploited by the commercial subsidiaries (including natural history, children' TV and news) due to the reduced size of the Counterfactual BBC;
- The Counterfactual BBC brand is likely to be weaker and enjoy less recognition internationally, therefore undermining the commercial subsidiaries' ability to exploit their content abroad; and
- the Counterfactual BBC Public Service is less likely to have persisted with some of its key titles (such as Top Gear and Dr Who) that have been exploited internationally but which have required significant investment over a long time before eventually becoming profitable assets

Our detailed assumptions regarding the activities of the Commercial Subsidiaries and associated revenues and expenditure are set out below.

5.2.6 The Commercial Subsidiaries revenues in the Counterfactual

In this section we set out the revenues that we have estimated the Commercial Subsidiaries would achieve in the Counterfactual. In our model we have assumed that expenditure changes proportionately to the change in revenues.

Channels (excluding UKTV), Sales & Distribution, Content & Production

These business units within BBC Worldwide monetise BBC Public Service content through international channels, content and format syndication. These businesses are therefore analogous to ITV's "Global Content" business, although we note that ITV does not sell channels, only programmes and formats. In the Counterfactual, we assume that insufficient quality content would have been available to create Channels for international distribution. We assume that the BBC Commercial Activities would have been focused on sales of programmes and formats. We assume that the BBC achieves the same proportional success in monetising its content in the Counterfactual as ITV does today. ITV, with UK advertising revenues of £1,550m, generates revenues of £123m from the exploitation of content internationally. We have applied the ITV's ratio of UK advertising to international revenues to the BBC's Counterfactual UK TV advertising revenues. Based on the Counterfactual BBC's revenue of £1,368m, BBC income from syndication of content and formats is £109m.

Table 21 BBC and ITV UK TV Public Service revenues and revenues from commercial content exploitation (2008/09)

	UK TV Public Service revenue (£m)	Revenue from content exploitation (£m)	Ratio UK Public Service TV to revenues from content exploitation
BBC	2,340	508	0.22
ITV	1,550	123	0.08
BBC Counterfactual	1,368	110	0.08

Source: Broadcasters' annual reports, Deloitte Analysis

Digital Media

We assume that BBC.com is unlikely to be retained, since C4, ITV and Five all lack specific ex-UK online presence. This is appropriate for the advertising-funded Counterfactual BBC, as its domestic website would carry advertising and ex-UK customers could be served with geographically-relevant adverts by a generic ad-network. The BBC.com spend would not be replaced in the UK as there is no natural substitute.

Motion Gallery depends on the quantity of content available for monetisation as clips. Content Partnerships, which syndicate content to non-traditional media outlets, is also likely to continue at a reduced scale. We have assumed that the scale of these business decreases proportionately to the decrease in BBC public service content investment, to £8.2m and £5.9m respectively. Digital Media total revenues therefore decrease to £14.1m, or 41% of their current revenues.

Magazines, Children's & Licensing

Since investment in CBeebies and other Children's output is significantly reduced in the BBC Public Service Counterfactual (in line with ITV's experience), we assume that only a small proportion of children magazines' activity is maintained by the Counterfactual BBC. Children's Magazines and other Children's-related license revenues represent £61m of £210.2m in this Division, or 29%. We assume that only a small proportion – 10% - of children magazines' activity is maintained by the Counterfactual BBC.

From the remaining magazine estate, we assume that Radio Times would exist in the Counterfactual, but that other magazines would not have been developed by the Counterfactual BBC. This is consistent with experience at ITV and Channel 4, which do not have magazine portfolios. We have assumed that a share of the revenue not unlocked by the Counterfactual BBC's commercial subsidiaries is transferred to other magazine publishers as consumers purchase alternative titles in the same genres.

BBC Worldwide therefore maintains in the Counterfactual, around £50m or 33% of its current magazines operations (excluding Children's). We assume that 30% of the remainder is transferred

to other magazine publishers as a result of reduced crowding out by the BBC, but there is a reduced number of high quality branded titles, such as Top Gear Magazine. This includes £20m of revenues from the BBC's distribution and subscription fulfilment JVs, which would instead be provided as a service to the BBC, rather than held in a JV.

Home Entertainment (excluding 2Entertain)

Home Entertainment includes two distinct businesses.

BBC monetises radio content through audiobook publishing, record licensing, radio programme sales and music publishing. As BBC radio content is likely to be weakened in the Counterfactual, we assume that this would be reflected in the Counterfactual BBC Worldwide, as a fall in revenues proportionate to the decrease in public service content investment, to £11m or 32% of current Home Entertainment's revenues. We assume this is not substituted by similar revenues outside the BBC.

'Books, Learning and Retail' is the second part of Home Entertainment. We have assumed that this operation is unlikely to remain as the reduction in education and children's programming is likely to make this a non-viable business.

2Entertain

It is typical for large national distributors to have their own DVD publishing and distribution businesses. For example, all US Studios have equivalent businesses to 2Entertain. Without the full complement of public service content, 2Entertain's revenues would fall. We have assumed that the fall in revenues is proportional to the fall in TV content investment, with a further reduction due to the fall in high quality content. We assume the size of 2Entertain's operation would fall in the Counterfactual to 50% of its current size. As this business' revenue opportunities are related to content availability, we have assumed that other UK organisations will be unable to substitute these operations.

Global Brands

The licence fee funded BBC public service has arguably persisted with its brand portfolio much longer than a commercial broadcaster would have done. Key BBC Worldwide Global Brands such as Dr Who and Top Gear achieved only limited success before becoming profitable assets. The success of BBC's Natural History unit is due in large part to the unit being nurtured over a long period of time. It is unlikely that a commercial broadcaster would have continued to invest in these properties without the incentive of a PSB mandate. Hence we assume that the contribution of these brands to the Counterfactual BBC Worldwide is nil.

Lonely Planet is a sustainable business in its own right. For this reason, we assume that its contribution to BBC Worldwide's revenues (or to the UK) remains the same in the Counterfactual case.

UKTV

UKTV, the JV with Virgin, is substantially dependent on the BBC for its content. Three scenarios are possible in the case of the advertising funded, Counterfactual BBC.

1. No UKTV and no substitution of its output, resulting in none of the operation being undertaken by the Counterfactual BBC Worldwide;
2. No UKTV, but the BBC uses its content on its own branded digital channels in lieu of sharing through a JV, resulting in none of operations being undertaken by the Counterfactual BBC Worldwide. It is possible that a small proportion of the content not exploited in the own spin-off channels would have been sold to other UK multichannel broadcasters instead of a joint-venture.
3. A smaller scale UKTV, with revenues scaled back to take into account the BBC's reduced output.

In all of the above cases, none of these operations are undertaken by other organisations.

In the Counterfactual, we assume that Scenario 2 is most likely and that the content currently commercialised through UKTV becomes part of the schedule of the commercial BBC 3 and 4. This is likely, since UKTV was initially triggered by a surplus of high quality BBC archive content for which there was no schedule space available. In the Counterfactual, the BBC may have launched spin-off channels earlier than in reality, hence obviating the need for a JV. We assume the revenues of this JV in the Counterfactual are foregone, as content is used in the BBC spin-off channels. Instead we assume that a small proportion of content – 10%- is sold to other multichannel broadcasters in the secondary market. As there is no JV with Virgin Media in the Counterfactual, BBC Worldwide would generate approximately 20% of UKTV's revenue today.

BBC Studios & Post Production

75% of BBC S&PP revenues are sourced from within the BBC Public Service, and the remaining 25% of revenues are from other sources, principally supporting the operations of independent producers in the UK. We assume that revenues from this source will decline in proportion to the reduced expenditure on content by the BBC and the rest of the sector, to £42m or 60% of current BBC S&PP revenues. The foregone expenditure is not substituted elsewhere within the creative sector.

BBC World News

The BBC brand is an important factor in the success of BBC World News. The likely degradation and impact on the international recognition of the BBC brand in the Counterfactual may have a significant impact on BBC World News' audiences and advertising revenues. In addition, BBC World News is highly dependent for its news content on the BBC Public Service (Journalism). It is likely that the Counterfactual BBC would invest less in high-quality news content, which would further reduce the quality and possibly the viability of the BBC World News business model. We have assumed that in the Counterfactual BBC World News would not exist, and that this revenue would not be substituted in the UK

Summary

Table 22: Assumptions regarding revenue of Commercial Subsidiaries in the Counterfactual

	% of BBC factual operation that the Counterfactual Commercial Subsidiaries would undertake	% of BBC factual operation that another UK party would undertake in the case of a Counterfactual BBC
BBC Worldwide		
Channels (exc. UKTV)	48%	0%
Content and Production		
Sales and Distribution		
UKTV	20%	0%
Digital Media	41%	0%
Magazines, Children's and Licensing (excluding Children's)	33%	30%
Children's	10%	0%
Home Entertainment (excluding 2Entertain)	32%	0%
2Entertain	50%	0%
Lonely Planet	100%	0%
BBC Studios & Post Production		
BBC S&PP	60%	0%
BBC World News		
BBC World News	0%	0%

Source: Deloitte estimates

5.2.7 Counterfactual BBC multipliers

The Counterfactual BBC scenario is likely to significantly reduce the total revenues available to individual suppliers in the TV and radio sectors. Some activities may be kept in-house, and some suppliers may need to leave the sector as a result.

Therefore, we have adjusted the Counterfactual TV and radio multipliers to reflect an industry with fewer supply chain linkages than in the current market. In the same way that we adjusted Factual TV multipliers downwards to derive Factual radio multipliers, we use the English Partnerships' Additionality Guide reference multiplier values for industries with medium versus high supply-chain linkages⁴¹ to adjust downwards our Factual TV and radio multipliers, as shown in the Table below.

We have assumed that the Counterfactual BBC does not have such a significant impact on other supply chains from which the BBC Public Service and Commercial subsidiaries acquire resources such as online, publishing or advertising. Therefore we have not adjusted those multipliers for the Counterfactual scenario

Table 23: The TV and radio multipliers in the Counterfactual

Channel	Factual Multiplier	Counterfactual Multiplier
TV	2.0	1.8
Radio	1.8	1.6

Source: Deloitte analysis

5.2.8 The Value Added in the Counterfactual

The Counterfactual GVA estimated for each activity is derived by applying the relevant Counterfactual multipliers to the Counterfactual net advertising revenues. The adjustments were made to reflect our view that supply linkages would be weaker in a scenario without the BBC in its present form, as noted above. Other multipliers -Online and "other"- remain unchanged from the multiplier figures adopted in the Factual BBC GVA estimation.

Counterfactual BBC GVA

The Counterfactual GVA for a commercially funded alternative to the BBC Public Service is £2,789m.

Table 24 below shows the NAR for each activity, the Counterfactual multipliers and the Counterfactual GVA.

⁴¹ See Section 3.3 above, and English Partnerships (2008)

Table 24: Counterfactual estimation (2008/09)

Activity	Multiplier	NAR - £m	GVA - £m
TV	1.8	1,368	2,334
Radio	1.6	210	327
Online	1.85	69	126

Source: Deloitte analysis

Competitor broadcasters' GVA in the Counterfactual

Table 25 shows the GVA of other broadcasters based on the estimated NARs and the multiplier values applied.⁴² The difference between these and the Factual GVA estimates can be explained by the impact of crowding out in Section 0 and in the case of TV and Radio slightly lower multipliers. This reflects a less vibrant creative sector supply chain absent the size, stability and the certainty of revenues for Indies provided by the BBC in its current form.

We have also included here the change in GVA for print and other media that occurs as a result of the reduction advertising revenues for this sector in the Counterfactual.

Table 25: GVA of other broadcasters (2008/09)

Activity	GVA - £m
TV	4,321
Radio	662
Online	5,793
Print and Other Media	12,981

Source: Deloitte analysis

⁴² The GVA of other broadcasters / other media is calculated using a single TV, radio, online or publishing multiplier as appropriate. We have not broken down other broadcasters' expenditure to apply different types of multipliers – e.g. infrastructure or overheads – as we have done in the case of the BBC. As infrastructure and overheads costs tend to have lower multipliers than TV and Publishing, the estimate of other broadcasters / other media GVA is likely to be an upper bound estimate.

The Commercial Subsidiaries' GVA in the Counterfactual

The assumptions, Factual GVAs, Counterfactual GVAs and expenditures are shown in below.

Table 26: Commercial subsidiaries Counterfactual in £'millions (2008/09)

	UK Expenditure	Factual GVA	BBC Commercial Subsidiary Counterfactual GVA	Third Party Counterfactual GVA
Total	691	1,348	594	81

Source: Deloitte analysis

Overheads (Corporate and regional services) and tax in the Counterfactual are estimated as a proportion of the Factual GVAs to the Counterfactual GVAs. In addition to this, the GVA of the profit returned by the counterfactual is £88m, £80m of which is attributable to the Counterfactual BBC commercial subsidiary and the rest to third parties.

The Value Added of the alternative use of the licence fee

A proportion of the £3,494m licence fee will be put to alternative use by households in the Counterfactual. We assume 13%⁴³ of this amount will be expended outside the UK such as on imported products and holidays and a further 5%⁴⁴ of this would be committed to savings. Consequently, we assume that households would commit an incremental £2,861m into the economy as a result of no longer having to pay a licence fee.

The GVA calculated from our estimate of alternative use of the licence fee consistent with our assumptions around leakages and savings is £5,634m. In calculating this amount, we applied a multiplier of 1.97. This was derived using the household expenditure weighted average of all the sector multipliers in the UK⁴⁵.

5.3 The BBC's Net Value Add

The BBC's NVA is £4,356m. The BBC's NVA is defined by the difference between the GVA of the BBC in the Factual and the BBC's GVA in the Counterfactual.

The Wider NVA is £2,551m. This includes the impact of the alternative use of the released licence fee and the reduction in other commercial broadcasters' value added as a result of the activities of a commercially funded BBC.

⁴³ ONS data on the ratio of domestic and import supply for household consumption final demand.

⁴⁴ Eurostat, UK average gross household savings rate from 1997-2007

⁴⁵ Household expenditure within each sector and relevant multiplier as reported by the Office of National Statistics.

Table 27: BBC Net Value Add (2008/09)

	Factual - £m	Counterfactual - £m				Net - £m
		TV	Radio	Online	Other	
BBC Public Service - TV	4,497					
BBC Public Service - Radio	1,040					
BBC Public Service - Online	321					
BBC Public Service - Other (including tax)	534					
BBC Commercial Subsidiaries (including JVs)	1,348					
BBC GVA	7,739					7,739
BBC Counterfactual		2,336	327	126		(2,789)
BBC Counterfactual Commercial Subsidiaries (including JVs)					594	(594)
BBC NVA						4,356
Commercial subsidiary - third party					81	(81)
Other Commercial Broadcasters	7,890	4,321	662			2,907
Online and Other Media	19,777			5,793	12,981	1,003
Alternative use of Licence fee					5,634	(5,634)
Wider Creative NVA						2,551

Source: Deloitte analysis

6 Part II: the BBC's impact on the independent production sector

6.1 Summary

The independent production (“**indie**”) sector in the UK is of substantial economic importance, generating some £2,160m of revenues in 2008/09⁴⁶. The BBC impacts on the indie sector in three main ways.

A licence fee funded BBC leads to a higher level of indie sector commissions from the BBC and other broadcasters' than would be the case in the Counterfactual. We have estimated that UK commissions from indies would decrease by £446m. This effect, which is included in our estimates in Section 4 and 5, results in NVA of approximately £893m. It therefore contributes significantly to the Wider NVA of £2,551m reported in Section 5.

In addition, we have estimated two further spillover impacts that the BBC has on the indie sector which are incremental to the value added reported in the previous sections: first, from the ability of the indie sector to derive more secondary revenues from UK commissions than in the Counterfactual; and second, from the stability of funding that the BBC's licence fee provides. These two effects generate additional NVA of £227m in aggregate (assuming a TV multiplier), in relation to the Counterfactual.

With significantly reduced UK revenues, it is reasonable to expect that the degree of TV supply chain linkages would also be affected, therefore reducing the TV multipliers. We have estimated that the lower Counterfactual TV multipliers on remaining UK commissions and overseas investment into the UK would further reduce the indie sector GVA in the Counterfactual by an additional £314m.

BBC Worldwide also makes direct investments into indies although we have not considered this to generate incremental Net Value Add. In addition, BBC Worldwide leverages its international network in order to help indies sell content internationally.

6.2 Introduction

The BBC impacts on the indie sector in three main ways.

First, the BBC provides direct funding through UK primary commissions.

Second, the BBC leads to a series of other spillover effects on the indie sector. Direct funding through UK primary commissions provides an opportunity for indies to exploit UK commissions in secondary and international markets and derive enhanced revenues. The BBC also provides an important degree of stability of funding to the sector. This is possible due to the stability of the BBC's own licence-fee funding base. This stability arguably supports a more cost competitive indie sector than would otherwise be the case enabling it to both attract more overseas investment into the UK and within the UK to encourage more investment into the indie sector above PSB quotas.

⁴⁶ PACT policy survey and financial census 2009

Third, BBC Worldwide makes direct investments into indies and leverages its international network in order to help indies sell content internationally.

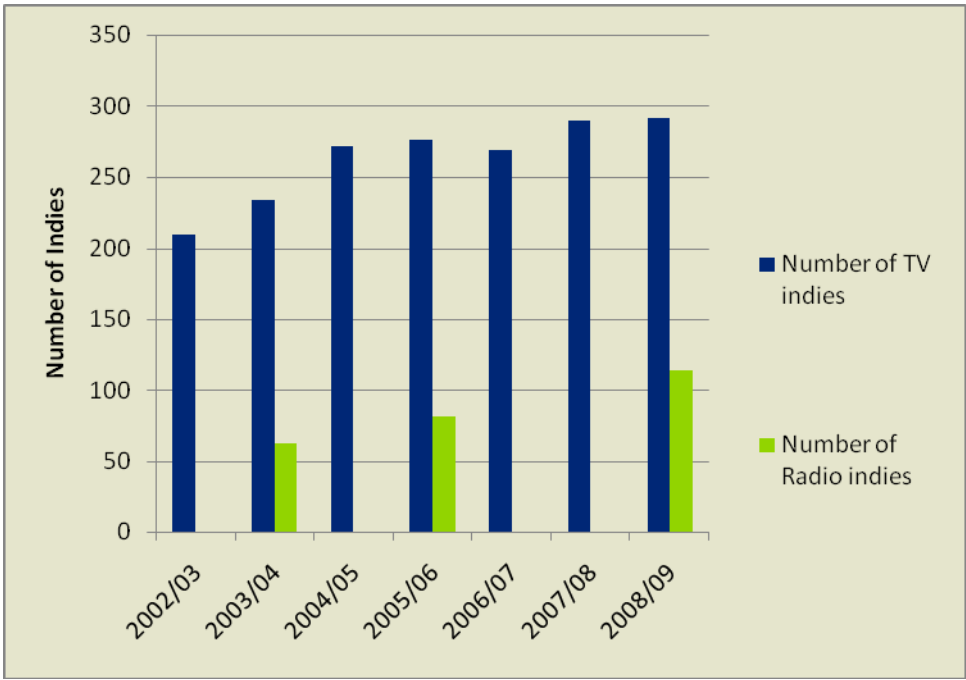
These impacts on the indie sector are greater than would be the case in the Counterfactual scenario.

