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What If There Were No BBC Television? The Net Impact on UK Viewers

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This independent contribution to the debate on the future of the BBC uses a range of scenarios to compare the current UK television market with what it might be like if there were no BBC TV; this provides a benchmark for understanding the effects of less extreme choices.

It assumes that commercial broadcasters would increase their content investment if they were no longer 'crowded out' by the BBC but nevertheless concludes that if there were no BBC Television:

- Total TV industry revenue would most likely be lower, although there is a wide range of uncertainty about how much.
- Total content investment would be 5–25% lower.
- Investment in first-run UK content would be 25–50% lower.
- The net impact on viewers would vary, but most would suffer a reduction in both choice and value for money.

A 25–50% net reduction in investment in first-run UK content would also be a severe blow to British production companies.

The projections are, if anything, conservative since they assume that the BBC does crowd out some commercial content investment rather than forcing commercial broadcasters to invest more in order to 'compete on quality'.

“*If there were no BBC Television...most [viewers] would suffer a reduction in both choice and value for money*”

None of the BBC's critics argue for it to be abolished overnight but many want it scaled back, without providing any evidence that a smaller BBC would be better for the public. Our analysis suggests the opposite.

Nor is the idea of the market without the BBC just a theoretical abstraction. On the contrary, it is the logical conclusion of the current 'salami-slicing' policy – freezing the BBC licence fee and diverting more and more of it to fund activities and organisations other than the BBC's UK services – while the rest of the market grows. If this policy continues (or even accelerates, as some are advocating) within a generation the BBC will be reduced to a minor sideshow, the UK equivalent of PBS in America.

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Executive Summary

Critics of the BBC often argue that, funded by a compulsory licence fee, it distorts the market, making it hard for commercial competitors to prosper and meet consumers' needs. They conclude that viewers would be better served if the BBC were smaller – allowing commercial broadcasters to expand – and showed only public service programmes (valued for 'citizenship' reasons) that the market will not provide.

Although this argument that the BBC 'crowds out' commercial provision has been widely made, none of its proponents has to our knowledge provided any empirical evidence to support it or tested the presumption that a free market without the BBC, funded by subscriptions and advertising, would meet consumers' needs better than the current mixed economy.

An alternative hypothesis is that, far from crowding out commercial broadcasters, the BBC forces them to 'compete on quality', increasing their need to invest in content, especially first-run UK content, in order to attract viewers. In this study, however, we give the BBC's critics the benefit of the doubt, assuming that the crowding out hypothesis is correct and testing its implications using recent market data.

The question we therefore address is: if there is crowding out, what is its extent and what is the net impact on viewers? We do this by creating a range of scenarios showing what the current UK television market might be like if there were no BBC TV and no licence fee, and the resulting net impact on viewers. We conclude that (even if there is crowding out), without BBC TV:

- Total TV industry revenue would most likely be lower, although there is a wide range of uncertainty about how much.
- Total content investment would be 5–25% lower.
- Investment in first-run UK content would be 25–50% lower.
- The net impact on viewers would vary, but most would suffer a reduction in both choice and value for money.

A 25–50% net reduction in investment in first-run UK content would also be a severe blow to UK production companies.

The Focus: UK Television from a Consumer Perspective

To explore the impact of the BBC's potential crowding out of commercial TV provision, we focus on the UK television market and the BBC's net impact on the public as consumers rather than citizens. Issues not addressed include:

- The net impact of BBC Radio, BBC Online, the World Service, and the various other activities funded by the licence fee;
- The BBC's impact on the UK's national culture, society, child development, politics, creative industries, technology adoption, wider economy, regional development, and international standing.¹

¹ The projected reduction in investment in first-run UK television content would impact the creative industries and wider economy, but our primary focus here is on the impact on UK viewers as consumers of television services.

The intellectual case for a smaller BBC focuses mainly on television and is based on a hitherto untested economic argument that claims to represent the consumer interest. The aim of this study is to test that claim. We do this directly by exploring the counterfactual of what the current UK television market might be like if there were no BBC.

A possible objection to this counterfactual is that no one is currently proposing that the BBC should be completely abolished. This objection is invalid for two reasons. First, those arguing that the BBC crowds out commercial provision assume that, if there were no BBC, commercial broadcasters would increase their content investment and consumers would, on balance, benefit. That is what we are testing. Secondly, as discussed later, the black-and-white no-BBC scenario provides a strong basis for evaluating less extreme proposals such as that the BBC should be scaled back.

Our counterfactual leads to two questions:

- If there were no BBC TV, how much might commercial TV broadcasters (funded mainly by subscriptions and advertising) expand?
- What would be the consequences for the UK public as consumers of television, i.e. ignoring the BBC's other services and its social, cultural, political, and other 'citizenship' impacts?

Method

The analysis is based on comparing the actual UK television market in 2012 with projections of what the market might have been like if there had been no BBC TV and no licence fee. The net impact of BBC TV is the difference between the two.

There is of course wide uncertainty about what the UK television market would be like if there were no BBC. We therefore develop two very different scenarios, one highly optimistic (from the viewpoint of the industry), one highly pessimistic. The aim is to be able to say that, assuming the crowding out hypothesis is correct, it is very unlikely that the outcome would fall outside the range represented by these two extremes.

The Net Impact on Revenue

The total revenue of the UK television industry was £12.3bn in 2012: £5.3bn from subscriptions, £3.7bn from advertising and sponsorship, £2.7bn BBC licence fee revenue allocated to TV, and £0.5bn other commercial revenue.² Our pessimistic and optimistic projections of the percentage changes in these revenues if there had been no BBC give us the following ranges (rounded):

- Subscriptions: zero to +50%
- Advertising: -15% to +25%
- Other commercial revenue: zero to +30%

The net effect of these changes, after allowing for the loss of BBC licence fee revenue, is that (compared with the actual situation in 2012, with the BBC), total TV industry revenue would be reduced by over 25% in the pessimistic scenario and increased by almost 10% in the optimistic scenario. For ease of

² This is using Ofcom's definition of TV industry revenue, which currently excludes revenue from online television (£0.25bn in 2012).

exposition, in the later analysis we use a central 'base case' projection (simply the midpoint of the pessimistic and optimistic scenarios), together with the range of uncertainty.³ Total industry revenue in the base case is £11.2bn, a reduction of just over £1bn (9%) on the actual 2012 figure of £12.3bn with the BBC (Figure 1).

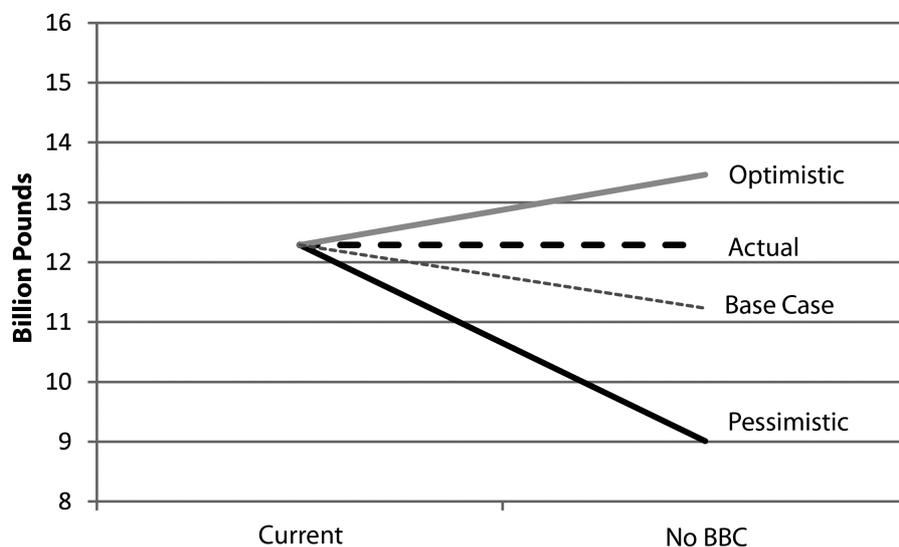


Figure 1. Total TV Revenue in 2012 (£bn)

Finally, we divide the commercial broadcasters into commercial public service broadcasters (ITV, C4/S4C, and C5, including their portfolio channels) and non-PSBs (all others). The commercial PSBs derive most of their income from advertising while the non-PSBs, as a group, derive most of theirs from subscriptions. Because subscription revenue is projected to increase much more than advertising revenue if there were no BBC, the non-PSBs would grow much more than the commercial PSBs: +22% versus +7% in the base case.

“ Overall, if there were no BBC, total industry revenue would be 9% lower in the base case ”

Overall, if there were no BBC, total industry revenue would be 9% lower in the base case (£11.2bn). 72% of this lower industry revenue would go to the non-PSBs, the other 28% to the commercial PSBs.

Net Impact on Content Investment

From a consumer perspective, what matters is choice and value for money. The main determinant of these is the total investment in content on channels available in the consumer's household at a given price. Almost as important is how much of this investment goes into first-run UK content as opposed to imports and repeats. Therefore, two key measures are the net impact of the

³ We are not suggesting that this base case is the most likely outcome: we simply lack the evidence to judge what that might be.

BBC on (i) total content investment and (ii) investment in first-run UK content. In 2012:

- BBC TV invested £1.6bn in content, 60% of its £2.7bn revenue. 94% of this investment (£1.5bn) was in first-run UK content.
- The commercial PSBs invested £1.8bn (61% of revenue) in content, 72% of which (£1.3bn) was in first-run UK content.
- The non-PSBs collectively invested £2.5bn in content (37% of their total revenue). 72% of this (£1.8bn) was for their premium sport and movie channels, the rest (£0.7bn) being for their other channels. We estimate that about £450m of the latter (65%) was for first-run UK content.

As a starting-point for projecting the net impact on UK content investment of losing the BBC, we take our base case projections of the commercial PSBs' and non-PSBs' revenues and assume that they would invest the same proportion of these increased revenues in content (and, within that, first-run UK content) as they actually invested in 2012. This implies increases of 7% and 22%, respectively, for the commercial PSBs and non-PSBs. Despite these increases, the net result in the base case is that, if there were no BBC, total content

“ *Total content investment would be reduced by between 5% and 25% and investment in first-run UK content by between 25% and 50%.* ”

investment would be reduced by £0.95bn (15%) and investment in first-run UK content by £1.33bn (40%).

There is wide uncertainty about both the commercial

broadcasters' revenue if there were no BBC and the percentage of that revenue that they would invest in content. Allowing for these uncertainties, our expectation is that, if there were no BBC, total content investment would be reduced by between 5% and 25% and investment in first-run UK content by between 25% and 50%.⁴ Figures 2 and 3 show the impact in financial terms under our base case assumptions.

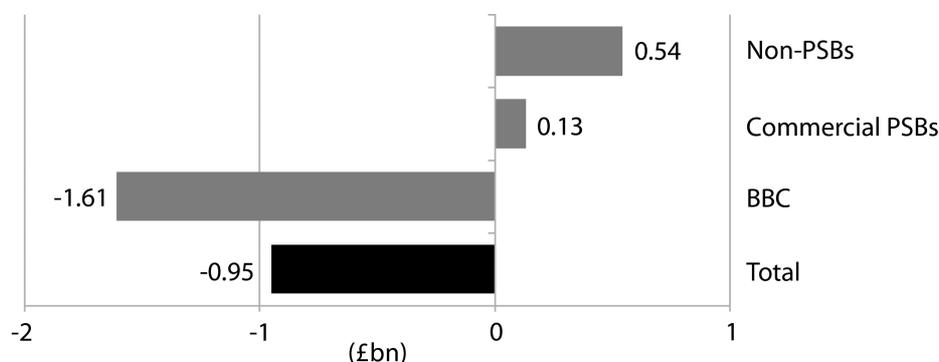


Figure 2. Net Impact on Total Content Investment in 2012, Base Case (£bn)

⁴ Note that we are here still conservatively assuming that there is crowding out rather than that the BBC's 'competition for quality' forces commercial broadcasters to invest more in content. If there is competition for quality, the reduction in content investment without the BBC would be even higher than we are projecting.

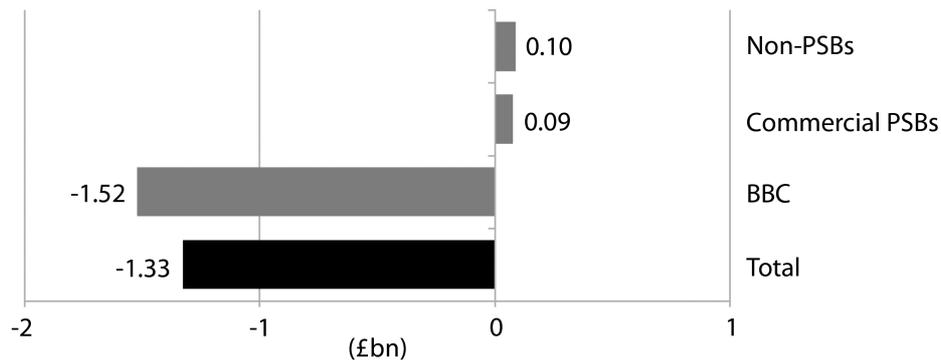


Figure 3. Net Impact on Investment in First-Run UK Content in 2012, Base Case (£bn)

The Net Impact on Viewers

The total consumer cost of UK television services in 2012 (subscriptions, the TV proportion of the licence fee, pay-per-view payments and the indirect cost of TV advertising) was £11.8bn, about £450 per household – £8.70 per week.

This works out at an average of only 13.5p per viewer-hour, much less than for almost all other media consumption. For instance, using the same measures, it costs consumers about 50p per user-hour to access free online products and services, make a fixed-line or mobile phone call, or read a cheap paperback book or a tabloid newspaper. The hourly consumption cost of all other significant media and paid-for leisure activities is even higher, apart from radio, which costs only about 2p per listener-hour (the radio proportion of the BBC licence fee, plus radio advertising).

BBC TV costs each household about £2 per week (just over 70% of the weekly cost of the licence fee, which also funds BBC Radio, Online, the World Service, etc.). The indirect cost of the commercial PSBs is about the same. In contrast, the average cost of the non-PSBs in households with pay TV is almost four times as high, £7.65 per week in 2012. On a per viewer-hour basis, the cost of the PSBs was 8–9p. For the non-PSBs, the equivalent cost was 25p per viewer-hour.⁵

In our base case scenario, if there were no BBC, the cost of television for the average household (assuming pay TV operators did not increase their prices) would be reduced by around 12p per day. But with total content investment reduced by about 15% and investment in first-run UK content by 40% in this scenario, most viewers would in all likelihood have a greatly reduced choice of programmes they wanted to watch.

We conclude that, in our base case scenario, if there were no BBC TV, the impact would vary greatly between different households but most would suffer detriment either because they would be paying slightly more for slightly less choice or because they would be paying slightly less for much less choice. Extending the analysis beyond the base case to the pessimistic and optimistic scenarios does not affect this conclusion.

⁵ Within this study we have been unable to separate out the costs and viewing of the premium sport and film channels in order to compute the average cost per viewer-hour of the other, basic pay TV, non-PSB channels. We would expect the latter to be much less than 25p but still significantly more than for the PSB channels.

Explaining These Results

Many economists (and non-economists) may be surprised by these results, which contradict the widespread assumption that a free market without the ‘distortion’ of the BBC would be best for the public as consumers. General economic theory suggests that the most efficient and effective way of providing choice and value for money is a free market where buyers allocate their purchases to the suppliers that best meet their needs, and suppliers try to maximise their profits by meeting these needs better than the competition.

Further, the BBC is a public sector organisation often accused of bureaucracy, profligacy, and inefficiency. It invests a high proportion of its content budget in first-run UK productions rather than cheaper imports and repeats. It devotes considerable resources to public service content such as regional, children’s, religious, and minority-interest programmes, all of which tend to increase its cost per viewer-hour. Nevertheless, some high-level facts provide an initial ‘sanity check’ on our results.

- The cost of the licence fee (about £12 per month including BBC Radio etc.) is much less than even the entry-level price of pay TV (£21.50 per month).⁶
- BBC TV’s revenue share of only 22% means that it seems unlikely to have a huge crowding out effect.
- Its viewing share of 33% gives it a low average cost per viewer-hour – over 40% less than for commercial TV as a whole. Removing it or scaling it back therefore seems unlikely to improve the overall efficiency of UK television.

Digging more deeply into the economics of television and the specific features of the UK market and the BBC, we find a number of structural factors that help to explain our results.⁷

Another important explanatory factor is that, without the BBC, most of the growth in commercial revenue would have to come from consumer subscriptions. Advertising revenue would increase relatively little and might even decrease.⁸ But the cost per viewer-hour of subscription TV is about 25p, 2.7 times the 9.2p cost per viewer-hour for BBC TV. In other words, we would

“ Once these factors are taken into account, directionally, our results are almost inevitable ”

largely be replacing a relatively low-cost source of TV content with a relatively expensive one.⁹

⁶ The monthly subscription cost of online TV services is less than this if one excludes the cost of broadband but the cost per viewer-hour is significantly higher. Because of the growing significance of online TV, this is an area for future research.

⁷ See also Patrick Barwise and Robert G. Picard, *The Economics of Television in a Digital World* (RISJ, Sept. 2012), 19–23.

⁸ Although the number of advertising exposures (‘commercial impacts’) would increase by up to 50% if there were no BBC, the price paid by advertisers for each exposure (the ‘cost per thousand viewers’) would fall. We discuss the reasons and evidence for this in Appendix A.

⁹ Of course, this is an oversimplification: the cost per viewer-hour is significantly higher for premium pay TV channels than for other non-PSB channels; marginal costs are generally lower than average costs; and the outcome would depend on the extent to which significant new entrants came into the market and the subsequent competitive dynamics (and, perhaps, intervention by the competition authorities). Nevertheless, on a like-for-like basis, it is hard to see how subscription funding could ever match the very low cost per week and per viewer-hour of BBC TV funded by the licence fee.

We believe that the market characteristics discussed here mean that our conclusions should, in reality, not be surprising at all. In fact, once these factors are taken into account, directionally, our results are almost inevitable. The reason, we think, why they run counter to many people's beliefs is that these people have been overinfluenced by generic economic theory rather than focusing on the specific market characteristics and performance of UK television as we have done.

Implications for BBC Charter Renewal

Based on current policy and market trends, by 2016, the last year of the current BBC Charter, total industry revenue, including from online TV, will have grown to £14.4bn, of which only £2.6bn (18.5%) will be BBC income allocated to television. The policy question is what happens after 2016.

The current policy 'salami-slices' the BBC by freezing the licence fee and using it to fund more and more other things (digital switchover, superfast broadband, the BBC World Service, S4C, local TV, etc.). Suppose that this policy continued through another ten-year Charter and that the commercial and online broadcasters, in aggregate, also continued their current growth rate of 4% per annum. By 2026 the BBC's share of TV industry revenue would have been reduced to just 11.5%.

Relative to the market, the size of BBC TV would have almost halved since 2012.¹⁰ Those now arguing for a much smaller BBC would presumably welcome this outcome. Implicit in their view is the idea that, even if complete abolition would be bad for the public, there is some optimum size for the BBC, relative to the market, greater than zero but much smaller than today.

This is not inconceivable in principle, but the onus should now be on those arguing for a smaller BBC to provide some kind of evidence and argument about why they believe it would lead to a better outcome for the UK public than the

current situation: a BBC with only 22% of total industry revenue but 33% of viewing, despite its public service commitments and its market-leading investment in first-run UK content.

“ If our analysis is correct and if the aim is to maximise the overall public benefit of UK television – not just the BBC – the ‘salami-slicing’ of the BBC should be halted ”

In the absence of such evidence, the main implication for Charter renewal is straightforward: if our analysis is correct and if the aim is to maximise the overall public benefit of UK television – not just the BBC – the 'salami-slicing' of the BBC should be halted.

¹⁰ If the same trends continued beyond 2026, the BBC would disappear altogether around the year 2040, roughly a generation from today.

1. Background and Introduction

1.1 BBC Charter Review and the Aim and Scope of This Report

The BBC's current Royal Charter and Agreement, the constitutional basis of its operations, run until 31 December 2016. Between now and then, there will be extensive debate about the next Charter and future funding: should the BBC still be largely funded by a compulsory licence fee and, if so, at what level should this be set and should it be inflation-proofed?

The debate is also likely to include the BBC's governance, regulation, and the scope of its activities, especially the extent to which these should still include services that compete directly with those of commercial broadcasters. Some will argue that the BBC should be limited to providing minority-interest public service content that commercial broadcasters would be unlikely to provide on a sufficient scale. They, and some others, will argue for a large cut in the BBC licence fee, on top of the 20% effective cut in the October 2010 spending review.¹¹ The long-term future shape and success of UK broadcasting and TV production will significantly depend on the outcome of this debate.

A central issue is the 'crowding out' effect of the BBC. Some competitors, economists, and others have long argued that the presence of the BBC, funded by a compulsory licence fee, distorts the market, making it hard for commercial broadcasters to prosper and meet consumers' needs.¹²

Although this argument has been widely made, none of its proponents has to our knowledge provided any empirical evidence to support it or tested the presumption that a free market without the BBC, funded by subscriptions and advertising, would meet consumers' needs better than the current mixed economy. This report is a first attempt to do so, assessing what would happen to TV industry revenues and content investment if there were no BBC and the likely net impact on viewers.¹³ The analysis is based on recent financial data and realistic best- and worst-case scenarios of the likely outcome.

By revealing the effect of removing the BBC from the market altogether (thereby addressing its full crowding out effect) this study then makes it possible to evaluate the effects of the numerous less extreme policy alternatives that have been proposed: a significantly smaller BBC; a 'contested' or shared funding model under which the BBC has to compete against other broadcasters for, or share a politically determined proportion of, a limited pot of money for public service content; a BBC funded by subscriptions rather than the licence fee; a wholly or partly privatised BBC; or some combination of these.¹⁴

¹¹ In Oct. 2010, the BBC agreed with the then Secretary of State Jeremy Hunt that the annual licence fee would be frozen at £145.50 until March 2017 (the end of the BBC's last financial year under the current Charter) and that the BBC would, while continuing to provide UK television, radio, and online services and international commercial services (BBC Worldwide), also take responsibility for funding the non-commercial BBC World Service and BBC Monitoring and provide financial support for superfast broadband roll-out, local television services, and the independent Welsh-language TV service S4C. The 20% figure is from *Delivering Quality First* (BBC, Oct. 2011).

¹² The first person to make this argument was the eminent economist Ronald Coase in 1947. For Coase and more recent proponents of the free-market view, see Barwise and Picard, *Economics of Television in a Digital World*, 11, 13, 22, and 33–5.

¹³ A wide-ranging 2008 study of the BBC's economic impact conducted by PwC for the BBC Trust addressed some of the same issues, also using a no-BBC counterfactual, but was not specifically focused on the crowding out argument, the net impact on viewers, or the policy implications discussed in this report. See PwC, *The Economic Impact of the BBC on the UK Creative Economy* (July 2008).

¹⁴ Examples include: Broadcasting Policy Group, *Beyond the Charter: The BBC After 2006* (Premium Publishing, 2004); Alan Peacock, *Public Service Broadcasting without the BBC?* (Institute of Economic Affairs, 2004); Mark Armstrong, 'Public Service Broadcasting', *Fiscal Studies*, 26/3 (Sept. 2005), 281–99; Mark Oliver, *Changing the Channel: A Case for Radical Reform of Public Service Broadcasting in the UK* (Policy Exchange, 2010); and numerous statements by politicians, newspaper leader writers, current and former BBC executives and broadcasters, etc.

FOCUS ON UK TELEVISION FROM A CONSUMER PERSPECTIVE

Given the wide range of issues, we have chosen to limit the scope of the analysis in two important ways.

First, we focus only on UK television. BBC TV accounts for nearly three-quarters of the Corporation's total annual expenditure on its UK services¹⁵ and generates much of the discussion about its market impact. The other activities funded by the licence fee are BBC Radio, BBC Online, the BBC World Service (from April 2014), BBC Monitoring (from April 2013),¹⁶ and support for superfast broadband, the Welsh-language service S4C, and local television. A significantly reduced licence fee would necessitate cutting back these other activities or finding new ways of funding them but these issues fall outside the scope of this report on the BBC's net impact on the UK television market.

Secondly, we take a narrow 'consumer' perspective, focusing on value for money (the cost to consumers and the choice of programmes available to them). We do not discuss the broader 'citizenship' issues such as the BBC's impact on the UK's national culture, society, politics, child development, technology adoption, creative industries, wider economy, regional development, and international standing.¹⁷ This is not because we think these citizenship issues are less important than the direct consumer ones

“ *The intellectual case for a smaller BBC is largely based on a hitherto untested economic argument that claims to represent the consumer interest. The aim of this report is to test that claim.* ”

– on the contrary, we see them as probably even more important – but because the intellectual case for a smaller BBC is largely based on a hitherto untested economic argument that claims to represent the consumer interest. The aim of this report is to test that claim.

THE LONG-TERM TREND IN THE BBC'S SHARE OF TOTAL TELEVISION REVENUE¹⁸
Calls for a reduced BBC are part of a long-term trend under which the BBC has become an increasingly smaller part of the wider UK television market.

Until 1954, the BBC's share of total TV revenue was 100%. From 1955 to 1960, its share fell rapidly to about 50% as ITV completed its network and advertisers switched expenditure to television, mainly from print display advertising.

The industry was then a duopoly until the launch of C4 in November 1982. For 25 years through the 1960s, 1970s, and early 1980s, the BBC's

¹⁵ *BBC Full Financial Statements 2012/13* (2013), 218–19. Total expenditure on UK services regulated by service licences (BBC TV, radio, and online) for the year ending 31 Mar. 2013 was £3,317.6m, of which £2,471.5m (74.5%) was for TV. These costs include content, distribution, and allocated overheads (property, technology, central overheads, etc.). In addition to funding the BBC's UK services, the licence fee (and dividends from the BBC's commercial activities, mainly BBC Worldwide) also funded digital switchover and helped to fund S4C.

¹⁶ BBC Monitoring is an open source news publisher that selects and translates information from mass media in 150 countries in more than 70 languages on behalf of the UK Government and commercial customers. Since Apr. 2013, the £25m annual cost has been funded by the BBC licence fee, as part of the Oct. 2010 settlement (www.monitor.bbc.co.uk).

¹⁷ Because our analysis includes content investment, it does have implications for UK programme production, as discussed in Section 3. But our main focus is on the net impact on consumers.

¹⁸ See *Economics of Television in a Digital World*, 13–16, for the history of the industry since the end of BBC TV's monopoly in 1955.

inflation-adjusted revenue grew almost continuously, boosted by the diffusion of colour TV, for which households paid a higher licence fee. But its *share* of total TV revenue fluctuated around 45–50%, depending on the ups and downs of the TV advertising market and periodic increases in the level of the licence fee at or above the level of inflation.

In 1985, the BBC's TV revenue share was 47.8%.¹⁹ Since then, however, it has fallen relentlessly due to three factors.

- TV advertising revenue grew rapidly in the 1980s and has remained remarkably robust since then, despite the growth of online advertising.
- Subscription revenue (mainly for satellite TV but also cable and now digital terrestrial pay TV) took off in the 1990s and has kept growing ever since then.
- Despite periodic adjustments, the BBC licence fee has generally failed to keep pace with inflation and has been frozen at £145.50 since April 2011.

By 2012, the BBC's share of total TV industry revenue had fallen to 22.1%,²⁰ a decrease of 25.7 percentage points in the 27 years since 1985, almost a full percentage point per annum. However, this reduction in revenue share has not been steady.

- Between 1985 and 1998, it lost 21.2 revenue share points in 13 years, from 47.8% in 1985 to 26.6% in 1998,²¹ an average of 1.6 share points per annum.
- Thanks to a more generous licence fee settlement to enable it to launch its digital portfolio channels, between 1998 and 2012 it lost only 4.5 revenue share points over 14 years, equivalent to 0.32 share points per annum.