6.3 The BBC’s interaction with the indie sector

The BBC each year provides a significant proportion of indie sector revenues. In 2008/09, the BBC contributed directly in the order of 20%⁴⁷ of indie sector revenues. In addition, BBC Worldwide provides funding for non-BBC indie content.

Figure 11 shows the number of indies commissioned by the BBC over time for TV and Radio⁴⁸. The number of indies being commissioned has increased since 2002/03.

Figure 11: Number of Indies commissioned in TV and Radio (2008/09)



Source: BBC data, Deloitte analysis

Figure 12 shows the Public Service spend devoted to the top 10 indies in 2004 and other indies. Spend with indies that were not in the Top 10 in 2004 has grown more than with those that were in the Top 10 in 2004.

⁴⁷ PACT data for TV (PACT policy survey and financial census 2009), BBC data for radio and online

⁴⁸ We do not have data on the number of indies commissioned in radio for the years 02/03,04/05,06/07,07/08, therefore those years have been proxied

Figure 12: Spend with indies amongst the Top 10 in 2004 and other indies in TV



Source: BBC data, Deloitte analysis

6.4 Our assessment

6.4.1 Scale of funding

We quantify the BBC’s long-term impact on the scale of the indie sector by estimating what the impact of the BBC Counterfactual broadcaster would be on the indie sector as a whole. We have focused this analysis on TV indie sector spend. In 2008/09 indies generated 88% of their revenues from TV⁴⁹, therefore our analysis captures most of the impact on the indie sector.

UK primary commissions

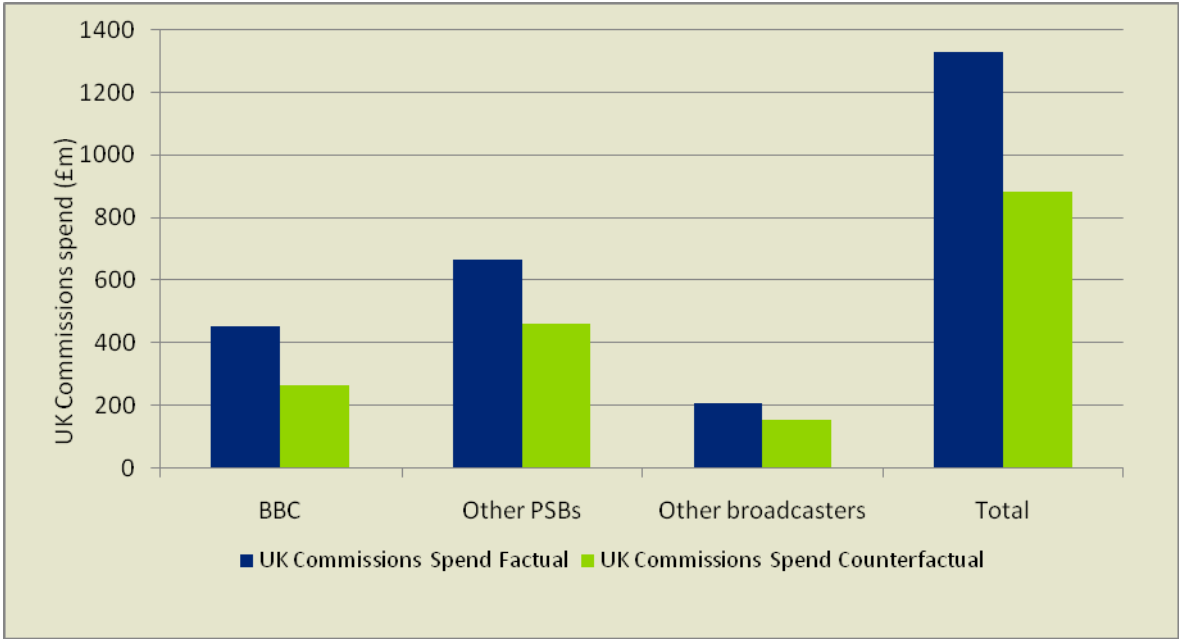
In our Counterfactual, the scale of TV revenues available in the sector drops from £5.8bn⁵⁰ in 2008/09 to £3.8bn. With this significant drop in TV revenues, we also assume that spend on indie content is affected.

We have estimated how much spend with the indie sector there would be in the Counterfactual. In doing so, we have assumed that broadcasters continue to spend the same proportion of their revenues on indie content in the Counterfactual. As TV revenues are smaller, spend in indie content also decreases. The amount of co-funding provided by third parties would also decrease, as the relevant programmes would be unlikely to be produced. As Figure 13 shows, UK commissions under our assumptions would decrease by £446m, or 34% of their level today.

⁴⁹ PACT policy survey and financial census 2009

⁵⁰ Licence fee TV spend and TV advertising revenues

Figure 13: The impact of the BBC Counterfactual on indie sector UK commissions (2008/09)



Source: Deloitte analysis, PACT 2009 survey data for factual scenario

Using a TV multiplier, a decrease in UK commissions by £446m would lead to approximately £893m foregone GVA. This effect is already included in our estimates in Section 4 and 5.

Indie quotas

In the Counterfactual, it is likely that the BBC1, BBC2 and ITV1 would acquire indie content only up to the level where they can meet the indie quota of 25% of qualifying hours, rather than exceeding it as is currently the case. Channel 4 and Five do not have in-house production capability. Therefore, as they face the funding pressures of the Counterfactual, they would also be likely to reduce their indie spend, although this may not be reflected in a reduction of indie hours as a proportion of relevant originated hours (the quota), but rather as a decrease in originations and an increase in acquisitions.

Table 28: Factual and counterfactual indie commissions (as a % of qualifying hours) (2008/09)

Channel	Factual proportion of indie hours commissioned	Counterfactual proportion of indie hours commissioned
BBC1	33%	25%
BBC2	42%	25%
ITV1	35%	25%

Source: Ofcom Communications Market Report, 2009

We have calculated the reduction in indie spend that would result from the BBC and ITV reducing their indie commissions to the level of the 25% indie quota. It is difficult to estimate qualifying hours

from the data publicly available. We have proxied qualifying hours by deducting hours of news from first-run originations (excluding repeats). We have proxied indie cost per-hour by first-run originations cost per-hour.

In the Counterfactual we assume that the BBC will lower the quality or apply pricing pressure to the content it commissions. We have assumed that the cost per hour paid by the BBC for indie content falls to a level consistent with the average cost per hour of all PSBs in the Factual, as reported by Ofcom. Furthermore, we assume that ITV also applies pricing pressure to the content it commissions from indies (we have assumed a 10% reduction in the cost per hour in relation to the Factual average cost per hour).

Table 29: Factual and Counterfactual estimated indie spend (2008/09)

Channel	First-run origination excluding news and repeats (hours)	Factual estimated indie hours	Factual cost per hour, £	Counterfactual estimated indie hours	Counterfactual cost per hour, £	Change in indie spend, £ m
BBC1	3,609	1,191	137,000	902	72,700	97.6
BBC2	3,188	1,339	99,000	797	72,700	74.6
ITV1	4,766	1,668	72,700	1,192	65,430	43.3

Source: Ofcom and Deloitte analysis

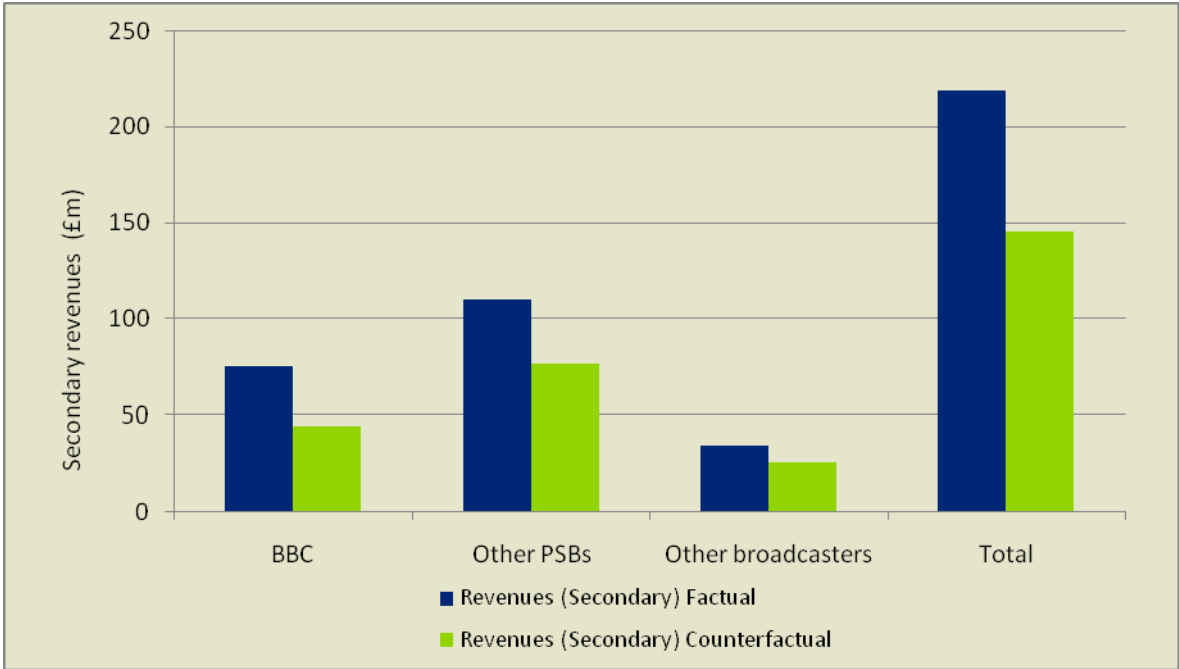
Our analysis suggests that the reduction in indie spend to the quota of 25% would result in reduced indie spend by BBC1 and BBC2 of £172m, and by ITV1 of approximately £43m. The decrease in BBC spend as a result of the decrease of commissions towards the level of the quota is broadly consistent with the order of magnitude of the impact estimated assuming a reduction proportionate to revenues.

Secondary indie revenues – spillover effect

Indies are able to earn revenues from exploitation of UK commissions in secondary windows – such as DVDs, sales to multi-channels, or international exploitation. With reduced UK commissions, indies secondary revenues would also fall. Assuming that indies are able to exploit secondary rights on UK commissions with the same degree of success as they do today, indies' revenues from this source would decrease by £73m, down from £219m in 2008/09⁵¹. Using a TV multiplier, this would lead to approximately £147m foregone GVA for the sector. This effect is incremental to the effects estimated in Sections 4 and 5.

⁵¹ PACT policy survey and financial census 2009

Figure 14: The impact of the BBC Counterfactual on indie sector UK commissions (2008/09)



Source: Deloitte analysis, PACT 2009 survey data for factual scenario

It is also likely that the BBC acts as a quality leader in the Factual scenario, and that the degree of success in exploiting secondary rights on UK commissions might be further undermined in the Counterfactual. For example, assuming that broadcasters’ ability to exploit secondary revenues per pound of investment in UK commissions in the Counterfactual is 80% of what it was in the Factual, indies’ revenues from this source would decrease by £102m, down from £219m in 2008/09. Due to the uncertainty regarding the possible reduction in quality in the Counterfactual we have not included this figure in our summary of impacts of the BBC on the indie sector.

Summary of impact from change in scale of funding

As Figure 13 shows, total indie sector UK TV revenues would decrease by £520m in the Counterfactual - from £1,551m⁵² to £1,031m. Indie sector UK TV revenues would drop significantly below their level in 2004 (£1,300m)⁵³, before the sector started to experience significant growth.

The TV indie sector in terms of UK revenues would be approximately two thirds of its size in 2008/09⁵⁴.

- 85% of the decrease in the size of the sector would result from reduced UK commissions/co-funding spend. This effect is already included in our GVA estimates in Sections 4 and 5.

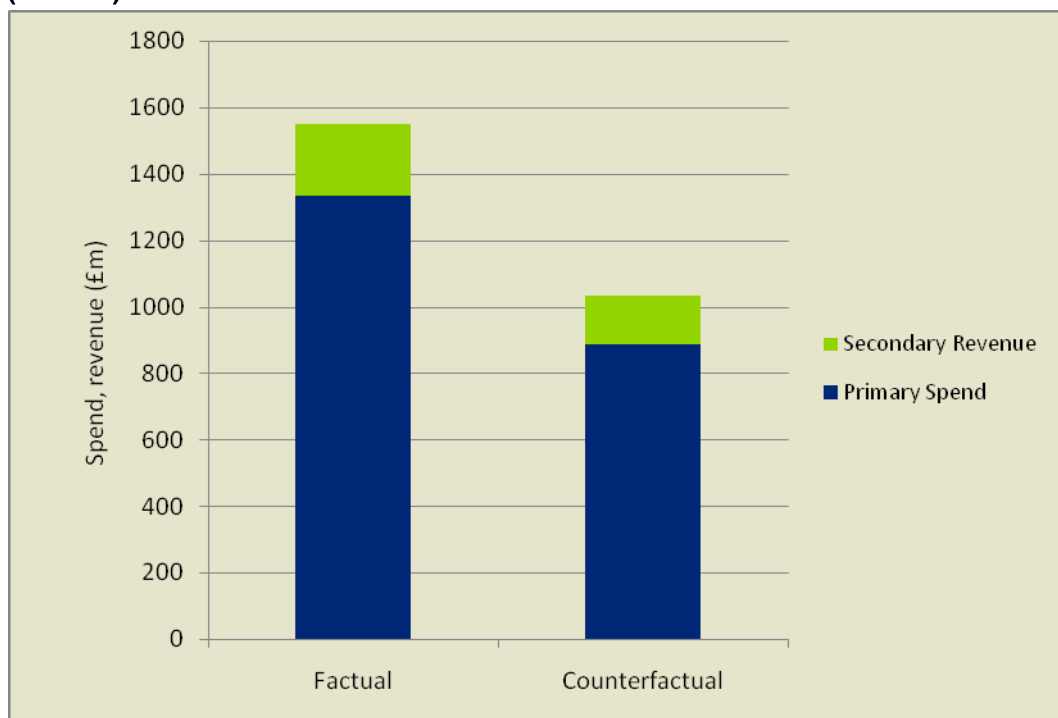
⁵² PACT policy survey and financial census 2009

⁵³ PACT policy survey and financial census 2009

⁵⁴ As a proportion of total indie sector revenues of £2,160m, this would represent three quarters of the indie sector size in 2008/09

- 15% of the decrease in the size of the sector results from reduced revenues from secondary exploitation of that content. This effect is incremental to the GVA estimates in Sections 4 and 5.

Figure 15: The impact of the BBC Counterfactual on indie sector UK revenues (2008/09)



Source: Deloitte analysis, PACT policy survey and financial census 2009 survey data for factual scenario

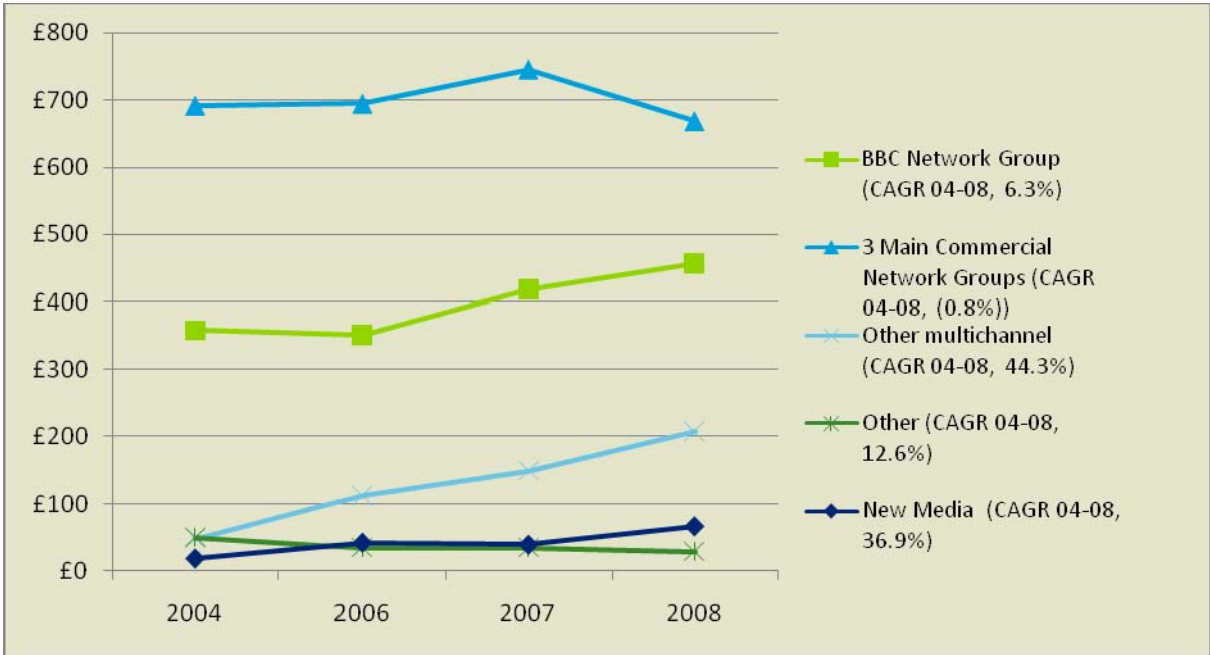
6.4.2 Stability of funding

The BBC, as a result of its licence-fee rather than advertising based funding, provides the indie sector with more stable and predictable funding than would be the case in the Counterfactual. As a result, the sector is better financed and more cost-competitive than would otherwise be the case.

The BBC's stable funding is reflected in the evolution of BBC spend with the indie sector in recent years. The BBC's spend has increased by 6.3% CAGR between 2004/05 and 2007/08, while other PSBs' spend with the indie sector decreased as recession affected the UK economy. Other multichannel broadcasters' spend has also increased. The increase in BBC spend over the period also reflects the BBC's increasing commitment to the indie sector as a result of the WOCC⁵⁵.

⁵⁵ The BBC's Charter and Agreement requires that 50% of programmes are reserved for in-house production and a statutory quota of 25% is reserved for the independent sector. In-house and external producers compete for the remaining 25% which is known as the Window of Creative Competition ("WOCC").

Figure 16: Value of UK commissions by broadcaster (including new media) - £m (2008/09)



Source: PACT policy survey and financial census 2009

In the absence of the licence fee, the television sector would be more exposed to the volatility of revenues from advertising which vary as a function of the overall economic cycle. This means that investors in the sector would require higher returns than currently, to compensate them for the higher risk, before investing. Consequently, it can be argued that the cost of capital of the sector is lower under the funding model anchored on the licence fee.