As we discuss in Section 6, analysts project that, over the rest of the current BBC Charter period, subscription revenue will continue to grow ahead of inflation, TV advertising will roughly keep pace with inflation, and online TV revenue will start to become material, while the licence fee remains frozen at £145.50 and is increasingly used to fund activities beyond the BBC's UK services. Based on these projections, we expect the BBC's revenue share to

have fallen to around 18.5% by 2016, the last year of the current Charter.²²

“ The long-term trend (for over 30 years) has been 0.7% per annum reduction in the BBC's share of TV industry revenue... If that trend continues, there will be no BBC within a generation (25–30 years). ”

The policy question is what happens after 2016. The long-term trend (for over 30 years) has been 0.7% per annum reduction in the BBC's

¹⁹ Booz Allen & Hamilton UK, *Subscription Television: A Study for the Home Office* (HMSO, 1987), 108: the BBC's income (including net commercial income) was £731.9m in 1984/85 and £956.0m in 1985/86, giving a weighted average of £900.0m for 1985. Ibid. 100: 1985 net advertising revenue was £982m.

²⁰ Ofcom, *Communications Market Report* (Aug. 2013 = 'CMR 13'), fig. 2.35.

²¹ Ofcom, *Communications Market Report* (2004), fig. 6.

²² This projection for 2016 includes online TV revenue as part of total industry revenue. The equivalent figure for 2012 is 21.7%.

share of TV industry revenue. This is projected to continue or slightly accelerate through 2016. If that trend continues, there will be no BBC within a generation (25–30 years).

This is not entirely fanciful: several of the current proposals for cutting, contesting or sharing the licence fee would lead to a significantly *faster* reduction in the BBC's revenue share than the long-term trend of 0.7% per annum. So the question addressed in this report – what the UK television market would be like without the BBC – is especially relevant to UK citizens aged less than, say, 50.

DIGITAL SWITCHOVER AND RENEWED CALLS FOR A FREE MARKET

Testing the economic arguments for a smaller BBC is especially timely because the forthcoming Charter review will be the first since the completion of digital TV switchover in October 2012. Digital switchover makes a free market (based mainly on consumer payments, supplemented by advertising) technically feasible for the first time. As we wrote at the time,

*We are entering a world in which all television is digital. In this new world, previous technical constraints on the number of channels – due to shortage of spectrum – will be largely eliminated. . . . Further, with potentially universal conditional access technology, it is now possible to organise television as an ordinary competitive market with different channel and platform suppliers competing on price, the range and quality of content, and service. . . . This raises . . . a specific issue for the UK around the future of the BBC: is the continuation of a large, publicly owned player funded by a compulsory licence fee still appropriate under these new market conditions?*²³

The potential for a free market in TV content is reinforced by the increasing availability of online video-on-demand (VoD) services such as Netflix, Amazon's LOVEFiLM, Tesco's Blinkbox and BSkyB's NowTV. Online TV is part of the broader 'digital convergence' trend under which many different types of content – video, audio, email, books, etc. – can all be packaged using the same internet protocol and distributed via the same fixed and mobile networks.²⁴

VoD services use the internet to deliver individual movies and programmes on demand, to be either watched in real time ('streaming') or downloaded for later viewing.²⁵ Although their impact on viewing has so far been rather limited – and much less than the digerati have always predicted²⁶ – it will certainly increase over the period of the next BBC Charter, providing further competition to the digital terrestrial, satellite, and cable TV operators.

There is great uncertainty about how much and how quickly online TV viewing and revenue will increase but, even without large-scale online TV, digital switchover already means that the free-market arguments need to be addressed using the available evidence. As we wrote at the end of our September 2012 report:

²³ *Economics of Television in a Digital World*, pages 5–6.

²⁴ *Ibid.* 7 and 38.

²⁵ A further distinction can be made between internet television using a dedicated 'walled garden' network to ensure quality and reliability (IPTV) and, typically lower cost, 'over-the-top' (OTT) services using the open internet. Both types use packet switching and the internet protocol.

²⁶ *Economics of Television in a Digital World*, 38–42. Note that, although the impact of video-on-demand (VoD) on viewing has been small, the impact on internet traffic is huge because long-form video content, especially HD content, is extremely bandwidth-heavy, making VoD a relatively expensive way of distributing TV programmes. (The distribution cost of broadcast IPTV, as opposed to VoD, has been significantly reduced using multicast routers http://www.theregister.co.uk/2011/05/30/bt_to_embrace_ip_tv_during_broadband_network_upgrade).

Digital switchover means that the UK could now move to a free market in television wholly or largely funded by subscriptions and advertising, with either no BBC, a much smaller BBC, or contestable funding for a limited amount of public service content dispensed by an 'Arts Council of the Air'. Whether the UK should take that route will be explored in a subsequent report on what the market would look like if there were no, or a much smaller, BBC.²⁷

This is that report.

1.2 Our Approach: Directly Model the BBC's Net Market Impact

In order to evaluate the public's continuing willingness to pay for BBC TV, it is not enough to ask consumers whether they would prefer for their household to continue paying £9/month for it²⁸ or to stop paying and no longer receive it. In practice, there is a high willingness to pay according to this measure but the question is misleading in the sense that it potentially overstates the BBC's value for money because it makes no allowance for its possible market impact.²⁹

The key issue – the central one addressed in this report – is that, because the BBC attracts a substantial proportion of viewing, it may well (as we assume here) crowd out some commercial provision. If there were no BBC TV, the viewing of commercial channels and – most commentators at least implicitly assume – the revenue of commercial broadcasters would increase,³⁰ enabling them to invest more in content and therefore to offer viewers more or better programmes than they currently do with the BBC as a successful, well-funded competitor.

In order to evaluate the optimum level of the licence fee, we need to allow for this market impact. Conceptually, the question to consumers is whether they would prefer to continue paying the licence fee and receiving BBC TV or to save the money and stop receiving it while potentially being able to choose from a greater range and/or quality of commercial TV content than is currently available with the BBC as a competitor.³¹

The focus of this report is on how much more the rest of the market would provide if there were no BBC. Some of its critics have claimed that the BBC has a huge negative market impact, i.e. that if there were no or a minimal BBC, commercial broadcasters would offer viewers much more than they currently do. For instance, James Murdoch, in his widely reported 2009 MacTaggart lecture 'The Absence of Trust', argued that

The BBC is dominant . . . The scale and scope of its current activities and future ambitions is [sic] chilling . . . The negative consequences of this

²⁷ *Economics of Television in a Digital World*, 44.

²⁸ 74.5% of a twelfth of £145.50. BBC TV accounts for 74.5% of expenditure on the BBC's UK services (see n. 14). For simplicity, we ignore the fact that the licence fee also pays for superfast broadband support, etc.

²⁹ In 2008, the average household was willing to pay £20.43 per month according to a study by Human Capital, *Public Service Broadcasting Now and in the Future: Audience Attitudes* (June 2008). There are a number of technical difficulties in measuring people's willingness to pay for the BBC even from a narrow consumer perspective and ignoring its market impact. Quantifying the value they place on its 'citizenship' benefits raises the even greater generic challenge of measuring people's willingness to pay for public services, see Simon Kemp, *Public Goods and Private Wants: A Psychological Approach to Government Spending* (Edward Elgar, 2002).

³⁰ As we discuss in Section 2, this is not necessarily true for advertising-funded commercial broadcasters. In this study, however, we assume that it is probably true for them and definitely true for pay TV broadcasters.

³¹ Note that this is all under the assumption that there is crowding out rather than competition for quality.

*expansion for innovation and development in the creative industries are serious.*³²

Few economists would go as far as this, but most would probably agree that the BBC has at least some crowding out effect, i.e. that if there were no BBC, the commercial television sector would expand.³³

Many analysts implicitly assume or explicitly argue that, without the BBC, the overall value for money of UK television would be improved, at least in narrow consumer terms (i.e. leaving aside ‘citizenship’ issues).³⁴ For instance, a recent analysis of public service broadcasting after digital switchover by economist Helen Weeds of the University of Essex explicitly concludes that ‘The rationale for public intervention in broadcasting must now rest on citizen concerns’.³⁵ It is that view that we test in this report. We do this directly by exploring the counterfactual of what the current UK television market would be like if there were no BBC.

- How much would commercial TV broadcasters (funded mostly by subscriptions and advertising) expand?
- What would be the consequences for the UK public *as consumers of television*?

A possible objection to this counterfactual is that no one is currently proposing that the BBC should be completely abolished. This objection is invalid for two reasons. First, those arguing that the BBC crowds out commercial provision assume that, if there were no BBC, commercial broadcasters would increase their content investment and consumers would, on balance, benefit. That is what we are testing. Secondly, as discussed later, the black-and-white no-BBC scenario provides a strong basis for evaluating less extreme proposals such as that the BBC should be scaled back.

“ *A possible objection...is that no one is currently proposing that the BBC should be completely abolished. This objection is invalid for two reasons.* ”

STEP-BY-STEP SCENARIO APPROACH

It should be obvious that our counterfactual – what the current UK television market would be like without the BBC – is not something that can be modelled with both high precision and high certainty. Not only are there many unknown or unpredictable variables but there is also a degree of circularity (what economists call ‘endogeneity’) in the way these variables

³² James Murdoch, ‘The Absence of Trust’, MacTaggart Lecture, Edinburgh International Television Festival, 29 Aug. 2009.

³³ Even if this is correct, the absence of the BBC would not necessarily benefit the existing commercial broadcasters. Any significant expansion of the commercial market would be likely to attract (and then be reinforced by) new entrants who – unlike the BBC – would be competing for the same revenue sources as the incumbents (mainly subscriptions and advertising). The extent to which any growth in commercial provision would be provided by the incumbents versus new entrants is again beyond the scope of this report.

³⁴ *Economics of Television in a Digital World*, 33–5.

³⁵ Helen Weeds, ‘Digitisation, Programme Quality and Public Service Broadcasting’, in Robert G. Picard and Paolo Siciliani (eds), *Is there Still a Place for Public Service Television? Effects of the Changing Economics of Broadcasting* (RISJ, Sept. 2013), 19.

interact: a commercial broadcaster's revenue helps determine its programme budget, which helps determine its popularity, which in turn helps determine its revenue.³⁶

To address these challenges, we use a step-by-step scenario approach with (i) a number of simplifying assumptions which we discuss as we proceed and (ii) contrasting scenarios that allow for the wide range of uncertainty. The aim is to develop a broad-brush, internally consistent picture of what the current UK television market would be like if there were no BBC and the likely net impact on viewers, allowing both for the BBC's crowding out effect and for the impact of varying the main assumptions.³⁷

REPORT STRUCTURE

The structure of the report follows the same step-by-step sequence. In Section 2, we explore the net impact of the BBC on revenue. We start with the current UK television market using the most recent (2012) Ofcom data. Apart from the proportion of BBC licence fee revenue allocated to television, the three other revenue streams are subscriptions, advertising and a miscellaneous 'other' category. Our counterfactual is based on what these commercial revenue streams would have been if there had been no licence fee and no BBC TV. The net impact of the BBC is the difference between what actually happened and this counterfactual.

Because of uncertainty about the revenue levels in the counterfactual, we explore two scenarios for each revenue stream – one optimistic (high), one pessimistic (low) – and combine them into an optimistic and pessimistic scenario for the overall counterfactual.³⁸ Finally, we allocate the various commercial revenues in both the actual and the no-BBC situations (subscriptions, advertising, and other) to two groups of commercial broadcasters: commercial PSBs (ITV, C4, and C5, including their portfolio channels) and non-PSBs (all other commercial broadcasters).

The second step in our analysis (Section 3) explores the implications of the no-BBC revenue scenarios for content investment. A key issue here is that the public service broadcasters (the BBC and the free-to-air commercial PSBs, funded largely by advertising) invest a higher proportion of revenue in content, especially first-run UK content, than is invested by the non-PSBs (funded largely by subscriptions), although the latter is harder to quantify due to the non-PSBs' more limited transparency.

Two further complications, which we discuss briefly but lack the data to analyse in detail, are that if there were no BBC, (i) the impact would most likely vary greatly between different genres and (ii) the cost and availability of some types of content might also be higher or lower.

The third and final step (Section 4) discusses the likely net impact on viewers of these changes (i.e. the counterfactual versus the real-world base case), focusing on the cost (per week and per viewer-hour) and the range and quality of programmes available, based mainly on the projected investment in

³⁶ This virtuous – or vicious – circle, combined with various economies of scale and some behavioural effects discussed later in the context of the BBC (see Appendix C), is why commercial TV markets tend to be highly concentrated, with one or two players dominating each revenue source, such as BSkyB in UK pay TV and, to a lesser extent, ITV in UK free-to-air commercial TV.

³⁷ In economic jargon, this is an exercise in 'comparative statics'. The counterfactual assumes that the BBC disappeared overnight on 31 Dec. 2011 and the market immediately reached a new quasi-equilibrium on 1 Jan. 2012, directly comparable to the quasi-equilibrium in the actual market in 2012.

³⁸ For ease of exposition, the analysis from the end of Section 2 focuses on a central 'base case' scenario (the midpoint of the pessimistic and optimistic scenarios) combined with the range of uncertainty (the difference between this central base case and the pessimistic and optimistic scenarios). The results are the same as if each scenario were analysed separately.

content and, within that, first-run UK content. We also discuss how the cost and perceived value for money might vary between different types of household.

In Section 5, we interpret and explain our results, first by giving a common sense explanation and then by discussing a number of both generic and specific features of the UK television market that distinguish it from a textbook market for products and services.

Finally, Section 6 discusses the implications for BBC Charter renewal.

2. The Net Impact on Revenue

This section explores the impact of BBC TV, funded mainly by the licence fee, on commercial TV broadcasters' revenue and, therefore, its net impact on total TV industry revenue. We do this by comparing (i) actual revenues in the UK television market in 2012 with (ii) projections of what these revenues might have been if there had been no licence fee and no BBC TV.

The first of these, discussed in section 2.1, is straightforward: we simply use the latest available Ofcom data.

The second (section 2.2) is less straightforward since there is great uncertainty about the extent to which the presence of the BBC crowds out the rest of the market, i.e. (assuming there is crowding out) how much higher the commercial broadcasters' revenue would have been if there had been no BBC. We reflect this uncertainty by developing two extreme scenarios, one highly pessimistic and one highly optimistic. For ease of exposition, we summarise the results using a central 'base case' projection (simply the midpoint of the pessimistic and optimistic scenarios) and the range of uncertainty for each revenue source.³⁹

Finally, in section 2.3, we allocate the base case projected revenues – and the range of uncertainty – between two types of commercial broadcaster, PSBs (ITV, C4/S4C, and C5, including their portfolio channels) and non-PSBs. The results then form the basis of our analysis in the following section of the net impact on content investment by the commercial PSBs and non-PSBs.

2.1 Actual UK Television Revenues in 2012

Ofcom lists UK television industry revenue under four headings: subscriptions,⁴⁰ advertising (net advertising revenue or NAR),⁴¹ BBC licence fee income allocated to television, and other commercial revenue. With one small change (the inclusion of sponsorship revenue in the advertising category) we use the same classification (Table 2.1).

The largest revenue source is subscriptions (£5.30bn in 2012), mainly BSkyB with 10.4 million and Virgin Media with 3.8 million TV subscribers.⁴² Next is advertising (£3.73bn including sponsorship of £184m), of which three-quarters (£2.78bn) was earned by the three commercial PSBs ITV, Channel 4 and Channel 5, including their portfolio channels.⁴³ The proportion of the licence fee allocated to BBC TV was £2.72bn, 22.1% of total industry revenue.⁴⁴

³⁹ We are not suggesting that this central base case is the most likely scenario.

⁴⁰ Including bundled and unbundled charges for set-top boxes, some other equipment and installation.

⁴¹ NAR is the revenue to the broadcaster. It excludes creative and media agency fees and commercial production costs. According to trade sources, advertisers' actual expenditure including these other costs is typically 15–20% higher than NAR (proportionately more/less for smaller/larger advertisers and campaigns and higher/lower production values).

⁴² http://corporate.sky.com/media/key_facts_and_figures;

<http://www.theguardian.com/media/2012/oct/23/virgin-media-internet-subscribers-60000>.

The main other competitor was BT Vision with 0.8m TV subscribers:

<http://www.standard.co.uk/business/business-news/bt-customers-flock-to-sign-up-to-tv-football-challenge-to-sky-sports-8731111.html>.

⁴³ Ofcom, *CMR 13*, fig. 2.37, gives a combined NAR of £2.64bn for the three commercial PSBs ITV, C4, and C5, including their portfolio channels, 74.5% of total TV NAR. To this we have added the same percentage of total sponsorship revenue (74.5% of £184m, *CMR 13*, fig. 2.39). ITV here includes STV, UTV, Channel TV, and ITV Breakfast. S4C's NAR is also included.

⁴⁴ Strictly speaking, Ofcom's expenditure-based methodology estimates the proportion of the BBC's *total* income allocated to BBC TV, including income from its commercial activities BBC Worldwide, BBC Global News, and BBC Studios and Post Production. In 2012/13, these operations paid a combined dividend of £49.5m. (*BBC Full Financial Statements 2012/13*, 6 and 26). Since these activities largely depend on content funded by the licence fee and would be lost if there were no BBC, we use Ofcom's figure and for simplicity, like Ofcom, refer to it as licence fee income.

Table 2.1. Actual TV Revenue 2012: (£bn)

Subscriptions	5.30 (43%)
Advertising	3.73 (30%)
BBC Licence Fee	2.72 (22%)
Other Revenue	0.54 (4%)
Total	12.29 (100%)

CMR 13, fig. 2.34. We have reallocated sponsorship revenue (£184m in 2012, CMR 13, fig. 2.39) from Other to Advertising. Other here comprises TV shopping £128m, S4C grant £84m, interactive £48m, pay-per-view £46m, programme sales £39m, other £194m. Note that Ofcom's TV industry figures exclude £252m online TV revenues (CMR 13, fig. 2.53). These grew by 38% between 2011 and 2012 and are likely to be material before the end of the current BBC Charter. We exclude this revenue in our analysis of 2012, but in Section 6 we include it in our analysis of industry revenues in 2016.

2.2 The Market without the BBC

With these actual figures as a starting-point, we now consider what the market might have looked like in 2012 without the BBC. Since we are assuming that there is crowding out, the removal of the BBC – a major competitor with a one-third (33.2%) share of TV viewing⁴⁵ – would (by definition under this assumption) have led to an increase in the choice of channels and programmes offered by commercial broadcasters – both existing UK broadcasters and new entrants attracted by the reduction in competition caused by the removal of the BBC. For a realistic assessment of what the UK television market in 2012 would have been like without the BBC, we need to allow for this assumed crowding out effect.

No one can know with any precision what the revenue of the commercial TV broadcasters would have been in 2012 if there had been no BBC. The outcome would have depended on many factors, including how we had reached that situation, the commercial strategies of various incumbents and new entrants, how successfully these were executed, and the effects of any regulatory changes or interventions by the competition authorities. Therefore, rather than trying to produce a single estimate, we reflect this wide uncertainty by developing two very different scenarios, one highly optimistic (from the viewpoint of the industry) and one highly pessimistic.

The aim is not to estimate precisely what total industry revenue would have been if there had been no BBC but rather to be able to say that it is very unlikely that it would have been higher than in the optimistic or lower than in the pessimistic scenario. We do this for each of the three commercial revenue sources in Table 2.1 – subscriptions, advertising, and other – and then combine them into two composite scenarios.

SUBSCRIPTIONS (£5.30bn in Table 2.1)

Our assumption that there is crowding out implies that, without the BBC, subscription revenue would have been higher, although it is far from clear by how much. Our two extreme scenarios reflect the range of uncertainty.

- At one extreme, our optimistic scenario assumes that all BBC TV's £2.72bn licence fee revenue would, without the BBC, have become extra subscription revenue. This would have happened through a

⁴⁵ CMR 13, fig. 2.70. This excludes the 24 Olympics channels, which accounted for an additional 0.21% share of total TV viewing in 2012.

combination of (i) some of the 47% of households with only free TV⁴⁶ becoming pay TV subscribers, (ii) some existing pay TV subscribers (the other 53% of households) upgrading to a more expensive package, and (iii) pay TV companies raising their prices. On this scenario, if there had been no BBC in 2012, subscription TV revenue would have been £8.02bn, an increase of 51%. We make no assumptions here about how much of this increase would go to the incumbent pay TV companies versus new entrants.

- At the other extreme, our pessimistic scenario assumes that subscription revenue would have been no higher if there had been no BBC.

In our view, it is (i) very unlikely, although not inconceivable, that subscription revenue would have increased by as much as in the optimistic scenario and (ii) equally unlikely that it would not have increased at all, as in the pessimistic scenario, given that we are assuming that there is crowding out. In other words, we believe that these extreme scenarios cover the likely range of possibilities and that the actual outcome would have been somewhere in between.

ADVERTISING (£3.73bn in Table 2.1)

We use the same approach of two extreme scenarios for advertising but the picture is more mixed. The absence of the BBC would lead to a large increase in the total viewing of TV commercials. Although an individual commercial channel's advertising revenue increases roughly in proportion to its viewing,⁴⁷ the same is not true for TV advertising revenue as a whole. In fact, some economists believe that a 1% increase in the total number of advertising exposures ('commercial impacts'⁴⁸) would cause the price per exposure paid by advertisers (cost per thousand viewers or CPM) to fall by *more than 1%*, leading to a net *reduction* in revenue. Others believe the opposite, that is, that prices (CPMs) would fall by less than the 1% increase in volume, leading to a net *increase* in revenue.

In other words, the 'price elasticity' of television advertising (the ratio of small changes in the number of commercial impacts and associated changes in the cost per thousand viewers) is contested. We discuss the issues, the range of previous estimates, and their applicability to the no-BBC scenarios in detail in Appendix A. Based on the analysis in Appendix A, we project that, without the BBC:

- In the optimistic (for the broadcasters) scenario, advertising and sponsorship revenue would have been 27% higher at £4.74bn;
- In the pessimistic scenario, it would have been 15% lower at £3.17bn.

As with the optimistic and pessimistic scenarios for subscriptions, we believe that these cover the full plausible range of possible outcomes.

OTHER COMMERCIAL REVENUE (£0.54bn in Table 2.1)

The other commercial revenues (TV shopping, S4C grant, interactive services, pay per view, programme sales, and other) are not all that material to the

⁴⁶ Ofcom *Digital TV Report* (Apr. 2013), fig. 5: pay TV penetration was 52.8% for the average quarter in 2012.

⁴⁷ But not exactly, see *Economics of Television in a Digital World*, 25–6.

⁴⁸ One commercial impact comprises one viewer having one 'opportunity to see' (OTS) one 30-second commercial.

policy debate, so for simplicity we assume a range of £0.54bn (no change: pessimistic) to £0.70bn (a 30% increase: optimistic) if there were no BBC.

COMPOSITE PESSIMISTIC AND OPTIMISTIC SCENARIOS

We now combine our optimistic and pessimistic scenarios for the three commercial revenue sources to produce two composite scenarios. For simplicity, our composite pessimistic scenario includes the pessimistic assumptions for all three commercial revenue sources, and the equivalent for the optimistic scenario.

The levels of subscription and advertising revenues without the BBC depend on two quite different factors:

- What consumers would have been willing to pay for subscription TV if there had been no BBC TV in 2012;
- What advertisers would have been willing to pay for the larger number of commercial exposures resulting from the absence of the BBC.

In this context, these factors are largely, if not entirely, independent of each other. So our combined optimistic and pessimistic scenarios are even less likely than the extreme scenarios for the three individual revenue sources, making our analysis even more conservative. With this proviso, Table 2.2 shows the actual revenues in 2012 (with the BBC) and the two composite counterfactual scenarios (without the BBC).

Table 2.2. TV Revenue in 2012 (£bn)

	Actual (Table 2.1)	No BBC (Pessimistic)	No BBC (Optimistic)
Subscriptions	5.30	5.30 (n/c)	8.02 (+51%)
Advertising	3.73	3.17 (-15%)	4.74 (+27%)
Other Revenue	0.54	0.54 (n/c)	0.70 (+30%)
Licence Fee	2.72	-	-
Total	12.29	9.01 (-27%)	13.46 (+9.5%)

THE CENTRAL 'BASE CASE' PROJECTION AND THE RANGE OF UNCERTAINTY
For ease of exposition in the following sections, Table 2.3 summarises these results by expressing them as a central 'base case' projection (the midpoint of the pessimistic and optimistic scenarios) and a range of uncertainty (the difference between this base case and the other two scenarios). Figures 2.1 and 2.2 show the same results as charts. The 'net impact' simply shows the difference between the base case and the actual figures in 2012.

Table 2.3. TV Revenue in 2012 (£bn)

	Actual (Table 2.1)	No BBC (Base Case)	Net Impact	Range of Uncertainty
Subscriptions	5.30 (43%)	6.66 (59%)	+1.36 (+26%)	+/- 1.36
Advertising	3.73 (30%)	3.95 (35%)	+0.22 (+6%)	+/- 0.79
Other Revenue	0.54 (4%)	0.62 (5.5%)	+0.08 (+15%)	+/- 0.08
Licence Fee	2.72 (22%)	-	-2.72 (-100%)	-
Total	12.29 (100%)	11.23 (100%)	-1.06 (-9%)	+/- 2.23

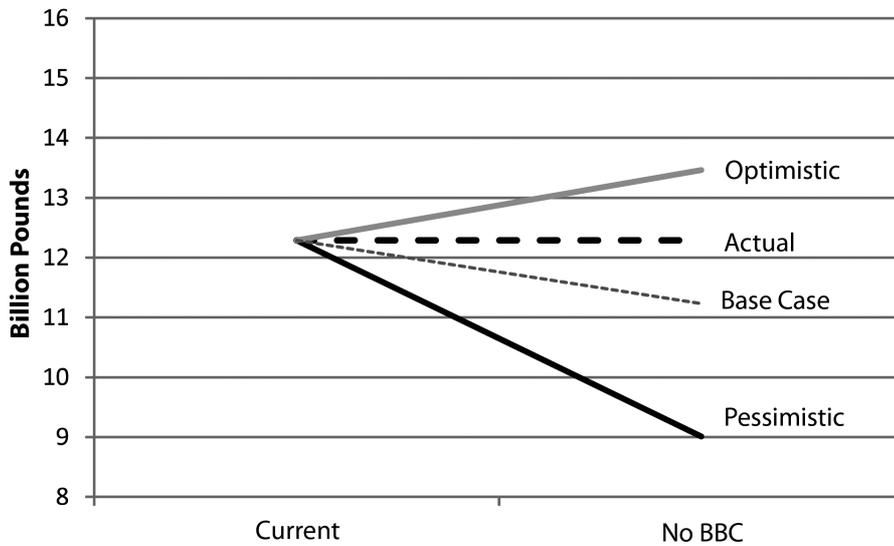


Figure 2.1. Total TV Revenue in 2012 (£bn)

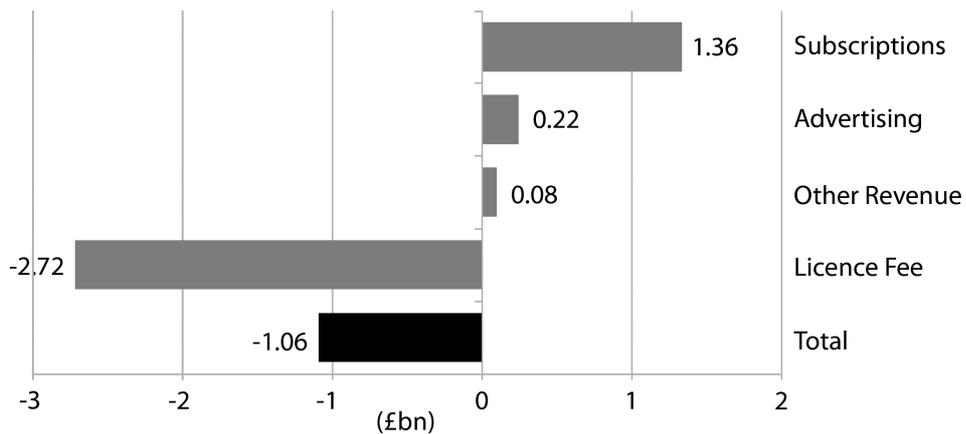


Figure 2.2. Net Impact on TV Revenue in 2012 (base case, £bn)

We are not suggesting that the base case is the most likely outcome – too little is known to develop a reliable view of what that would be – but it represents a simple way of introducing the analysis of the net impact on content investment (Section 3) and on viewers (Section 4). To reflect the range of uncertainty, Sections 3 and 4 also discuss the effect of varying the

“ *In the base case, [the increase in] commercial revenue, even in combination...is not enough to compensate for the loss of the licence fee. The net effect is a reduction of over £1bn (9%) in total industry revenue* ”

assumptions in line with the two extreme scenarios.

In the event, the broad conclusions in Sections 3 and 4 are rather robust (although the details inevitably vary between the scenarios). In other words, the qualitative

picture painted using the base case is largely unaffected by changing the revenue assumptions.

Despite the wide range of uncertainty, Table 2.3 illustrates a number of points:

- In the base case, although all three sources of commercial revenue increase, even in combination the increase is not enough to compensate for the loss of the licence fee. The net effect is a reduction of over £1bn (9%) in total industry revenue, from £12.29bn to £11.23bn.
- Well over 80% of the increase in commercial revenue in the base case comes from consumers, mainly subscriptions (£1.36bn out of £1.66bn⁴⁹ – about 82%) plus presumably much of the £0.08bn increase in other revenue (e.g. home shopping and pay-per-view). The result is that subscriptions account for 59% of total industry revenue in the base case versus 43% in the actual figures that include the BBC.
- Conversely, because of price elasticity, the increase in TV advertising revenue accounts for only about 13% of the total increase in commercial broadcasters' revenues in the base case (£0.22bn out of £1.66bn). Even in relative terms, advertising revenue is projected to increase much less than subscriptions in the base case (+6% versus +26%).

2.3 Commercial PSBs versus Non-PSBs

Commercial broadcasters can be split into two groups: commercial public service broadcasters (ITV, C4/S4C, and C5, including their portfolio channels) and others (non-PSBs). As we have seen,

- The commercial PSBs derive most of their income from advertising while the non-PSBs, as a group, derive most of their income from subscriptions;
- The increase in revenue in the central base case, compared with the actual figures in 2012, is much higher for subscriptions than for advertising (in both absolute and relative terms).

Removing the BBC from the market would therefore lead to a much bigger increase in the non-PSBs' revenue than for the commercial PSBs (again, in both absolute and relative terms). Table 2.4 shows our projections based on the following assumptions for the commercial PSBs' income in 2012 as a percentage of each commercial revenue source (with and without the BBC): 0% of subscriptions, 74.5% of advertising,⁵⁰ and 38% of other revenue.⁵¹

Table 2.4. Commercial TV Broadcasters' 2012 Revenue (£bn)

	Actual	No BBC (Base Case)	Net Impact	Range of Uncertainty
Commercial PSBs	2.98 (31%)	3.18 (28%)	+0.20(+7%)	+/- 0.62
Non-PSBs	6.59 (69%)	8.05 (72%)	+1.46 (+22%)	+/- 1.61
Total	9.57 (100%)	11.23 (100%)	+1.66 (+17%)	+/- 2.23

⁴⁹ Table 2.3: net impact on total commercial revenue: 1.36 + 0.22 + 0.08 = 1.66.

⁵⁰ CMR 13, fig. 2.37 gives £2,642m out of £3,546m (74.5%) to the commercial PSBs, including their portfolio channels.

⁵¹ In answer to an information request, Ofcom told us that the £722m Other revenue figure in CMR 13, figs 2.34 and 2.39, comprised aggregate totals of £341m for the commercial PSBs and £381m for the non-PSBs. Excluding £184m sponsorship revenue (which we have included with NAR, split 74.5% commercial PSBs, 25.5% non-PSBs) reduces the Other category to £538m of which the commercial PSBs accounted for £204m (38%).

The most striking feature of Table 2.4 is how much of the increase in commercial revenues in the base case goes to the non-PSBs⁵² (1.46/1.66 equals 88%), increasing their dominance of commercial revenues from 69% with the BBC to 72% with no BBC.

These projections (the base case and the range of uncertainty) for each of the two types of commercial broadcaster now enable us, in the following section, to explore the likely impact on content investment if there were no BBC.

⁵² Some combination of the incumbents and new entrants.

3. The Net Impact on Content Investment

3.1 Introduction

From a consumer perspective, what matters is the range and quality of content available at a given price.

THE RANGE OF CONTENT

We have been unable to locate any data on content spend by genre for the BBC and our two groups of commercial broadcasters – commercial PSBs (including their portfolio channels) and non-PSBs –

using the same genre definitions.⁵³ We are therefore unable to make any evidence-based projections of the likely net impact of losing the BBC on the range of programmes

“*From a consumer perspective, what matters is the range and quality of content available at a given price.*”

available to viewers in terms of the complete genre mix. (This is a possible topic for future research and certainly something the Government should explore – or ask Ofcom to explore – before considering major changes to the BBC.)

All we can confidently say about investment in genres at this point is that investment in content for the nations and regions would greatly decrease (e.g. by at least 50%) if there were no BBC. In 2012, 69% of this investment was by the BBC,⁵⁴ all the other 31% being by ITV. ITV's content investment for the nations and regions is part of its licence obligation and costs more than the advertising revenue it generates.⁵⁵

Without competition from the BBC, the ratings and revenue of regional ITV programmes would increase somewhat but ITV would still find it hard to make a commercial case for significantly increasing this content investment. C4, C5, and the non-PSBs have no regional distribution networks and do not invest in content for the nations and regions apart from S4C. In our view, they would be unlikely to invest in these even if there were no BBC because they would have little if any commercial incentive to do so.

We can also conjecture that investment in other types of public service content, such as news, current affairs, and first-run UK content for children, would also decrease significantly if there were no BBC. We have not found any published data to enable us to test this directly for the UK although European research regularly shows that, compared with public service broadcasters, commercial broadcasters provide (i) fewer minority-interest

⁵³ Ofcom publishes data on the content spend by the commercial multichannels (defined as commercial PSBs' portfolio channels and the non-PSB channels, combined) for each of eight genres: sport, entertainment, movies, factual, news, kids, music, leisure (CMR 13, fig. 2.52). It also publishes figures for the *hours* of different genres broadcast by three sets of channels: the five main PSB channels, BBC portfolio channels, and combined commercial multichannels (CMR 13, figs. 2.48–2.51). The data on the commercial multichannels' hours (fig. 2.51) use the same genre definitions as fig. 2.52 for the same channels' content investment but figs. 2.48–2.50 for the hours broadcast on the five main PSBs (peak time and daytime) and the BBC's portfolio channels (all day) use a different set of genre definitions. In addition, the cost per hour varies so much between genres that hours broadcast, even with consistent genre and broadcaster definitions, would tell us little about the breakdown of content investment by genre and type of broadcaster.

⁵⁴ £183m out of £266m, Ofcom, *Public Service Broadcasting Annual Report 2013* (PSB 13), annex D, fig. 8.

⁵⁵ Trade sources.

programmes and (ii) fewer domestic programmes (an important issue to which we return shortly).

For instance, a study for the Council of Europe reported ‘a marked difference between public service broadcasters and commercial channels across countries in terms of programming investment in areas that do not attract large audiences as well as in domestic production’.⁵⁶ However, we have no comparable data for the UK for minority-interest programmes in general or by genre that we can use to estimate the effect of removing the BBC.

THE QUALITY OF CONTENT

Programme quality obviously involves both value judgements and personal preference. In an economic analysis, the best overall surrogate is content expenditure, on the broad-brush assumption that the more money invested in content, the more content there will be that audiences will value. This assumption (the ‘financial commitment’ approach) is standard in media research.⁵⁷

Bigger budgets enable broadcasters to invest in more expensive genres such as drama and to commission or acquire higher quality programmes (on average, as judged by viewers) within each genre. Therefore, content investment is a good, although not perfect, overall indicator of the amount of programming available that is likely to be highly valued by viewers. This section therefore focuses on what the net impact on content investment would have been in 2012 if there had been no BBC.

METHODOLOGY AND STRUCTURE OF THIS SECTION

As with our analysis of revenue in Section 2, we start with the actual figures for content investment in 2012 (section 3.2). We then project how much the commercial PSBs and non-PSBs might have invested in content if there had been no BBC (section 3.3).

First, we assume that, without the BBC, (i) the commercial broadcasters’ revenue would have been as projected in the base case in Table 2.4 and (ii) they would have invested the same percentage of this higher revenue as they actually invested in 2012, despite the reduction in competition – especially competition for high-quality original UK content – resulting from the absence of the BBC. (As we’ll discuss, this is more likely to be optimistic than pessimistic.)

Finally, in section 3.4, we discuss the impact of varying these two assumptions, i.e. allowing for (i) the range of uncertainty around the base case revenue and (ii) commercial broadcasters investing either a higher or lower percentage of their revenue if there were no BBC. The detailed analysis for this is in Appendix B.

⁵⁶ David Ward, *The Assessment of Content Diversity in Newspapers and Television in the Context of Increasing Trends towards Concentration in Media Markets*. Final report. Media Division, Directorate General of Human Rights, Council of Europe. MC-S-MD (2006), 5. See also Richard van der Wurff, ‘Program Choices of Multichannel Broadcasters: Supply and Diversity of Programs in the Netherlands’, *Journal of Broadcasting and Electronic Media*, 48/1 (2004), 134–50; European Audiovisual Observatory, *Some Data to Compare Public and Private TV Programming* (2008): www.obs.coe.int/online_publication/expert/data_public_vs_private_tv.pdf.en.

⁵⁷ Barry R. Litman and Janet Bridges, ‘An Economic Analysis of Daily Newspaper Performance’, *Newspaper Research Journal*, 7 (Spring 1986), 9–26; Stephen Lacy, Anthony Atwater, and Xinmin Qin, ‘Competition and the Allocation of Resources for Local Television News’, *Journal of Media Economics*, 2/1 (Spring 1989), 3–13.

3.2 Actual Content Investment in 2012

Other things being equal (genre, production values, etc.), UK consumers prefer UK programmes to imports and first-run programmes to repeats.⁵⁸ Therefore, we need to look at both total content investment and investment in first-run UK content. For obvious reasons, the latter is also important for UK television production companies and the creative industries more generally.

TOTAL CONTENT INVESTMENT

The figures for total content investment in 2012 (i.e. including first-run programmes, acquired programmes and repeats, on all channels) are shown in Table 3.1.

Table 3.1. Total Content Investment in 2012 (£m)

BBC networks (incl. portfolio channels)	1,390
BBC nations and regions	183
BBC Alba and support for S4C	38
Total BBC	1,611 (27%)
Commercial PSBs: networks (incl. portfolio channels)	1,748
ITV nations and regions	83
Total commercial PSBs	1,831 (31%)
Film/sport channels	1,772
Other channels	691
Total non-PSBs	2,463 (42%)
TOTAL ALL CHANNELS	5,905 (100%)

Sources: CMR 13, fig. 2.41; PSB 13, annex D, fig. 8; BBC Annual Report (2013), note 2c.

The non-PSBs accounted for the highest proportion (42%) of total content investment. 72% of this (£1,772m out of £2,463m) was for premium film and sport channels for those households willing and able to pay a premium subscription. The other 28% of the non-PSBs' content investment (11.7% of total content investment) was for their other channels, funded by a combination of lower-tier subscriptions (basic pay TV channels, available in all, or almost all, pay TV homes) and advertising (including some free-to-air channels also available in most free-TV-only homes).

The other 58% of total content investment was by the PSBs, i.e. the BBC (27%) and the commercial PSBs (31%). Since the completion of digital switchover, this content has been available in all homes.

⁵⁸ Viewers' preference, in all countries, for local versus imported content (other things being equal) was discussed in *Economics of Television in a Digital World*, 18–19. The importance of original UK (and regional) content to UK viewers is shown by the results of Ofcom's regular surveys, e.g. the Audience Impact section in Ofcom's *PSB Report 2013: Information Pack* (Aug. 2013), slide 22. Viewers' preference for first-run programmes versus repeats is also well established, e.g. Phil Williams, 'The Evolution of the Television Rerun', *Journal of Popular Film and Television*, 21/4 (1994), 162–75; Peter J. Danaher, Tracey S. Dagger, and Michael S. Smith, 'Forecasting Television Ratings', *International Journal of Forecasting*, 27/4 (2011), 1214–40.

INVESTMENT IN FIRST-RUN UK CONTENT

For the BBC and the commercial PSBs, similar figures are available on their investment in first-run UK content. There are no directly comparable published figures for investment in first-run UK content by the non-PSBs but COBA (the Commercial Broadcasters Association) has stated that its members' first-run UK *commissions* in 2012 were 'nearly £500m'.⁵⁹ We therefore estimate the value of first-run UK content *transmitted* by the non-PSBs in 2012 (i.e. the equivalent of the other content investment figures in this report) as roughly £450m, giving the estimates for the market as a whole shown in Table 3.2.

Table 3.2. First-Run UK Content Investment in 2012 (£m)

BBC networks (incl. portfolio channels)	1,296
BBC nations and regions	183
BBC Alba and support for S4C	38
Total BBC	1,517 (46%)
Commercial PSBs (incl. portfolio channels)	1,240
ITV nations and regions	83
Total commercial PSBs	1,323 (40%)
Non-PSBs*	450 (14%)
TOTAL ALL CHANNELS	3,290 (100%)

Sources: PSB 13, annex D, figs. 4 and 8; BBC Annual Report (2013), note 2c; authors' estimate based on COBA press release.

* Estimated: see text.

The picture for first-run UK content investment in Table 3.2 is very different from that for total content investment in Table 3.1. Based on our estimate of £450m, the non-PSBs accounted for only 14% of the total £3.3bn investment in first-run UK content in 2012. The BBC accounted for the highest proportion (46%), closely followed by the commercial PSBs (40%).

The reason for the BBC's dominance of Table 3.2 is that it invested 94% of its content budget in first-run UK programmes (£1,517m out of £1,611m), a

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Based on our estimate of £450m, the non-PSBs accounted for only 14% of the total £3.3bn investment in first-run UK content in 2012.

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significantly higher proportion than for the commercial PSBs (1323/1831 = 72%) and dramatically higher than our estimate for the non-PSBs (450/2463 = 18%). For the latter,

however, their investment in first-run UK content as a proportion of their content spend when premium film and sport channels are excluded was 65% (450/691), not much lower than the 72% equivalent figure for the commercial PSBs.

⁵⁹ COBA press release, 'Multichannel Sector Commits to Flurry of Investments in UK Television Content', July 2013. COBA represents all the non-PSBs except for BSkyB's platform competitors Virgin Media, BT Vision, TalkTalk TV, and Top Up TV, none of which, to our knowledge, invested significantly in first-run UK content in 2012.

Using these figures for actual content investment in 2012, we now develop our base case scenario for what the commercial broadcasters' content investment might have been if there had been no BBC.

3.3 Content Investment without the BBC: Base Case

Our base case scenario for content investment makes two assumptions. First, it assumes that the commercial broadcasters' revenues in 2012 would have been as in the base case in Table 2.4:

- Commercial PSBs: £3.18bn, 7% higher than their actual 2012 revenue of £2.98bn;
- Non-PSBs: £8.05bn, 22% higher than their actual 2012 revenue of £6.59bn.

Secondly, it assumes that the commercial PSBs and the non-PSBs would each have invested the same percentage of revenue in total content (and, within that, first-run UK content) as they actually invested in 2012.

In other words, the commercial PSBs' and non-PSBs' content investment if there had been no BBC would have been 7% and 22% higher, respectively, both for total content and first-run UK content. This gives us the base case projections in Table 3.3 for total content investment and Table 3.4 for investment in first-run UK content, with and without the BBC.

TOTAL CONTENT INVESTMENT

Table 3.3 shows how the increase in total content investment by commercial broadcasters (£0.13bn for the commercial PSBs and £0.54bn for the non-PSBs, total £0.67bn) is not nearly sufficient to compensate for the loss of the BBC's £1.61bn content investment in 2012. The net result is that, under our base case assumptions, if there had been no BBC, total content investment would have been 16% lower – £4.96bn versus £5.91bn, a net loss of nearly £1bn in total annual content investment.

“
Under our base case assumptions, if there had been no BBC, total content investment would have been 16% lower...a net loss of nearly £1bn
 ”

Table 3.3. Total Content Investment in 2012 (£bn)

	Actual (Table 3.1)	No BBC (Base Case)	Net Impact
BBC	1.61	-	-1.61
Commercial PSBs	1.83	1.96 (+7%)	+0.13
Non-PSBs	2.46	3.00 (+22%)	+0.54
Total	5.91	4.96 (-16%)	-0.95

INVESTMENT IN FIRST-RUN CONTENT

Table 3.4 shows the equivalent figures for first-run UK content. The results are even starker. Because investment in first-run UK content as a proportion

of total content investment is so high for the BBC (94%) and so low for the non-PSBs (growing, but still only 18%), the reduction in first-run content investment is projected to be greater even in absolute terms (£1.33bn) than the reduction in total content investment (£0.95bn, Table 3.3).⁶⁰ A net loss of over £1.3bn in first-run UK content investment would be bad for UK viewers and disastrous for UK television production.

Table 3.4. Investment in First-Run UK Content in 2012 (£bn)

	Actual (Table 3.2)	No BBC (Base Case)	Net Impact
BBC	1.52	-	-1.52
Commercial PSBs	1.32	1.41 (+7%)	+0.09
Non-PSBs	0.45	0.55 (+22%)	+0.10
Total	3.29	1.96 (-40%)	-1.33

3.4 Varying the Base Case Assumptions

These projections are all based on our base case assumptions. What happens when we vary these? The two base case assumptions in section 3.2 were that, without the BBC:

1. The commercial broadcasters' revenue would have been as in the central revenue case in Table 2.4.
2. They would have invested the same percentage of this revenue as they actually invested in 2012.

In Appendix B, we explore the impact on our content investment projections of varying each of these assumptions. In order to cover the full range of possible outcomes, we combine pessimistic and optimistic scenarios for both assumptions. As discussed in Appendix B, for (1), we use the pessimistic and optimistic revenue scenarios from Table 2.4. For (2), we assume the following decreases/increases in the percentage of revenue invested in content.

Total content investment:

- Commercial PSBs: +/- 8%, i.e. from 56.5% to 66.3%;
- Non-PSB sport and movie channels: +/- 4%, i.e. from 25.8% to 28.0% of the non-PSBs' total revenue;
- Non-PSB other channels: +/- 15%, i.e. from 8.9% to 12.1% of the non-PSBs' total revenue.

Investment in first-run UK content:

- Commercial PSBs: +/-10%, i.e. from 40.0% to 48.8% of total revenue;
- Non-PSBs: +/-20%, i.e. from 5.4% to 8.2% of the non-PSBs' total revenue.

⁶⁰ An additional factor is that the commercial PSBs (being largely dependent on advertising revenue) are projected to increase their revenue and investment by only 7% in the base case. Therefore, although (compared with the non-PSBs) they invest a high proportion of revenue in first-run content, the projected increase for them in Table 3.4 is only £0.09bn, just 6% of the £1.52bn that the BBC invested in first-run UK content in 2012.

Combining these extreme assumptions gives us ‘doubly’ pessimistic and optimistic results for total content investment and investment in first-run UK content, respectively.

TOTAL CONTENT INVESTMENT

For total content investment, we have the results in Table 3.5 and Figure 3.1. Not surprisingly, given the extreme combination of pessimistic and optimistic assumptions, these show a very wide range of possible outcomes, from a ‘doubly pessimistic’ projection of a £2.2bn (38%) reduction⁶¹ to a ‘doubly optimistic’ £0.5bn (8%) increase in total content investment if there were no BBC.

More realistically, our expectation is that, without the BBC, total content investment would most likely have been reduced by between about 5% (£0.3bn) and 25% (£1.5bn), although the outcome would depend on many unpredictable factors, especially the possible entry of major new competitors and the subsequent competitive dynamics.

Table 3.5. Total Content Investment in 2012 (£bn)

	Actual	Doubly Pessimistic	Base Case	Doubly Optimistic
BBC	1.61	-	-	-
Comm. PSBs	1.83	1.44 (-21%)	1.96 (+7%)	2.52 (+38%)
Non-PSBs	2.46	2.24 (-9%)	3.00 (+22%)	3.87 (+57%)
Total	5.91	3.68 (-38%)	4.96 (-16%)	6.39 (+8%)

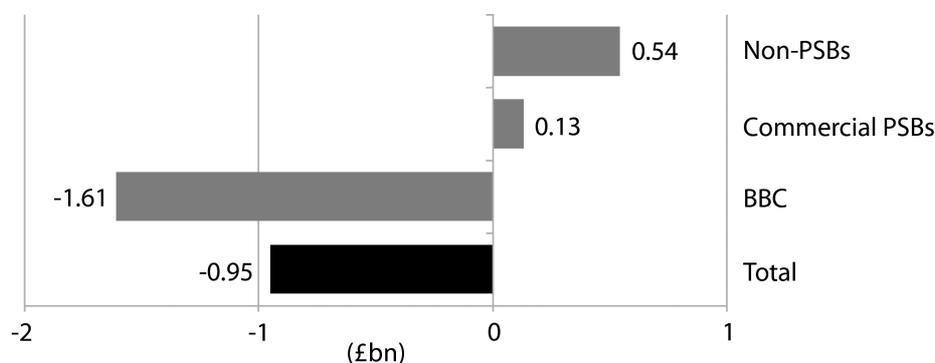


Figure 3.1. Net Impact on Total Content Investment in 2012 (Base Case, £bn)

Investment in First-Run UK Content

Table 3.6 and Figure 3.2 give a similar analysis for first-run UK content. Again, we have a wide range of possible outcomes based on the combined extreme assumptions. But in this case, there is no ambiguity about the direction of change: even under a heroically optimistic combination of assumptions (leading to an increase in first-run content investment of 38% for the commercial PSBs and 79% for the non-PSBs), total investment in first-run UK productions would be reduced by £0.67bn (20%) if there were no BBC.

As already discussed in section 3.2, in the more likely base case scenario, first-run UK content investment would have been over £1.3bn (40%) lower without the BBC. Under more pessimistic assumptions, it would of

⁶¹ £5.91bn – £3.68bn = £2.23bn.

course have been even lower – a reduction of nearly £1.9bn (-57%) in the ‘doubly pessimistic’ scenario.

Table 3.6. First-Run UK Content Investment in 2012 (£bn)

	Actual (£bn)	Doubly Pessimistic (£bn)	Base Case (£bn)	Doubly Optimistic (£bn)
BBC	1.52	-	-	-
Comm. PSBs	1.32	1.05 (-20%)	1.41 (+7%)	1.83 (+38%)
Non-PSBs	0.45	0.35 (-22%)	0.55 (+22%)	0.79 (+76%)
Total	3.29	1.41 (-57%)	1.96 (-40%)	2.62 (-20%)

Our expectation is that, without the BBC, and still assuming that there is some crowding out,

“Without the BBC...investment in first-run UK content would most likely be reduced by between £0.8bn (about 25%) and £1.6bn (about 50%) despite higher investment by commercial broadcasters

investment in first-run UK content would most likely be reduced by between £0.8bn (about 25%) and £1.6bn (about 50%) despite higher investment by commercial broadcasters.

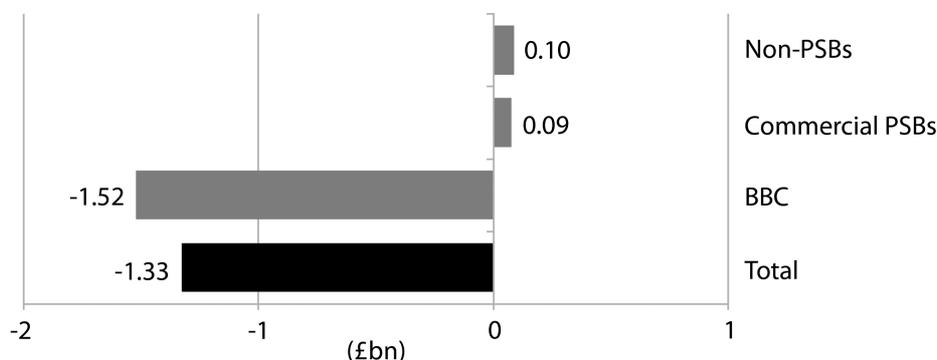


Figure 3.2. Net Impact on Investment in First-Run UK Content in 2012 (Base Case, £bn)

4. The Net Impact on Viewers

This report is about what the UK television market would have been like in 2012 if there had been no BBC. Having explored the net impact on industry revenue (Section 2) and content investment (Section 3), we now turn to the resulting net impact on viewers.

- Section 4.1 discusses the cost of TV for the average household in 2012, both per week and per viewer-hour, for total TV and for the BBC, commercial PSBs and non-PSBs.
- Section 4.2 uses the base case for content investment (Section 3.2) to explore the net impact on the average household of losing the BBC, focusing on value for money (cost per week and per viewer-hour) and choice (the availability of content, especially first-run UK programmes).
- Section 4.3, still using the same base case, then discusses how this impact might vary between different types of household.
- Finally, Section 4.4 explores how the results would change under the more optimistic and pessimistic (from an industry viewpoint) scenarios summarised in Section 3.4.

4.1 The Cost of Television for the Average Household in 2012

The direct consumer cost of television content in 2012 (subscriptions, BBC licence fee, and pay-per-view payments) was £8.03bn.⁶² Arguably, we should add to this some or all of the cost of advertising and sponsorship – £3.73bn in 2012 (Table 2.1) – on the basis that consumers indirectly paid for these by buying the advertised products and services. A detailed analysis of the perennial question of whether – and if so, how much – consumers indirectly pay for advertising is beyond the scope of this study⁶³ but in order to evaluate the cost and value for money of UK television with and without the BBC, we need to take a view on it.

DO CONSUMERS PAY FOR TV ADVERTISING?

As with many such questions, the answer depends on the counterfactual. Advertising in some form is an inherent part of a competitive market economy. The no-advertising counterfactual would therefore have to be a centrally planned economy. The closest real-world example of what the UK might be like with versus without mainstream competitive markets and advertising is the two Germanys before the fall of the Berlin Wall. East Germany was hardly a consumer paradise.⁶⁴

A more realistic counterfactual would be a market economy with advertising but without TV advertising, similar to the UK before 1955 and Sweden until 1992.⁶⁵ In this situation, marketing budgets would presumably be much the same as today but TV advertising expenditure would be reallocated to other media (print, online, posters, radio, etc.), price cuts and

⁶² Table 2.1, based on CMR 13, figs. 2.34 and 2.39 and excluding £0.04bn corresponding to 74.5% of the £49m dividend from the BBC's commercial activities (*BBC Full Financial Statements 2012/13*, 6 and 26). This reduces the consumer cost of BBC TV from the £2.72bn in Table 2.1 to £2.68bn (-1.5%).

⁶³ See A. S. C. Ehrenberg and T. P. Barwise, 'How Much Does UK Television Cost?', *International Journal of Advertising*, 2 (1983), 17–32.

⁶⁴ Patrick Barwise and Sean Meehan, *Beyond the Familiar: Long-Term Growth through Customer Focus and Innovation* (Jossey-Bass, 2011), 27.

⁶⁵ Sweden had some commercial channels via cable from 1987. This led to the introduction of the first terrestrial commercial channel in 1992 (http://en.wikipedia.org/wiki/Television_in_Sweden).

promotions, and other marketing activities (brand PR and events, direct mail, etc.).

Many of these expenditures would benefit UK consumers either directly (price cuts and consumer promotions) or indirectly (e.g. by subsidising print media or live events). Others would be of less consumer benefit (e.g. online and outdoor advertising and direct mail contribute little as a percentage of revenue to UK content creation).