A lower indie sector weighted average cost of capital (“WACC”) as a result of the BBC stability of funding leads in principle to lower costs and a more competitive indie sector than otherwise. This leads to higher UK output, for example as international broadcasters commission more programmes from UK indies, and encourages a greater degree of investment into the UK which then increases UK GVA relative to the Counterfactual.

The underlying logic of the flow of impacts can be summarised as follows.

- Lower volatility of licence fee revenues relative to advertising revenues means that the indie sector is subject to lower risk when funded (at least partially) through stable licence fee revenues.
- Lower exposure to risk means that the cost of capital of the indie sector is lower and/or that investors will show a higher willingness to bear risk.
- This is likely to facilitate greater investment in the indie sector, because of the lower risks associated with investment or because the lower cost of capital may allow indies to sustain lower prices than would otherwise be the case and so win more business.
- Greater UK investment results in a positive impact on the UK’s GVA.

We quantify the impact of the BBC's stability of funding on indies by considering the following two aspects:

- impact on international competitiveness - the impact on the ability of indies to attract international investment into the UK; and
- impact on level of UK commissions beyond quotas – the impact on UK broadcasters' investment with indies above the UK originations quotas, a share of which may otherwise be diverted to non-UK spend.

Impact on international competitiveness

We have estimated the share of overseas commissions with UK indies and associated revenues that would be foregone in the absence of a licence fee funded model for the BBC, as is the case in the Counterfactual.

Primary UK commissions and associated revenues constitute the large majority of the indie sector revenues – 83% in 2008/09⁵⁶. It is therefore reasonable to assume that without UK commissions, the UK indie sector would not exist in anything like its current form and that overseas investment would not be attracted to the same extent, if at all.

Therefore, we assume initially that the BBC and other UK broadcasters contribute to sustaining indie sector overseas investment in proportion of their shares of UK commissions. We have then assumed that the BBC contributes to overseas investment more than indicated by its share of UK commissions, due to the stability of funding that it brings to the sector and the resulting lower cost of capital. Our approach is based on first determining the difference in the WACC between a licence-fee funded business and an advertising funded business.

We have estimated this difference in WACC by considering⁵⁷:

- The equity beta⁵⁸ of a fully advertising funded business; and
- The 'hypothetical equity beta' of a licence fee funded business derived from the relative volatility of the licence fee and advertising revenues⁵⁹.

⁵⁶ PACT policy survey and financial census 2009

⁵⁷ The cost of capital is calculated as $WACC = R_e W_e + (1-t) R_d W_d$
where

R_e = cost of equity capital, R_d = pre-tax cost of debt capital, W_e = weight of equity capital (equity/(debt + equity)); and W_d
= weight of debt capital (debt/(debt + equity)) and t = corporate tax rate

⁵⁸ The beta reflects the systematic risk attached to the returns on equity. We have used an indicative equity beta of 1.13 in our analysis

⁵⁹ See CAA paper :Cost of capital – estimating separate costs of capital for Heathrow and Gatwick
<http://www.caa.co.uk/docs/5/ergdocs/airportsdec06/sp13.pdf>

We have then calculated the differential cost of capital of a hypothetical licence fee funded business and an advertising funded business. We have kept other variables that impact on the cost of capital (such as risk free rate, gearing, tax rate) constant between both scenarios in order to reflect only the impact of the funding model on the WACC.⁶⁰

Consideration of the cost of equity associated with an illustrative fully advertising funded business and that associated with a fully licence fee funded business in the way indicated above suggests that the difference in the cost of equity might be around 300 basis points. This implies that the cost of capital of the indie sector might be some 15% to 20% lower than it would otherwise be the case in the absence of the licence fee, depending on the relative proportions of equity and debt used to finance indie activities.

We have then attributed to the BBC a share of indie sector revenues from international commissions (including rights income) to reflect the contribution from stability of funding. We have done so by calculating the higher BBC contribution to overseas investment as a result of stability of funding. We have used the difference in the cost of capital between a licence-fee funded and advertising funded business as the basis for determining the higher BBC contribution. We have accordingly uplifted the difference between the contribution indicated by the BBC's share of UK spend and the BBC's contribution by the estimated differential in the cost of capital. This indicates that the BBC supports an additional £18m of investment as a result of the stability of funding it provides to the sector.

International income (primary international commissions, international rights, other international and pre-production) amounted to £323m in 2008/09⁶¹. The estimated £18m of support that the BBC provides as a result of the stability of funding it provides to the sector represents nearly 6% of that investment.

In the Counterfactual, with the BBC being advertising funded, this spillover impact of the BBC's stability of funding would not exist. The indie sector would be smaller than estimated in the previous section by an additional £18m.

Impact on UK commissions beyond quotas

As a result of decreasing indie competitiveness, UK broadcasters may substitute UK commissions from UK indies with international acquisitions or commissioning of content in other countries. The extent to which broadcasters would be able to substitute away from indie commissioning will differ between PSB and non-PSB channels. Under the 2003 Communications Act, public service channels are required to meet "original production" quotas, which specify the proportion of programme output which must be commissioned from indies or the broadcaster's own in-house production facilities. Quotas include both first-run originations and repeats. These quotas limit the ability of PSB broadcasters to reduce UK originations.

⁶⁰ See CAA paper :Cost of capital – estimating separate costs of capital for Heathrow and Gatwick
<http://www.caa.co.uk/docs/5/ergdocs/airportsdec06/sp13.pdf>

⁶⁰ We have assumed a risk free rate of 4.5% gearing of approximately 50% and an effective tax rate of 28%. We have taken a long-term view of the value of the risk-free rate.

⁶¹ PACT policy survey and financial census 2009

However, all channels subject to original production quotas have historically exceeded these quotas. Figure 17 below shows broadcasters' performance against original production quotas. It also shows the additional spend on original production represented by the broadcasters' over-performance against the required quotas, assuming an average cost per hour for all originations hours. In the event of increased cost of indie productions, PSBs may choose to reduce the proportion of indie productions commissioned, reducing the current 'excess' of originations above the quotas.

We have calculated the impact of stability of funding on the 'excess' spend on UK indie commissions by UK broadcasters (above quotas) as follows:

- As outlined previously, we have estimated that the cost of equity might be some 300 basis points higher in the absence of stability of funding;
- The implications of an increase in the cost of equity can be proxied by an increase in required hypothetical payments to investors.
- For an indicative publicly listed company, we have estimated that the increase in payments to investors is equivalent to an up to 3% increase in the cost of production. We have assumed that this leads to an equivalent increase in prices.

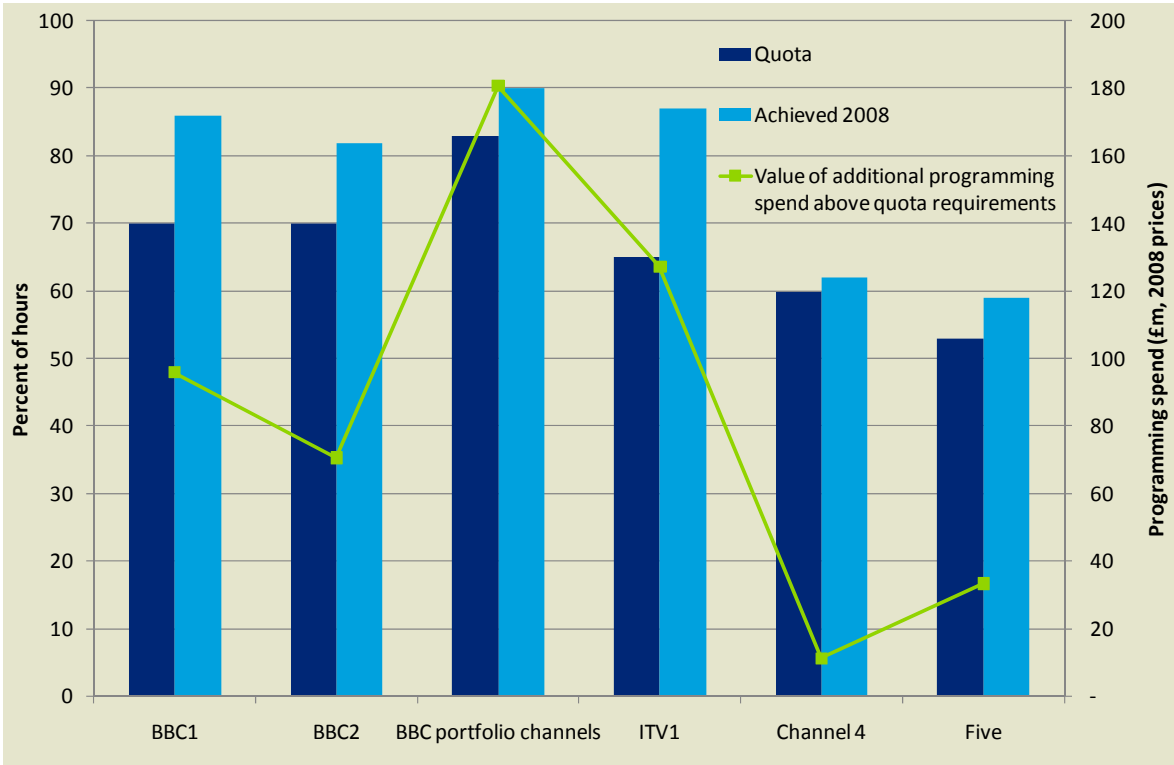
We have assumed that a 3% increase in prices results in a 3% reduction in the 'excess' of originated programmes above the quota, and that indie commissions rather than in-house commissions would be reduced⁶². We have therefore estimated that the loss of the stability of funding provided by the licence fee funded BBC would result in reduced spend by the PSBs on indies in the order of £15.5m. In practice, the potential reduction in indie spend depends on a variety of factors including the differential in UK and international price and quality of programming, as well as the differential impact of that content on advertising revenues.

We note that an increase in indie production costs might equally lead to a greater than 3% reduction in excess programmes commissioned from indies. Since PSBs are obliged to commission a certain proportion of original productions to fulfil quota requirements, increasing indie costs would also increase the costs of meeting the original production quotas. In the context of relatively fixed content budgets, this could put further pressure on additional original productions commissioned over and above the quota requirements, and lead to a larger than 3% reduction in the excess programmes commissioned from indies.

In turn, an increase in indie costs could lead to substitution away from first-run originations towards repeats, which may still result in reduced spend on indies but of a smaller magnitude, or a reduction in in-house programming.

⁶² Channel 4 and five do not have in-house production. Regarding the BBC and ITV, we have assumed that it is easier for broadcasters to reduce indie spend as it can be done on a programme by programme basis, while in order to reduce in-house spend these broadcasters would have to reduce their own cost base of staff, facilities and equipment.

Figure 17: Public service channels performance against original production quotas



Source: Ofcom

Notes: The quota for BBC portfolio channels represents a weighted average of the quota for BBC Three, BBC Four, CBBC, CBeebies, BBC News Channel and BBC Parliament.

Additional programming spend is valued using the average cost per hour of first run originated content across all PSBs

Non-PSB channels are not subject to any quota requirements on original productions. This means that an increase in indie production costs might lead to an unlimited decrease in spend on programmes commissioned from indies. According to the PACT 2009 survey, non-PSB multichannels accounted for £208m worth of primary commissions to the independent sector. Given fixed content budgets, if a 3% increase in indie production costs led to a conservative 3% decrease in content commissioned by non-PSB multichannels, then this could result in reduced commissions to indies in the order of £6m.

Table 30: Estimated impact of stability of funding on indies (2008/09)

Type of impact	Size of estimated impact
Estimated PSB spend on original productions in excess of that required by original production quotas	£518.5m
Value of a 3% reduction in PSB spend on indies	£15.5m
Value of other multichannel spend on indies	£208m
Value of a 3% reduction in other multichannel spend on indies	£6m

Source: Ofcom; PACT policy survey and financial census 2009; Deloitte analysis

6.4.3 Direct involvement with indies

Beyond the co-funding spend provided for BBC programmes, BBC Worldwide impacts upon indies in a number of other ways. One such impact is the direct funding of non-BBC content. The number of indies receiving funding from BBC Worldwide for non-BBC programmes has increased steadily over recent years, with in the order of 30 indies receiving funding from BBC WW in 2008/09.

BBC Worldwide also helps indies distribute both BBC and non-BBC content internationally. Various indies use BBC Worldwide as their distributor, and there is arguably a benefit for indies in their non-BBC content being sold internationally packaged with BBC content. There are different examples of BBC Worldwide offering exposure for content in key markets which later went on to be re-made locally, such as *The Office*, *Ramsay's Kitchen Nightmares*, *Life on Mars*, *Top Gear* and *Gavin and Stacey*. BBC Worldwide has observed a positive impact of opening up the US market to British entertainment formats post success of *Dancing With the Stars*.

In addition, BBC Worldwide holds stakes with a number of indies. In 2008/09 BBC Worldwide held a 25% stake in eight indies and a 15% stake in a ninth. We have not considered this to generate additional net value to the UK economy, as it is possible that other investors would have taken stakes had BBC Worldwide not done so.

6.4.4 Impact on Counterfactual multipliers

In the Counterfactual, indie sector revenues would drop significantly below 2004 levels. With significantly reduced UK revenues, it is reasonable to expect that the degree of TV supply chain linkages would also be affected. It is likely that fewer indies could be sustained in the marketplace. Deloitte analysis for 2007 suggests that the mid-tier of indies (excluding those that are part of indie groups) already experience relatively low profit margins⁶³. Since 2007, overall industry profitability has decreased further from a 9.3% average to 8.2%⁶⁴, suggesting that the situation for some indies in 2008 could be worse.

⁶³ Less than 2% average profit margins for individual company indies with revenues between £5m-£10m, and 4% average profit margins for individual company indies with revenues between £10-£20m.

⁶⁴ PACT policy survey and financial census 2009, A report by Oliver & Ohlbaum Associates Ltd for PACT

Therefore, we have adjusted the Counterfactual TV and radio multipliers to reflect an industry with medium supply chain linkages. Using the English Partnerships reference multiplier values for industries with medium versus high supply-chain linkages⁶⁵, we have re-estimated the multipliers.

Figure 18: The TV and radio multipliers in the Counterfactual

Channel	Factual Multiplier	Counterfactual Multiplier
TV	2.0	1.8
Radio	1.8	1.6

Source: Deloitte Analysis

6.5 Estimated Spillover GVA from BBC interaction with indie sector

We have estimated that £1,119m indie sector Gross Value Add would be foregone in the Counterfactual as a result of a smaller scale of funding available from UK broadcasters, foregone indie secondary revenues and loss of stability of funding. Of this estimated impact:

- £893m foregone Value Add (resulting from a loss of £446m UK commissions) is already included in our Wider Net Value Add estimates reported in Sections 4 and 5; and
- £227m foregone Value Add (resulting from a loss of indie UK secondary revenues and stability of funding in the order of £73m and £40m respectively) is incremental to our Wider NVA estimates reported in Sections 4 and 5.

In addition, the lower Counterfactual TV multiplier resulting from less complex TV supply chain linkages would further reduce the GVA in the Counterfactual by an additional £314m:

- £208m Value Add would be foregone on remaining UK commissions. This effect is already included in our Wider Net Value Add estimates reported in Sections 4 and 5; and
- £106m Value Add would be foregone on remaining UK secondary revenues and overseas investment into the UK, this effect is incremental.

Overall we have estimated that £1,433m indie sector GVA would be foregone in the Counterfactual in aggregate as a result of less UK commissions, spillover effects and lower multipliers on remaining spend. This would represent a loss of 33% of indie GVA, from an estimated total indie GVA of £4,320m (based on £2,160m indie sector revenues in 08/09⁶⁶).

⁶⁵ English Partnerships Additionality Guide(2008)

⁶⁶ PACT policy survey and financial census 2009, p7

7 Part II: the economic impact of BBC clusters in the creative sector

7.1 Summary

Clusters are geographic concentrations of interconnected firms and other organisations in a particular sector. Organisations in a cluster benefit from easier and cheaper communication and trade with each other, with their customers and with potential employees. Clusters bring particular benefits to the creative sector, in terms of innovations to products and business models.

The BBC's presence is generally recognised as having been critical to the formation of creative sector clusters in Bristol, Cardiff and Glasgow, and the commitment to move nearly 2,500 staff to Salford will create another significant media cluster in the UK after London.

We define a Counterfactual scenario in which, for the purposes of our analysis, the BBC is assumed to move all its employees out of Bristol and Cardiff and reduce its presence in Glasgow to levels consistent with its public service responsibilities in a "typical" region. We assume that this has knock-on effects on non-BBC creative sector employment in each city. We have based our estimates of the impact of the BBC on clusters on a recent empirical study which finds that cluster effects are present (but small) in the UK creative sector and that a doubling of the size of the cluster would increase productivity of firms in that cluster by 3.5%.

Overall, we estimate that the BBC's presence in these clusters generates higher employment (3,457 in Glasgow, 1,684 in Bristol and 1,763 in Cardiff) compared to the Counterfactual. This is equivalent to 0.8%, 0.5% and 0.6% of GVA in each city-region respectively.

We then use the results from the study mentioned above to estimate the reduction in productivity of the creative sector firms remaining in each of the three city-regions in the counterfactual scenario once the BBC is assumed to have left. These estimated impacts are small in GVA terms.

Our Counterfactual for this section assumes no change in overall BBC and wider creative sector employment, in order to isolate the impact of clusters. As a result, and due to the fact we assume all the jobs migrate to London, which is already a large cluster, there is a small net increase in direct GVA (of around £7m) in the Counterfactual compared to the Factual.

However, this does not necessarily imply that the UK would be 'better off' if all BBC employment was concentrated in London. Our estimates do not allow for any (regional) distributional weighting. As the government has an explicit target to reduce disparities in regional economic performance, it could be argued that a job or pound of GVA in less prosperous areas is "worth" more to society than an equivalent job in a more prosperous area. And our estimates do not attempt to value the cultural and social benefits – e.g. better reflecting society - of the BBC producing content outside London.

7.2 The economic impact of clusters

The potential positive externalities associated with clusters⁶⁷ have long been recognised.⁶⁸ Clusters make it easier and cheaper for firms to communicate and trade with their customers and their suppliers. Sector-specific infrastructure investment can be undertaken more easily. The opportunity for easier and more substantial networks between employees and employers across the sector allows for knowledge spillovers, more rapid innovation and technological take-up. Finally, the combination of these effects will lower barriers to entry, attract foreign companies and result in a deeper and more specialised labour pool. These factors can provide static productivity benefits to the members of the cluster as well as longer term dynamic benefits in terms of higher economic growth more generally.