For these reasons, relative to the realistic counterfactual of the UK as a market economy without TV advertising, we can say that television advertising does have a cost (strictly speaking, an opportunity cost) to UK consumers although that cost is somewhat less than the amount companies spend on it, i.e. commercial broadcasters' net advertising revenue plus 15–20% to cover the cost of commercial production and agency fees.⁶⁶

For simplicity, we assume that the net indirect cost of TV advertising and sponsorship to UK consumers in 2012 was equal to the £3.73bn in Table 2.1 (net advertising and sponsorship revenue), bringing the total direct and indirect consumer cost to £11.76bn.⁶⁷ With 26 million UK households,⁶⁸ this works out at an annual cost of £452 per household per annum averaged across the whole population. 22.8% of this⁶⁹ – equivalent to £103 per household per annum, just under £2 per household per week – was for BBC TV content funded by the licence fee.

AVERAGE COST PER USER-HOUR: TV VERSUS OTHER MEDIA

Assuming averages of 2.3 people per household and 4.0 hours of TV viewing per person per day,⁷⁰ the overall cost per viewer-hour was $£452 / (2.3 \times 4.0 \times$

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The overall cost per viewer-hour was ... 13.5p

”

$365) = 13.5p$. (The direct consumer cost – i.e. excluding the cost of advertising – was only 9.2p per viewer-hour.)

To put these figures into perspective:

despite the continuing fall in telecommunication and computing costs, a conservative estimate of the direct cost of a residential broadband connection, excluding the cost of any content or services, is 23.5p per user-hour.⁷¹

Including up to 29.8p per user-hour for the (opportunity) cost to consumers of internet advertising⁷² brings the total cost of the residential internet to about

⁶⁶ Section 2.1, n. 41. One other issue is that, to the extent that TV advertisements are more cost-effective than alternative marketing investments (for the purposes for which advertisers use them), their loss would lead to some reduction in allocative efficiency, albeit much less than for a centrally planned economy. On the other hand, the evidence is that, other things being equal, most viewers would prefer to watch programmes with fewer, or no, commercial breaks, as reflected in the high incidence of fast-forwarding through the commercial breaks when viewing time-shifted programmes off a DVR. We here ignore both of these factors.

⁶⁷ 95.7% of total industry revenue (Table 2.1). Excluded are BBC TV's share of the dividends from the BBC's commercial activities £38m, TV shopping £128m, S4C grant £84m, interactive £48m, programme sales £39m, and 'Other' £194m.

⁶⁸ CMR 13, fig. 2.54.

⁶⁹ £2.68bn (see n. 62) out of £11.76bn total cost to consumers.

⁷⁰ Average 2.3 people aged 2+ per household (ONS: 2011 Census); 4.0 hours per person per day (CMR 13, fig. 2.5).

⁷¹ CMR 13, fig. 5.64 gives £16.35/month as the average price of residential fixed broadband. CMR 13, fig. 4.1, gives 34.7 hours per month as the time spent 'web browsing' per laptop/desktop user. Assuming, very conservatively, that all 'web browsing' is via the home broadband connection (i.e. excluding online activity at work, school, etc.) and also that there are 2.0 monthly users per residential broadband home, the cost per user hour is $£16.35 / (2.0 \times 34.7 \text{ hours}) = 23.5p/\text{hour}$. This is almost certainly an underestimate.

⁷² Monthly active internet audience 43.6m individuals, each 'web browsing' for an average of 34.7 hours per month (CMR 13, fig. 4.1). Internet advertising expenditure £5,416m (CMR 13, fig.4.7). $(£5,416m / 12) / (43.6m \times 34.7\text{hrs}) = 29.8p$ per user-hour. This includes some business-to-business advertising as well as consumers being exposed to online advertising at work, college, etc.

50p per user-hour plus the cost of content and services. Similarly, the cost of fixed-line and mobile voice telephony is just over 50p per hour.⁷³

Most print media also cost significantly more per user-hour than TV viewing. Among paid-for print media, the cheapest are tabloid newspapers. For instance, the *Sun* costs 40p. It has 2.8 readers per copy.⁷⁴ Assuming each of them reads it for an average of 25 minutes, the direct consumer cost per reader-hour is $40p / (2.8 \times 25 / 60) = 34p$. Adding the indirect cost of advertising would again push the total cost up to around 50p per reader-hour.

A £5.99 book that takes ten hours to read and is read by, say, 1.2 people on average again costs 50p per reader-hour. Paid-for magazines and quality papers cost significantly more, especially once the cost of advertising (generally a higher percentage of

“These comparisons show that broadcasting, which (including radio) accounts for an average of almost seven hours per day of people’s lives, remains an exceptionally low-cost leisure activity.”

revenue than for tabloid newspapers) is factored in. Retail and rental DVD consumption costs also cost much more than TV viewing and most out-of-home leisure activities (restaurants, pubs, cinemas, etc.) cost much more again.

The only major medium with a lower consumption cost than television is radio, which (on a comparable basis to the 13.5p per viewer-hour for TV) costs only 1.9p per listener-hour.⁷⁵

These comparisons show that broadcasting, which (including radio) accounts for an average of almost seven hours per day of people’s lives,⁷⁶ remains an exceptionally low-cost leisure activity. But the cost of television per week and per viewer-hour also varies greatly between the PSBs and non-PSBs.

PSBs VERSUS NON-PSBs: COST PER WEEK

Table 4.1 (Column 3) and Figure 4.1 show the cost per household (not per person) per week for the BBC, the commercial PSBs and the non-PSBs in 2012. The figures for the non-PSBs are for pay TV homes, 57% of all homes in 2012.

Table 4.1. Cost per Week and per Viewer-Hour in 2012

	Consumer Cost (£bn)	Households (Millions)	Cost/Week (£)	Cost/Viewer-Hour (p)
Non-PSBs	5.89	14.8	7.65	24.9
Commercial PSBs	2.78	26.0	2.06	8.0
BBC	2.68	26.0	1.98	9.2

⁷³ CMR 13, fig. 5.53, has 8.6p/minute (52p/hour) and 9.1p/minute (55p/hour) as the average cost of mobile and fixed-line voice calls, respectively.

⁷⁴ <http://www.mediauk.com/newspapers/13707/the-sun/readership-figures>.

⁷⁵ CMR 13, fig. 3.1, gives total 2012 radio industry revenue of £1,193m and average weekly radio listening of 19.9 hours per head. Assuming a population of 60m, the cost per listener-hour was $£1,193m / (60m \times 19.9 \times 52) = 1.9p$. The cost excluding advertising, equivalent to the 9.2 p/hour figure for TV – i.e. the direct consumer cost (BBC expenditure, funded by the licence fee) divided by total radio listening – was just over 1.1p per listener-hour. The cost per listener-hour of BBC Radio – BBC expenditure divided by BBC Radio listening hours (55% of total listening, CMR 13, fig. 3.1) – was 2.1p.

⁷⁶ Average 6.8 hours/day comprising 4.0 hours/day of TV viewing (CMR 13, fig. 2.1) plus 2.8 hours/day of radio listening (19.9 hours/week, CMR 13, fig. 3.1) with minimal overlap between these.

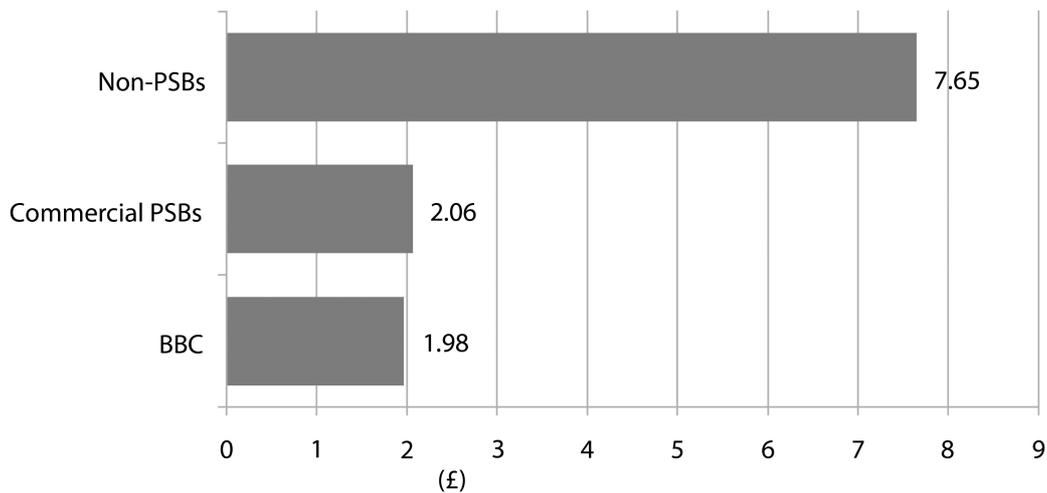


Figure 4.1. Cost per Week in 2012 (£)

The cost per household per week (Figure 4.1) is about £2 for the four universally available PSBs (BBC, ITV, C4/S4C, and C5, including their portfolio channels) and £7.65 for the non-PSBs in pay TV homes. This ratio of nearly four to one in the cost per week is driven by two factors, corresponding to the first two columns of the table.

- The total annual cost of the non-PSB channels to consumers in pay TV homes (£5.89bn) is more than double that of either the BBC (£2.68bn) or the commercial PSBs (£2.78bn).
- The PSBs were universally available but the £5.89bn cost of the non-PSBs had to be covered by the 57% of homes with pay TV.

There are several reasons why the absolute cost of the non-PSBs is so much higher than for the PSBs despite their much lower investment in first-run UK

“ The cost per household per week...is about £2 for the four universally available PSBs...and £7.65 for the non-PSBs in pay TV homes ”

content. The main one is the high cost of sport and movie rights for their premium pay TV channels. These rights accounted for 72% of the non-PSBs’ total content

investment in 2012 (£1.77bn out of £2.46bn, Table 3.1). Another is that pay TV subscriptions cover the cost of consumer equipment, installation, customer service, and marketing. The cost per week (and also per viewer-hour) is likely to be significantly lower in basic pay TV households without premium channels but we have been unable to locate published data to enable us to make that comparison.

COST PER VIEWER-HOUR

Table 4.1 (Column 4) and Figure 4.2 show the cost per viewer-hour for the BBC, the commercial PSBs, and the non-PSBs. These figures are total consumer costs divided by total viewing hours, for each of the three categories of broadcaster. Total TV viewing was 4.01 hours per person per

day in 2012, shared as follows: BBC 33.2%, commercial PSBs 39.7%, non-PSBs 27.2%.⁷⁷

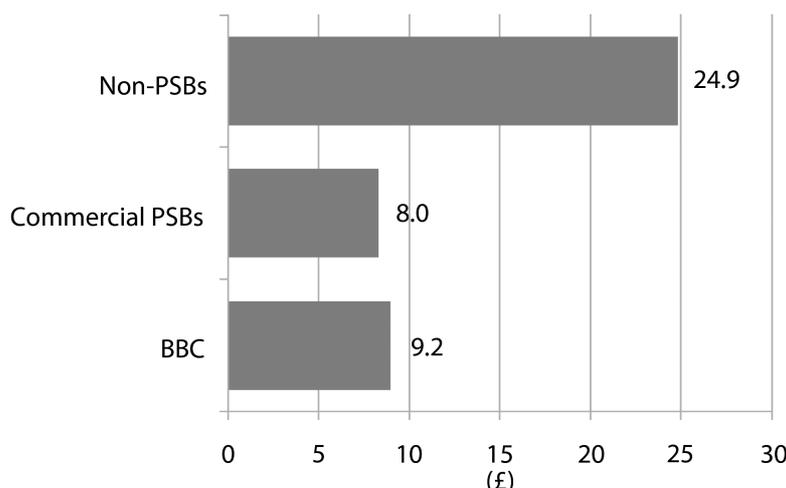


Figure 4.2. Cost per Viewer-Hour in 2012 (pence)

The broad picture for the cost per viewer-hour is similar to that for the cost per household per week – the non-PSB figure is again much higher than the two PSB figures – but with two differences.

First, the cost per viewer-hour of the BBC is about 15% higher than that of the commercial PSBs (9.2p versus 8p) despite its slightly lower cost per week (£1.98 versus £2.06). This partly reflects the way we are treating advertising and sponsorship as a consumer cost, using the commercial broadcasters' net advertising revenue (NAR) and excluding the additional 15–20% cost of commercial production costs and creative and media agency fees. If these additional costs were included, the cost per viewer-hour of the commercial PSBs would be the same as, or marginally higher than, the BBC's 9.2p.⁷⁸

In addition to this measurement issue for the consumer cost of TV advertising, there are three other reasons why (under our definitions) the BBC's cost per viewer-hour is 15% higher than for the commercial PSBs:

- The BBC's higher investment in first-run UK content – £1.52bn versus £1.32bn (Table 3.2), a difference of 15% in absolute terms and slightly more as a percentage of consumer cost;
- The BBC's need for 10–15% more programme content per hour than the commercial PSBs because of the absence of commercial breaks;
- The commercial PSBs' somewhat greater ability to generate revenue from other sources.⁷⁹

The second difference between the relative costs per week and per viewer-hour in Table 4.1 is that the ratio of the cost of the non-PSBs to that of the PSBs is rather lower on a per viewer-hour basis than on a per week basis:⁸⁰

- Cost per week: 3.9x BBC, 3.7x commercial PSBs;

⁷⁷ CMR 13, 181 and fig. 2.70.

⁷⁸ The cost per viewer-hour for the non-PSBs would also be slightly increased.

⁷⁹ In Table 2.4, we assumed £204m of other commercial revenue for the commercial PSBs.

⁸⁰ Table 4.1, e.g. cost per household £7.65/week for the non-PSBs, 3.9 × the £1.98/week figure for the BBC. The *average aggregate individual viewing* (as opposed to the *average viewing per head*) is higher in pay TV homes than in free-TV-only homes.

- Cost per viewer-hour: 2.7x BBC, 3.1x commercial PSBs.

Despite these differences and despite the growth of pay TV, we repeat our earlier point that TV viewing remains a very low-cost activity relative to other media consumption apart from radio listening. Even the non-PSBs' cost of 25p per viewer-hour is only about half as much as accessing free content on the internet, a fixed-line or mobile phone conversation, or reading a tabloid newspaper or a cheap paperback book.

We now turn from the actual consumer costs in 2012 to consider what these costs would have been for the average household without the BBC, focusing first on the base case revenue scenario we developed in Section 2.

4.2 The Cost and Value for Money without the BBC

Under the base case, if there had been no BBC in 2012, subscription revenue would have increased by 26% to £6.66bn and advertising and sponsorship by 6% to £3.95bn (Table 2.3). Assuming a 26% increase in pay-per-view revenue to £58m, in line with subscriptions, brings the total consumer cost of TV content to £10.67bn, a 9.6% reduction versus our estimate of £11.8bn for the actual cost in 2012, with the BBC. For the average household, this reduction equates to an annual saving of 9.6% of £452, i.e. £43.39 – equivalent to 83p per week or 11.9p per day.

THE COST PER VIEWER-HOUR WITHOUT THE BBC

With 2.3 people in the average household, the saving would be 36p per person per week (83p/2.3), just over 5p per day. Assuming, optimistically, that total viewing was unchanged (i.e. that the 80 minutes per day that the average person watched BBC TV in 2012⁸¹ would all have gone to commercial channels rather than some of it going to other activities), the cost per viewer-hour would have been reduced by the same 9.6% as the cost per household per week, from 13.5p to 12.2p per viewer-hour, a reduction of just 1.3p.

If, more realistically, 15% of the 80 minutes per day BBC viewing (i.e. 12 minutes per day) went to other activities, total viewing would have gone down by 5%, from 4.0 hours/day to 3.8 hours/day, making the cost per viewer-hour 12.8p,⁸² only 0.7p/hour (5%) less than the actual cost of 13.5p per viewer-hour with the BBC.

In other words, in the base case revenue scenario, if there were no BBC:

- The average cost of television would be reduced by just under 12p per household per day – about 5p per person per day in an average household of 2.3 people;
- The average cost per viewer-hour would be reduced by 1.3p (assuming no reduction in total viewing) or 0.7p (assuming, more realistically, that 15% of BBC viewing went to other activities).

In the context of other media consumption (except radio) costing at least 50p per user-hour, these are very small reductions.

WHAT WOULD VIEWERS BE GETTING FOR THEIR MONEY?

⁸¹ CMR 13, fig. 2.70.

⁸² 12.2p/hour/(1.00-0.05).

In Section 3, we used the same base case revenue projections from Section 2 to develop an equivalent base case for content investment, assuming that the commercial PSBs and non-PSBs would have continued to invest the same percentage of their (now higher) revenues in content, despite the likely reduction in ‘competition for quality’ resulting from the absence of the BBC. The results were:⁸³

- Total content investment down £0.95bn (16%);
- Investment in first-run UK content down £1.33bn (40%).

Viewers would be losing all the BBC content, which captured one-third of their viewing in 2012 – 80 minutes per person per day. In partial compensation, without the BBC’s assumed crowding out effect, commercial broadcasters would have increased their content investment: in our base case, we assume that this increase would be in line with their increased revenues. But the net effect would still be a reduction of almost £1bn in total content investment and over £1.3bn in investment in first-run UK programmes, with a large increase in imports, reruns, and repeats.

The availability of first-run content in some genres would be reduced by even more than 40% but the only genre for which we can confidently say that this would happen (given our lack of comparable data on content investment by genre across the different types of broadcaster) is programmes for the nations and regions, investment in which would be cut by at least 50%. Other genres likely to suffer would include news, current affairs, UK-produced children’s programmes, and other public service content.

The average household would be paying very slightly less (saving just under 12p per day) for less choice and much less good television. Given the large role that television plays in people’s lives (average viewing of 4.0 hours/day), it is hard to see how many viewers would consider that such a small saving would compensate for such a big reduction in choice. This is potentially an area for further research using surveys and perhaps a deliberative (citizens’ jury) approach, but we would be surprised if many consumers would consider this a better outcome.

“
The average household would be paying very slightly less...for less choice and much less good television
 ”

4.3 How Might the Impact Vary between Different Types of Household?

The analysis has so far focused on the net impact on the average household. But, in reality, the impact would vary greatly between different types of household. A detailed quantitative exploration of this variation is beyond the scope of this study but we can say the following:

1. Pay TV companies might increase their prices in response to the reduction in competition resulting from the absence of the BBC. This

⁸³ Tables 3.3 and 3.4.

- would reduce the value for money for both existing and any new pay TV subscribers. In this study, we ignore this possibility.⁸⁴
2. Assuming no increase in pay TV prices resulting from the removal of the BBC, the negative impact would be greatest for those households with the highest combined individual viewing of BBC TV. The main pattern is that these would generally be large households that watch a lot of television. An important secondary factor would be the BBC's viewing share within the household, which in turn is likely to correlate with the household members' ages and socio-economic status and whether they have pay TV: the BBC's viewing share is higher among older and higher-income viewers and in homes without pay TV, especially without premium sport and movie channels.
 3. Those households that upgraded to pay TV, or to a more expensive package of channels, would obviously be paying more for more choice than if they had not done so.

Point 2 is a possible area for further research, e.g. an analysis of the value for money (cost per week and per viewer-hour) of the licence fee and television in general for different types of household, depending on:

- The household members' combined individual viewing of BBC TV and total television;
- Whether the household has no pay TV, basic pay TV, or premium pay TV.⁸⁵

We have no direct empirical evidence on Point 3 but, for illustrative purposes, we here explore it via the type of 'what-if?' approach used in this study.

HOUSEHOLDS UPGRADING TO PAY TV OR A PRICIER PACKAGE

In 2012, 57% of households had pay TV and 43% did not (see n. 46). In the base case, subscription revenue is projected to increase by £1.36bn (26%) without the BBC. In order for this large increase in subscription revenue to be achieved (and assuming no increase in pay TV prices as a result of the absence of the BBC), a significant proportion of the 43% free-TV-only homes would have to upgrade to pay TV and a significant proportion of pay TV homes would have to upgrade or switch to a higher-priced package.

For illustration, assume that, under the no-BBC scenario, UK households could be categorised into four groups as follows:

- 33% of households continued as free-TV-only homes (Group 1);
- 10% upgraded from free-TV-only to pay TV at an average cost of £28/month (Group 2);
- 47% continued with the same pay TV package (Group 3);
- 10% upgraded or switched to a higher package at an average incremental cost of £16/month (Group 4).

With 26 million total households, the effect would be an increase in annual subscription revenues of just over £1.36bn, in line with the base case.

⁸⁴ But in Appendix B we do discuss whether the BBC makes the market more competitive, constraining pay TV operators' ability to cut investment and/or raise prices.

⁸⁵ The current proportions are roughly 40%, 25%, and 35% of households (trade sources).

THE NET IMPACT ON HOUSEHOLDS IN GROUPS 1 TO 4

Groups 1 and 3, together accounting for 80% of households, would have saved the £1.98/week cost of BBC TV (Table 4.1) but lost all the BBC channels. Without data on their demographics and viewing, we cannot be specific about who they are and how great their reduction in choice would be. But, based on other data, we can conjecture that, compared with the average household discussed in section 4.2:

- Group 1 (households that continued without pay TV) would tend to have fewer, older household members, lower incomes, higher viewing per head but lower total individual viewing, and a slightly higher proportion of BBC viewing;⁸⁶
- Group 3 (households that continued with the same pay TV package) would tend to be the opposite of Group 1 on all the dimensions listed.

The trade-off would therefore be somewhat different for these two groups.

- The reduction in choice would be most severe for Group 1 but the £1.98/week saving would also be somewhat more significant for them because of their relatively low average household income. They would have been unwilling – or in some cases unable – to spend at least £21.50/month (£4.96/week) to upgrade to pay TV.⁸⁷
- Conversely, for most of Group 3, the £1.98/week saving⁸⁸ would be pretty negligible but the relative reduction in choice would also be somewhat less. This last point should not be overstated, however: BBC1 and BBC2 had a combined share of 27% in DTT homes versus 25% in digital cable homes and 24% in digital satellite homes – not a huge difference.⁸⁹ In fact, given the high combined individual viewing levels in many pay TV homes (because of their large household size), the BBC's cost per viewer-hour may well be lower in basic pay TV homes than in free-TV-only homes.

Households in Group 2 (upgrading from free-TV-only to pay TV) would tend to be broadly similar to those in Group 1 in demographic and viewing terms but closer to the average household, as reflected in their willingness and ability to pay at least £21.50/month (£4.96/week) for pay TV despite having chosen not to do so when the BBC was available. They would be paying almost £3 per week more for their television⁹⁰ but, despite this higher cost, most would almost certainly see the result as a net reduction in choice, especially for first-run UK content.

The fact that they had chosen not to subscribe to pay TV until the disappearance of the BBC shows that they did not previously perceive the basic pay TV content to be worth the subscription cost. Their reduction in choice would be somewhat lessened by the commercial broadcasters' increased content investment. Nevertheless, our interpretation is that most of this group would be paying more for what they would perceive as inferior television.

⁸⁶ CMR 13, figs. 2.55, 2.65: DTT only versus digital satellite and digital cable homes.

⁸⁷ £21.50/month is the price of BSkyB's entry-level pay TV package.

⁸⁸ Of course even this saving would be reduced if pay TV prices were raised in response to the reduced competition resulting from the removal of the BBC.

⁸⁹ CMR 13, fig. 2.65.

⁹⁰ £4.96 – £1.98 = £2.98.

Similar considerations apply for Group 4 (pay TV households upgrading to a higher-priced package in response to the loss of the BBC). They too would be paying somewhat more: an average of £16/month (£3.69/week) in higher subscriptions in our illustrative example, minus £1.98/week for the BBC, a net increase of £1.71/week. Again, these are households that had previously chosen not to subscribe to the higher-priced pay TV package, which, too, would have benefited from some extra content investment.

Overall (and still assuming no increase in pay TV prices), if there were no BBC:

- Most homes (Groups 1 and 3, 80% of all homes in our illustrative example) would be saving £1.98/week but suffering a significant net reduction in choice due to the loss of the BBC channels;
- The rest (the other 20%) would be paying slightly more (of the order of £1.70–£3.00 per week) but also in most cases suffering a reduction in perceived choice because, as we saw in Section 3, the increase in investment in content

(especially first-run UK content) by the commercial broadcasters if there were no BBC would not

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This analysis suggests that the great majority of viewers would be worse off in pure value for money terms if there were no BBC TV.

”

come close to compensating for the loss of BBC content, especially for first-run UK content.

This analysis suggests that the great majority of viewers would be worse off in pure value for money terms if there were no BBC TV.

4.4 The Optimistic and Pessimistic Scenarios

The discussion so far (for both the average household and different types of household) has all been based on the base case projection from section 3.2. We now consider how the net impact on viewers would vary under the conditions of the more optimistic and pessimistic (for the industry) scenarios. To ensure that we span the full range of possible outcomes, we focus on the extreme ‘doubly optimistic/pessimistic’ scenarios summarised in section 3.4.

‘DOUBLY OPTIMISTIC’ SCENARIO

Under this scenario, the cost to consumers (subscriptions, advertising and pay-per-view) would have been £12.83bn without the BBC.⁹¹ This is 20% higher than in the base case (£10.67bn) and 9.1% higher than the actual cost in 2012 (£11.76bn), including the BBC licence fee.⁹²

However, even under the extremely optimistic assumptions of this scenario (both for revenue – still assuming no price increase – and for the percentage of revenue invested in content), total content investment would

⁹¹ Table 2.2, assuming a 51% increase in pay-per-view revenue, from £46m to £69m (£0.07bn) in line with the increase in subscriptions: $8.02 + 4.74 + 0.07 = 12.83$.

⁹² See earlier text in Sections 4.1 and 4.2.

have been only 8% higher (Table 3.5) and investment in first-run UK content would have been 20% lower (Table 3.6) than the actual 2012 figures with the BBC.

In other words, under the extreme ‘doubly optimistic’ (from an industry perspective) scenario, if there had been no BBC, the average household would have been paying 9% more for TV, for which they would have been getting 8% more total content investment but 20% less investment in first-run UK content. They would be watching many more imports, reruns, and repeats and much less first-run UK content.

Assuming no change in viewing levels, the cost per viewer-hour would have increased by 9.1%, in line with the total cost to consumers, from the actual 13.5p per viewer-hour with the BBC to 14.7p per viewer-hour.

Overall, the average household would be paying a bit more for its television but still getting less for its money. The details would vary between different types of household, but directionally, the main variance from the base case discussed in section 4.3 would be that the proportion of households in Groups 2 and 4 (upgrading to pay TV or a higher-priced package) would be higher and the proportion in Groups 1 and 3 (not upgrading) correspondingly lower. The net impact within each group would be broadly similar to what we discussed in section 4.3.

The commercial broadcasters’ investment in content would be 8% higher than they actually invested in 2012, with the BBC (Table 3.5), but their investment in first-run UK content would still be 20% lower (Table 3.6).

Even under this extremely optimistic scenario, most viewers would be getting less value for money from their televisions.

‘DOUBLY PESSIMISTIC’ SCENARIO

The outcome here is, broadly, the mirror image of the ‘doubly optimistic’ scenario. The annual cost to consumers would have been only £8.52bn,⁹³ 28% less than the actual £11.76bn with the BBC, saving the average household 28% of £452 or £126 per annum, equivalent to £2.42 per week, 35p per day, or 15p per person per day. The downside would be a huge reduction in choice, with total content investment down 38% (Table 3.5) and investment in first-run UK content down 57% (Table 3.6).

We would expect this to lead to a significant reduction in total viewing. For instance, suppose average viewing decreased by 10%, from 4.0 to 3.6 hours per day, a reduction of 24 minutes per day, equivalent to just 30% of BBC viewing in 2012, with the other 70% going to commercial channels. The cost per viewer-hour would then be 10.8p/hour,⁹⁴ 2.7p/hour (20%) less than the actual 13.5p per viewer-hour in 2012 with the BBC.

As with the central case and doubly optimistic scenarios, a potential area for future research is how many households would prefer to put up with such a big reduction in the range and quality of TV content – a reduction of almost 40% in total content investment and

“*An area for future research is how many households would prefer to put up with such a big reduction [in choice] to save 35p/day.*”

⁹³ Table 2.2: subscriptions £5.30bn and advertising £3.17bn plus £46m pay-per-view equals £8.52bn.