Most importantly in the context of assessing the economic impact of the BBC, clusters have been argued to bring particular benefits for creative sector companies.⁶⁹ A recent report by NESTA⁷⁰ found a number of specific innovations that can be observed in clusters which incorporate independent producers:

- innovative business models, including new approaches to risk and reward sharing and a focus on content which can be appropriate for international distribution;
- product innovations, such as multi-platform content repackaging and associated internet-specific content; and
- organisational innovations such as outsourcing of simple and routine functions, whilst individual firms can become more specialised in technologically demanding and creative aspects.

A recent study by Overman et al (2009) provides robust estimates of the impact of cluster effects, distinct from other impacts, on the productivity of UK firms in 24 sectors. In this section we use some of the key results from this study, applied to the Factual and Counterfactual scenarios, to quantify the impact of cluster effects in the creative sector. We also consider the part the BBC has played in creating various creative sector clusters in the UK.

7.3 Creative sector clusters in the UK

We have focussed on four creative sector clusters in the UK with which the BBC is closely associated.

⁶⁷ Porter (1990) defines clusters as "...geographic concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries, and associated organisations (such as universities, standard agencies, trade associations) in a particular field linked by commonalities and complementarities. There is competition as well as cooperation."

⁶⁸ From the ideas discussed in his Principles of Economics, Alfred Marshall gave his name to "Marshallian Industrial Districts", a concept rooted in "external economies" emanating from firms locating together

⁶⁹ Staying Ahead: The Economic Performance of the UK's Creative industries, pp148

⁷⁰ Hidden Innovation in the creative industries, NESTA, pp51

Bristol

Bristol and its surrounding area had a TV and Radio sector employing 1,788 in 2007/2008, of which the BBC accounted for around 750. Stemming from the BBC's historic activities in the region, the cluster has developed specialisms in natural history and animation production.⁷¹ In 2007 the area produced 25% of world wide Natural History programming.⁷² The BBC and specifically its Natural History Unit is at the core of Bristol's cluster development. Natural history Indies in the cluster include "Zebra, Tigress, Icon, Green Umbrella, Scorer Associates, John Downer and Beeley Productions" as well as other factual indies,⁷³ are supported by smaller main facilities, sound and graphics specialists. Most of these companies are in walking distance of the BBC in Clifton.⁷⁴ Indeed, the owner of a Bristol-based firm notes that "When we looked for this office, I just put a pin in the BBC and drew 50 yards around it".⁷⁵ This concentration of production has also provided support for a specialised supply chain including underwater filming specialists and feature film composers.⁷⁶ It has also attracted a broader range of businesses that benefits from the spillovers of the skills and expertise that the cluster brings, such as ARKive, global archive of endangered species, that now partners with Google.⁷⁷ Furthermore, this is combined with substantial post-production and network infrastructure to support the production process, including a BBC Studios & Post Production facility and commercial post-production houses.⁷⁸ As one stakeholder asserts; "It is safe to say that if the NHU had not been established in the city in 1957, and survived and prospered since then, most of the other film-making activities would not exist"⁷⁹

Glasgow

The Glasgow cluster encompasses Channel 4 and Scottish Television as well as the BBC.⁸⁰ Glasgow is the BBC's national Head Office for Scotland, Network and national television services, interactive services, and the BBC Scottish Symphony Orchestra. Despite the fact that Pacific Quay only opened in 2007 we find that media companies such as SMG and Galaxy Scotland are located there. These support a number of indies⁸¹ located in the Glasgow area. Furthermore, these

⁷¹ The BBC's animation unit has since gone, but Ardman Animation has helped consolidate the cluster; for example there is Bolex Brother and A Productions. In total there are 21 animation/CGI companies in total in the region.

⁷² New Media Partners, 2009, Mapping of the digital media sector in the West of England Sub-region, p17

⁷³ These include: RDF West, Diverse Bristol, Available Light Productions, Endemol West, Love Productions

⁷⁴ Bassett et al. 2002, Cultural industries, cultural cluster and the city: the example of natural history film-making in Bristol , pp168

⁷⁵ Ibid, pp173

⁷⁶ Ibid , pp172

⁷⁷ New Media Partners, 2009, Mapping of the digital media sector in the West of England Sub-region, p22

⁷⁸ Such as Films at 59, Dog House, BDH Graphics

⁷⁹ Bassett et al. 2002, Cultural industries, cultural cluster and the city: the example of natural history film-making in Bristol

⁸⁰ Frontier, The Economic Impact of the BBC in the Nations and Regions, p11

⁸¹ IWC Media, Lion Scotland, Endemol Scotland, Tern TV, The Comedy Unit, Mentorn Scotland, Caledonia TV and Angel Eye

content production houses are complemented by a number of facilities providers such as Arc, M8 Media, Edit 123 and Serious.

Cardiff

From its head office in Cardiff, BBC Wales produces a wide range of content in English and Welsh across television, radio and online platforms. The BBC National Orchestra of Wales also has its home in the city.

The BBC currently employs 1,326 staff in Cardiff, out of total TV & Radio employment in Wales of 2,794⁸². A Work Foundation (2007) study found that BBC Wales had doubled its income from network production to £50m in three years, and that the production of Doctor Who in Cardiff had led to a significant increase in tourism.⁸³ BBC Wales has its own infrastructure to manage and support its content with services such as facilities management, technology, finance and marketing and communications housed in Cardiff.

Salford

Finally, the BBC’s plans to move nearly 2,500 of its staff⁸⁴ to **Salford** by 2011 will make it a key UK media hub after London.

7.4 Measuring Clusters

Clusters can be measured using a Location Quotient (“**LQ**”). This is a summary statistic that is often used to measure the level of employment of a particular sector within a particular spatial area (such as a city or region) compared to the economy as a whole. Appendix B provides more detail on the construction of LQs. Table 31 and Table 32 display 3 alternative LQ statistics for the regions and at city level. These are calculated across various dimensions. First, the relative density of BBC staff compared to TV & Radio employment, second the density of BBC staff compared to total employment and, finally, TV & Radio employment compared to total employment. The regions that contain our proposed clusters have high concentrations across all dimensions⁸⁵. When focusing down to the city-level, we find robust support for the clusters selected in our analysis.

Table 31: Regional Level Location Quotients (2007)

⁸² BBC and ONS respectively

⁸³ Work Foundation (2007), Staying Ahead – the Economic Performance of the UK’s Creative Industries

⁸⁴ Including children’s TV, Sport, Radio 5 live, and part of the Future Media and Technology team

⁸⁵ This includes London, South West (for Bristol), Wales and Scotland

Region	LQ (BBC vs TV)	LQ (BBC vs Total)	LQ (TV vs Total UK)
North East	1.26	0.37	0.29
North West	0.79	0.37	0.46
Yorkshire and The Humber	0.88	0.29	0.34
East Midlands	0.83	0.21	0.25
West Midlands	1.24	0.47	0.38
East of England	0.81	0.22	0.27
London	1.03	3.77	3.65
South East	0.52	0.20	0.38
South West	1.38	0.67	0.48
Wales	1.94	1.99	1.02
Scotland	0.58	0.93	1.59
Northern Ireland	1.94	1.42	0.73
Great Britain	1.00	1.00	1.00

Source: ONS, BBC & Deloitte analysis

Table 32: City Level Location Quotients (2007)

Cities	LQ (BBC vs TV)	LQ (BBC vs Total)	LQ (TV vs Total UK)
Manchester	1.26	3.58	2.84
Bristol, City of	2.68	5.66	2.11
Cardiff	3.03	12.16	4.01
Glasgow City	1.95	4.20	2.15

Source: ONS, BBC & Deloitte analysis

7.5 Quantifying the effects of BBC-driven clusters

Our approach to quantifying the effects of BBC-driven clusters is as follows:

- First, we define a Counterfactual scenario in which the BBC moves employees out of Bristol, Cardiff and Glasgow and into London. Overall BBC employment in this Counterfactual scenario is the same as the Factual, in order to isolate the impact of cluster effects.
- Second, we estimate the direct employment and GVA impacts on Bristol, Cardiff and Glasgow as a result of BBC staff being moved to London.
- Third, we use a coefficient from Overman et al (2009) to estimate the impact of smaller creative sector clusters in Bristol, Cardiff and Glasgow on the productivity of creative sector firms remaining in those clusters. We combine the direct employment and GVA impacts with the productivity effects to estimate the overall impacts on each of these three city-regions.

- Finally, we estimate the increase in employment and GVA and the productivity of creative sector firms in London resulting from the larger London cluster, to estimate the net impact on the UK creative sector.

7.5.1 Counterfactual clustering

We assume for the purpose of our analysis that the Counterfactual BBC would remove its presence in Bristol and Cardiff but would still maintain staffing in Glasgow as part of its public service responsibilities. We use the average number of employees per head of population in both the West Midlands and Yorkshire & Humber to represent a 'normal' service provision of local content across TV, Radio and Online media in Glasgow. This equates to one BBC employee for every 9,353 people in the region. This is then scaled by the population to generate the Counterfactual baseline of BBC staff in Glasgow. The net of these two figures generates the number of BBC staff who move to London.⁸⁶

We also need to make assumptions about the proportion of non-BBC staff who would follow the movement of BBC staff to London in the Counterfactual. Based on our understanding of the type of BBC and non-BBC activities in each of the three clusters, we have assumed that the large majority of non-BBC staff would (eventually) relocate from Bristol and Cardiff (90% and 80% respectively). For Glasgow, we assume that 60% of non-BBC staff would relocate to London, reflecting the retained BBC presence in Glasgow.

7.5.2 Measuring the impact of clusters on productivity

Methodology

There is little empirical evidence on the quantitative importance of clusters to productivity, for the creative or indeed any other sector. In part, this is because the benefits of clusters build up gradually over a long period of time; it is also difficult to assess what would have happened to the economic structure of a region or city in the absence of a cluster forming. A recent study for the Manchester Independent Economic Review, Overman et al (2009), is the first attempt that we are aware of to quantify the impact of cluster effects on firm productivity using UK data.⁸⁷ The study uses data on individual firms from the ONS Annual Census of Production between 1997 and 2004, covering 285,000 observations across 24 sectors. The paper then explains firm level productivity in terms of levels of labour and capital inputs, skills levels, access to key transport infrastructure and the degree of urbanisation, as well as cluster (or localisation externality) effects.⁸⁸ In common with the handful of previous estimates of cluster effects, Overman et al (2009) find there are distinct

⁸⁶ We note that this implies no change in total BBC staff in the counterfactual, which is not consistent with the counterfactual assumed elsewhere in this report. But we make this assumption to isolate cluster effects holding total employment levels constant, rather than conflate the two effects.

⁸⁷ A recent review of the literature, Graham (2008), finds only a handful of studies and none specifically estimated using UK data; these suggest that cluster effects can be identified, but are small: a doubling of the size of the cluster increases the productivity of the firms in the cluster by between 3% and 19%.

⁸⁸ It is important to distinguish between urbanisation externalities, which reflect the benefits of locating in or near a large city, and localisation or cluster externalities, which accrue as a result of being near to other firms in the same sector. See Beaudry and Schiffauerova (2009) "Who's right, Marshall or Jacobs? The localisation versus urbanisation debate"

cluster effects on productivity, but these are small. More specifically, the paper concludes that the creative sector is one of only seven of the 24 sectors with a statistically significant cluster effect, but only of the order of 0.035. This implies that a doubling of the size of the cluster would increase the productivity of the firms in the cluster by just 3.5%.

Data

We have used data provided by the BBC on its current employment at the regional and city-level. We have also used data from the 2002 and 2007 ONS Annual Business Inquiry, focusing on SIC(03) 92.2 Radio and Television Activities.⁸⁹ We were unable to use the firm-level productivity data used in Overman et al (2009) since the ONS attach strict confidentiality requirements to data at this level of detail. Instead, we proxy productivity by GVA per worker. This is generated from estimates of GVA provided in the Annual Business Inquiry, which measure direct GVA⁹⁰, divided by total number of employees in the SIC92.2 category. At the UK aggregate level, this implies GVA per employee in the creative sector of approximately £30,000 per annum.

We were also not able to estimate the “cluster index” variable used in Overman et al (2009) for the Counterfactual. This requires specific assumptions about the geographical location of all firms which move in the counterfactual scenario, which is beyond the scope of this study. We therefore proxy the change in the cluster index with the percentage change in employment in the TV & Radio sector.

7.6 Results

We, first, present the impact on employment of the reduced clustering in the Counterfactual. The change in employment has a direct impact on local GVA and a consequential impact on the productivity of the remaining cluster due to its reduced size. This is shown in Table 33. These results suggest that the BBC reducing its presence in Glasgow, Cardiff and Bristol would have a significant impact on the employment and GVA in those areas. However the impacts on productivity resulting from the re-location of BBC and other creative sector staff are small. We note that the increase in productivity of firms in the London cluster more than offsets the reduction in productivity in the declining clusters, though the net effect is small.

In practice, the assumed reductions in employment and productivity would take several years to unfold, since firms would only gradually relocate following the movement of BBC staff and operations. This highlights the difficulties of precisely quantifying cluster and other spatial effects, since location decisions play out over many years and it becomes difficult to isolate the impact of one factor separately from many other changing circumstances. This dynamic component also highlights the fact that given Glasgow and Cardiff are relatively new clusters the productivity and supply-chain benefits may not have been captured in the 2003/04 multipliers.

⁸⁹ This data was extracted at the UK NUTS2 geocode level, which corresponds to a sub-regional level. We also had city-level data on Manchester, Glasgow, Cardiff and Bristol.

⁹⁰ ONS (2008). GVA reported by the ONS represents the income generated by the business, industry or sector less their intermediate consumption of goods and services used up in order to produce their output. It represents ‘direct GVA’ in the sense described in Section 0 and excludes indirect and induced impacts.

Table 33: Cluster Effects

Cluster	Total change in area employment	Change in GVA due to Staff Movement £m	Change in GVA due to Productivity £m	Total change in area GVA	
				£m	As % of area GVA
Glasgow	-3,457	-104	-1.5	-105	-0.75%
Bristol	-1,684	-50	-0.1	-51	-0.49%
Cardiff	-1,763	-53	-0.3	-53	-0.60%
London	6,904	207	8.5	215	0.11%
Net UK	0	0	6.6	7	

Source: Deloitte analysis

Our estimates do not allow for any (regional) ‘distributional weighting’. This would apply to the extent that an extra job or pound of GVA generated was ‘worth’ more in relatively deprived areas than in prosperous areas. The UK government has an explicit objective to raise the productivity and employment of under-performing regions, and the BBC’s presence outside the Greater South East contributes to that objective. This is partly through its positive impact on creative clusters, but also on the productivity of the host cities more generally.⁹¹ In addition, of course, the BBC’s presence in the regions provides social and cultural benefits beyond the purely economic. Consequently the proportionate impact of the BBC on a region may be more than is suggested by our analysis and presented below.

Finally, we note that the productivity effects due to clusters are partially captured in our GVA estimates. The impact of clusters on the productivity of the BBC’s own staff, and on the productivity associated with activity in the sector resulting from BBC spend with its supply chain should be reflected in the multiplier estimates used to calculate the BBC’s overall GVA impact.

Some part of the sector’s value added in respect of non-BBC driven activity is due to cluster effects, and some part of that is due to the BBC’s location and investment decisions (over a long period of time). We estimate the proportion of the productivity and employment impact from clusters on non-BBC activity which is incremental to the estimates of the BBC’s overall GVA impact by using the relative size of the BBC compared to the wider broadcasting sector.

⁹¹ In particular, Florida (1992) and others argue that the ‘creative class’ generates a more innovative and creative environment for all to live in. This in turn attracts more creative and productive workers to an area, raising the productivity and prosperity of the city and its hinterland.

8 Part II: the economic impact of training spillovers

8.1 Summary

The BBC spent nearly £45m on training in 2008/09, which is substantially more than ITV and Channel 4. The cumulative impact of current and past BBC training on the productivity of the sector is likely to be significant. BBC training increases the productivity of its own staff, and raises the productivity of staff in the rest of the sector through BBC training of non-BBC creative sector workers, and as a result of BBC-trained staff moving from the BBC.

To quantify the size of these impacts, we first estimate the proportion of staff in the creative sector that would receive training in the Counterfactual scenario. We assume that the BBC in the Counterfactual would reduce its training spend-per-employee to average ITV levels. We compare the training “rates” in the Factual and Counterfactual scenarios, and apply a “training impact” coefficient to the difference between these training rates. This coefficient is taken from a recent study of the effect of training on the productivity of UK firms.

Our counterfactual assumptions include a reduction in BBC training spend from £44.4m to £5.7m a year. ITV’s training spend would also fall, based on the £6m figure for ITV training reported in PwC (2008), we assume that this would fall, to £4.2m in our Counterfactual. Combining these figures with our central estimate of the training impact coefficient of 0.73 implies that sector productivity would be £59m a year lower in the Counterfactual.

We present variants around this central estimate, allowing for a lower ITV training budget in the Factual (since the £6m figure is not based on audited figures and may be an over-estimate) and for a higher and lower training impact coefficient. This gives us a range of £38m-£73m a year for the impact of BBC training on sector productivity.

Finally, we note that these are likely to be conservative estimates, for two reasons. First, the training impact coefficient is derived from a study across all UK industrial sectors, and it is likely that the impact of training in a high value-add sector such as creative and media will be greater than average. Second, the training impact coefficient measures the effect of marginal changes in training rates, whereas the reduction implied in our counterfactual scenario is very large. Such a step change could have disproportionately adverse effects in terms of the capacity of the UK creative sector, especially over the long term.

8.2 The scale of BBC’s training expenditure and activities

The BBC is required to meet specific obligations for the training and development of its staff and the wider creative sector. The BBC spent a training budget of £44.4m in 2008/09, which was substantially greater than the training spend of ITV and Channel 4. Key BBC training activities in 2008/09 included the following.

- **Training of in-house staff:** The BBC provides around 52,000 days of face-to-face training to around 16,000 staff members and completion of more than 130,000 on-line learning modules.

- **Training to non-BBC staff in the creative sector:** The BBC provides around 5,000 days of face-to-face training to around 1900 delegates.
- **Partnerships with other industry bodies:** The BBC contributed £830,000 to Skillset, the sector skills council for creative media, and worked closely with the Broadcast Journalism Training Council, a number of universities and various community partnerships.

These training activities are likely to have significant positive effects on the productivity of the BBC's own staff and on the productivity of other staff in the wider creative sector. The productivity of the wider sector is also boosted by BBC-trained staff moving from the BBC to other parts of the creative sector.

The aim of this section is to provide some quantitative estimates of the impact of the BBC's training activities on the productivity of the creative sector. To do this we use an estimate from a recent econometric study of the effect of training activity in explaining overall sector productivity across a large panel data set of UK firms. We also consider the extent to which the overall training impact is incorporated in our estimates of GVA impact.

8.3 Quantifying the effects of BBC training

Our approach to quantifying the productivity impacts of the BBC's training activities is the following.

- First, we estimate the difference in the proportion of the creative sector workforce that received training in 2008/09 and that which we have estimated would receive training in the Counterfactual scenario. In the Counterfactual it is assumed that there would be fewer employees in both the BBC and the wider creative sector, and the training expenditure per employee would be lower, using estimated current ITV expenditure as a proxy. More specifically, the lower levels of training in the Counterfactual reflect:
 - less BBC training of its own staff;
 - less BBC training of non-BBC creative sector workers; and
 - fewer BBC-trained people moving into the non-BBC creative sector.
- Second, we take the difference in training levels (between the actual 2008/09 amount and the estimated amount in the counterfactual scenario) and apply to it a coefficient, derived from a recent empirical study, which identifies the change in productivity per worker (across the sector), given a change in the proportion of the sector workforce receiving training.
- Third, we multiply the change in productivity per worker by the number of workers in the sector to estimate the difference in sector productivity in the counterfactual compared to actual GVA of the sector.

8.3.1 Counterfactual

Our key assumption is that the BBC's overall training activities in the Counterfactual will mirror the level of training currently conducted by ITV, which we take to be representative of training activity in

the wider non-BBC creative sector.⁹² We estimate, for the Counterfactual, the amount of training-per-employee at ITV and the total number of creative sector employees (at the BBC and elsewhere). Overall in the Counterfactual, there will be fewer staff to train in the sector, and of these staff a lower proportion will be trained. We assume that 30% of the training currently provided by the BBC non-BBC staff no longer happens in the Counterfactual.⁹³ Finally, we assume no reduction in the quality of training in the counterfactual compared to the current quality of training.

8.3.2 The impact of training on productivity

Methodology

The source of our “training-productivity” coefficient is Dearden et al (2005), a recent paper that explicitly estimates the impact of levels of training on productivity in UK industries.⁹⁴ The main finding from the study is that a one percentage point change in training activity⁹⁵ is associated with a change in productivity of about 0.73%, holding all other things constant, across both manufacturing and service sector firms. This is used as our central estimate of the productivity effect of changes in training activity. As variants around this central case we use:

- a coefficient of 0.6%, which is the value estimated in Dearden et al (2005) when using data from manufacturing firms only and
- a coefficient of 0.8%, which is coefficient for (only) service sector firms which is implied by the other two coefficient values, given the relative weights of the manufacturing and service sectors in the UK economy.

⁹² In the absence of data from ITV on its training activity, we use a figure quoted in the PwC report plus some variants. See Section 7.3 below.

⁹³ This may be because the cost of providing some highly specialised schemes may only be commercially viable when the existing facilities and economies (that the BBC has) can be deployed.

⁹⁴ While there is a large literature estimating the effects of training on employee wage levels, there are few studies of the impact of training on productivity. The usual assumption is that workers are paid their marginal product, and therefore wages equate to productivity. But that relationship can break down for many reasons. For example, if there is monopsony power on the part of the employer then employees will be paid less than their marginal product. Dearden et al (2005) is one of the few studies which quantifies the impact of training on productivity. Another advantage of this paper is that it uses a panel of data on UK firms that extends over 14 years, and so observes changes over time in aggregate training and productivity levels, but also tracks changes in productivity and training at the level of individual firms. The study therefore controls for unobserved “fixed” (i.e. time-invariant) firm-specific effects.

⁹⁵ Measured by the proportion of the workforce receiving training in the last four weeks, as recorded in the UK Labour Force Survey

To estimate the reduction in productivity in the Counterfactual as a result of lower training activity we need to calculate the 'training rate', on a similar basis to that used in Dearden et al (2005), in the Factual and Counterfactual scenarios. Accordingly our analysis incorporates assumptions on the reduction in the training provided to non-BBC staff and the reduction in the trained human capital being transferred from the BBC to non-BBC competitors.

Data

We have used data provided by the BBC on its current levels of training provision and retention rates. For ITV, we use the ITV 2009 Annual Report for the number of employees, and a range of indicative training budgets; namely £1m, £3m and £6m per annum.⁹⁶ Data from the ONS's Annual Business Inquiry Survey is also used, to calculate the impact of changes in the proportions of trained staff that make up TV and Radio employment.

8.4 Results

Impact on training expenditure

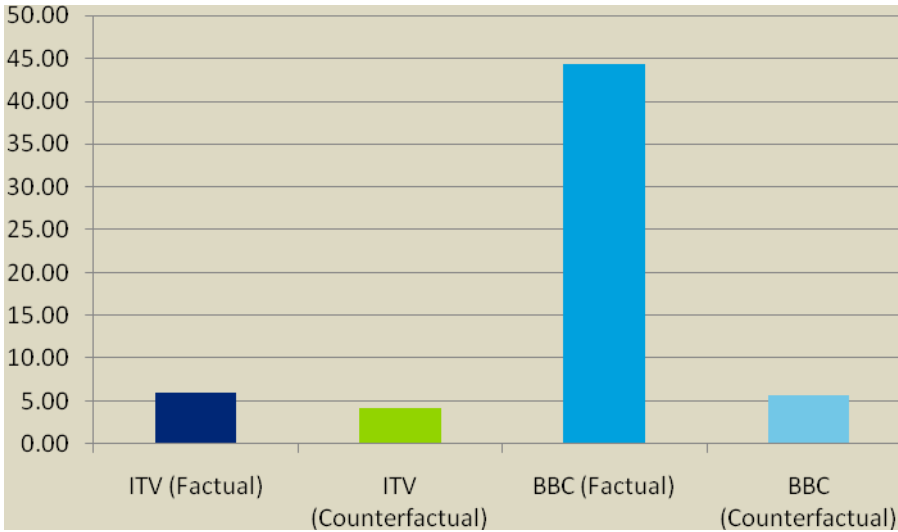
In the Counterfactual scenario the training budget of the Counterfactual BBC is reduced to £5.7m, and ITV's training budget falls from £6m to £4.2m. This reflects significantly lower employment levels and training budgets in the Counterfactual.⁹⁷ Using our assumption about the cost of training, this budget implies that around 2,033 BBC staff are trained per year in the counterfactual.⁹⁸ This compares to the 15,743 that the BBC trained in 2008/09. With 13,710 fewer trained staff per year, there are potentially broader issues regarding shortages of sufficiently skilled staff within the industry in key areas. To capture this impact we would need to assess long term growth and decline of particular aspects of the sector, variations in projected sector wide demands for specific skills and the subsequent response by all stakeholders. This is beyond the scope of this assessment. However, the implication is that our estimates are likely to understate the longer term adverse impacts of lower training in the counterfactual scenario.

⁹⁶ The PwC report quoted an ITV spend on overall training of £6m in 2006/07. The PwC report notes that the ITV training spend figure is not directly comparable to the BBC training expenditure figure, and is likely to overestimate the amount of training at ITV. This is particularly relevant in light of the current difficulties the broadcasting sector is facing. For instance, in January 2009, ITV withdrew its entire funding support of £270,000 for the National Film and Television School. All other commercial broadcasters reduced their support for the fund, with only the BBC maintaining its existing level of funding.

⁹⁷ We assume the cost of training per employee is the same for ITV as for the BBC in the Factual scenario. Hence the lower training budget in the Counterfactual is assumed to translate into fewer training "episodes" at current levels of quality, rather than maintaining the number of training episodes by reducing quality or intensity.

⁹⁸ This assumes that the staff that are trained receive on average the same number of training "events" as in the factual scenario (2.6 training events per year).

Figure 19: Training Budgets in Factual and Counterfactual Scenarios, £'s millions



Source: Deloitte analysis

Impact on productivity

In Table 34 we present estimates of the impact on productivity for three alternative assumptions about the level of ITV training expenditure in the Factual scenario. With annual ITV training spend of £6m, sector productivity is estimated to be lower by around £38m a year; this increases as the assumed level of ITV training spend in the Factual scenario is assumed to be lower. The table also shows how the total productivity impact can be apportioned between four different effects: the reduction in BBC training of its own staff, BBC training of non-BBC employees, fewer BBC staff moving to the rest of the sector, and lower training in the non-BBC sector.

Table 34: Effect on sector productivity (assuming central estimate of training-impact coefficient) £'s million (2008/09)

	Assumed ITV Training Expenditure		
	£6m	£3m	£1m
Lower BBC training of own staff	20	7	3
Fewer staff trained in the rest of the sector	8	36	48
Lower non-BBC training	8	12	16
Fewer BBC-trained staff moving	3	4	6
Total	38	59	73

Source: ONS, BBC & Deloitte analysis

Table 35: Effect on sector productivity (varying training-impact coefficient and ITV factual training budget) £'s million (2008/09)

Elasticity Coefficient	ITV Factual Training Expenditure (in Factual Scenario)		
	£6m	£3m	£1m
Manufacturing only (0.60)	31	49	60
Manufacturing & Services (0.73)	38	59	73
Estimated Services (0.78)	41	64	79

Source: ONS, BBC & Deloitte analysis

These estimated impacts will be largely included in the GVA estimate. The impact of BBC training activity on the productivity of BBC employees is included in the measured value add of the BBC. The productivity impact on the rest of the sector (via BBC-provided training, the movement of BBC-trained staff and the reduction in non-BBC training budgets) can be divided between the impact on activity created by the BBC's spend with its supply chain, which is also included in our GVA estimate, and the impact on other sector activity, which will be incremental to our GVA estimate. As in the Cluster chapter, we proxy this split using the ratio of BBC expenditure (£4bn) to total sector turnover (£12bn). Using the mid-point estimate of ITV training budget, and the 0.73 coefficient, implies an incremental impact of £16m out of a total estimated training impact of £59m.

We conclude by noting that our estimates of the impact of BBC training on sector productivity are likely to be conservative, for two reasons. First, even the "service sector only" training-impact coefficient may underestimate the impact of BBC training on productivity, because it is likely that the impact of training in a high value-add sector such as the creative industries will exceed the impact of training averaged across all service sector industries. Second, the training-impact coefficient measures the effect of relatively small changes in training activity, whereas the reduction implied by our counterfactual scenario is very large in scale and may therefore have more adverse effects over the longer term.

9 Part II: Opening up new digital markets

9.1 Summary

The BBC's remit includes "to deliver to the public the benefit of emerging communications technologies and services and, in addition, taking a leading role in the switchover to digital television".⁹⁹ Consequently the BBC plays an important role in developing digital markets.

In this section, we consider the BBC's contribution to the developments of digital market in the UK by focussing on Freeview, the collection of free to air services on the Digital Terrestrial Television ("DTT") platform, and Video-on-demand ("VoD") services delivered through bbc.co.uk and iPlayer.

We provide a partial estimate of the economic impact that the BBC has generated from opening up new digital markets by estimating the BBC's contribution to accelerating digital switchover. We find that, for financial year 2008/09, the spillover effects from the BBC's contribution to accelerating DSO can be estimated to be in the range of £94.8m to £262.6m. We also note that, if we assume that DSO is postponed to 2014 instead of 2016, such benefits would be in the range of £51.8m-£133.5m.

9.2 The BBC's contribution to opening up new digital markets

The BBC has promoted the opening up of digital markets in the UK through numerous initiatives, including:

9.2.1 Freeview

The BBC has played a key part in setting up and supporting Freeview, the platform that operates DTT services in the UK. Freeview was created in 2002, following the termination of ITV Digital¹⁰⁰, when the Independent Television Commission decided to re-auction the licenses for the three multiplexes (MUX B, C and D) that had been used by ITV Digital.

Freeview was established by the BBC as a joint-venture, Digital Television Services Ltd, between the BBC, Crown Castle and BSkyB. In August 2002 the licenses were granted to members of the Freeview consortium, with BBC obtaining multiplex B and Crown Castle obtaining multiplexes C and D. The BBC contributed directly in organising the bid, in particular gathering support from Crown and Castle, which had invested in upgrading the multiplex structure, and from Sky.

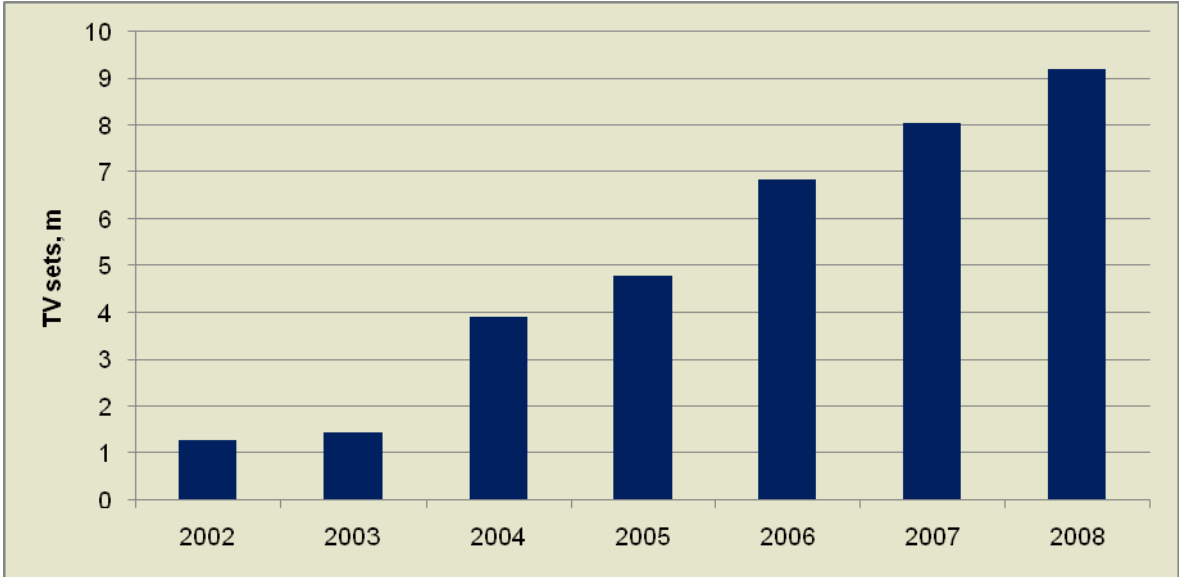
In line with its objective to promote digital technologies, the BBC developed a new market proposition for Freeview, which was centred on the provision of additional free TV channels. A successful promotion campaign, developed by the BBC, clearly illustrated how viewers could receive access to a variety of new television and radio services for free. The message proved

⁹⁹ Royal Charter for the continuance of the British Broadcasting Corporation, The Public purposes (f)

¹⁰⁰ ITV Digital was a digital terrestrial television broadcaster, which launched pay-TV services on a digital terrestrial television network (Ondigital) in 1998 and briefly re-branded as ITV Digital in July 2001, before the service ceased in May 2002. Its main shareholders were Carlton Communications plc and Granada plc.

successful and the Freeview platform grew significantly, in particular from 2004, as illustrated in Figure 20.

Figure 20: Number of TV sets with access to Freeview



Source: Ofcom, BBC

This rapid growth prompted other broadcasters to join the platform and, in October 2009, Freeview offered 50 TV channels and 24 radio stations, all with no subscription fee.

Contribution to commercial revenues

The increased availability of Freeview services to viewers has increased revenue opportunities for other channels (such as ITV and Channel 4 through non PSB channels such as ITV2/3, E4 and Film4). However, for the purposes of our study, we note that the extra advertising revenue generated by channels on Freeview may be considered to be diverted from other resources, and we have not considered this benefit for the purpose of our overall economic impact analysis.

Digital penetration

The marked increase in take up of Freeview over the last five years has been considered a key element in the proliferation and take up of digital technologies in the UK. In particular, the success and proliferation of Freeview has contributed to educate viewers to digital television, thus reducing disruptions related to the digital switchover which is currently in process. The BBC's investment in its digital channels and their promotion has contributed to increased consumer interest in digital services and has reduced consumer confusion on digital technologies, promoting take up and the related economic benefits.

The central role of the BBC in the success of Freeview has been widely recognised. The National Audit Office noted that:

“..the BBC contributed significantly to the quick and successful launch. Since the launch of Freeview, takeup of digital terrestrial television has significantly exceeded the BBC’s projections and this has helped make progress towards digital switchover”¹⁰¹.

In addition, Ofcom commented that:

“In digital TV, the BBC’s main overall impact has been via its involvement in Freeview. By backing and cross promoting digital terrestrial TV (‘DTT’) and enhancing its offering with attractive new services, the BBC has been central to DTT’s recent success”¹⁰².

9.2.2 Video-on-demand

The BBC’s internet video services, known as the iPlayer, were launched in 2007. In December 2007, the iPlayer became available to all computer platforms (including Apple Macs and Linux), which contributed to increase service demand in 2008. In 2009 the BBC was the first broadcaster to launch HD content on a VoD platform.

The iPlayer service has proved successful and has led the way for other similar services delivered by other broadcasters. In the 2009 Communication Market Review, Ofcom reports that audience data from Nielsen Online show that in May 2009 the *iPlayer* reached nearly 15% of active UK internet users, more than double the figure 12 months previously. This was nearly five times higher than its next largest rival, the *ITV Player* (3.3%), while the reach of the remaining major catch-up TV services stood at around 1% each¹⁰³.

Ofcom further notes that the success of the iPlayer “may also reflect the resources that the BBC has devoted to developing the user experience; for instance, rolling out *iPlayer* content on games consoles and revamping the consumer interface in June 2008”¹⁰⁴.

In addition, Ofcom has noted the wider role of the BBC in opening markets such as VoD:

“We believe it is important that the BBC should take a proactive and forward-looking approach to reflect likely changes in audience behaviour and expectations. We also believe the BBC should be enabled to participate actively and fully in emerging markets... As the internet grows in importance as a medium, the public will therefore rightly expect BBC television and radio content to be made available online and on demand. There are clearly very considerable public benefits to be gained from the BBC using new technology and new media to enhance and extend existing services into new markets”¹⁰⁵.

¹⁰¹ “The BBC’s investment in Freeview, NAO review presented to the BBC Governors’ Audit Committee”, May 2004, by the Comptroller and Auditor General, and a response to the review from the BBC’s Board of Governors

¹⁰² Assessment of the Market Impact of the BBC’s New Digital TV and Radio Services, Ofcom, 13 October 2004

¹⁰³ Ofcom, Communications Market Report 2009, Section 5.2.2

¹⁰⁴ Ofcom, Communications Market Report 2009, Section 5.2.2

¹⁰⁵ Paragraph 1.10, Ofcom, BBC new on-demand proposals – Market Impact assessment, 23 January 2006

On-demand services

The BBC offers four 'on-demand' services. These comprise catch-up TV over cable, catch-up TV over the internet, 'simulcast' TV over the internet (live streaming of TV), and non-Digital Rights Management (DRM) audio downloads (podcasts). These services may have a positive economic impact through expanding nascent markets, encouraging investment in broadband infrastructure, and opening up BBC content to under-served audiences.