⁹⁴ $13.5p \times (1.00 - 0.28) / (1.00 - 0.10) = 10.8p$.

almost 60% in first-run UK content investment – in order to save 35p per day. Our strong expectation is that very few would.

Conclusion

Varying the assumptions in line with the extreme optimistic and pessimistic scenarios does not change our conclusion that, even after allowing for the BBC's assumed crowding out of commercial provision, most households would be worse off in pure consumer terms – choice and value for money – if there were no BBC TV.

5. Explaining these Results

According to our analysis in Sections 2–4, the net impact of losing BBC TV would be negative for most households, even after allowing for its assumed crowding out of commercial TV and even from a pure consumer value-for-money perspective (a combination of cost and choice) that ignores the BBC’s various ‘citizenship’ impacts.

Many economists (and non-economists) may be surprised by this conclusion, which contradicts the widespread assumption that a free market without the ‘distortion’ of the BBC would be best for the public as consumers. There seem to be both generic and specific reasons for the belief that the UK public as consumers of television (if not, perhaps, as citizens, radio listeners, or internet users) would be better off if there were no BBC.

General economic theory suggests that the most efficient and effective way of providing choice and value for money is a free market within which buyers allocate their purchases to the suppliers that best meet their needs, while the suppliers relentlessly strive to maximise their long-term profits by meeting these needs – and, over time, building a reputation for meeting them – better than the competition. As a chairman of a major consumer organisation who has also taught, published, and consulted widely on customer focus (Barwise) and a career media economist (Picard) we of course agree with this view as a general, if oversimplified, economic theory.

Several specific features of the BBC might be also expected to reduce its value for money for consumers.

- It is a public-sector organisation and therefore assumed by many to be, by definition, less efficient than its private sector competitors.
- It is often accused – sometimes rightly – of bureaucracy, profligacy, and inefficiency.
- It invests a high proportion of its content budget in first-run UK productions rather than cheaper imports, reruns, and repeats.⁹⁵
- As part of its remit, it devotes considerable resources to public service content (e.g. regional, children’s, news, current affairs, religious, and minority-interest programmes). This tends to increase its average cost per viewer-hour.

In this section, we aim to show why, despite the implications of general economic theory and these specific factors, we are confident that the conclusion of our analysis in Sections 2–4 remains valid. We first give a common sense explanation and reality check using simple high-level data on the current market. We then discuss some key, relevant aspects of the generic economics of television. Finally, we highlight some other specific features of the UK market that further help to explain the BBC’s remarkable value for money and, therefore, our results.

We believe that the market characteristics discussed here mean that our conclusions should, in reality, not be surprising at all. In fact, once these factors are taken into account, we believe that the overall direction of our results is almost inevitable. The reason, we think, why many people believe the opposite is that they have been over influenced by generic economic

⁹⁵ Reruns generally refer to a second or subsequent run of a series after a gap of several months or years. Repeats refer to showing the same programme or episode more than once in the same day or week.

theory rather than focusing on the specific market characteristics and performance of UK television as we have done here.

5.1 A Common Sense Explanation and Sanity Check

The first simple fact is that pay TV is much more expensive for consumers than the BBC. The basic BSkyB entertainment packages range from £21.50 to

“*Pay TV is much more expensive for consumers than the BBC*”

£32 per month, with another £16/month for Sky Movies and £22/month for Sky Sports.⁹⁶ Compared with these prices (ranging

from £21.50 to £70 per month), the BBC licence fee at £12.13 per month, including BBC Radio and Online (and the World Service, broadband subsidies, etc.) looks remarkably good value for money.⁹⁷

Secondly, with the BBC now accounting for only 22% of total industry revenue, it is hard to see how its market impact could be as dramatic as James Murdoch and some of its other critics suggest. BSkyB alone has annual television revenue of over £5bn, nearly double the £2.7bn annual revenue of BBC TV. Commercial television broadcasters as a group enjoy over three-and-a-half times BBC TV's revenue.

INTERNATIONAL COMPARISONS

Contrary to the idea that the BBC seriously crowds out commercial TV, the evidence from international comparisons is that, with the exception of the USA – an outlier with virtually no public broadcasting – there is little if any relationship across different developed countries⁹⁸ between per capita public TV revenue (from licence fees or general taxation) and per capita commercial TV revenue. If crowding out were significant, there would be a negative correlation between the two.

Fully investigating these international comparisons is beyond the scope of this study but Figures 5.1 and 5.2, using Ofcom data, suggest that our assumption that there is crowding out (rather than 'competition for quality') may be too conservative.

⁹⁶ BSkyB website, accessed 15 Nov. 2013.

⁹⁷ Of course this is a simplification – the two offers are very different. But, as we'll see, the ratio of consumption time is nothing like the 1.8 to 5.8 price ratio between pay TV and the BBC (including radio, etc.). Nor have we seen any evidence that average appreciation scores are higher for basic pay TV programmes and channels (the relevant comparator since the BBC is no longer a serious player in the market for premium sports and films) even among those who choose to subscribe to them. Based on the general patterns of audience appreciation and audience size, we would expect, if anything, the opposite. See T. P. Barwise, A. S. C. Ehrenberg, and G. J. Goodhardt, 'Audience Appreciation and Audience Size', *Journal of the Market Research Society*, 21 (1979), 269–89, and Patrick Barwise and Andrew Ehrenberg, *Television and its Audience* (Sage, 1988), ch. 5.

⁹⁸ If developing countries are included, we would expect a positive correlation because both types of per capita revenue are likely to be correlated with per capita GDP. This is why in Figures 5.1 and 5.2 we have excluded the four developing countries in the Ofcom data.

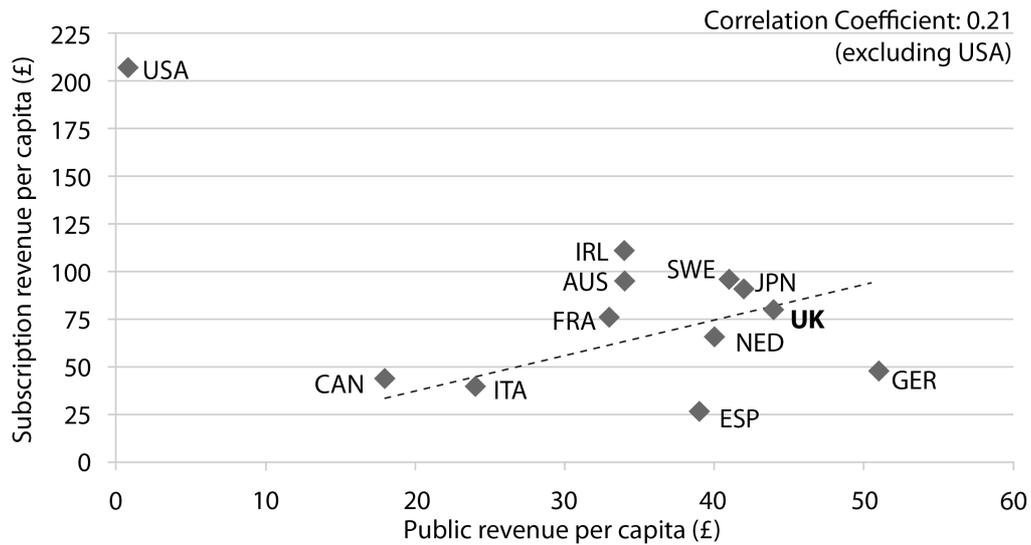


Figure 5.1. Public and Subscription Revenue per Capita
(Data from Ofcom, *International Communications Market Review 2012*, fig. 3.19)

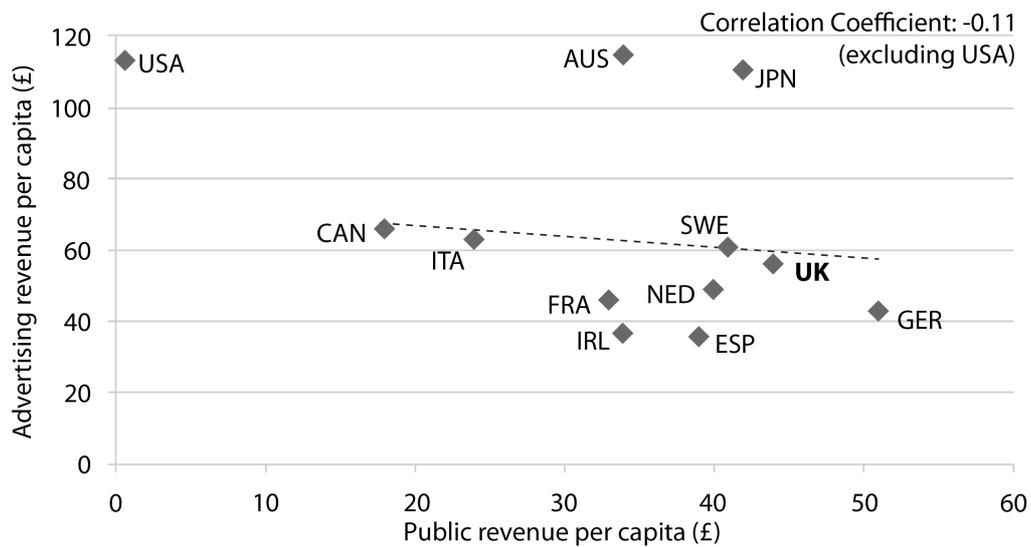


Figure 5.2. Public and TV Advertising Revenue per Capita
(Data from Ofcom, *International Communications Market Review 2012*, fig. 3.19)

Figure 5.1 actually finds a weak *positive* correlation between per capita public and subscription revenue across the ten developed countries – excluding the USA – in the Ofcom data. Figure 5.2 finds an even weaker negative correlation between per capita public and advertising revenue. With only ten countries in the sample, neither of these correlations is statistically significant and there are many other underlying differences between the countries: culture, language, the history and governance of broadcasting, competition from other media, traditions of theatre, film production, news, sport and hobbies, etc., population size and GDP per capita, and so on. But the results suggest that crowding out is, at best, a weak effect.

We see this as another area for further research. For now, the conclusion we have to explain is that, even if (despite these international

comparisons) there is crowding out – as assumed in this study – most consumers would nevertheless be worse off if there were no BBC.

VIEWING SHARE VERSUS REVENUE SHARE

Assuming there is crowding out, if the BBC were as inefficient as its critics suggest, even with a low revenue share, it might still be marginally reducing the overall efficiency and effectiveness of the market, at least from a pure consumer perspective.

That this is unlikely is evidenced by the third simple fact, also discussed in Section 2: with only 22.1% of industry revenue in 2012, the BBC achieved 33.2% of total viewing. Audiences are hugely attracted to BBC programmes, significantly more than its revenue share would suggest.

The commercial broadcasters, with the other 77.9% of industry revenue, achieved 66.8% of viewing. On this simple aggregate basis, despite the BBC's public service commitments and high investment in first-run UK programmes, its overall cost per viewer-hour was 43% lower than for the commercial broadcasters collectively.⁹⁹ Again, it is hard to see how removing it from the market – or even just scaling it back – could possibly improve overall value for money.

WHERE'S THE POTENTIAL GROWTH: SUBSCRIPTIONS OR ADVERTISING?

This broad-brush conclusion is further strengthened when we incorporate the differences between the two main sources of commercial revenue, subscriptions and advertising. The key facts, discussed in Sections 2–4, are as follows:

- Subscriptions already account for over 40% more revenue than advertising.¹⁰⁰
- Although the price elasticity of TV advertising is contested, all analysts agree that a big increase in commercial exposures (e.g. resulting from the removal of the BBC) would lead to relatively little – if any – increase in advertising revenue.¹⁰¹
- Therefore, most of any increase in commercial revenues if there were no BBC would have to come from consumer subscriptions.
- The average cost per viewer-hour of the non-PSBs, funded largely by subscriptions, was 2.7 times the figure for BBC TV in 2012 (24.9p versus 9.2p, Table 4.1).

In other words, the main impact on consumers of eliminating, or reducing the scale of, BBC TV would be to replace a broadcaster that costs them about 9p

“The removal of the BBC would lead to relatively little – if any – increase in advertising revenue.”

per viewer-hour with one that costs them about 25p per viewer-hour while providing less choice and investing much less in first-run UK content.

⁹⁹ $1 - ((22.1/33.2) \times (66.8/77.9)) = 0.43$.

¹⁰⁰ £5.30bn versus £3.73bn in 2012 (Table 2.1). Note that our figure for advertising includes £180m sponsorship revenue. Without that – i.e. using Ofcom's definition – subscription revenue was already almost 50% higher than advertising in 2012 (CMR 13, fig. 2.34).

¹⁰¹ See Appendix A.

As we have discussed, there are many uncertainties and also many differences between different households. The situation is further complicated by the important distinction between basic and premium pay TV (the latter having a significantly higher cost per week and per viewer-hour). Future research should explore these and other complications. But it seems clear that the net result of eliminating or reducing BBC TV would indeed be to reduce the overall value for money for most UK viewers even if we disregard the need to pay for BBC Radio and the other services currently funded by the licence fee and whatever extra value we place on the BBC's public service content and citizenship benefits.

These high-level numbers provide an initial sanity check on the results of Sections 2–4. We now turn to the key relevant aspects of the generic economics of television to highlight some of the underlying reasons.

5.2 The Generic Economics of Television

We discussed the generic economics of television in our last report.¹⁰² We here summarise the aspects that help explain why the value for money of UK television would be reduced if there were no BBC.

The underlying cost structure of television is one of high fixed cost and zero marginal cost. The production cost per viewer falls inversely with the number of viewers. Digital technology has reduced the cost of making and distributing the 'long tail'

of programmes few people want to watch¹⁰³ but, with few exceptions, technology has not cut the cost of producing programmes able to attract large audiences.

If anything, the cost of

premium content is increasing due to ever-growing competition for the top rights and talent.¹⁰⁴

“ *Because the marginal cost is zero, the fixed licence fee is...an extremely efficient way for consumers to pay for television* ”

Because the marginal cost is zero, the fixed licence fee is an extremely efficient way for consumers to pay for television, providing they almost all consume it (which, in the case of households paying the licence fee, they do).

US VERSUS DOMESTIC PRODUCTION

This fundamental cost structure (combined with a preference in all countries for domestic content, discussed shortly) especially favours US production because the US is by far the biggest market for television content.¹⁰⁵ This does somewhat penalise the BBC (and, to a slightly lesser extent, the commercial PSBs) in comparison with the non-PSBs, with their much greater reliance on US imports. But that penalty is far less in the UK, with 26 million TV households, than for PSBs in smaller countries such as Denmark, with only

¹⁰² *Economics of Television in a Digital World*, esp. section 3.

¹⁰³ Chris Anderson, *The Longer Long Tail: How Endless Choice is Creating Unlimited Demand* (Random House, 2009).

¹⁰⁴ *Economics of Television in a Digital World*, 18–19; Anita Elberse, *Blockbusters: Hit-Making, Risk-Taking, and the Future of the Entertainment Business* (Henry Holt, 2013).

¹⁰⁵ C. Hoskins, R. Mirus, and W. Rosenbloom, 'Reasons for the US Dominance of the International Trade in Television Programmes', *Media, Culture and Society*, 10 (1988), 499–515; S. Wildman and S. Siwek, *International Trade in Films and Television Programs* (Ballinger Publishing, 1988); M. Dupagne and David Waterman, 'Determinants of US Television Fiction Imports in Western Europe', *Journal of Broadcasting and Electronic Media*, 42/2 (1998), 208–20.

2.5 million households.¹⁰⁶ DR, the Danish equivalent of the BBC, rightly lauded for its recent successes in Scandi-noir and political drama, nevertheless has to rely on a higher proportion of imports than the BBC.

Accurate comparative data on imports/exports of television programming is limited, but there is some evidence showing compliance with the European Union Audiovisual Media Services (AVMS) Directive. Large European countries such as the UK are less reliant on non-EU programmes than small European countries and public broadcasters are much less reliant on non-EU programmes than private broadcasters. For example, in one study, the proportion of EU content during qualifying hours in 2010¹⁰⁷ was:

- 69% for the UK, 57% for Estonia, and 49% for Sweden;
- 82% for public broadcasters but only 57% for private broadcasters.¹⁰⁸

A further factor is the English language. This cuts both ways: the UK is especially open to US (and other Anglophone) imports, which can be shown here without dubbing or subtitles; but it also benefits from the same lack of language barriers in other Anglophone markets and from many viewers in non-Anglophone markets being able to understand – and in many cases wishing to improve their competence in – English as a second language.

Where production quality is the same, audiences tend to prefer local content, which they generally find more personally and culturally relevant. This pattern somewhat mitigates the effect of the extreme economies of scale of TV production.¹⁰⁹ It also explains the non-PSBs' increasing investment in UK content in order to compete although, as we have seen, the proportion of revenue they invest in first-run UK programmes is still much lower than for the PSBs.

THE UNIVERSAL AVAILABILITY OF PSB CONTENT

Where the BBC and other universally available PSBs – including the UK commercial PSBs – gain from the cost structure is that, *within* each country, all TV homes contribute to the programme budget without generating incremental production costs (because the marginal cost of production is zero). In contrast, subscription TV content is available only to those homes willing and able to pay for a package that includes the particular channel on which it is shown. This proportionately increases the content cost per home.¹¹⁰

AN EXAMPLE: MAD MEN ON BBC4 VERSUS SKY ATLANTIC

The impact of this last factor can be substantial. One widely discussed example is the cult US series *Mad Men*. The first four seasons were shown on BBC4, available in all digital TV homes – 87% of all homes in 2007, rising to 93% in 2010.¹¹¹ BSkyB then outbid the BBC for the rights, with estimates of the premium ranging from 50 to 300 per cent.¹¹² The show was heavily promoted as part of the launch of the Sky Atlantic channel, available in all BSkyB homes – but this was still fewer than 40% of all UK homes. In the event, the average

¹⁰⁶ http://en.wikipedia.org/wiki/List_of_countries_by_number_of_households.

¹⁰⁷ A definition used by the EU that excludes news, sports, games, and advertising.

¹⁰⁸ Final Study Report, *Study on the Implementation of the Provisions of the Audiovisual Media Services Directive Concerning the Promotion of European Works in Audiovisual Media Services* (European Commission, 2010/0002, 13 Dec. 2011).

¹⁰⁹ *Economics of Television in a Digital World*, 18–19.

¹¹⁰ This is a slight oversimplification. For some content, pay TV operators pay for content on a per home basis. However, this contractual wrinkle this does not change the underlying economics.

¹¹¹ CMR 13, fig. 2.1.

¹¹² Ben Fenton, 'BSkyB Outbids BBC for Rights to Mad Men', www.ft.com, 2 Oct. 2010.

audience size for season five was at least 50% lower than for season four on BBC4, although the ratings in the USA showed no such reduction.¹¹³

BSkyB claimed that this still reflected a significant increase in the viewing of *Mad Men* in Sky homes and quite rightly pointed out that, as a subscription service, it has little direct interest in audience size, being mainly concerned with the show's ability to help it attract and retain subscribers.¹¹⁴ Nevertheless, even if one takes the lowest independent estimate of the premium paid for the rights (50%), the net effect has been a cost per viewer-hour at least three times as high as for the now universally available BBC4, despite it being the smallest of the BBC's four mixed-genre channels.

LOWER OVERHEADS AND GREATER STABILITY

A further factor is that a well-run PSB funded by a compulsory licence fee (and with free spectrum) can have lower overheads, especially lower revenue generation costs, than an equally well-run pay TV broadcaster. This enables licence-fee-funded broadcasters to invest a higher proportion of revenue in content, which then tends to increase viewing and reduce the average cost-per-viewer-hour.

Licence fee funding also provides more stable revenue than subscriptions and, especially, advertising. This potentially enables licence-fee-funded broadcasters to take a longer-term view of programme planning and development.

REACH AND FAIRNESS

Television services are especially well suited to being funded by a universal licence fee because they are consumed by almost everyone, on a very large scale (an average of four hours per day in the UK¹¹⁵) and at a very low cost in absolute terms (9p per viewer-hour in the case of the BBC, Table 4.1).

Unlike many public services, the licence fee does not constitute a significant transfer of resources from some parts of the public to others. Further, insofar as its

“ Unlike many public services, the licence fee does not constitute a significant transfer of resources from some parts of the public to others ”

consumption is somewhat skewed demographically, the skew favours older and poorer citizens, who tend to watch more television and therefore pay less per viewer-hour on average.

It is regressive compared with funding out of general taxation, but more suitable for limiting politicians' ability to use the threat of funding cuts to pressurise for favourable news and current affairs coverage. Pay TV is of course equally regressive as well as much more expensive.

¹¹³ The numbers are somewhat contested and depend on definitions. 355,000 watched the premiere of season four in 2010 but the premiere of season five attracted only 98,000 viewers on a like-for-like basis ('overnight' BARB ratings including same-day time-shifted viewing). According to BSkyB, the cumulative audience for this episode over seven days was 209,000 (an increase of almost 50% over the premiere of season four in BSkyB homes).

¹¹⁴ BSkyB may, however, have been less nonchalant about *Mad Men's* ratings than it claimed. Audience size reflects the show's popularity among subscribers, which in turn influences their loyalty and willingness to pay. It also largely determines pay TV broadcasters' ability to generate advertising revenue. Advertising accounts for only a small proportion of their total revenue but, with minimal marginal cost once the sales organisation is in place, every £1,000 of incremental NAR increases the bottom line by almost £1,000.

¹¹⁵ CMR 13, fig. 2.1.

The theoretical objection that people who do not consume the BBC's services should not be forced to pay for them has little force in practice because both the number of households for whom this is the case and the amount of money involved are so small – certainly far less than for most public services.¹¹⁶

5.3 Specific Features of the UK Market and the BBC

Taken together, these generic factors help explain why the cost per week and per viewer-hour is so much lower for the BBC than for subscription TV and, therefore, why eliminating or reducing the BBC is likely to reduce value for money for most households, despite the BBC being a publicly owned organisation routinely accused of inefficiency, and despite its carrying the extra burden of its public service obligations and high investment in expensive first-run UK content. In addition to these generic factors, some further specific features of the UK market and the BBC reinforce the BBC's value for money.

COMPETITIVE MARKET

The current UK television market is extremely competitive. It did not start this way: until 1955, the BBC – like a majority of public services even today –

“
The current UK television market is extremely competitive
”

was a monopolist. Since then, the launch of ITV (1955), C4 (1982), multichannel television (from the late 1980s), and now online TV have created not only one of the most competitive

television markets in the world but also a market that is more competitive than for all other public services.¹¹⁷

The (contested) stereotype of bloated, bureaucratic public service organisations traditionally applies to areas with no competition: if you want the service, there is only one place to go. The contrast with the current UK television market could hardly be greater.

Whatever may have been the case before, the relentless increase in competition over the last 30-plus years has forced the BBC to become more and more audience-focused and efficient (as well as forcing big efficiency gains at ITV).

SPECIFIC FEATURES OF THE BBC

In Appendix C, we discuss a number of specific features of the BBC as an organisation that further help to account for the – surprising to some – results of our analysis in Sections 2–4:

¹¹⁶ However, a related practical issue that will need to be addressed in the Charter Review is the small but growing proportion of viewers who watch BBC content only on non-TV devices, 0.4% of adults 16+ according to GfK's *Cross Media Insight Survey* (Jan.–June 2013). (The proportion of households in which all viewing is on non-TV devices is lower than the proportion of individuals but we have not seen data quantifying this.) This raises practical challenges to do with licence fee collection in households without a TV set – an important executional issue beyond the scope of this report.

¹¹⁷ See *Economics of Television in a Digital World*, 13–16, for the development of the market since 1955. The higher education market has more competitors than television but much less well-informed consumers and consumer choice is also limited except for the top candidates.

- It continuously seeks to balance popularity (share of viewing) and the Reithian idea of investing ahead of public taste. Broadcasting is both an 'experience good' (viewers and listeners have limited ability to judge the quality of a programme in advance) and a 'merit good' (the act of consuming the product can change consumers' preferences).¹¹⁸
- It is no longer in the market for the most expensive premium acquired content. For listed events such as the Grand National and the summer Olympic Games, which are required to be broadcast on universally available channels, the BBC and other PSBs pay less than the rights would fetch in an unregulated market.
- The BBC has a very strong and, despite periodic scandals, highly trusted brand. Combined with a number of interrelated behavioural factors (huge reach, substantial audience flow, no advertising breaks, and a portfolio of big channels to facilitate cross-promotion), the result is that programmes shown on the BBC, especially its major channels, tend to attract larger audiences than the same programmes would attract elsewhere.

¹¹⁸ Andrew Graham, 'Is Broadcasting Just Another Good or Service?', in Picard and Siciliani (eds) *Is there Still a Place for Public Service Broadcasting?*, 43–50; Andrew Graham and Gavyn Davies, *Broadcasting, Society and Policy in the Multimedia Age* (John Libbey, 1997).

6. Implications for BBC Charter Renewal

In Sections 2–4 we concluded that most households would be worse off in pure value for money terms if there were no BBC TV, even after allowing for its assumed crowding out of commercial provision. This analysis also ignores the consumer benefits of BBC Radio and the other services funded by the licence fee, as well as the BBC’s various ‘citizenship’ benefits.

This conclusion held under a wide range of both pessimistic and optimistic assumptions about both (i) what commercial broadcasters’ revenue would be if there were no BBC and (ii) the proportion of that revenue that they would invest in content and, within that, first-run UK content.

Finally, in Section 5 we discussed a range of reasons why, although this conclusion runs counter to what many people believe or assume, it is consistent with the observed facts, the generic economics of TV, and a number of specific features of the UK television market and the BBC.

We now turn to its implications for Charter renewal, starting with a projection of the market in 2016, the last year of the current Charter.

6.1 2016 and Beyond

The next BBC Charter runs from the end of 2016¹¹⁹ so we need to consider the likely market at that point, on the politically realistic assumption that the then government renews the Charter. We have therefore asked Enders Analysis (EA), a leading independent research company, for a projection of the main commercial revenue streams for the period 2012–16: subscriptions and advertising (using our definitions, as in Table 2.1) and online TV revenue.¹²⁰

EA’s detailed analysis, separately projecting each major revenue source for each major player in each year, gives the following cumulative annual growth rates (CAGRs) for 2012–16:

- Broadcast pay TV subscriptions:¹²¹ 2.36%;
- Broadcast advertising and sponsorship: 2.25%;
- Online television: 41.35%.¹²²

“ On this basis, the BBC’s proportion of total industry revenue will have fallen from 21.7% in 2012 to only 18.5% in 2016 ”

Over the same period, we project that, under the October 2010 agreement, the revenue of BBC TV (i.e. its share of total BBC income) will decline by an average of 1% per annum.¹²³ If we also assume 2.5% per annum growth for other commercial revenue, we have the projections in Table 6.1.

¹¹⁹ The funding runs until 31 Mar. 2017, the end of the BBC’s 2016–17 financial year, but the Charter itself ends 31 Dec. 2016.

¹²⁰ CMR 13, fig. 2.53, gives online TV revenue for 2012 (and % increases over 2011) of £252.4m (+38%) broken down as follows: ‘free-to-view’, i.e. advertising, £142.9m (+27%); subscriptions £62.0m (+153%); pay-per-view £34m (-32%); download-to-own £44.1m (+8%).

¹²¹ Including hybrid broadcast/broadband.

¹²² Same revenue streams as in CMR 13, fig. 2.53: online video advertising, VoD subscriptions, pay-per-view and download-to-own. Includes BSkyB’s online TV services.

¹²³ Licence fee frozen at £145.50 but some nominal growth through net increase in the number of households paying (despite a growth in homes avoiding/evading it by watching only online) and increasing contribution from the BBC’s commercial activities, leading to total BBC revenue (licence fee plus dividends from commercial activities) growing 1% pa. Proportion of total revenue allocated to BBC TV falling by 2% pa over this period due to resources being reallocated to the BBC World Service and other activities, partly mitigated by continuing reduction in overheads.