Markets for on-demand services are small but growing rapidly. The BBC on-demand services have a potentially significant role in expanding these markets, bringing additional content to current and new users and driving investment from commercial broadcasters competing for viewers or listeners. Ofcom estimates¹⁰⁶ that by 2011 the three video services of the BBC could account for 3 billion viewer hours, or around 3% of total UK viewing hours; the non-DRM Audio service could account for a further 0.8 billion downloaded program hours. Some of this expansion will take the form of substitution away from other media or competitors' services (for example Ofcom estimates that linear TV viewing will decrease by 20-30% by 2011) but the analysis suggests that a significant proportion of the expansion – over half in the case of non-DRM audio – is likely to represent an increase in overall UK hours. Both Ofcom and the BBC¹⁰⁷ suggest that the non-DRM audio download has the potential to make a strong contribution to the growth of the UK market for audio downloads, by enabling users to access new, storable content and encouraging listener familiarity with the download process, which in turn stimulate demand for other audio download products.

The increased volume of downloads that result from the uptake of internet on-demand services (Ofcom estimates an additional 3GB of data per month for the average broadband customer using the services) is likely to result in increased demand for higher speed broadband access, which may in turn encourage investment in the development of the UK broadband infrastructure. It is important to note, however, that increased broadband capacity itself comes at a cost, estimated by Ofcom to be in the order of £399m-£831m. Some of this cost may be mitigated by new technological solutions that reduce the incremental cost of capacity.

Finally, on-demand services have the potential to open up content to under-served audiences, in particular younger audiences. ONS figures suggest large differences between age groups in the way that media content is consumed. For example, 83% of 16-24 year olds are estimated to have accessed the internet in last three months compared to 15% of people over the age of 65. 82% of those over 65 are estimated never to have used the internet, compared to 10% of 16-24 year olds. The high usage of the internet on a regular basis by younger people suggests that internet on-demand services are an opportunity to extend the reach of BBC content to younger audiences who might otherwise be under-served.

¹⁰⁶ Ofcom Market Impact Assessment of BBC On-demand Proposals, 23rd January 2006

¹⁰⁷ BBC on-demand Public Value Assessment, January 2007

9.2.3 Digital Switchover

In addition to its role in Freeview, the BBC has played a leading role in supporting and planning the UK's switchover to digital TV. The BBC has taken part in all stages of the switchover.

- **Radio frequency planning.** BBC radio engineers form part of a number of radio spectrum groups (such as the Joint Planning Group) whose task is to re-plan the spectrum frequencies which will be used to broadcast digital TV services.
- **Executing all aspects of the switchover**, in particular through Digital UK (“**DUK**”). DUK is a not-for-profit body, formally a subsidiary of the BBC (which owns a 56% share¹⁰⁸). DUK communicates switchover to the public, works with industry to build support for the switchover programme, and co-ordinates engineering work across the UK broadcast network.
- **Consumer support**, in particular through the Digital switchover Help Scheme (“**DSHS**”). The DSHS was set up to help vulnerable consumers to switch to digital television services by offering comprehensive advice as well as technical support. The Help Scheme is run by the BBC under an agreement with the government.

These activities deliver benefits to the whole broadcasting sector, not just to the BBC, by opening up opportunities for new services and new efficient use of resources.

9.3 Estimating the impact of the BBC on digital markets

We provide a partial estimate of the BBC's contribution to the development and promotion of digital markets, by modelling the BBC's contribution to accelerating digital switchover (“**DSO**”). This has been achieved through the active role played by the BBC in delivering a successful DTT platform, Freeview.

We have modelled the development of digital television, measured specifically by the speed of the DSO, against a Counterfactual in which DSO would have happened, albeit later in time. In particular, we assume that, without Freeview, digital television take up would be slower, and this would postpone DSO and reduce the economic benefits accrued as a result of the DSO. As we discuss in more detail below, several economic impact and cost-benefit studies have sought to measure the economic impact of the DSO in terms of the Net Present Value (“**NPV**”) of economic benefits.

To determine the net impact of the BBC, we consider the NPV differential between DSO occurring in 2012 vs. 2016¹⁰⁹. We attribute to the BBC the difference between the NPV benefits of DSO taking place in 2012 as opposed to 2016 on the assumption that this differential is due to different levels of take up of digital TV with Freeview and without Freeview. Given that our overall objective is to calculate the BBC's economic impact for a single year (2008/09) we have only attributed a proportion of the overall NPV differential.

¹⁰⁸ Other shareholders are ITV, Channel 4, Five, S4C, Teletext, SDN and Arqiva.

¹⁰⁹ As calculated by the Department of Trade and Industry, “Cost Benefit Analysis of Digital Switchover”, 10 February 2005

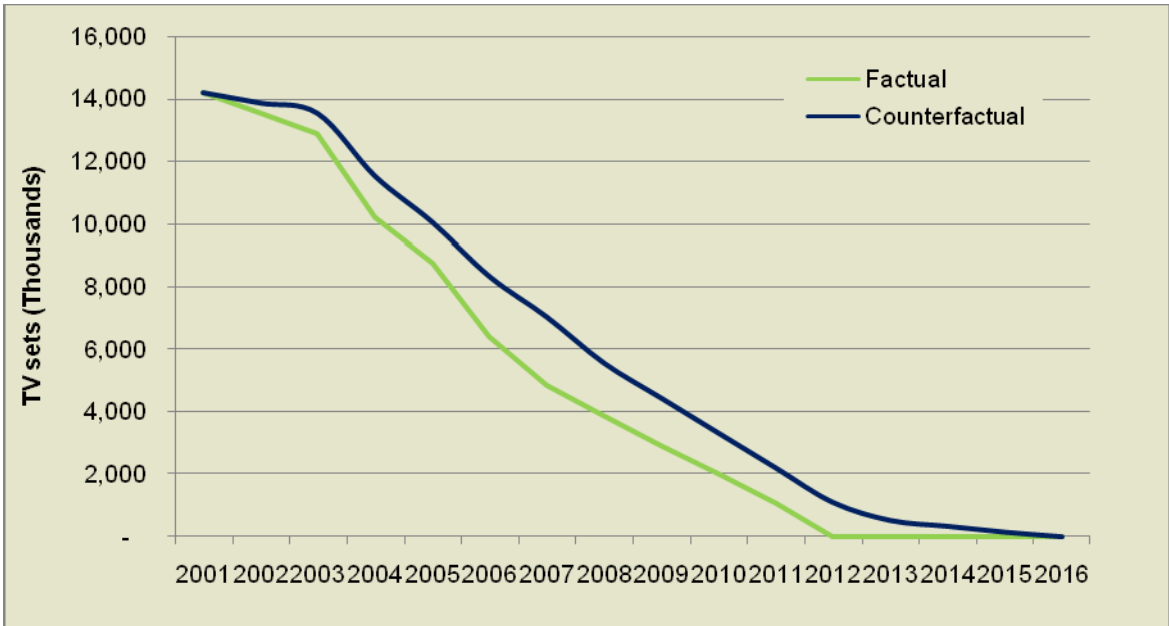
The Freeview Counterfactual

Our Freeview Counterfactual is based on the following assumptions.

- The BBC-led Freeview consortium is not awarded the DTT licence in 2001.
- The DTT licence is awarded to a weaker platform than Freeview.
- Without the BBC’s marketing and reach, and following on the problems encountered by ITV Digital, the take-up of the alternative platform is significantly slower, thus reducing the penetration of digital television in the UK.
- A weaker DTT platform provides Sky and Cable with a considerable advantage, and they extend their market share more, leaving a smaller maximum market share to be gained by a free DTT platform. Freesat is also included in our analysis and this platform experiences higher growth. However, whilst in this Counterfactual other platforms are assumed to grow faster than with Freeview, these services would not fully compensate for the take-up of digital television with Freeview.
- DSO is planned to be achieved for 2016. This assumes that the DSO date of 2012 is partly driven by the success of Freeview, which demonstrates DSO is feasible. Without Freeview, this date would need to be delayed.

Our assumptions on the differential between the analogue and digital platform penetration under the Factual and Counterfactual; scenarios are illustrated in Figure 21.

Figure 21: Analogue platform penetration



Source: Deloitte analysis

The NPV of digital switchover

A number of studies have provided measures of the impact of DSO in the UK. These studies include:

- a study carried out by the Department of Trade and Industry (“**DTI**”) and the Department of Culture, Sports and Media (“**DCMS**”), published on 10 February 2005, entitled “Cost Benefit Analysis (CBA) of Digital Switchover (“**the DTI/DCMS study**”); and
- a study carried out by Ofcom, published in December 2005 within Ofcom’s consultation entitled Digital Dividend Review¹¹⁰ (“**the Ofcom study**”).

The DTI/DCMS study

The DTI/DCMS study calculates the costs and benefits associated with the DSO process in the following way. It estimates consumer benefits (such as access to additional TV channels), consumer costs (such as set conversions), producer benefits (such as from the additional services provided) and producer costs (such as infrastructure costs, planning and operation costs). It does not include the economic benefits of providing alternative services on the freed spectrum. A key result is that the NPV of benefits of switchover decrease with every year of delay in the DSO by around £250-300m¹¹¹. It also shows that, if DSO occurs in 2012, the net benefits of DSO are £1.9bn (in 2008/09 prices).

The Ofcom study

The Ofcom study does not directly measure the impact of DSO but rather measures the value of the Digital Dividend; this is the spectrum freed as a result of the DSO. Whilst the economic benefits of this spectrum occur as a direct result of DSO, this study aims at identifying the broader impact of developing new services on such spectrum.

The Ofcom study includes an assessment of the private producer and consumer value which may be generated by the different potential uses of the spectrum and also includes an assessment of the possible magnitude of external values which may also be generated by these services. The services which Ofcom modelled in 2006 are mobile multimedia, DTT, local TV, programme making and special events (“**PMSE**”) (professional and community), mobile broadband and mobile communications.

The Ofcom model calculates benefits in the range of £5-10bn. Such a wide range can be explained by the significant uncertainty on the value of the modelled services at the time, and by the fact that Ofcom had to make assumptions on the combination of services that could be provided on the freed spectrum.

¹¹⁰ Annex 9, Digital Dividend Review – Annexes, Ofcom, 19 December 2006

¹¹¹ The DTI/DCMS model considers year 2010 to 2015 as dates for DSO

Summary

We consider that the DTI/DCMS study captures the economic impact of opening up new digital markets, in particular through the DSO, as it specifically models in depth the consumer and producer cost and benefits associated with the switchover of analogue TV services. However, Ofcom’s analysis illustrates that the benefits of the DSO are not limited to digital television but affect other services, and suggests that accelerating DSO may generate significant benefits to the economy by allowing new providers to use the digital dividend spectrum to satisfy the increasing demand of alternative services.

In our analysis, we have calculated the economic benefits of accelerating DSO using both the DTI/DCMS and the Ofcom studies. We note that these figures may contain common elements and so should not be added together.

9.4 Spillover value from the BBC’s contribution to accelerating digital switchover

We have modelled the net impact of the BBC’s contribution to DSO using both the DSO benefits calculated by the DTI/DCMS and by Ofcom.

The DTI/DCMS DSO benefits

Based on the DTI/DCMS study, we have calculated the value of the DSO occurring in 2012 and updated the value to reflect 2008 money value. This is £1.9bn. Equally, based on that study, we have estimated that the benefits of the DSO in 2016 would reduce to just over £1bn¹¹². The results, in 2008 money value, are illustrated in Table 36: .

Table 36: Net benefits of DSO occurring in different years (2008 money value, £bn)

DTI/DCMS	2010	2011	2012	2013	2014	2015	2016
Net benefits (£bn)	2.6	2.2	1.9	1.7	1.5	1.2	1.1

Source: DTI/DCMS study

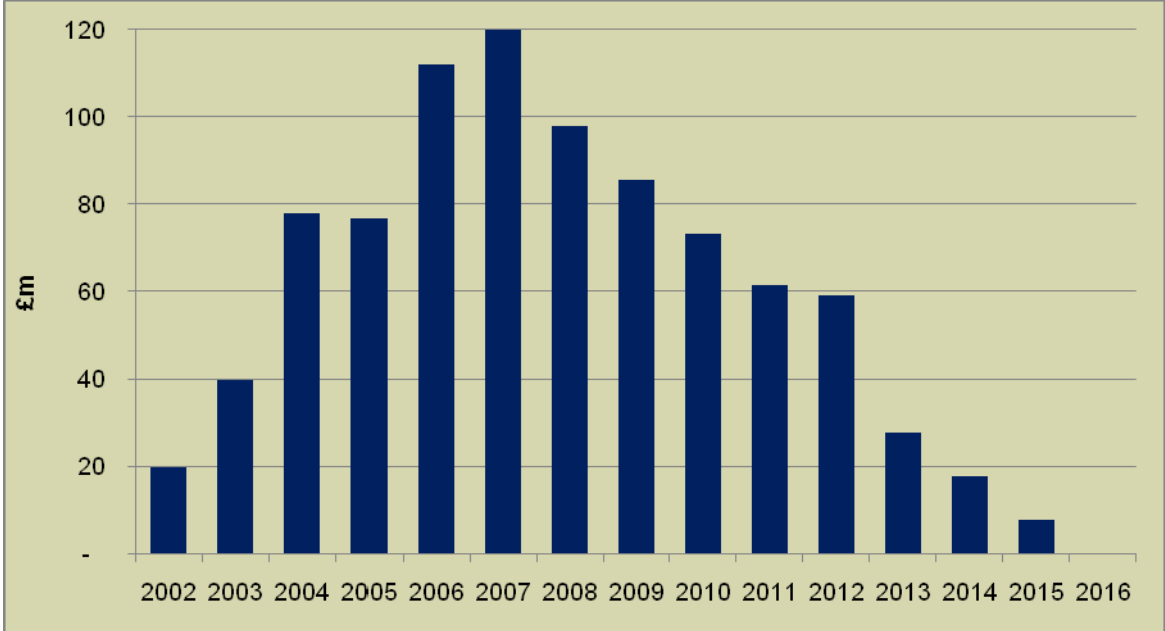
The net economic benefits of DSO occurring in 2012 are given by the difference between the net benefits of the DSO occurring in 2012 and the benefits of the DSO occurring in 2016, and amount to £803m.

To allocate these benefits over time, we have used our assumptions on the differential between the digital platform penetration under the Factual and Counterfactual scenarios (in the presence or in the absence of Freeview) as illustrated in Figure 21 above. By allocating these net benefits in line

¹¹² Whilst the DTI/DCMS study does not provide a figure for 2016, we have taken the average annual decrease in the net benefits over time and use that value as the decrease rate applied to the 2015 value to obtain the value for 2016

with the differential between digital penetration under the Factual and Counterfactual scenarios, we obtain an annual allocation of the benefits. This is illustrated in Figure 22. 113

Figure 22 Net benefits of 2012 vs. 2016 DSO: annual breakdown (based on DTI/DCMS study)



Source: Deloitte analysis based on DTI/DCMS study

For financial year 2008/09, based on the DTI/DCMS study, we estimate that the spillover effects from the BBC’s contribution to accelerating DSO are £94.8m.

The Ofcom benefits

Based on Ofcom’s study, we applied the same methodology described above to the net benefits calculated by Ofcom. We have used the conservative £5bn figure.

We discounted the £5bn figure to obtain data in 2008 money value. By applying the same decrease pattern used in the DTI/DCMS study, we have estimated how these benefits would vary if DSO were to occur later than 2012. These results are shown in Table 37: .

Table 37: Net benefits of DSO occurring in different years (2008 money value, £bn)

Ofcom	2012	2013	2014	2015	2016
Net benefits (£bn)	5.36	4.69	4.07	3.43	2.91

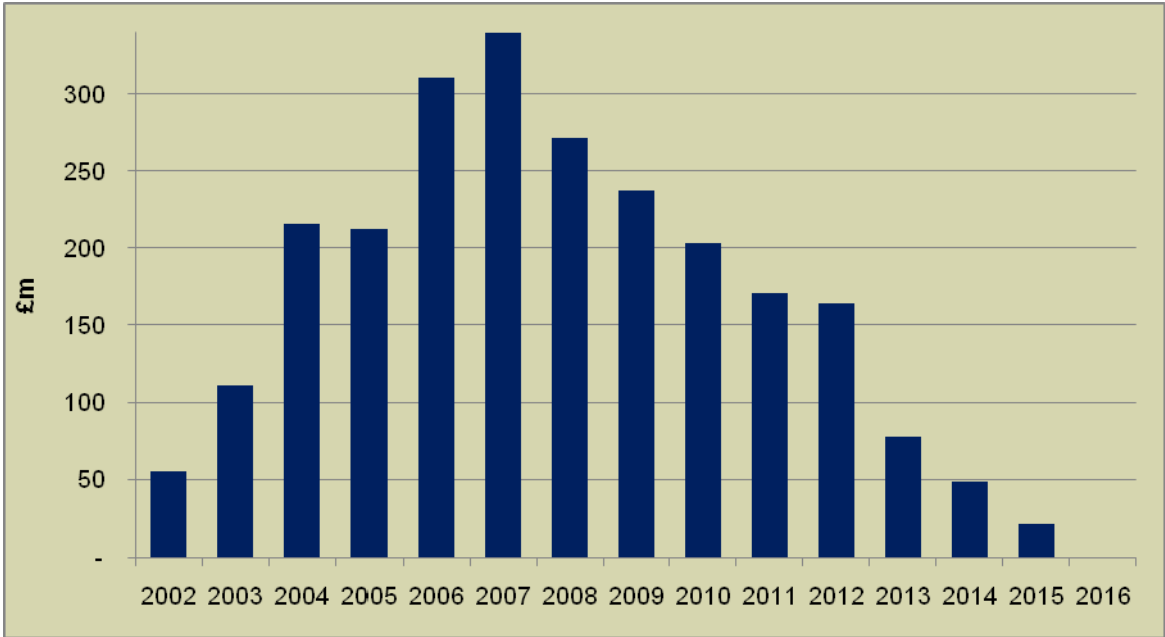
Source: Ofcom

The net economic benefits in our analysis of DSO occurring in 2012 are given by the difference between the net benefits of the DSO occurring in 2012 and the benefits of the DSO occurring in 2016, and amount to £2.4bn in NPV terms. To allocate these benefits over time, we have used our

¹¹³ This shows results based on calendar years.

assumptions on the differential between the digital platform penetration under the Factual and Counterfactual scenarios (i.e. in the presence or in the absence of Freeview) as illustrated in Figure 21 above. By allocating these net benefits in line with the differential between digital penetration under the two scenarios, we obtain an annual allocation of the benefits. This is illustrated in Figure 23¹¹⁴.

Figure 23 Net benefits of 2012 vs. 2016 DSO: annual breakdown (based on Ofcom study)



Source: Deloitte analysis based on Ofcom study

For financial year 2008/09 we estimate the spillover effects from the BBC’s contribution to accelerating DSO are £262.6m.

Results

In conclusion, we find that, for financial year 2008/09, the spillover effects from the BBC’s contribution to accelerating DSO can be estimated to be in the range of £94.8m to £262.6m. We also note that, if we assume that DSO is postponed to 2014 instead of 2016, such benefits would be in the range of £51.8m to £133.5m.