On this basis, the BBC's proportion of total industry revenue will have fallen from 21.7% in 2012¹²⁴ to only 18.5% in 2016, the last year of the current Charter.¹²⁵ This expected reduction in the BBC's share of total television industry revenue is a consequence of current policy and market trends.

- Policy: the October 2010 spending review decision to freeze the licence fee at £145.50 and use it to fund the BBC World Service and other activities previously funded out of general taxation.
- Market trends: the continuing growth of commercial TV revenue, including a small but growing proportion from online TV.

Table 6.1 TV Revenue in 2012 and 2016 (£bn)

	2012	2016
Subscriptions	5.30 (42%)	5.82 (41%)
Advertising	3.73 (30%)	4.08 (29%)
BBC Licence Fee	2.72 (22%)	2.61 (18%)
Online TV	0.25 (2%)	1.00 (7%)
Other	0.54 (4%)	0.60 (4%)
Total	12.54 (100%)	14.11 (100%)

Table 6.1 represents a significant acceleration of the decline in the BBC's share of total TV industry revenue from 0.32% per annum for 1998–2012 (see section 1.1) to 0.8% per annum for 2012–16.

The policy question now is what should happen after 2016. There is a wide range of options.

THE NUCLEAR OPTION: NO BBC AFTER 2016

One option would be simply to abolish the BBC at the end of this Charter and leave broadcasting entirely to the market.¹²⁶ As far as we know, none of the BBC's critics are proposing this, either because they genuinely believe that the public would be better served by some intermediate option or because they see abolition as desirable but politically infeasible.

Whatever the reasons, being clear about what the likely consequences of abolition would be provides a reference point for less extreme policy options. If our analysis is correct, the outcome would be significantly worse for most viewers as consumers and a serious blow for UK producers because of a 25–50% net reduction in investment in first-run UK content, despite the increased investment by commercial broadcasters, especially the non-PSBs, assumed in our analysis.

BBC TV also has numerous impacts on 'citizenship' issues, such as the UK's national culture and society, news and current affairs, the creative industries, regional production, the balance of payments and the wider economy, child development, the diffusion of new technologies and digital inclusion, and the UK's international profile and reputation. Some of these are contested and reasonable people may disagree about issues such as the

¹²⁴ This is slightly lower than the 22.1% proportion in Table 2.1 and the analysis in Section 2 because we here include revenue from online TV within total industry revenue.

¹²⁵ From £2.72bn out of £12.54bn in 2012 to £2.61bn out of £14.11bn in 2016.

¹²⁶ Plus perhaps C4 and S4C, whose role falls outside the scope of this study.

appropriate limits on its commercial activities. But we are not aware of any serious critics of the BBC who believe that its overall net impact on the UK public as citizens is negative.

THE LONG-TERM IMPLICATIONS OF CONTINUING ‘SALAMI-SLICING’

We see no serious threat of the BBC being abolished in the foreseeable future. However, there is a serious threat to its long-term value, and even viability, in the continuation of the current policy of ‘salami-slicing’ its resources. This is happening through a combination of (i) reducing the licence fee in real terms (by freezing it while inflation continues at, say, 2.5–3.0% per annum) and (ii) using an ever-increasing proportion of it as a replacement for general taxation to fund other initiatives such as the BBC World Service, digital TV switchover, superfast broadband, S4C, local TV, or other public service broadcasting.

Suppose the current policy were extended beyond 2016 with a 10-year settlement leading to a continuing reduction of 1% per annum in the funding of BBC TV. By 2026, its revenue would have fallen to £2.36bn, equivalent to £1.67bn in 2012 pounds assuming 2.5% per annum inflation – a 39% reduction in real terms over the 14 years 2012–26.

Consider the following scenario beyond 2016.

- The projected 4.0% per annum¹²⁷ growth rate of total commercial TV revenue for 2012–16 (Table 6.1) continues to 2026, increasingly driven by online TV.
- By then, total commercial revenue would have grown from £11.8bn in 2016 to £18.1bn in 2026 (+54%).
- Total TV industry revenue would be £20.5bn of which the BBC’s £2.36bn would represent a share of just 11.5%.

Further continuation of the same trend would lead to the BBC disappearing around 2040, just under 120 years after its foundation.

In other words, the no-BBC counterfactual explored in this study could become a reality within 25–30 years, even though no one is advocating it and the result would be much worse for the public as both consumers and citizens, as well as for UK production.

Continuation of the current ‘salami-slicing’ policy will lead, over time, to a smaller BBC, both in absolute terms and, especially, relative to the overall size of the UK television market. Some people are advocating this as a deliberate policy rather than an inadvertent consequence of tactical decisions to hold down the licence fee and/or load other costs onto it.

“The no-BBC counterfactual explored in this study could become a reality within 25–30 years, even though no one is advocating it and the result would be much worse for the public as both consumers and citizens, as well as for UK production”

We therefore now discuss this option, i.e. a deliberate move to a much smaller BBC.

¹²⁷ Table 6.1: commercial TV revenues (including online TV) were £9.82bn in 2012, projected to grow to £11.50bn in 2016, a CAGR of 4.0% pa.

6.2 A Deliberately Much Smaller BBC

Those arguing for a much smaller BBC assume, at least implicitly, that there is some optimum size for it greater than zero but significantly smaller than today. How does this suggestion stand up to the results of our analysis?

THE OVERALL PUBLIC BENEFIT OF THE TELEVISION ECOLOGY

Figure 6.1 is a schematic representation of our results. It shows the overall public benefit of UK television with/without the BBC. By public benefit, we mean the overall public interest, a combination of consumer and citizen costs and benefits. This is not a function that can be directly measured and quantified, partly because the relative weighting of consumer and citizen benefits depends on value judgements. But since our analysis suggests that, if there were no BBC TV, the public as a whole would be significantly worse off as both consumers and citizens, the weighting between these does not change the qualitative picture portrayed.

Figure 6.1 graphically illustrates our conclusion that eliminating BBC TV – i.e. a 100% reduction in its scale and scope (and funding) – would lead to a significant reduction in the overall public benefit of UK television, shown in the vertical double-ended arrow on the right of the chart.

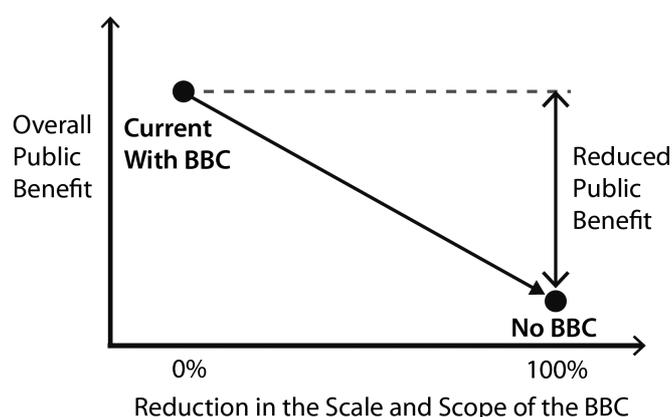


Figure 6.1. Overall Public Benefit of UK Television With versus Without the BBC

What about a smaller (say, 25%) reduction in the scale, scope, and funding of BBC TV? Figure 6.2 shows the result, on the assumption that there is a straight-line relationship between the reduction in public benefit and the scaling back of the BBC. On this basis, the loss of public benefit would be only 25% as much as if the BBC were eliminated altogether, as in Figure 6.1, but the public would still be worse off than with the BBC at its current scale.

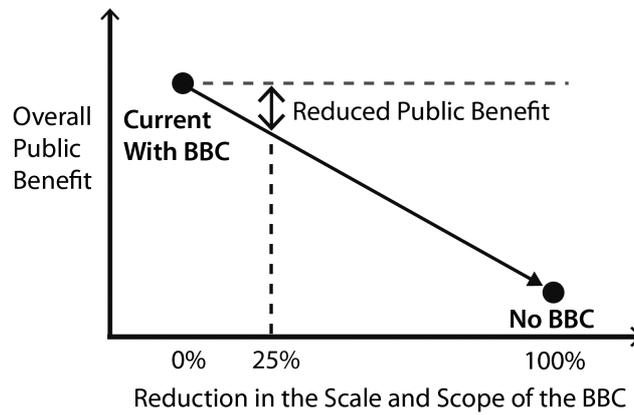


Figure 6.2. Overall Public Benefit with a 25% Reduction in the Scale and Scope of the BBC, Assuming a Linear Relationship

Those arguing that a smaller BBC would be in the public interest assume that the relationship between the overall public benefit of the UK television ecology and the scale and scope of the BBC is very different from this, with an optimum point somewhere between the current situation and the no-BBC scenario modelled in this study. Figure 6.3 illustrates this schematically, with an optimum corresponding to a 25% reduction in the scale and scope of the BBC.

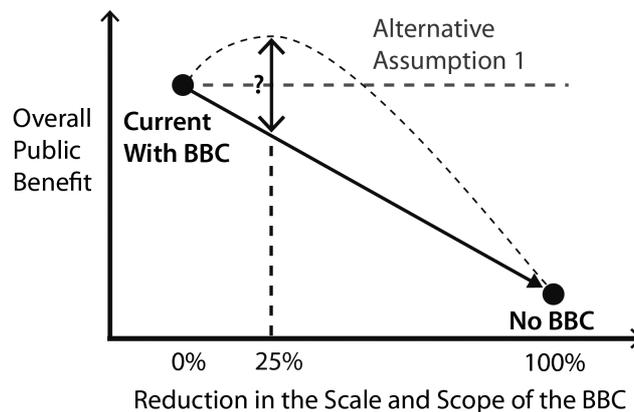


Figure 6.3. Alternative Assumption 1: Optimum with a 25% Reduction in the Scale and Scope of the BBC

The vertical double-ended arrow in Figure 6.3 represents the *extra* public benefit assumed by the proponents of a smaller BBC. This is in addition to the incremental public benefit from commercial broadcasters assumed in our analysis (due to our assumption that the BBC crowds out some commercial provision and that, if there were no BBC, the commercial PSBs and, especially, the non-PSBs would increase their content investment).

The reasons why those arguing for a smaller BBC believe that their proposals would generate so much extra public benefit vary, depending on the proposals. As far as we know, however, none of them has attempted to justify this belief using an evidence-based model of the likely consequences of what they are proposing, equivalent to our analysis in this study.

The type of highly nonlinear relationship portrayed in Figure 6.3 is not inconceivable in principle but we are sceptical about its plausibility in practice.

This is even more the case for those arguing for a much smaller BBC, as represented in Figure 6.4 for a 75% scaling back of BBC TV.

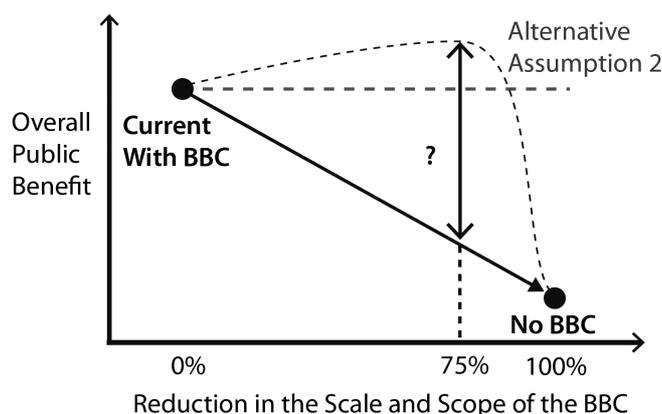


Figure 6.4. Alternative Assumption 2: Optimum with a 75% Reduction in the Scale and Scope of the BBC

The onus should surely be on those arguing for a smaller BBC to provide some kind of evidence and argument about why they believe the situation shown schematically by the curves in these charts to be the case.

THE 'MARKET FAILURE' ARGUMENT

Those arguing for this position generally believe that a smaller BBC should disproportionately reduce its investment in popular programming to focus on less popular public service content that the commercial broadcasters will not provide. There are four practical problems with this 'market failure' argument.

1. Broadcasting is a creative industry and the distinction between commercial and public service genres and programmes is neither fixed nor clear-cut.¹²⁸ The most innovative programmes often change viewers' interests and preferences, sometimes by challenging, blurring, or crossing the boundaries between existing genres. The long-term aim of the UK PSBs, including the BBC, has always been to 'make popular programmes good and good programmes popular'. The logical conclusion of the market failure argument is a ghettoised system in which the only non-commercial content is so worthy and dull that hardly anyone watches it (also increasing the cost per viewer-hour).
2. The BBC's remarkable value for money (low cost per week and per viewer-hour) and its high reach are based on its ability to show a wide range of programmes, with plenty for everyone, in order to justify the licence fee. Further, as discussed in section 5.3 and Appendix C, its trusted brand, popularity, and audience flow are self-reinforcing, enabling it to generate larger audiences for its programmes – including the most demanding public service programmes – than the same programmes would achieve on other channels. All this may be infuriating for some of its competitors and for free-market enthusiasts but it surely benefits the UK public.
3. Viewers enjoy the wide range of programmes shown by the BBC. Contrary to popular belief, the television audience is only weakly

¹²⁸ The author of *King Lear* was a shareholder with a direct interest in the box office takings.

segmented: all viewers watch a wide range of genres and a highly individual mixture of popular and less popular programmes.¹²⁹

4. According to our analysis – even conservatively assuming, as we have, that the BBC does crowd out some commercial content investment – its negative market impact is already much less than often suggested. By the end of the current Charter, it will be even less.

Once one allows for the BBC's own investment in content, 94% of which is in first-run UK content, the evidence is that any scaling back of the BBC, with or

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Any scaling back of the BBC, with or without narrowing its scope... would lead to reduced viewer choice and value for money

”

without narrowing its scope to focus only on non-commercial genres and programmes, would lead to reduced viewer choice and value for money.

Whatever weight one places on consumer

versus citizen value, it is hard to see how the net result could be an increase in overall public benefit (as in figures 6.3 and 6.4).

OTHER POLICY OPTIONS

The main analysis in this study is of what the UK television market would be like, and the net impact on viewers, if there were no BBC TV. As just discussed, we believe that this has implications both for the current policy of quietly 'salami-slicing' BBC Television – steadily reducing its funding while the rest of the market keeps growing – and for an alternative, more radical policy of deliberately reducing the BBC's scale, scope, and funding more drastically, as some have proposed.

As we have noted, many other policy options have been suggested, separately or in combination. Evaluating them in detail is beyond the scope of this study but we discuss a number of them briefly in Appendix D:

1. Funding out of general taxation
2. Privatisation
3. Subscription funding
4. Advertising funding
5. Contested funding (programme by programme)
6. Sharing the licence fee with other public service broadcasters

None of options 1–5 appears to have much political traction – rightly, in our view, for reasons summarised in Appendix D.

Option 6, sharing licence fee revenue with other public service broadcasters,¹³⁰ already happens on a small scale with S4C. The case for further extending it has some political support and could be evaluated along the lines of our analysis, i.e. by exploring the likely consequences. However, our analysis already shows that reducing the scope and scale of the BBC is likely to be against the public interest. If the licence fee is to be shared with

¹²⁹ Barwise and Ehrenberg, *Television and its Audience*, ch. 3; Byron Sharp, Virginia Beale, and Martin Collins, 'Television: Back to the Future', *Journal of Advertising Research*, 49/2 (2009), 211–19.

¹³⁰ Oliver, *Changing the Channel*.

other public service broadcasters (beyond S4C) without further reducing the scale and scope of the BBC, it will need to be increased well ahead of inflation and/or the amount shared will need to be kept very low.

The bigger issue for us is that, if the current 'salami-slicing' policy continues, before very long there will be little or no licence fee to share.

6.3 Limitations and Areas for Further Research

As discussed in Section 1, this study focuses on BBC TV and takes a pure consumer perspective (choice and value for money). It does not cover BBC Radio, Online, the World Service, or any of the other services funded by the licence fee, nor the BBC's impact on the UK's national culture, society, politics, creative industries (apart from TV production), wider economy, regional development, international standing, or other 'citizenship' issues. In addition, as in every study, the analysis has limitations.

1. We have assumed throughout that the BBC crowds out some content investment by commercial broadcasters rather than forcing them to 'compete on quality' by investing more, especially in first-run UK content. This assumption could be tested through international comparative research, although the answers will never be definitive because of the many other differences between countries.
2. Ours is a 'comparative statics' analysis that compares the actual market in 2012 with a counterfactual where BBC TV disappeared overnight on 31 December 2011 and the market immediately reached a new quasi-equilibrium on 1 January 2012. Because of the almost infinite number of unknowns, we have not attempted to model the subsequent market dynamics with/without the BBC, although we have discussed issues such as whether the BBC makes the market more or less competitive (see Appendix B). There is certainly scope to explore the market dynamics more fully, although the onus should be on those arguing that the market would be more innovative without the BBC to provide some evidence to support this view.¹³¹
3. Our optimistic and pessimistic revenue scenarios in Section 2 are extreme. The resulting wide range of uncertainty could be reduced through (i) research on consumers' increased willingness to subscribe to pay TV, or upgrade to a more expensive subscription, if there were no BBC, and (ii) an updated survey of whether advertisers would increase, decrease, or leave unchanged their TV advertising budgets if the number of commercial impacts increased by up to 50% as a result of the disappearance of the BBC (see Appendix A).
4. Our analysis of current content investment (Section 3.2) is limited by data availability. As we discussed, areas for further research include (i) obtaining data on first-run UK content investment by the non-PSBs and online TV services comparable to the data already available for the PSBs, and (ii) the likely net impact on total and first-run content investment by genre using like-for-like data for the PSBs and non-PSBs.
5. An important limitation of our analysis of the likely net impact on viewers (Section 4) is that we have not separated the cost, viewing, and value for money of premium sport and film channels from those of

¹³¹ And to counter the evidence to the contrary, e.g. Mariana Mazzucato, 'BBC: From Crowding Out to *Dynamising It*', in Picard and Siciliani, *Is there Still a Place for Public Service Broadcasting?*, 51–6.

lower-priced basic pay TV channels. Because the BBC no longer competes in the premium acquired rights market, it is the basic pay TV channels¹³² that are the most relevant comparator to it in the context of our analysis.

6. As also discussed in Section 4, our illustrative analysis of the net impact on different types of household is broad-brush and conjectural. Stronger conclusions could be drawn from a finer-grained empirical analysis categorising households by (i) whether they subscribed to no, basic, or premium pay TV and (ii) their aggregate individual viewing of BBC TV.
7. Some of the generic and specific explanations of our results (Section 5) could be tested and extended through further empirical research.
8. The revenue projections to 2016 and beyond (section 6.1) can be updated and improved over time, as can their likely implications for content investment and the net impact on viewers.

We discuss these and other limitations, and suggestions for further research, more fully in Appendix E. Despite them, we believe that our results are so strong that they already have clear implications for Charter renewal.

6.4 Policy Implications

The main implication for Charter renewal is straightforward: based on our analysis and if the aim is to maximise public benefit (i.e. the overall benefit of UK television – not just the BBC – to the UK public as consumers and citizens), the ‘salami-slicing’ of the BBC should be halted and other options viewed with some scepticism.

There is no objective way to determine the optimum level of the licence fee, which depends on a number of value judgements as well as many other factors. These include, especially, the BBC’s continuing ability to maintain or even increase its investment in first-run UK content and the public’s continuing appetite for this content, reflected in audience appreciation, reach, viewing levels, and the other metrics reported in the BBC’s Annual Report and elsewhere.

But, based on our analysis, it will be hard for anyone to argue that

“Based on our analysis, it will be hard for anyone to argue that further reducing the scale, scope, and funding of the BBC ... would benefit the public

”

further reducing the scale, scope, and funding of the BBC (currently 22% of industry revenue in 2012, projected to fall to only 18.5% by the end of the current Charter in 2016) would benefit the public.

Scaling back the BBC is also likely to be a one-way street. Rebuilding it in the current ideological and fiscal climate would be extremely challenging, partly because of the power of the commercial interests that would oppose any attempt to do so. The onus must now be on those advocating further

¹³² And, to a lesser extent (because of their greater dependence on advertising revenue, which would increase by much less than subscriptions, as discussed in Section 2) the commercial PSB channels.

reduction in BBC funding to spell out, far more fully than they have, why they believe the public would benefit.

The danger, in our view, is not from any of the more radical proposals to take an axe to the BBC or the licence fee, since, if seriously put forward, they would be likely to produce a strong backlash from the public. Instead, the more likely scenario is a continuation of the current ‘salami-slicing’ policy, leading ineluctably to a smaller and smaller BBC within a bigger and bigger broadcast and, increasingly, online television market.

As we have seen, based on Enders Analysis commercial revenue projections, we expect the BBC’s revenue share to fall to around 18.5% by 2016, an average loss of 0.8 revenue share points per annum over the four years 2012–16. A continuing share loss at the same rate (consistent with some of the less radical proposals from critics of the BBC) would lead to its disappearance by around 2040.

More likely, the BBC would not disappear altogether. But it is not scaremongering to project that, if the current policy continues (i.e. even if the more radical proposals for scaling back the BBC are rejected), within a generation it will have been reduced to a barely relevant sideshow, the UK equivalent of PBS in America.

UK PRODUCTION

Finally, although our focus has been on viewers, an important finding of this study is that if there were no BBC there would be a sharp net reduction in investment in first-run UK programmes despite higher investment by commercial broadcasters. The only uncertainty is how much that investment would be reduced: 40% in our base case but potentially anywhere in the range 25% to 50% (section 3.4).

It is excellent news for UK producers that the non-PSBs are increasing their investment in first-run UK content from an admittedly low base. Although we have been unable to locate reliable figures directly comparable to those for the PSBs, our impression is that the non-PSBs’ investment in first-run UK content may be growing even as a percentage of their revenue, as well as in absolute terms. But this increase has not been nearly enough to compensate for the reduction in investment in first-run content by the PSBs resulting from the budget cuts at the BBC in response to the 2010 settlement and the financial pressures at the commercial PSBs.

Independent producers’ TV-related income grew from £2,016m in 2008 to £2,589m in 2012, a 28% increase in four years.¹³³ But 80% of this nominal increase came from the dramatic growth of international income from £342m to £802m, an increase of 135%. Primary UK commissions, including from the non-PSBs, grew by only 2.1% in nominal terms between 2008 and 2012,¹³⁴ a reduction of about 10% in real terms or 2.4% per annum.

“ Every 1% cut in the licence fee leads to a 0.4% net reduction in total investment in first-run UK content. ”

Any reduction in the licence fee will lead to a net reduction in UK production industry revenue. In our base case projection, a 100% cut in the licence fee leads to a 40% net reduction in first-run UK content investment (Table 3.4). Assuming a linear

¹³³ These and the other figures in this paragraph are from CMR 13, fig. 2.42.

¹³⁴ From £1,508m to £1,539m.

relationship (likely to be a good approximation), this suggests that every 1% cut in the licence fee leads to a 0.4% net reduction in total investment in first-run UK content.

Note that this is still based on our assumption that the BBC crowds out some commercial content investment. If instead the BBC currently forces commercial broadcasters to invest more in order to 'compete on quality', the negative impact on first-run UK content investment is even greater than we have projected.

Appendix A: The Price Elasticity of TV Advertising

Who shall decide when doctors disagree? (Alexander Pope)

Advertising¹³⁵ is a major TV revenue source. It generated £3.73bn – 30% of total industry revenue – in 2012 (Table 2.1). A key issue is therefore how much TV advertising revenue there might have been if there had been no BBC.

The reason why there might have been more or less advertising revenue without the BBC is that the viewing of channels with advertising, and therefore the number of commercial exposures, would have been higher. The first issue is therefore how many more commercial exposures there would have been if there had been no BBC.

The Increase in Commercial Exposures without the BBC

Average total viewing in 2012 was 4.01 hours per day of which 33.2% (1.33 hours/day) was of BBC TV and the other 66.8% (2.68 hours/day) was of commercial channels.¹³⁶

As discussed in section 2.2, in modelling the market without the BBC, our approach is to develop two extreme scenarios, one highly optimistic, one highly pessimistic (from an industry perspective). We can then be confident that the outcome would have been somewhere between these.

If there had been no BBC, the chances are that the resulting reduction in choice would in reality have led to some reduction in total viewing. But in order to allow for the full range of uncertainty about the impact on advertising revenue, we conservatively assume no such reduction in total viewing, maximising the projected increase in the number of commercial exposures and, therefore, the potential impact on advertising revenue.

On this basis, we assume that, without the BBC, total viewing (now entirely of commercial channels) would have remained at 4.01 hours/day, so that the viewing of commercial channels would have increased from 2.68 to 4.01 hours/day, a 50% increase. For simplicity, we further assume that this would have led to a 50% increase in the number of commercial impacts ('opportunities-to-see' or OTS) for all channels carrying advertising.¹³⁷ The question, then, becomes: what would be the net effect on total TV advertising revenue of a 50% increase in the number of commercial impacts?

What is not in dispute is that advertising revenue would increase, if at all, by much less than the 50% increase in volume because the price per impact – the average cost per thousand viewers or CPM – would fall.¹³⁸ There is, however, wide disagreement about *how much* the average CPM would fall and, therefore, about the net impact on revenue (which is simply the volume times the average price).

In order to answer the question posed above, we here develop pessimistic and optimistic estimates of the price elasticity of TV advertising. We then combine these estimates of price elasticity with the 50% assumed increase in commercial exposures to develop our pessimistic and optimistic projections of how much TV advertising revenue there would have been if there had been no BBC.

¹³⁵ As in the main report, 'advertising' here includes sponsorship.

¹³⁶ CMR 13, 181 and fig. 2.70.

¹³⁷ In reality, there are two reasons why this might not be the case. First, some commercial channels would almost certainly increase their viewing proportionately more than others. In particular, the viewing of premium pay TV channels would most likely increase proportionately less than that of free-to-air channels, especially universally available commercial PSB channels, because (i) the BBC's share is lower in pay (especially premium pay) TV homes and (ii) much of the viewing of these channels (which carry less advertising than FTA multichannels) is of premium sport content which is not a close substitute for BBC content. For simplicity, we ignore this second-order effect, the impact of which would be small compared with the range of uncertainty we are modelling here. Secondly, there might be calls – including, potentially from advertisers – for a reduction in the number of commercial airtime minutes per hour, in which case the total number of commercial exposures would have increased by less than 50%. Conservatively, we ignore this possibility too.

¹³⁸ The cost per thousand viewers varies between channels, programmes, regions, times of day, etc. (see *Economics of Television in a Digital World*, 25–6). These differences do not materially affect the analysis here. We therefore focus on the average CPM, ignoring the differences.

What do we Mean by the Price Elasticity of TV Advertising?

The price elasticity (formally, the 'own-price elasticity of demand') is the responsiveness of the volume of demand to a small change in price. The price elasticity of television advertising is the ratio of (i) small changes in the number of commercial impacts to (ii) associated changes in the CPM. For convenience, it is simpler to express this as the ratio of a small percentage *increase* (or decrease) in commercial impacts to the associated percentage *decrease* (or increase) in price, making it a positive number.¹³⁹

If the price elasticity expressed in this way is greater than one, a 1% increase in volume (commercial impacts) is associated with a reduction in price (CPM) of less than 1%. Demand is then said to be elastic and the net effect is an increase in revenue because the volume has increased proportionately more than the reduction in price. The percentage revenue increase will always be less than the percentage increase in volume unless demand is infinitely elastic, meaning that the price reduction associated with the volume increase is infinitesimal.

Conversely, if the price elasticity is less than one, demand is said to be inelastic. In this case, a 1% increase in volume is associated with a price reduction of more than 1% and therefore with a net reduction in revenue.

Estimating Price Elasticity: The Idealised Case

In a simple textbook market,

- Product quality is homogeneous and constant;
- The supplier¹⁴⁰ sets a price that varies over time, enabling us to observe different combinations of price and volume;
- The market responds only to price, by buying a greater or smaller volume of the product;
- The relationship between price and volume – the 'demand curve' – is constant over time; and
- There is no general inflation, so prices from different time periods are directly comparable.