¹¹⁴ This shows results based on calendar years.

10 Part II - Spillovers: Creating value for others

10.1 Summary

We consider further, mainly in qualitative terms, spillover impacts of the BBC relating to the creation of value for others. These comprise:

- the effects of the BBC on the value of UK exports – through quality leadership and the impact of the BBC brand;
- the benefit of the BBC's research and development activities to others and the UK;
- the creation of value for BBC Worldwide's JV partners and associates;
- the creation of retail and third party revenues from BBC Worldwide's operations; and
- the contribution of the BBC in encouraging economic in cultural products and events, in particular new UK music.

Two of these impacts – creating value for JV partners and associates, and expanding retail and other third party markets – are quantifiable. We assume that the profits accruing to JV partners as a result of BBC Worldwide operations are incremental, and estimate the net spillover impact of the BBC in this area to be approximately £26m in JV profits. We assume that the value created for JVs, associates and third parties is not incremental.

The other three impacts – the effect of the BBC on the value of UK exports, and the creation of interest in cultural products and events – are not readily quantifiable. We find evidence to suggest that value generated in these areas is incremental, and that there is a positive net impact in both areas, but do not quantify this impact. We note that some of the BBC's impact upon the value of UK exports has already been accounted for in Section 6.

10.2 Contributions to UK exports

10.2.1 Quality leadership

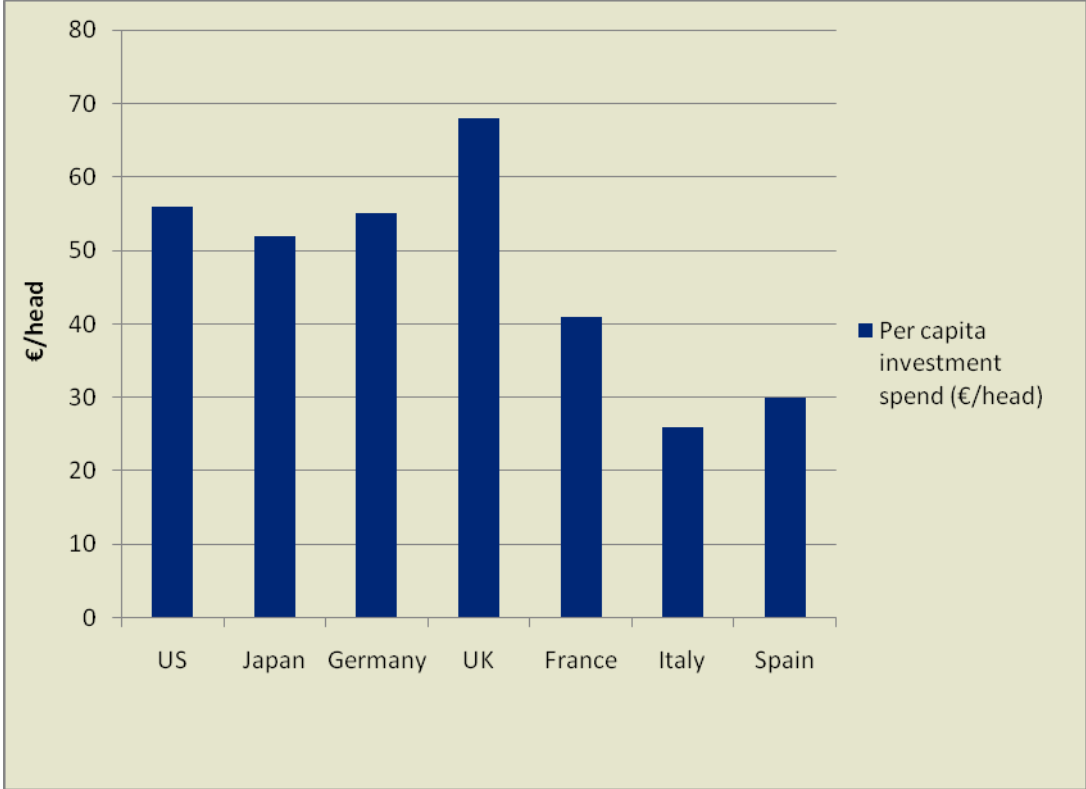
The output of the licence fee funded BBC is not affected by the need for immediate profit that is a chief concern for commercial broadcasters. This enables the BBC to deliver programming of an arguably higher quality than that which would otherwise be produced by a purely commercial entity. This in turn raises the quality of the programming of other UK broadcasters that need to compete with the BBC for audiences.

The increased quality of commercial broadcasters' output, relative to other countries which do not have a licence funded broadcaster stimulating quality, can be exploited to increase the value of exports of that output. Part of the economic impact of this effect has already been accounted for in Section 6.

The incremental quality of UK programming is difficult to quantify, especially given the limited data available. We can, however, use the differential in UK TV investment per capita versus that of other

countries as a proxy for the incremental quality of television, and in turn use this proxy to illustrate the potential value of quality for exports.

Figure 24: Per capita TV investment in 2006/7, € per head



Source: Oliver & Ohlbaum

Figure 24 shows per capita TV investment for nine developed countries in 2006/7 (the most recent data available). The UK has the highest investment per capita by a significant margin at €68 per person. Put in terms of the UK population, this translates to an investment spend of €724m more than the equivalent in the US and €2,532m more than in Italy (UK investment in 2006/7 was approximately €4,100m).

Differences in per capita investment may provide an indication of differences in programming quality between countries under certain assumptions regarding viewing. As such, Figure 24 provides some evidence that UK programming quality is potentially higher than that of other countries.

As discussed above, some proportion of the quality differential suggested by Figure 24 is likely to be due to the presence of a licence fee funded BBC stimulating the quality of programming of other broadcasters. However, without further evidence it is not possible to quantify:

the effect that increased quality has on the value of exports; and

the proportion of any quality differential that is caused by the licence funding of the BBC and which would be removed in the counterfactual.

Without the two pieces of information above it is not possible to quantify the spillover effect on exports that the BBC brings, although it is likely that some such effect exists.

10.2.2 The impact of the BBC brand

In addition to the value that high quality programming brings, the BBC adds value through its creation of a global brand. The licence funding and PSB commitments of the BBC mean that its brand is directly associated with the UK in a way that commercial broadcasters' brands are less likely to be. The presence of a globally recognised UK brand associated with high quality output potentially boosts the sales and value of UK exports, both creative and otherwise.

Brand awareness data commissioned by BBC Worldwide shows that the BBC brand has a similar level of presence to major media brands such as CNN, Google, Disney and Discovery in a variety of countries such as Germany, Singapore, Australia and India. While the BBC 'master' brand has a lower presence in the US, a number of sub-brands such as BBC News, 'Dancing with the Stars', BBC America, and Top Gear perform well in US and other countries. The BBC is still primarily associated internationally with news - which tends to result in lower 'appreciation' ratings in brand surveys than other media brands - although the BBC's broader offerings are becoming increasingly well recognised as a result of branding initiatives by BBC Worldwide.

The effect of the BBC brand on the value of exports is again difficult to quantify.

10.3 The BBC's Research and Development

BBC Research and Development undertakes technology research with the aim to innovate in the areas of broadcast and related technologies. Its role is defined in the BBC Charter Agreement as follows:

To conduct research and development activities geared to the promotion of the BBC's Public Purposes and which aim to maintain the BBC's position as a centre of excellence for research and development in broadcasting and other means for the electronic distribution of audio, visual and audiovisual material, and in related technologies.

To support the development of "open standards".

Activities should be conducted both within the BBC and in co-operation with suitable partners, such as university departments and businesses which are active in relevant fields.

The BBC has a particular obligation to have regard to the impact of its R&D activity on the UK economy. The Charter Agreement requires the BBC to strike an appropriate balance between:

the potential for generating revenue through commercial exploitation of its intellectual property; and

the value that might be delivered to licence fee payers and the UK economy by making new developments widely and openly available.

Through its technology and knowledge transfer activities, the BBC contributes to the development of the broadcasting industry by investing in product innovation; by procuring, testing and licensing

broadcasting technology; and by supporting both academic and internal research. The types of activity carried out by the R&D department can be broken down as follows:

Strategic Research—long term innovation which aims to have an industry changing impact; often carried out in partnership with academia and industry partners.

Applied Research—medium term activity that addresses a defined area.

Development—short term delivery of a specific product, solution or service; commonly in partnership with industry, regulators or subsidiaries.

Service Innovation—evolving current services and technology portfolio, bringing about improvements and efficiencies; often in collaboration with the BBC's technology service providers.

Standardisation—joint development of open standards which define the playing field for the industry; generally achieved through industry-wide standardisation bodies.

Consistent with the objectives and the practices listed above, the BBC's R&D department is currently engaged in around 50 projects, ranging from broadcast through to internet TV, as well as across the value chain from production through to distribution. The BBC's R&D activities are spread across four main areas of operation:

Production—recent work in this area includes computer vision & tracking, 3D enhancements and new audio experiences. Technology is commonly transferred to the wider UK industry for example through third party licensing generating both audience benefits and revenue opportunities.

Media Management—activities in this area involve production processes and archive analysis and retrieval. Technology is often transferred through third party adoption of standards, generating cost savings and efficiencies.

Distribution—these activities often involve the development and implementation of new standards and the development of specific implementations. These can be transferred through standard promotion and adoption and through licensing. New standards can create new markets, create efficiencies (e.g. DVB-T2) and deliver audience benefit (e.g. HD).

Audience experience—research in this area helps develop accessibility, interfaces, navigation and new content. Promotion and adoption of the new standards typically delivers audience benefits & cost efficiencies.

In a multiplatform broadcast environment, the value of research and innovation is likely to lie in its contribution to the following:

Contribution to new audience experiences—increased consumer choice, control, as well as audio-visual quality.

Contribution to open standards—likely to reduce both costs and increase speed to market for a range of players.

Contribution to end-to-end digital broadcasting—an opportunity for all broadcasters to improve processes, reduce costs, and drive creativity.

Long term innovation—through reputation and critical mass the BBC can create and incubate new markets.

The examples below provide an insight in to the projects that BBC R&D has been involved in, and the type of value created.

BBC R&D's contribution to Digital Switchover (DSO) has played a key role in delivering the 'digital dividend'—spectrum freed up by the move from analogue to more efficient digital broadcasting standards. Moving from analogue to digital offers new opportunities to broadcasters and content creators. For example, in a digital world, it is possible to have more TV and radio channels. Some of the value delivered by the BBC in this area is captured in the previous Section where we have quantified the BBC's contribution to accelerating DSO.

Strategic and applied BBC research activity has contributed to the implementation of HD TV services. These provide an enhanced audience experience and are based on open standards. As such they offer efficiencies, clarity and certainty to the market.

BBC led industry collaboration to create the highly efficient DVB-T2 standard means that more HD services will be available on a terrestrial free-to-air basis than would otherwise have been possible with existing standards. BBC R&D expertise acquired in developing DVB-T2 has also benefited industry in other ways. For example, numerous receiver and transmitter manufacturers have licensed BBC R&D source code in order to reduce their development costs and increase their speed to market. This brings revenue in to the organisation which funds further research. Because the DVB-T2 development was led through a collaborative, industry-wide forum, each company that contributed essential intellectual property, including the BBC, will accrue reasonable 'patent pool' royalties from receiver sales.

By driving continued innovation, BBC R&D provides new services to audiences. For manufacturers this can mean new features which add value to their products. It can also lead to the creation of new markets. An example of value add feature includes BBC R&D's NICAM Stereo standard. A new market might include that for DAB digital radios. In driving change R&D also contributes to a managed technology evolution and interoperability by standardising core technologies.

In production, R&D has developed technologies—such as 3D graphics—which it has licensed to third parties who have sold on the technology to broadcasters throughout the UK and across the world. The tapeless production system, Ingex, offers opportunities for significant efficiencies throughout the production and archiving chain. Because it is available on an open source basis, it can be deployed and modified by manufacturers and service providers in a wide variety of offerings.

R&D activities have an impact on the overall productivity of an economy. The UK has comparatively low R&D spend compared to the US or other European countries. For example, in

2005, US R&D spend represented 2.62% of GDP, Sweden's represented 3.89% but the UK's only 1.78%.¹¹⁵

Empirical evidence indicates that R&D expenditure leads to higher output. For example, a paper by the US Congressional Budget Office estimates that elasticity of GDP to R&D spend lies in the range of 2% to 5%¹¹⁶. Oxford Intellectual Property Research¹¹⁷ estimates that for non-manufacturing firms, the output elasticities of R&D vary from 7% to 15%.

While it is difficult to quantify the benefit of the BBC's R&D activity, the range of activities described above and the empirical evidence on the impact of R&D indicate that the BBC's R&D activities are likely to generate value for the UK economy over the long term. We note that some of the benefits of this activity are captured in our assessment of the contribution of Freeview to bringing forward DSO in the previous Section, while other benefits are incremental.

10.4 BBC Worldwide's creation of value for JV partners

Factual GVA for JV partners

BBC Worldwide is involved in a number of JVs and business associations within the UK. These JVs and associations cover BBC Worldwide channels (for example UKTV), content and production, magazines and children's content, and home entertainment (for example 2entertain). Successful JVs, driven in part by BBC Worldwide involvement or expenditure, generate value for JV partners or associates. This effect is incremental to the GVA of JVs in Sections 4 and 5, which is focused on Joint Ventures' expenditure.

Table 38 and Table 39 show the Profit Before Interest and Taxation (PBIT) of UK JV partners and associates respectively. BBC Worldwide channels (UKTV) and Home Entertainment (2Entertain) are the largest sources of profit for JV partners (£41m combined). Digital media covers the Kangaroo project which generated losses of approximately £7m after being rejected by the Competition Commission. Content and Production saw a £3m loss for associates, whereas other sectors generate modest profits.

¹¹⁵ OECD Factbook 2008: R&D Spend as a % of GDP

¹¹⁶ Congressional Budget Office, R&D and Productivity Growth, June 2005

¹¹⁷ R&D and Productivity in the UK: evidence from firm-level data in the 1990s, 2005

Table 38: PBIT of UK JV partners, £m

	BBC Worldwide Channels (UKTV)	Magazines and Children's (excluding Children's)	Children's only	Home entertainment (2Entertain)	Digital media (Kangaroo)	Total
PBIT of JV partners	25.5	0.2	1.1	15.6	-6.5	35.9

Source: BBC Data, Deloitte analysis

Table 39: PBIT of UK Associates, £m

	Content and Production	Magazines and Children's (excluding Children's)	Children's only	Home entertainment	Total
PBIT of associates	-3.3	0.7	1.0	0.6	-1.0

Source: BBC Data, Deloitte analysis

Note: The PBIT of £-3.3m of UK content and production associates reflects a number of start-up business associates of BBC Worldwide which are currently in investment phase.

Counterfactual

Table 40 summarises our assumptions about the proportion of BBC Worldwide's factual operations that would be undertaken in the Counterfactual in each of the categories above. Table 40 and Table 41 apply these assumptions to the Factual profits of JV partners and associates respectively to give Counterfactual profits. This assumes that the same divisions of profits between broadcaster and JV partner are maintained between the Factual and Counterfactual scenarios.

Table 40: Counterfactual PBIT of JV partners, £m

	BBC Worldwide Channels (UKTV)	Magazines and Children's (excluding Children's)	Children's only	Home entertainment (2Entertain)	Digital media (Kangaroo)	Total
% of Factual operations undertaken in Counterfactual	20%	63%	10%	50%	41%	
Counterfactual PBIT of JV partners	5.1	0.1	0.1	7.8	-2.7	10.4

Source: BBC Data, Deloitte estimates

Table 41: Counterfactual PBIT of associates, £m

	Content and production	Magazines and Children's (excluding Children's)	Children's only	Home entertainment (2Entertain)	Total
% of Factual operations undertaken in Counterfactual	48%	63%	10%	32%	
Counterfactual PBIT of associates	-1.6	0.4	0.2	0.2	-0.9

Source: BBC Data, Deloitte estimates

JV partner profits are estimated to decrease in the Counterfactual from £36m to approximately £10m, a reduction of 71%. This is driven primarily by the large reduction in the profits of UKTV partners in the absence of a licence fee funded BBC. Hence we estimate that the licence fee funded BBC has a positive net impact on the profits of JV partners in the order of £26m.

Total profits of associates are estimated to change from a loss of £1m to a loss of £0.9m. Both of these quantities are small enough to be considered immaterial. BBC Worldwide's stakes in associates tend to be much lower than its stakes in JVs (39% in Origin Publishing Limited, 25% or less in all other associates). For this reason we assume that the Factual profits of associates are not incremental and that similar profits would be maintained in the Counterfactual.

10.5 BBC Worldwide's contribution to expanding retail markets

Factual contribution to retail markets

In addition to the value generated for JV partners and associates, products created by BBC Worldwide's operations also generate revenue for third parties, in particular retailers. This also includes revenue from merchandise products associated with output and revenue from events supported by BBC Worldwide. Table 42 and Table 43 show revenues accruing to third parties for a range of BBC Worldwide outputs. Merchandising of BBC Worldwide output, in particular, is estimated to generate a large amount of revenue for third parties, in part due to large estimated mark-ups in this category. DVD and magazine output also generates substantial revenue for third parties.

Table 42: Revenue accruing to third parties from BBC Worldwide's projects, £m

	DVD	Audiobooks - CD	Audiobooks - Digital	Adult and Learning Books	Children's books
Revenue accruing to third parties	51.2	2.5	1.7	4.5	9.6

Source: BBC Estimates

Table 43: Revenue accruing to third parties from BBC Worldwide’s projects, continued, £m

	Merchandise	Magazines	Lonely Planet	Events
Revenue accruing to third parties	206.3	44.5	5.6	2.7

Source: BBC Estimates

Counterfactual

In the absence of operations currently conducted by BBC Worldwide it is unlikely that retail demand in the UK will be changed, and similar UK consumption of DVDs, Audiobooks and other such products might be expected. Whilst excess demand may be fulfilled by goods produced outside of the UK, it is assumed that the great majority of these products will still be purchased from UK retailers. Similarly, the majority of third party revenue from events held within the UK will be likely to accrue to UK firms. We do, however, recognise that a small proportion of revenue will be diverted to retailers outside of the UK, particularly in the DVD, audiobooks, and adult and leaning books categories, as these can be purchased online.

For the above reasons we assume that Factual third party revenues are not incremental, and that BBC Worldwide’s contribution to expanding retail markets is not material.

10.6 Encouraging interest in cultural products and activities

10.6.1 Contributions to new UK music

The BBC’s PSB obligations lead it to make contributions to the discovery, support, and promotion of new music in the UK that would otherwise not be carried out by a commercial broadcaster. These contributions primarily take the form of specialist or dedicated airtime and the organisation of live events.

BBC support for new music provides value by affecting the incentives of potential new artists – providing opportunities that would otherwise not be possible and making a career as a ground breaking musician more financially feasible – and the incentives of the music industry as whole by providing, for example, increased financial opportunities for music labels in new or underground music.

Below we provide examples of the contributions that the BBC makes in supporting new UK music.

Specialist and dedicated airtime

Radio 1 and Radio 1Xtra play a particularly important role in supporting new UK music. Radio 1 has a distinctive focus on new and UK music. In 2008 it played more new music in daytime than the six leading commercial stations, played more new, UK music during daytime, and broadcast more live music¹¹⁸. Radio1 Xtra is dedicated to new UK black music, and again broadcasts more

¹¹⁸ Intelligent Media research, 17th to 23rd May 2008

than the other leading commercial stations. Both Radio1 and Radio1Xtra broadcast specialist shows that specifically promote new UK music.

The launch of *BBC Introducing...* in June 2007 has played an important role in the BBC's contribution to the discovery and development of new artists at the grass roots level. This is a pan-BBC initiative that showcases unsigned and undiscovered music, which has weekly shows on Radio 1 and additional shows on 1Xtra, 6 Music, and over thirty local radio stations. The initiative is also directly involved in a number of live events.

Radio 3 launched the *New Generation Artists* scheme which promotes new classical musicians from the UK and other countries. The scheme dedicates airtime to live performances by young musicians, as well as commissioning studio recordings and co-producing CDs. The scheme also gives young musicians the opportunity to appear in live events such as the Proms with other BBC performing groups.

Live events

The BBC organises its own music festival in *The Big Weekend*, which promotes new UK music and is deliberately organised in areas where live music events are rare. In 2008 approximately 35,000 free tickets were given out to listeners. *The Big Weekend* also comprises a Fringe program designed to provide opportunities to local bands and give local promoters and venues the opportunity to participate. The fringe program at the Swindon *Big Weekend* aimed to provide opportunities for 60 local bands, with eight bands playing the main event, a further 40 playing gigs surrounding the event, four school bands playing a *Big Bank Holiday* event, and opportunities for bands to meet Radio 1 DJs, industry promoters and management, and have their records played in the warm up to the main event.

In addition *BBC Introducing...* has stages at a number of festivals including Glastonbury, Bestival, and Creamfields, as well as the BBC's own *Big Weekend*. Radio 1 also covers full-scale concerts under the *Radio 1 presents...* strand, including *The Kooks* in Liverpool, *Foo Fighters* at Wembley, and the *Killers* at the Royal Albert Hall. Radio 1Xtra hosts and covers a number of live events including the *1Xtra Live* event in Coventry, the *Carnival After Party* in London and *1Xtra Loves Summer*. The Radio 3 *New Generation Artists* scheme also organises concerts, both in London (at the Wigmore Hall and LSO St. Luke's) and the regions and nations.

Examples of support for artists

Emerging artists that have received support from the BBC (both in terms of airtime and performance opportunities) include *The Ting Tings*, *Dizzie Rascal*, and *Wiley*. The Ting Tings were played on Radio 1 and a number of BBC specialist shows early in their career in May 2007, while signed to a small independent label in Manchester, before being given the opportunity to play on the BBC *Introducing...* stage at Glastonbury. They went on to perform live on radio under *BBC Introducing...* and *Live Lounge* shows, before playing at *Radio 1's Big Weekend*, with their second single being added to the Radio 1 playlist in October 2007, a month before release. On the single's release, the band were added to a number of commercial radio stations for the first time, before reaching No.1 with their debut album a year after their first play on Radio 1.

Wiley released his first single while still unsigned, selling copies himself to specialist music shops. This single was added to the Radio 1Xtra playlist in 2003, followed by ten more of his songs receiving support in the station's specialist schedule. He also appeared performing live and as a guest on 1Xtra programmes, and featured in the line up for the *1Xtra Live* event in March 2008. The single *Wearing My Rolex* was played on 1Xtra in January 2008, before being transferred to Radio 1 as a result of 1Xtra's support. The single went on to sell 200,000 copies and brought the genre of Grime into the mainstream.

10.6.2 Contributions to other cultural events

The BBC's public service obligations lead it to provide, promote and support a wide array of other cultural events to an extent unlikely to be matched by a commercial entity.

For example, BBC hosts a large number of musical events, in addition to those listed above, including the Cambridge Folk Festival and the BBC Proms, which is the largest classical music concert in the world. The BBC also hosts a range of events in connection with its dedicated performing groups which include five orchestras, a full-time professional choir, and a big band.

In addition to the direct value of these events in terms of cultural appreciation, there are economic benefits for the areas or regions in which they are hosted. *The Big Weekend*, for example, was estimated by the BBC to have brought £1.5m revenue to Maidstone and Preston.

10.7 Spillover Value from the BBC's contribution to creating value for others

Overall we find that the BBC has a number of spillover effects in creating value for others, comprising contributions to the value of UK exports, the generation of value for JV partners and associates, the generation of value for third parties, and the encouragement of economic activity relating to cultural products and activities - in particular new UK music.

We have estimated that the BBC has a net positive impact on JV partner profits in the order of £25m. Many of the other effects are difficult to quantify. Where the effect cannot be quantified – in terms of the BBC's contribution to export value and its promotion of cultural products – we find evidence that suggests that there is likely to be a positive net impact.

Appendix A Composite multipliers

In extending the analysis of the economic impact of the BBC, whilst maintaining consistency with the methodology established by PwC, we need to incorporate other multipliers for areas of spend that were previously excluded. As discussed in the body of the report, where possible we seek to use pre-existing multipliers. For the categories of infrastructure, overheads and other, where no comparable multipliers exist, we create composite multipliers.

We attempt to generate an approximation of the appropriate multiplier by segmenting the remaining BBC spend down into more distinct cost components. With spend split by department we can then select the multiplier that most closely replicates the sectors of the economy stimulated by the BBC activity. For instance the supply chain of BBC Finance department would be expected to conform closely to that of the broader “accountancy service” industry, which the ONS provide multipliers for. The same logic follows for all other components. These are then combined by weighting them in accordance to their proportion the aggregated cost. This method generates estimated composite multipliers for overheads, infrastructure and other.

Below are the summary tables for the composite multipliers. Each is broken down into the components of BBC spend. We provide the name of the proxy multiplier used for each component, the proportion of costs that each component contributes and each weighted component multipliers which are then summed to generate the composite multiplier.

Table 44: Overheads Multiplier Components

	Proxy Multiplier (Name)	Proportion of Costs	Proxy Multiplier
DG Office	Accountancy services	0.01%	1.6
BBC People	Accountancy services	13%	1.6
BBC Finance	Accountancy services	20%	1.6
Operations	Legal activities	68%	1.7

Source: BBC, ONS & Deloitte Analysis

Table 45: Infrastructure Multiplier Components

	Proxy Multiplier (Name)	Proportion of Costs	Proxy Multiplier
Marketing, press and publicity	Advertising	33%	2
On-Air Trails	Advertising	17%	2
Market Research and Consumer Services	Market research, management consultancy	12%	2.2
Libraries, learning support and community events	Education	38%	1.8
Additional pension payments	Auxiliary financial services	0%	2.5

Source: BBC, ONS & Deloitte Analysis

Table 46: Other Multiplier Components

	Proxy Multiplier (Name)	Proportion of Costs	Proxy Multiplier
Licence Fee Collection	Accountancy services	53%	1.6
Orchestras & Performance Groups	Recreational Services	8%	2.3
S4C, BBC Jam, Development Spend, Digital switchover costs	TV	31%	2
DAB Radio	Transmitters for TV, radio and phone	4%	2.1
Digital Text	Transmitters for TV, radio and phone	4%	2.1

Source: BBC, ONS & Deloitte Analysis

Appendix B Location Quotients

The Location Quotient (LQ) is a summary statistic that captures the relative intensity of a factor of production in one spatial area relative to a more broadly defined one. It is often deployed to measure the level of employment of a particular sector cities or regions compared to the economy as a whole. In a recent literature review of clusters/knowledge externalities, the LQ was found to be used as an explanatory variable in 45 of 108 papers surveyed.¹¹⁹

Given that it provides a direct measure of relative factor density and is simple in its construction, it can provide intuitive guidance on the location and relative strength of clusters. Indeed, it has been used in the literature as a benchmarking method of identifying and ranking clusters across Europe.^{120 121} There is no agreed discrete point at which a collection of companies is sufficiently concentrated to be considered a cluster. This is partly because there are many variations of cluster definition (for further discussion see¹²²). A high LQ value is neither necessary nor sufficient to define an area as a cluster. We need both qualitative and quantitative analysis. Indeed, some have noted the methodology is sensitive to region size.¹²³

$$LQ_i = \frac{\frac{e_i}{e}}{\frac{E_i}{E}}$$

Where,

e_i is the level of employment in the i-th sector within the sub-region under consideration

e is the total employment in the sub-region

E_i is the total level of employment in the i-th sector in the whole economy

E is the total level of employment in the whole economy

If the area has an i-th sector with:

$LQ_i < 1$, it is below the UK-average proportion of sector i employment.

$LQ_i > 1$, it is above the UK-average proportion of sector i employment.

$LQ_i = 1$, it has the UK-average proportion of sector i employment.

¹¹⁹ Who's right, Marshall or Jacobs? The localization versus urbanization debate, pp321

¹²⁰ Innovation Clusters in Europe – A Statistical Analysis and Overview of Current Policy Support, DG Report

¹²¹ The use of data and analysis as a tool for cluster policy, European Cluster Alliance

¹²² Clusters, Balancing Evolutionary and Constructive Forces, Sölvell, Ö

¹²³ Ejerme (2005)

Appendix C The revenues of the BBC Public Service in the Counterfactual

In estimating the size of the Counterfactual BBC we have broadly followed a similar approach to PWC¹²⁴.

C.1 TV

TV viewing figures of the Counterfactual broadcaster and other commercial broadcasters

Viewing figures for the Counterfactual Broadcaster have been calculated by assigning each channel of the factual BBC a commercial equivalent. In the absence of commercial equivalents, Cbeebies was assigned as its own equivalent and BBC Parliament and BBC HD were omitted from the CF Broadcaster’s channel inventory. In their place we assumed that the Counterfactual BBC would use the spectrum to broadcast a ‘BBC 2+1’ channel, whose commercial equivalent would be Channel 4+1. The total viewing of the CF broadcaster was assumed to be the sum of the factual viewing figures of the equivalent commercial channels, amounting to 7 hours and 23 minutes per week per person.

Table 47: Equivalent commercial channels assigned to each BBC channel

Factual BBC Channel	Equivalent Commercial Channel for Counterfactual
BBC1	ITV1
BBC2	C4
BBC3	E4
BBC4	ITV4
CBBC	CITV
Cbeebies	Cbeebies
BBC News Channel	Sky News
BBC Parliament	No equivalent
BBC HD	No equivalent
‘BBC 2+1’ (in place of BBC Parliament and BBC HD)	Channel 4+1

Source: Deloitte

In assigning equivalent channels we do not anticipate that the Counterfactual broadcaster will replicate the content of these channels. Some content that the BBC currently provides might well

¹²⁴ PWC, the economic impact of the BBC, a report for the BBC Trust, appendix 6

prove commercially successful (high end documentaries for example), whereas other content might not be as commercially viable (for example children's programming). The nature of the content that the Counterfactual channels provide will impact upon the performance of BBC Worldwide in the Counterfactual.

We also assumed that total viewing of TV is the same as factual viewing in 2008-9 (average 25 hours and 40 mins per week per person). The viewing of the Counterfactual Broadcaster as defined above, when added to the factual viewing of all other commercial broadcasters (17 hours 32 mins) does not equal this total. We call this shortfall 'X' (44 mins). ITV and Channel 4 are particularly close competitors of the BBC for viewing, and therefore the BBC is more likely to crowd those out. Therefore, in order to account for this, we have assigned the viewing amount X between Five and other commercial broadcasters who are not ITV, Channel 4 or the Counterfactual BBC, according to relative share of viewing.

Television NAR in the Counterfactual

The addition of a Counterfactual broadcaster will increase the volume of commercial impacts by approximately 41%, and therefore decrease the price per impact. PwC report a number of own price elasticities with which to estimate the increase in total television NAR that would correspond to such an increase in impacts. Within the large variation in estimates they assume a 10% increase in NAR; we have used the same assumption as PwC. Therefore in our Counterfactual we assume that television NAR increases from £3,470m¹²⁵ in the factual 2008/09 to £3,817m.

This increase in NAR will arise largely from substitution by advertisers away from other media - i.e. radio, online, and print advertising – rather than through a secular increase in advertising budgets. We have not found relevant cross-price elasticities with which to directly calculate this substitution effect from each of those media individually.

Advertising premiums, viewing share, and allocation of NAR

TV NAR is allocated in proportion to the viewing share of each broadcaster. Different channels are able to secure more or less revenue from selling the same number of impacts, due to differing audience size and demographics. In addition, some channels are partly funded by subscription revenue as well as advertising revenues. For these reasons a channel's share of commercial viewing will not be the same as its share of advertising revenue; channels that attract higher advertising premiums will earn more revenue per viewing hour than those with lower premiums, and those with a large base of subscription funding will have a lower proportion of advertising revenue to viewing share.

In order to account for the above effects we estimate a proxy for mark-ups/subscription composition by looking at ratios of NAR share to viewing share in the factual 2008/09. Table 48 gives the premiums on viewing share calculated for different channels.

¹²⁵ Ofcom Communications Report, August 2009, p. 35

Table 48: Premiums on viewing shares for different broadcasters in the factual 2008/09

Broadcaster	Viewing share adjustment factor
ITV	1.36
C4	1.43
FIVE	1.06
Others	0.55

Source: Deloitte analysis, BARB viewing data, Ofcom data on NAR

Table 48 shows that ITV wins a revenue share greater than its viewing share (revenue share is 1.36 times as large as viewing share). The Channel 4 mark-up on viewing is even greater. Broadcasters other than the main PSBs, however, tend to have an advertising revenue share smaller than their viewing share. This is consistent with the fact that Channel 4 and ITV are able to charge advertising mark-ups based on the desirability to advertisers of their audiences, and the fact that many broadcasters in the ‘others’ category, for example Sky, have significant subscription revenue.

In the Counterfactual we assume that the BBC would have the same premium as ITV, based on similarity in programming, audience, and funding base.

TV NAR was allocated to broadcasters according to viewing shares adjusted in line with the factors in Table 48.

Size of Counterfactual Broadcaster and other broadcasters in the TV Counterfactual

Table 50 compares the Factual and Counterfactual figures for viewing hours, viewing shares, and revenue shares, in the TV Counterfactual for different broadcasters. Table 49 shows Net Advertising Revenues in the TV Counterfactual for different broadcasters, and also the degree to which advertising revenue of ITV, Channel 4, Five, and other broadcasters is crowded out by the introduction in the Counterfactual of a commercially funded BBC.

Table 50: Commercial viewing, share of commercial viewing, and share of NAR for each broadcaster, Factual and Counterfactual

Broadcaster	Factual Commercial viewing	Counterfactual Commercial Viewing	Factual Share of Commercial Viewing	Counterfactual Share of Commercial Viewing	Counterfactual Share of NAR after adjustment
CF Broadcaster	-	7:23	0%	29%	36%
ITV	5:45	5:45	33%	22%	28%
Channel 4	2:48	2:48	16%	11%	14%
FIVE	1:31	1:38	9%	6%	6%
Other	7:27	8:04	43%	31%	16%
Total Non-BBC	17:32	18:16	100%	71%	64%
Total	17:32	25:40	100%	100%	100%

Source: Deloitte analysis, BARB viewing data

Table 51: Factual and Counterfactual NAR and crowding out for each broadcaster

Broadcaster	Factual NAR (£m)	Counterfactual NAR (£m)	Crowding out
CF Broadcaster	-	1368	
ITV	1550	1065	-485
Channel 4	793	545	-248
FIVE	317	236	-81
Other	810	603	-207
Total Non-BBC	3470	2449	-1021
Total	3470	3817	347

Source: Deloitte analysis, Ofcom NAR data

Table 52 compares the factual and Counterfactual TV NAR sizes of the Counterfactual BBC and other commercial broadcasters.

Table 52: TV revenue and crowding out for Counterfactual broadcaster and other broadcasters

Broadcaster	Factual NAR (£m)	Counterfactual Revenue (3m)	Crowding out
CF Broadcaster	-	1368	
Other commercial Broadcasters	3470	2449	-1021

Source: Deloitte analysis

C.2 Radio

Listening figures for the Counterfactual broadcaster and other broadcasters

The split of listening between the BBC and other broadcasters in 2008/09 is approximately 56:44. In the Counterfactual we assume, following PwC, that the BBC's share of broadcasting decreases. Thus we assume split of listening between the Counterfactual BBC and other broadcasters to be 33:67¹²⁶.

Radio NAR in the Counterfactual

The addition of a Counterfactual broadcaster will increase the volume of commercial impacts by approximately 125%. PwC provide a number of own price elasticities with which to estimate the increase in total radio NAR that would correspond to such an increase in impacts. Due to the large variation in estimates they assume a 20% increase in radio NAR; we have used the same assumption as PwC. Therefore in our Counterfactual we assume that radio NAR increases from £529m the real world to £635m.

As with television NAR we are aware that changes in radio NAR may be due in large part to substitution effects. In particular, an increase in radio NAR of 20% may well be too generous, since a large part of the increase in television NAR will probably be funded by substitution of advertisers away from radio (there is empirical evidence that TV and Radio advertising are substitutes).

Radio NAR was allocated between the Counterfactual Broadcaster and other commercial broadcasters according to listening shares given in the scenarios above.

¹²⁶ We have adopted PwC's 'Central Scenario'

Size of Counterfactual Broadcaster and other broadcasters in the Radio Counterfactual

Table 53 compares the factual and Counterfactual Radio NAR sizes of the Counterfactual BBC and other commercial radio broadcasters.

Table 53: Radio revenue of Counterfactual broadcasters and other radio broadcasters

Broadcaster	Factual Radio NAR (£m)	Counterfactual Radio NAR (£m)	Crowding out
CF BBC	0	210	
Others	529	425	-104

Source: Deloitte analysis

C.3 Online

Following PwC we assume that the online revenue of the Counterfactual Broadcaster is equal to joint online income of ITV and Channel 4, at £69m.

C.4 Total size of the Counterfactual Broadcaster and competitors

Table 54 shows the total revenue allocated to the Counterfactual BBC across TV, Radio and Online businesses, and also shows the Counterfactual revenues of all other broadcasters in television and radio.

Table 54: Total size of Counterfactual Broadcaster and competitors

	BBC Counterfactual Revenue (£m)	Other broadcasters' Counterfactual revenues (£m)
TV revenue	1,368	2,449
Radio revenue	210	425
Online Revenue	69	-
Total	1,648	2,875

Source: Deloitte analysis