In this idealised situation, the demand curve can be estimated directly by plotting observed combinations of price and volume. The price elasticity at a particular price and volume is simply the slope of the demand curve at that point.¹⁴¹

In the real world, however, these textbook conditions never apply. Further, several additional factors make it particularly difficult to estimate the price elasticity reliably using econometrics in this market.

Why Price Elasticity is Hard to Estimate in This Market

In the UK television airtime market, the volume bought (total commercial impacts in a given time period) is not the result of the market responding to different prices chosen by a supplier. Instead, it is largely driven by external factors, specifically: (i) total TV viewing, (ii) the share of that viewing captured by channels with advertising slots, and (iii) the minutes per hour of commercial airtime on those channels (which varies between channels and times of day¹⁴²).

The available airtime is sold through an auction-like process in which a small number of sophisticated buyers (media agencies and a few clients doing their own media buying) negotiate with a small number of sophisticated sellers (TV sales

¹³⁹ Strictly speaking, this appendix is therefore about the *magnitude* of the price elasticity.

¹⁴⁰ Or suppliers in an undifferentiated commodity market where all suppliers sell at the same price, which changes over time in response to supply-side factors such as cost or yield variation.

¹⁴¹ Strictly speaking, because we have defined the elasticity as the ratio of a small volume increase to the associated price decrease – a positive ratio – the price elasticity is the additive inverse of the slope of the demand curve, e.g. if the slope is -1.2, the price elasticity under our definition is +1.2.

¹⁴² *Economics of Television in a Digital World*, 25.

houses) to buy slots until all, or almost all, have been sold. The average price per thousand viewers (CPM) is the outcome of this process.

Although this mechanism differs from the textbook case, observed prices (adjusted for inflation) and volumes could be validly used to estimate the price elasticity if the other idealised conditions applied.¹⁴³ In reality, however, the market for commercial impacts deviates markedly from the textbook assumptions.

1. The number of commercial impacts has more than doubled over the last 20 years, because of an increase in broadcast hours and the proliferation of commercial channels. This makes it hard to discriminate between price changes caused by volume changes and price changes caused by the various other factors listed below, all of which also changed structurally over time (a 'collinearity' problem, where correlation between different explanatory variables limits our ability to pin down their relative influence).
2. The quality of the product is not only heterogeneous (both within and between channels) but has also changed significantly over time. Channel proliferation has not only increased the total *quantity* of commercial impacts – point 1 above – but also fragmented the audience, reducing the average *quality* of airtime by making it harder for advertisers to achieve high reach quickly and efficiently. This deterioration reflects two factors: (i) the growth in the number of commercial impacts has been on advertising-funded multichannels (including the commercial PSBs' portfolio channels) reinforced by more off-peak hours on the established channels; both of these achieve much lower average ratings – and therefore lower CPMs – than prime time on the main commercial channels; (ii) ratings on the main channels have also declined as the multichannels have captured a growing share of viewing.¹⁴⁴
3. A third factor has been the growth of digital video recorders (DVRs) that make it easy for viewers to fast-forward through commercial breaks when watching time-shifted programmes. (However, the impact of DVRs has been much less than many predicted: time-shifting still accounts for only about 10% of total viewing¹⁴⁵ and the net impact on commercial exposures is less than this.¹⁴⁶)
4. The market is also distorted by complex regulations, currently Contract Rights Renewal (CRR) and the Code on the Scheduling of Television Airtime (COSTA).¹⁴⁷ The continuing justification and impact of these is disputed but they both constitute significant deviations from a textbook (ie, free) market.
5. Finally, the unobservable underlying level of demand varies greatly, driven by changes in both overall marketing budgets and the share of those budgets allocated to TV advertising.

It is this last factor – the unobservable, continuously changing, underlying demand for TV advertising – that perhaps provides the greatest challenge to econometricians seeking to estimate the price elasticity in this market.

¹⁴³ In this context, where volume is an independent variable and price the dependent variable, what econometricians are estimating is the 'own-price *inverse* elasticity'. To do this, they estimate a different regression formula than they would use in a standard market where price is an independent variable. See Analysys Mason, *An Econometric Analysis of the TV Advertising Market: Final Report* (prepared for Ofcom, Mar. 2010), 32.

¹⁴⁴ CMR 13, figs. 2.72–2.74.

¹⁴⁵ CMR 13, fig. 2.79.

¹⁴⁶ Source: Thinkbox.

¹⁴⁷ CRR has been likened to the Schleswig-Holstein Question in the 19th century. It gives media agencies and advertisers two automatic rights when renewing a contract with ITV1: (i) to reduce the share of spend allocated to ITV1 if its Share of Commercial Impacts (SOCI) shrinks and (ii) to renew the contract with no increase in ITV1's share of spend above any change in its SOCI, while in both cases continuing to receive the same discount off station average price (SAP) and the same contractual terms and conditions. COSTA governs the maximum number of advertising minutes that can be scheduled in any one hour. The rules vary by time of day and, importantly, still allow fewer minutes per hour for the three main commercial PSB channels (ITV1 and the main C4 and C5 channels) than for the multichannels, including the commercial PSBs' portfolio channels. See House of Lords, *The Regulation of Television Advertising*, report with evidence, HL Paper 99 (Feb. 2011), chs 3 and 4. Until 2010, the commercial PSBs were also required to sell 100% of their airtime under the Airtime Sales Rule (ASR).

- Total marketing budgets are quite volatile and, within them, advertising budgets even more so, mainly driven by general economic conditions such as consumer expenditure and company profits.¹⁴⁸ When budgets are tight, companies tend to allocate a higher proportion of their reduced marketing expenditure to short-term promotions and less to long-term brand-building investments such as (most) TV advertising.¹⁴⁹
- At the same time, there have been major long-term structural changes in the way marketing budgets are spent. The most important of these is the relentless increase in investment in digital marketing, squeezing expenditure on other marketing activities. TV advertising has been more resilient than most traditional marketing activities (notably press advertising) because digital marketing is in general not a close substitute for it, but it has not been immune to the long-term increase in pressure on traditional marketing expenditures caused by the growth of digital marketing.

How Different Econometricians Address These Challenges

Different econometricians address these challenges in different ways. First, they use a wide variety of different *structural models*. For instance, they vary in how they handle (i) the causal relationships between volume, price, and revenue, and (ii) the heterogeneity of the quality of advertising inventory at a given time (e.g. for different channels or types of channel) and/or over time.

Secondly, they differ in their choice of proxy variables to allow for the cyclical and structural shifts in underlying demand over time caused by general economic factors and the impact of VCRs/DVRs and the internet.

Thirdly, they use different data sources and intervals (e.g. annual versus quarterly) and have different ways of handling one-off events and structural changes such as a strike at ITV in 1979, the launch of C4 in 1982, and the 2006 World Cup.

The net effect is that different econometricians have derived very different estimates of the price elasticity of TV advertising.

Estimates for the 1986 Peacock Report

The biggest effort to date to estimate the price elasticity of TV advertising was at the time of the 1986 Peacock Committee on financing the BBC. This was specifically set up by Margaret Thatcher to assess the effects of introducing advertising on the BBC to supplement or supplant the licence fee.¹⁵⁰

At that time, there were only two commercial channels, ITV and C4 (launched in 1982), minimal time-shifting (via VCRs), and no online advertising, so some of the more recent estimation challenges had not yet appeared. Nevertheless, the main challenge, the unobservable fluctuating underlying demand for TV advertising, has always been there. Most econometricians tried to address this by estimating an 'income elasticity of demand' for TV advertising, i.e. its relationship with some observable measure of income such as inflation-adjusted consumer expenditure, and embedding that into their models.

The Peacock Committee discussed these various approaches and summarised the results in a chart reproduced here as Figure A1. The key point for our purposes is the wide variation in the estimated price elasticity, from about 0.5 to about 1.8. (The variation in income elasticity is not directly relevant to the issues we are addressing here.)

To some extent, the results depended on (or at least, correlated with the commercial interests of) whoever was paying for them. In particular, the lowest estimate was on behalf of the Newspaper Society (representing local and regional

¹⁴⁸ Robert G. Picard, 'Effects of Recessions on Advertising Expenditures: An Exploratory Study of Economic Downturns in Nine Developed Nations', *Journal of Media Economics*, 14/1 (2001), 1–14; Richard van der Wurff, Piet Bakker, and Robert G. Picard, 'Economic Growth and Advertising Expenditures in Different Media in Different Countries', *Journal of Media Economics*, 21/1 (2008), 28–52.

¹⁴⁹ Patrick Barwise (ed.), *Advertising in a Recession: The Benefits of Investing for the Long Term* (WARC, 1999).

¹⁵⁰ *Report of the Committee on Financing the BBC*, the Peacock Report (HMSO, Cmnd. 9824, July 1986), 1.

newspapers, who were naturally not keen for the BBC to start carrying advertising), while the highest was on behalf of ISBA, the trade association for major advertisers, who wanted to be able to advertise on the BBC.

Professor Alan Budd, for the ITCA (the ITV companies, who of course were extremely opposed), using an econometric model, estimated a very low price elasticity but argued on theoretical grounds that the actual figure was likely to be higher than his estimate.

The study for the IPA (the trade association for advertising agencies) gave an estimate of income elasticity but not of price elasticity and is not relevant to us here. Conversely, the paper by Harry Henry estimated the price elasticity (at around 1.2) but not the income elasticity.

Having studied the various submissions and the analyses behind them, the Peacock Committee took the view that those by NERA and Cave and Swann were 'most appropriate for our purposes, in that they are economically sound, are based on extensive data analysis and, although commissioned separately, come to very similar conclusions'.¹⁵¹

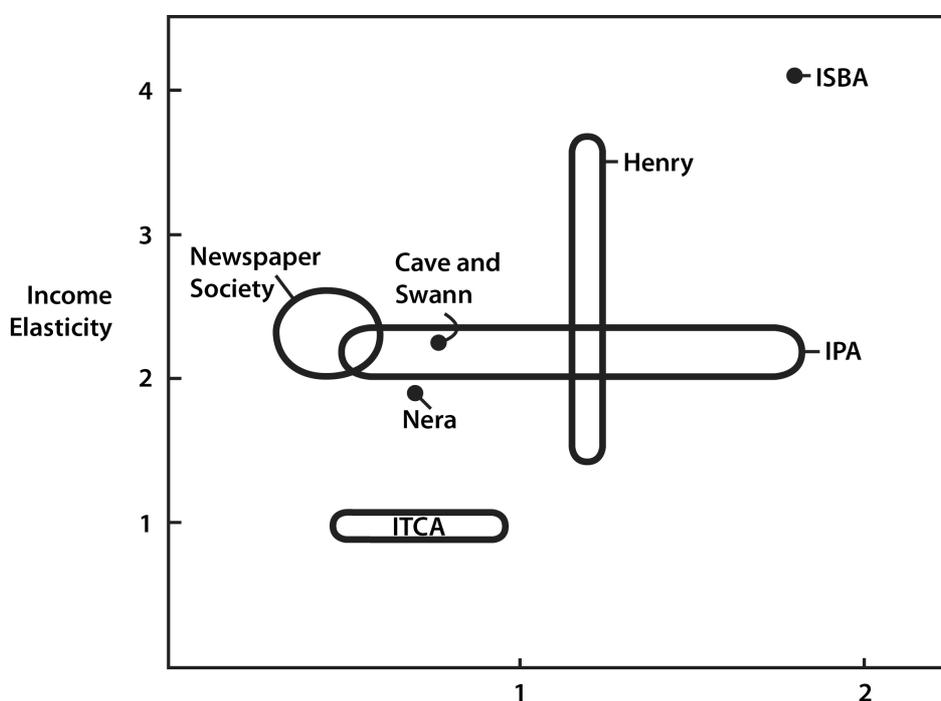


Figure A1. Implicit and Explicit Estimates of the Income and Price Elasticity of TV Advertising for the 1986 Peacock Committee (Peacock Report, fig. 8.2; contains Parliamentary information licensed under the Open Parliament Licence v1.0.)

The committee recommended against advertising on the BBC. Their main reason was that they felt that the result would be a reduction in consumer choice and welfare because 'The main defect of a system based on advertising finance is that channel owners do not sell programmes to audiences, but audiences to advertisers.'¹⁵² This conclusion was reinforced by their view, based on the above analyses, that the price elasticity was likely to be 1 or less, so that total advertising revenue would, if anything, decline if the BBC carried advertising, even though (or, strictly, because) the number of commercial exposures would increase.

More Recent Econometric Estimates

In 1992, David Hendry, a leading econometrician, published a paper challenging the results of NERA, Cave and Swann, and Alan Budd/ITCA, the main studies on which

¹⁵¹ Ibid. 71, where the various econometric approaches are discussed.

¹⁵² Ibid. 137. See also *Economics of Television in a Digital World*, 24.

the Peacock Committee relied in concluding that the price elasticity of advertising was 1 or less than 1.¹⁵³ Hendry concluded that:

- The price elasticity was significantly higher than 1 (he estimated it at about 2);
- The previous studies had underestimated the price elasticity because they used annual data and assumed that the supply of commercial impacts was independent of the price.

Hendry's model allowed for an interaction between supply and demand, i.e. it assumed that a higher/lower price could lead to some increase/decrease in the number of commercial impacts. He argued that, although the price of airtime would have little effect on the supply of commercial impacts within a single quarter, it might have a material such effect within a year.

For his main analysis Hendry therefore used seasonally adjusted quarterly data for 1973–86 to minimise this interaction effect. He also tested his hypothesis that the earlier studies (using annual data for 1961–84) had underestimated the price elasticity, by replicating them using his model and the same annual data used by the earlier analysts, obtaining similar low estimates of the price elasticity.

In 2004, PwC updated Hendry's analysis, extending his model to include, as a separate estimate, the price elasticity of advertising on the commercial multichannels as well as on the three main commercial PSB channels.¹⁵⁴ PwC concluded that:

- The short-term price elasticity was about 1 but the long-term price elasticity (the relevant figure for our study) was about 1.4 for the three main commercial PSB channels and higher (about 4) for the multichannels;
- However, there was already evidence of competition between the traditional commercial channels and the commercial multichannels, suggesting that they were part of a single advertising market.¹⁵⁵

In 2010, Analysys Mason (AM), on behalf of Ofcom, reached very different conclusions.¹⁵⁶ They used a more complex and fine-grained model than previous econometricians in terms of both data (monthly prices, viewing levels, and advertising minutes) and model structure. In particular, their model

- Split the commercial channels into seven individual channels or groups,¹⁵⁷ each with its own sub-model;
- Estimated both the own-price inverse elasticity for each channel/group and the inverse cross-price elasticities between them (i.e. the extent to which the CPM on channel A is affected by the commercial impacts on channel B and vice versa).

AM's overall conclusion was that the demand for TV advertising is inelastic. For instance, their results suggest that a 1% increase in the number of commercial impacts supplied by ITV1 leads to a 1.05% decrease in the price (CPM) for ITV1 advertising and also to decreases in the prices on all other channels, so that revenues for both ITV1 and the market as a whole will decline.¹⁵⁸

AM's estimated elasticities and cross-elasticities varied greatly between different (pairs of) channel groups and were subject to quite wide confidence

¹⁵³ David Hendry, 'An Econometric Analysis of TV Advertising Expenditure in the UK', *Journal of Policy Analysis*, 14/3 (1992), 281–311.

¹⁵⁴ PwC, *Economic Analysis of the TV Advertising Market* (prepared for Ofcom, Dec. 2004).

¹⁵⁵ In 2007, the Competition Commission, in its evaluation of BSkyB's proposed acquisition of 17.9% of ITV, took the same view, concluding that the relevant market should be defined at least as widely as television advertising (http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/non-inquiry/rep_pub/reports/2007/fulltext/535.pdf).

¹⁵⁶ Analysys Mason, *Econometric Analysis*.

¹⁵⁷ ITV1, C4, C5, ITV portfolio channels, C4 portfolio channels, C5 portfolio channels, non-PSB channels.

¹⁵⁸ Analysys Mason, *Econometric Analysis*, 62.

intervals¹⁵⁹ but their overall conclusion was that increases in the number of commercial minutes lead to a reduction in total advertising revenue.

Conclusion: Optimistic and Pessimistic Price Elasticity Assumptions

For the purpose of this study, we are looking for two estimates of the overall price elasticity of TV advertising, one highly optimistic (from an industry perspective, i.e. elastic), one highly pessimistic (inelastic). The PwC and AM studies, respectively, do come to optimistic and pessimistic conclusions but we cannot simply lift their results because their models do not estimate an overall price elasticity. Instead, they give estimates for two (PwC) or seven (AM) channel groups separately.

For our optimistic scenario, our starting-point is therefore Hendry's 1992 estimate of 2 for the long-term price elasticity. This is even higher than the estimate for ISBA in Figure A1 but, in order to allow for the widest plausible range of possible outcomes, we are increasing our optimistic assumption to 2.4 to reflect the 2004 PwC study (which extended Hendry's model to include the commercial multichannels), updated to allow for the further evolution of the market since 2004.

PwC's estimates of price elasticity were 1.4 for the three main commercial PSB channels and 4 for the multichannels, but they also found evidence of convergence towards a single TV advertising market. We assume that this process of convergence has continued. For simplicity, we assume that, by 2012, the elasticity was 2 for the main PSB channels (the same as Hendry's estimate) and 3 for the multichannels. Weighting these by their shares of advertising revenue in 2012 – 58% and 42%, respectively¹⁶⁰ – gives us the figure of 2.4 for our optimistic scenario.

For our pessimistic scenario, we assume an elasticity of 0.72 in line with the NERA and Cave and Swann estimates for the Peacock Committee. Our interpretation of the 2010 study by AM is that, if they had produced a single estimate for the market as a whole, it would have been less than one but more than 0.72. The latter therefore seems safe as a pessimistic figure.

Optimistic and Pessimistic Revenue Projections Using Arc Elasticities

There remains one final complication. Price elasticity usually relates to small changes in price and volume. But this report is about what the market would be like with no BBC, which we have conservatively assumed (earlier in this appendix) would lead to a 50% increase in the number of commercial impacts.

A large change in volume like this would move the market a significant way along the demand curve. It is therefore invalid to assume that the resulting change in price can be obtained by applying the elasticity at the starting-point to the whole percentage change. This would be valid only if the elasticity were constant along the whole relevant section of the demand curve, which is extremely unlikely.

The pragmatic solution is to use the 'arc elasticity', defined as the percentage change in volume divided by the percentage change in price, with each percentage calculated relative to the *midpoint* (rather than the starting-point) of the change in that variable.¹⁶¹

We are assuming a 50% increase in volume (commercial impacts). Suppose the actual number of commercial impacts (ie, with the BBC) is V_1 . Then:

- The projected number without the BBC is therefore $V_2 = 1.5 \times V_1$.
- The increase is $0.5 \times V_1$ and the midpoint between V_1 and V_2 is $(V_1 + V_2) / 2 = 1.25 \times V_1$.
- The percentage change relative to that midpoint is $0.5 \times V_1 / 1.25 \times V_1 = 0.4$, i.e. 40%.

¹⁵⁹ The results for C5 were especially anomalous, leading AM to conclude, erroneously, that the C5 audience must be especially loyal.

¹⁶⁰ CMR 13, fig. 2.37.

¹⁶¹ http://en.wikipedia.org/wiki/Price_elasticity_of_demand#Arc_elasticity.

If the prices before and after the change are P1 and P2, respectively, the percentage change relative to the midpoint is similarly $(P2 - P1) / ((P1 + P2) / 2)$ expressed as a percentage.

For example, taking the optimistic price elasticity estimate of 2.4 as an arc elasticity, we have:

$$\frac{\% \text{ increase in volume relative to the midpoint}}{\% \text{ reduction in price relative to the midpoint}} = 2.4$$

This is consistent with a 15.3% reduction in price (relative to the initial price).¹⁶² The optimistic scenario is therefore a combination of a 50% volume increase and a 15.3% price reduction. The resulting revenue is $1.50 \times (1 - 0.153) = 1.27$ times the initial revenue.

In other words, our optimistic scenario is that total advertising revenue increases by 27%, resulting from a combination of a 50% increase in the number of commercial impacts and a reduction in the average CPM of just over 15%.

A similar calculation for the pessimistic scenario (based on an arc elasticity of 0.72) leads to a 15% reduction in total advertising revenue, again resulting from a 50% increase in the number of commercial impacts but in this case with a reduction in the average CPM of just over 43%.

As with our subscription revenue projections, we believe that these scenarios represent extremes and that the actual outcome would almost certainly fall somewhere between them.

A Sanity Check: Ask the Advertisers

It should be clear from the above that estimating the price elasticity of TV advertising using econometric methods is especially challenging. An alternative, more straightforward, approach is to ask leading advertisers what they would do if the BBC carried advertising and the average price of airtime fell. The response would no doubt depend on the competitive dynamics of the particular market, but there would be rational arguments for both increasing and decreasing TV advertising investment to take advantage of the reduction in the average CPM.

- The company could cut its TV spend while still achieving the same campaign reach and frequency.
- Or it could increase its TV spend by shifting resources from other marketing activities to exploit the improved value for money of TV.

To our knowledge, the only study to use this approach was one conducted by IFF Research in 1985 for Professor Andrew Ehrenberg, acting as an adviser to the BBC at the time of the Peacock Committee.¹⁶³ This was a survey of 160 of the top 250 TV advertisers. Respondents (61 CEOs and 99 marketing directors) were asked:

If there were advertising on the BBC (and the cost of airtime went down by perhaps 30%) would you expect your company's total expenditure on television advertising to: go up, go down, or stay about the same (compared with what would happen without BBC advertising, not compared with present expenditure levels)?

38% said that their companies' expenditure would increase, 8% that it would decrease, and 54% that it would stay the same. Those expecting a change were asked to quantify it. Three-quarters were able to do so, giving either a specific percentage

¹⁶² The midpoint $(P1+P2)/2$ is $0.923 \times P1$ and the percentage change relative to this midpoint is $15.3\% / 0.923 = 16.6\%$. 40% (the increase in volume relative to the midpoint, calculated above, i.e. $50\% / 1.25$) divided by 16.6% is 2.4, the arc elasticity.

¹⁶³ IFF Research, *Advertising and the BBC: Top Advertisers' Expenditure Expectations* (1985). Patrick Barwise advised on the design of this study. In terms of the advertising market, the issue addressed is similar to the one explored here.

change or a range. The average response across the whole sample was equivalent to a 5% increase in advertising expenditure.

In combination with a 30% reduction in the average CPM, this average response happens to be consistent with the 50% increase in commercial impacts we are assuming in this study: $1.50 \times 0.70 = 1.05$. It implies an arc elasticity of 1.13.¹⁶⁴

Reassuringly, the 5% revenue increase based on this survey-based approach, which is completely independent of the various econometric estimates, falls almost exactly halfway between our optimistic (+27%) and pessimistic (-15%) projections, reinforcing our confidence that the outcome would fall within the range we are assuming.

It would be helpful if the 1985 IFF study were replicated now. We see no reason why the response would have changed significantly¹⁶⁵ but this is an empirical question.

¹⁶⁴ Increase in volume relative to the midpoint: $(50\% / 1.25) = 40\%$. Decrease in price relative to the midpoint: $(30\% / 0.85) = 35.3\%$. Arc elasticity = $(40 / 35.3) = 1.13$.

¹⁶⁵ Our hunch is that the low price elasticity estimates at the time of Peacock reflect the use of inadvertently biased models, which Hendry then corrected in 1992, rather than that the market was much less elastic then.

Appendix B: Content Investment: The Full Range of Possible Outcomes

The two base case assumptions in Section 3.2 were that, without the BBC, (i) the commercial broadcasters' revenue would have been as in the central base case in Table 2.4 and (ii) they would have invested the same percentage of this revenue as they actually invested in 2012. We here explore the impact on our content investment projections of varying each of these assumptions.

Varying the Revenue Assumptions

As well as the base case revenue projections, Table 2.4 also showed a wide range of uncertainty based on our pessimistic and optimistic scenarios for what the commercial broadcasters' revenues might have been if there had been no BBC. We now show the impact of this range of uncertainty on projected total content investment (Table B1) and first-run UK content investment (Table B2), respectively.

In both these tables, we hold the second base case assumption constant, i.e. we still assume that the commercial broadcasters would have invested the same proportion of revenue in content (and, within that, first-run UK content) as they actually invested in 2012. We return to this assumption shortly.

Table B1. Total Content Investment in 2012 (£bn)

	Actual (£bn)	No BBC (£bn) (Pessimistic)	No BBC (£bn) (Optimistic)
BBC	1.61	-	-
Commercial PSBs	1.83	1.57 (-14%)	2.33 (+28%)
Non-PSBs	2.46	2.40 (-2%)	3.61 (+47%)
Total	5.91	3.97 (-33%)	5.94 (+1%)

Based on the figures in Table 2.4. For instance, the pessimistic scenario for the commercial PSBs was for revenue of £3.18bn (base case) minus £0.62bn (the bottom of the range of uncertainty), making £2.56bn, a 14% reduction on their actual 2012 revenue of £2.98bn. In Table B1, we apply the same percentage reduction (-14%) to the commercial PSBs' actual content investment (£1.83bn) giving £1.57bn.

The results in Table B1 for total content investment suggest that, if there had been no BBC and the commercial broadcasters had invested the same percentage of their revenues in content as they actually invested in 2012 (with the BBC as a competitor), total content investment would almost certainly have been lower (Figure B1). The pessimistic and optimistic revenue scenarios in Section 2 represented extreme assumptions but even under the optimistic scenario, total content investment would have been only very marginally higher (+1%). Under the pessimistic scenario, it would have been 33% lower.

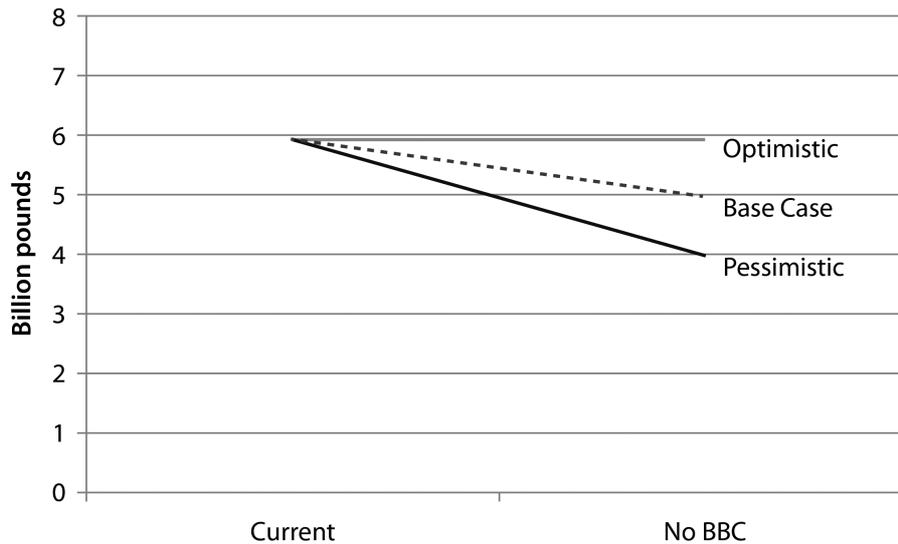


Figure B1. Total Content Investment in 2012.

Table B2 and Figure B2 show the equivalent analysis for what the investment in first-run UK content would have been under the pessimistic and optimistic revenue scenarios without the BBC. Even under the optimistic revenue scenario, investment in first-run UK content would have been almost 30% lower without the BBC. Under the pessimistic scenario, it would have been over 50% lower.

Table B2. First-Run UK Content Investment in 2012 (£bn)

	Actual (£bn)	No BBC (£bn) (Pessimistic)	No BBC (£bn) (Optimistic)
BBC	1.52	-	-
Commercial PSBs	1.32	1.14 (-14%)	1.69 (+28%)
Non-PSBs	0.45	0.44 (-2%)	0.66 (+47%)
Total	3.29	1.58 (-52%)	2.35 (-29%)

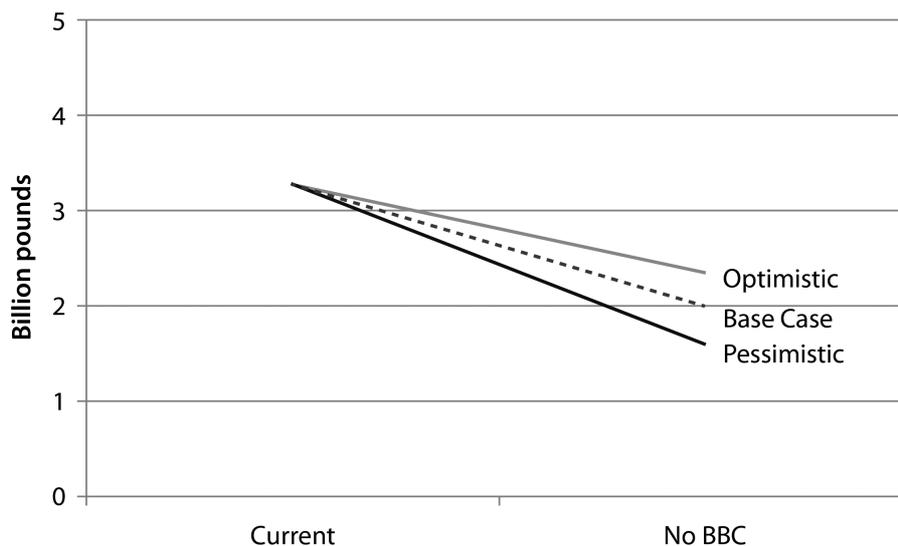


Figure B2. First-Run UK Content Investment in 2012.

Varying Content Investment as a Percentage of Revenue

With the exception of C4 and S4C, the commercial broadcasters are profit-maximising private companies. This holds both for the incumbents (ITV, C5, and the current non-PSBs) and for any likely new entrants who might be attracted to the market by the reduction in competition resulting from the absence of the BBC. The following factors drive content investment by private broadcasters.

- Pay TV broadcasters need to invest in attractive content to acquire and retain customers and to support high subscription prices, especially for premium channel packages (mainly sport and movies).
- Advertising-funded broadcasters need to do much the same in order to deliver high audience reach and ratings, especially among the hard-to-reach and more valuable (to advertisers) younger and more upmarket viewers. They also want to attract enough viewing to justify a prominent place on platform electronic programme guides (EPGs) and, potentially, to generate fees from platform operators, although who pays whom varies between countries.¹⁶⁶
- At the same time, content investment is a cost and, as with all costs, there is always pressure to reduce it. One way to do this is to rely less on first-run programmes and more on imports, syndicated programmes, reruns, and repeats.

The net outcome depends on the competitive situation: the greater the competition for subscribers and viewers, the greater the need for commercial broadcasters to invest in content to attract them.¹⁶⁷

Competition over Time versus the Competitive Impact of the BBC

In evaluating these competitive factors, it is important to distinguish between two categorically different questions.

1. First, regardless of the size of the BBC, is commercial broadcasting becoming more competitive?
2. Secondly, would the television market be more or less competitive if there were no BBC?

The answer to the first question is yes. In the UK, BSkyB is highly competitive despite its control of both the dominant platform and most of the premium content in sport and major studio movies. It continually invests in innovation, content, and customer service to increase the size of the pay TV market as well as its share of that market.¹⁶⁸ Further, it now faces a wide range of new competitors such as BT Vision in pay TV, Netflix in online TV, and many others, as well as a rejuvenated ITV and, potentially, Virgin Media and C5.

The trend towards ever-greater competition in UK commercial TV therefore seems likely to continue, forcing the players to keep investing in programming, partly by driving up the cost of the most valuable content such as rights in the top sports, movies, and US series. BT's recent investment in premium sports content is an example of this trend. We expect the growth in commercial broadcasters' content investment, including in first-run UK content, to continue.

¹⁶⁶ Currently, the UK commercial PSBs have EPG prominence irrespective of their viewing shares. On carriage fees, the general pattern to date has been that other people pay the company controlled by Rupert Murdoch, whether it is a platform (BSkyB in the UK) or a content provider (Fox in the USA). See *Economics of Television in a Digital World*, 29. The UK trend is now towards the US situation where platforms pay for content that attracts large numbers of viewers. In 2012, the five main PSB channels alone accounted for 45% of viewing in BSkyB homes and 49% in Virgin Media homes, versus 53% in DTT-only homes. Including their portfolio channels, the PSBs accounted for 73% of viewing in all multichannel homes (CMR 13, figs 2.65, 2.69).

¹⁶⁷ Oxera Consulting, *Viewers, Advertising and Programme Investment: Implications of CRR*, annex 2 of ITV submission to House of Lords Communications Select Committee inquiry into the regulation of television advertising (Oct. 2010), 3–8 ('Competitive dynamics of broadcasting: the need to invest in content').

¹⁶⁸ *Economics of Television in a Digital World*, 28.

However, this trend over time is irrelevant to the ‘comparative statics’ question addressed in this study, which is about the net impact of the BBC, focusing on its crowding-out effect. In order to decide whether the commercial broadcasters would invest a higher or lower proportion of their revenue in content if there were no BBC, we first need to take a view on whether the presence of the BBC increases or decreases competition compared with a counterfactual with no BBC, i.e. we need to address the second of the two questions listed above. The general increase in competition over time with or without the BBC (the first of the two questions) is a separate issue.¹⁶⁹

Does the BBC Make the Market More Competitive?

The answer to this second question depends on individual company strategies and their execution (including those of potential new entrants) and unpredictable competitive and regulatory dynamics. It therefore cannot be answered precisely and reliably, but we can make the following qualitative statements.

- With a 33% share, the BBC clearly increases competition for viewers.¹⁷⁰ It would be surprising if competition for viewers were higher without it, although this would be likely to vary between genres and market segments. On this basis, commercial broadcasters might be able to reduce their content investment (especially in first-run UK content), at least as a percentage of revenue, if there were no BBC.
- As we discuss in section 5.1, international comparisons provide some support for this hypothesis, i.e. that the presence of the BBC forces the UK commercial broadcasters to invest more in content, especially first-run UK content, than they otherwise would.
- The BBC also increases competition on the supply side, and therefore the cost of some types of acquired content and talent. Without this supply-side competition, commercial broadcasters might be able to get more ‘bang for the buck’ from their content budgets. Whether this would encourage them to invest more or less as a percentage of revenue is unclear, however, and in any case this supply-side factor should not be overstated. The BBC lacks the resources to compete head-to-head for the most valuable acquired content (top sports, movies, and US series) and attempting to do so too aggressively would rightly be seen as conflicting with its remit, although reasonable people will always disagree about where to draw the line.
- In the long term, the BBC has a key role in training and developing UK talent and experimenting with new programme formats and technologies. In particular, without the BBC’s continuing investment, the supply of world-class UK on- and off-screen talent would be unlikely to be sustained at the current level.
- Finally, a key issue if there were no BBC would be the extent to which its absence encouraged new entrants into the UK market. If many well-funded new entrants came into the UK as a result of there being no BBC, competition for viewers and subscribers would increase and the incumbents would be forced to spend more on content, perhaps including first-run UK content, even as a percentage of revenue. The outcome might conceivably be a market even more competitive than with the BBC as a major player, although this seems to us unlikely.

Taking these factors into consideration, it is unclear whether the overall effect of removing the BBC from the market would lead commercial broadcasters to invest a higher or lower proportion of revenue in content than now. The assumption that

¹⁶⁹ See *Economics of Television in a Digital World*, sections 2 and 5.

¹⁷⁰ Strictly speaking, the BBC increases competition for viewing, not viewers, since most consumers spread their viewing over a portfolio of six to ten favourite channels, in almost all cases including several BBC channels. For simplicity, we refer to this as competing for viewers.

these percentages (for both the commercial PSBs and the non-PSBs) would, on balance, remain unchanged is probably a tad optimistic but does not look unreasonable. Nevertheless, in order to test the robustness of our conclusions, we now consider what the impact would be if these percentages significantly changed.

Modelling Possible Changes in Commercial Broadcasters' Content Investment as a Percentage of Revenue

Given that the BBC is no longer a major competitor for premium content (top sports rights and first-run Hollywood movies), we assume that its absence would not lead in itself to a big change in non-PSBs' investment in this content as a proportion of revenue.¹⁷¹ Instead, we focus mainly on their investment in general programming. Based on our estimates in sections 2.3 and 3.2, commercial broadcasters invested the following percentages of revenue in total content and first-run UK content in 2012:¹⁷²

- Commercial PSBs: £1,831m (total) of which £1,323m (first-run) out of £2.98bn revenue = 61.4% (total) and 44.4% (first-run content);
- Non-PSBs: £1,772m (sport and movie channels) and £691m (other channels) of which £450m (first-run content) out of £6.59bn revenue = 26.9% (sport and movie channels) and 10.5% (other channels) of which 6.8% (first-run), all expressed as percentages of total non-PSB revenue.¹⁷³

Total Content Investment

In order to explore the sensitivity of our results to variations in these percentages, we first consider the following decreases/increases in the percentage of revenue invested in total content:

- Commercial PSBs: +/- 8%, i.e. from 56.5% to 66.3%;
- Non-PSB sport and movie channels: +/- 4%, i.e. from 25.8% to 28.0%;
- Non-PSB other channels: +/- 15%, i.e. from 8.9% to 12.1%.

Given the lack of objective data, these figures represent our subjective judgments of the plausible range of possibilities. Combining these assumptions with the pessimistic and optimistic revenue scenarios in Section 2 gives the results in Table B3, where the 'doubly pessimistic' results combine the pessimistic assumptions for both (i) revenue and (ii) the percentage of that revenue invested in first-run UK content (and the equivalent for the 'doubly optimistic' results).

For instance, in Table B1, our pessimistic projection of total content investment by the commercial PSBs was £1.57bn. This assumed that the commercial PSBs (i) achieved revenue in line with the pessimistic revenue scenario in Section 2 (£2.56bn, from Table 2.4) and (ii) invested the same percentage of this revenue as they actually invested in 2012 (61.4%). In Table B3, the 'doubly pessimistic' projection retains assumption (i) but replaces (ii) with the additional pessimistic assumption that these broadcasters invested 8% less in content than if they had maintained their content investment as a percentage of revenue. This reduces the pessimistic £1.57bn in Table B1 to the 'doubly pessimistic' £1.44bn in Table B3.¹⁷⁴

¹⁷¹ If new entrants did, as a result of the BBC's absence, compete more for this content, investment would increase but the net impact on viewers would most likely be negative: the effect would be more money going to Premiership footballers, Hollywood actors and studios, etc., and higher long-term subscription prices. BT's recent acquisition of rights for the Champions League is a case in point.

¹⁷² Tables 2.4, 3.1, and 3.2.

¹⁷³ A high proportion of the non-PSBs' revenue was generated by their premium sport and movie channels, although we do not have the split. Their investment in total and first-run content as a percentage of non-premium channel revenue was therefore significantly higher than the 10.5% and 6.8% figures here.

¹⁷⁴ Another way of calculating this result is to multiply the £2.56bn pessimistic revenue projection by the 56.5% pessimistic projection for content investment as a percentage of revenue, again giving £1.44bn.

Table B3. Total Content Investment in 2012 (£bn)

	Actual	Doubly Pessimistic	Base Case	Doubly Optimistic
BBC	1.61	-	-	-
Comm. PSBs	1.83	1.44 (-21%)	1.96 (+7%)	2.52 (+38%)
Non-PSBs	2.46	2.24 (-9%)	3.00 (+22%)	3.87 (+57%)
Total	5.91	3.68 (-38%)	4.96 (-16%)	6.39 (+8%)

Actual and base case figures: Table 3.3. Doubly pessimistic/optimistic figures: pessimistic/optimistic figures in Table 3.5 reduced/increased by +/-8% (commercial PSBs), +/-4% (sport and movie channels, raw numbers in Table 3.1), and +/-15% (other non-PSB channels).

Given this combination of extreme assumptions, the results for total content investment in Table B3, not surprisingly, show a wide range of possible outcomes, from a reduction of 38% to an increase of 8% (Figure B3). The latter figure involves a heroic combination of extremely optimistic assumptions, i.e. if there had been no BBC in 2012:

- Subscription revenue would have been 51% higher.
- Advertising revenue would have been 27% higher.
- Other commercial revenue would have been 30% higher.
- Commercial PSBs would have increased their content investment as a proportion of revenue by 8%, leading to a 38% increase in their total content investment.
- Non-PSBs would have increased their content investment as a proportion of revenue by 4% (sport and movie channels) and 15% (other channels), leading to a 57% increase in their overall content investment.

The 'doubly pessimistic' scenario (total content investment down 38% without the BBC) involves a similarly extreme combination of pessimistic assumptions.

More realistically, our expectation is that, without the BBC, total content investment would have been lower, most likely by between 5% and 25%, although the outcome would depend on many unpredictable factors, especially the possible entry of major new competitors and the subsequent competitive dynamics.

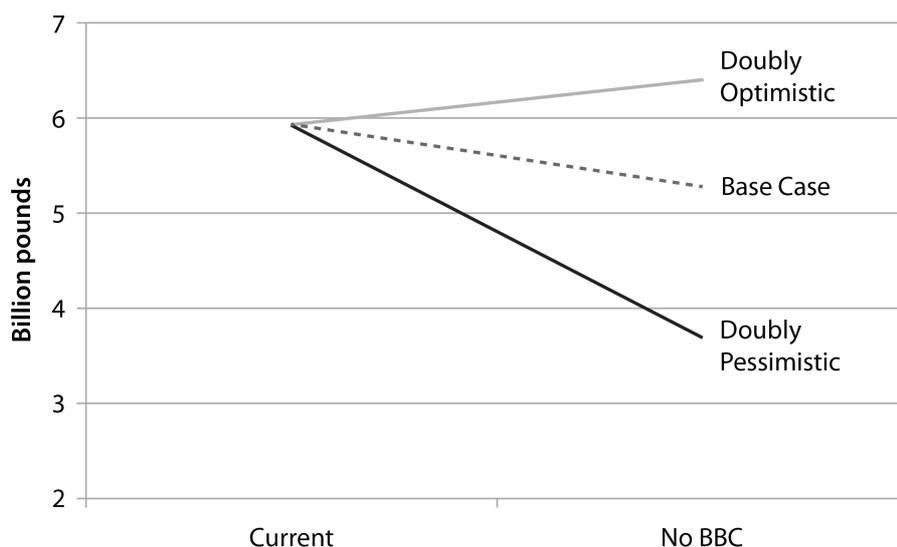


Figure B3. Total Content Investment in 2012 (£bn).

First-Run UK Content

Table B4 and Figure B4 give a similar analysis for first-run UK content, assuming the following increases/decreases as a percentage of revenue:

- Commercial PSBs: +/-10%, i.e. from 40.0% to 48.8% of total revenue;¹⁷⁵
- Non-PSBs: +/-20%, i.e. from 5.4% to 8.2% of total revenue.

Again, we have a range of outcomes based on the combined extreme assumptions – i.e. both (i) revenue and (ii) investment in first-run UK content as a percentage of that revenue – reflected in the ‘doubly pessimistic’ and ‘doubly optimistic’ scenarios. But in this case, there is no ambiguity about the direction of change: even under an extremely optimistic combination of assumptions (leading to an increase in first-run content investment of 38% for the commercial PSBs and 76% for the non-PSBs), total investment in first-run UK productions would be reduced by 20% if there were no BBC.

Table B4. First-Run UK Content Investment in 2012 (£bn)

	Actual	Doubly Pessimistic	Base Case	Doubly Optimistic
BBC	1.52	-	-	-
Comm. PSBs	1.32	1.05 (-20%)	1.41 (+7%)	1.83 (+38%)
Non-PSBs	0.45	0.35 (-22%)	0.55 (+22%)	0.79 (+76%)
Total	3.29	1.41 (-57%)	1.96 (-40%)	2.62 (-20%)

Actual and base case figures: Table 3.4. Doubly pessimistic/optimistic figures: pessimistic/optimistic figures in Table 3.6 reduced/increased by -/+ 10% (commercial PSBs) and -/+25% (non-PSBs).

In the more likely base case scenario – the ‘central case’ revenue projections in Section 2 with commercial broadcasters maintaining the percentage of revenue they invest in first-run UK content despite the likely reduction in competition resulting from the absence of the BBC – first-run UK content investment would have been 40% lower without the BBC. Under more pessimistic assumptions, it would of course have been even lower (-57% in the ‘doubly pessimistic’ scenario).

Our expectation is that, if there were no BBC, investment in first-run UK content would most likely be reduced by between 25% and 50% despite higher investment by commercial broadcasters.

¹⁷⁵ Note that, in this study, commercial PSBs include portfolio channels. *PSB 13*, fig. 14, shows ‘commercial PSB ratio of first-run content spend to income’ increasing from 36% in 1998 to 57% in 2012 and the equivalent for the BBC falling from 62% to 56% over the same period. However, the commercial PSB figures in *PSB 13* are only for the three main commercial PSB channels (ITV1 and the main C4 and C5 channels). In contrast, our focus is on the commercial PSBs as broadcasters, including their portfolio channels, which invest a lower proportion of revenue in first-run content than their main channels. The 56% Ofcom figure for the BBC in 2012 includes the BBC’s portfolio channels in line with our figures in Tables 2.1 and 3.2: £1,517m/£2.72bn = 56%.

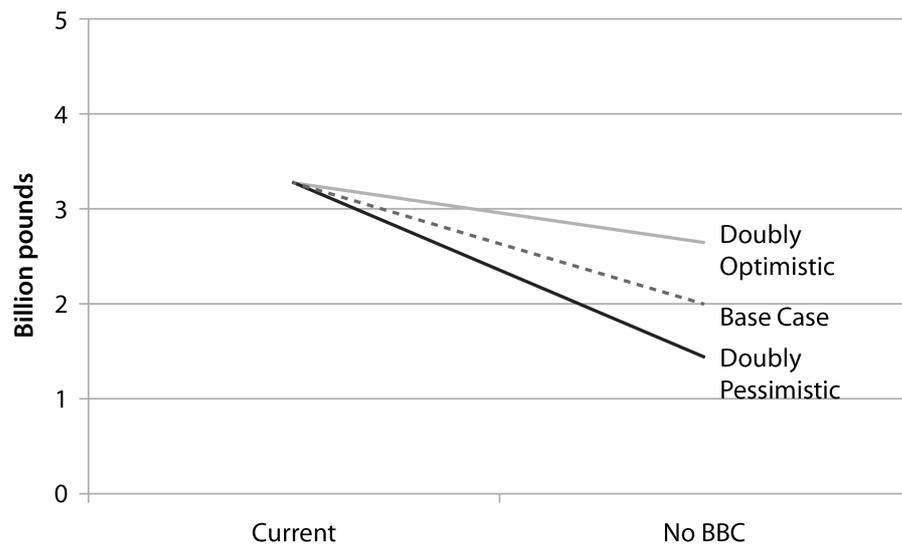


Figure B4. First-Run UK Content Investment in 2012 (£bn)

Appendix C: Some Specific Features of the BBC

We here discuss some specific features of the BBC as an organisation and brand that help account for the results of our analysis in Sections 2–4.

Efficiency, Popularity, and Other Public Service Objectives

As noted in Section 5.3, BBC TV now operates in extremely competitive markets, forcing it (and ITV) to be much more audience-focused and efficient than in the past. Audience focus and efficiency are not straightforward issues for the BBC, however. Even commercial companies need to go beyond just giving customers what they currently want: for long-term success they need to be willing to innovate ‘beyond the familiar’ to uncover and meet latent customer needs ahead of the competition.¹⁷⁶

The need to innovate beyond the familiar is even more important in creative industries such as broadcasting. Kevin Spacey’s recent MacTaggart lecture may have been somewhat starry-eyed about online TV but his comments on the need for risk-taking and innovation in content investment (as opposed to constantly reworking existing programmes, formats, and themes) were surely correct.¹⁷⁷

This certainly applies to the BBC, despite the extra criticism it sometimes receives for wasting licence payers’ money when a risky investment fails to pay off – comparable to the criticism companies receive in similar circumstances. Television programmes are ‘experience goods’, i.e. goods for which consumers have limited ability to judge quality before consuming them, and also ‘merit goods’, whose consumption itself changes viewers’ preferences. As our leading public broadcaster, the BBC still has the Reithian remit, and the resources, to invest ahead of public taste, at least some of the time.

As we have noted, the remit also requires it to offer public service programmes whose popularity with audiences would rarely be enough to generate a profit for a commercial broadcaster. These programmes increase its overall cost per viewer-hour. In that narrow accounting sense, they reduce its efficiency, but they are an important part of its role in increasing overall choice and they reinforce public and political support for the BBC.

The tension between giving audiences what they want and giving them programmes that stretch them a bit more or meet other public service objectives (and therefore tend to attract smaller audiences and increase the average cost per viewer-hour) is a complex, contested, and endlessly discussed topic beyond the scope of this report.

Despite these complications, if by efficiency we mean minimising overheads and always seeking maximum benefit for licence payers, the evidence is that a combination of competitive pressure and the BBC’s formal and informal governance processes (its accountability to the Trust and Parliament and the relentless media and public scrutiny under which it operates) have forced it to become far more efficient than portrayed by its critics – few of whom face a similar level of expectation and scrutiny. If the BBC were really as inefficient as portrayed, it is hard to see how it could provide content at such a low cost per viewer-hour while still delivering on its public service remit. (Of course it needs to continue the pressure for greater efficiency, especially under the current funding agreement, but that is not the issue here.)

Premium Content and Listed Events

These factors are reinforced by a ‘double whammy’ that helps to reduce the BBC’s (and, to a lesser extent, commercial PSBs’) cost per viewer-hour compared with subscription TV.

¹⁷⁶ Barwise and Meehan, *Beyond the Familiar*, ch. 5.

¹⁷⁷ Kevin Spacey, MacTaggart Lecture, Guardian Edinburgh International Television Festival, 23 Aug. 2013.

- The BBC is no longer in the competitive market for premium acquired content such as Champions League and Premiership football rights and first-run Hollywood movies. The commercial PSBs are also only marginal players in these markets. Less and less of this premium content is now available to viewers without premium pay TV channels.
- The exception is the relatively small number of major listed events such as the FIFA World Cup finals, the Grand National, and the summer Olympic Games.

The Strength of the BBC's Brand

As an organisation, the BBC is therefore much more internally efficient (in the sense of converting revenue into programmes people want to watch) than the way it is often described. In addition, it has a strong brand, enabling it to achieve bigger audiences for many of its programmes than the same programmes would be likely to win elsewhere. We here use the word brand in two categorically different but closely linked senses.

- First, the BBC's high viewing share shows that it is an extremely strong brand in the sense of a *specific named set of products and services* (BBC1, BBC Radio 2, etc. and the programmes on them) offered to UK consumers. In this sense, the BBC brand is freely chosen by the UK public at least 200 million times a day,¹⁷⁸ far more than any other brand (e.g. Tesco, Coca-Cola) – and in highly competitive markets with zero switching costs between channels. In this sense, the BBC is clearly a very successful brand – but that is just another way of saying that it is consumed a lot. It does not in itself explain why.
- Underlying this success (and with a chicken-and-egg relationship with the BBC's ability to turn resources into high-quality content) is the BBC brand in the deeper sense of *brand equity*, i.e. viewers' and listeners' beliefs and expectations about the quality and reliability of its products and services.¹⁷⁹

The key factor here is the public's high trust in the BBC across a number of dimensions such as impartial news, trustworthy documentaries, safe and stimulating content for children, and reliable advice on technology with no commercial agenda. Closely related is the public's general confidence in the BBC's programme quality in areas such as costume drama.

The downside of these high expectations – and of the compulsory licence fee – is that failure to meet them leads to a particularly strong public backlash, often reinforced by hostile newspapers and politicians.¹⁸⁰ Despite the various media and political attacks on the BBC, however, the public retains a strong and, perhaps, even growing psychological attachment to it, including a sense of ownership.

Other Behavioural Factors

Another closely related behavioural factor is the virtuous circle under which the BBC's high reach and viewing share enable it to promote new programmes successfully across its various channels. This is reinforced by its high 'audience flow'

¹⁷⁸ In 2012, the average individual watched TV for 4.0 hours/day, of which 33.2% was BBC TV. Assuming an average of 40 minutes viewed per programme, this equates to 2.0 out of 6.0 total TV programme choices per day. With a population of about 60 million aged 2+, the total number of such choices was roughly 120 million/day. BBC Radio attracted an average of 1.56 hours' listening per day (54.8% of 19.9 hours/week). Again assuming an average of 40 minutes per programme, this equates to another 140 million choices/day, bringing the total to 260 million/day, excluding BBC Online. These are rough estimates but the quoted figure of at least 200 million/day looks conservative (CMR 13, figs. 2.56, 2.71, 3.1).

¹⁷⁹ And also their beliefs about it as an organisation, although in the BBC's case there is some disconnection between the two, with many consumers being more positive about the BBC's programmes and services than about the BBC as an organisation. The third main use of 'brand', not relevant here, is to denote a trademark. See Barwise and Meehan, *Beyond the Familiar*, 25, for a fuller explanation of the meanings of 'brand'.

¹⁸⁰ For example, there were four complaints about 'Sachsgate' in 2008 from listeners to the programme in the four days after the broadcast. By the end of the campaign by the *Mail on Sunday* and *Daily Mail*, reinforced by other newspapers and some politicians, the number of complaints had increased to 32,000. We stress that broadcasting the pre-recorded show was, in our view, a serious mistake. Our point is that not that the BBC never makes mistakes but rather that, when it does, the backlash is in our view disproportionate.

or 'lead-in' from one programme to the next¹⁸¹ and, perhaps to a lesser extent, by the absence of commercials other than programme promotions and occasional public service announcements.

The way in which viewers consume television deviates in many ways from classical so-called 'rational' economic behaviour, even more than for most products and services. For instance, with digital technology, it is now possible to deliver TV programmes routinely on a pay-per-view (PPV) on-demand basis, so that consumers simply buy the programmes they want, as they do both in economics textbooks and, in the real world, with most food, holidays, cars, cinema tickets, and so on. But the dominant pay TV model is still one of bundled channels funded by monthly subscriptions. In fact, the current trend is for more bundling (with broadband and fixed and mobile telephony) not less.

Even video-on-demand (VoD) is increasingly being funded by subscriptions: in 2012, online TV subscriptions increased by 153% while PPV transactions declined by 32%.¹⁸²

The reason, we believe, is that consumers prefer the simplicity and certainty of a bundled monthly subscription for the great majority of their viewing. In the same way, traditional TV channels (of which the BBC has two of the top four and five of the top sixteen)¹⁸³ are a different form of bundling that helps viewers find what they want with minimal effort and no worry about the cost of different programmes.

These various behavioural factors – the BBC's brand, reach, and audience flow, and its relatively small portfolio of relatively large channels (by the standards of multichannel TV today) – are mutually supportive. Taken together, and reinforced by the absence of advertising breaks, they mean that a programme shown on BBC1 is likely to attract a bigger audience than if the same programme had been shown on any other TV channel.

The BBC's portfolio channels such as BBC3 and BBC4 also benefit from its overall brand equity and its ability to cross-promote on different channels. BBC4, its smallest mainstream channel, still represents a substantial medium in its own right: its viewing share of 0.9% is equivalent to an average of 15 minutes' consumption per week across the whole UK population – slightly less than the consumption of the *Sun* newspaper, the UK's highest-circulation print medium.¹⁸⁴

¹⁸¹ Barwise and Ehrenberg, *Television and its Audience*, 34 and 72–4.

¹⁸² CMR 13, fig. 2.53.

¹⁸³ CMR 13, fig. 2.77.

¹⁸⁴ CMR 13, fig. 2.71, gives the 2012 viewing shares for BBC4 and the other BBC channels. 0.9% of 28 hours/week is 15 minutes/week. The *Sun* has an average daily circulation of 2.4m and an average daily readership of 6.71m adult readers (2.8 readers per copy). Assuming a population of 51m adults 15+ and that the average reader reads it for 25 minutes per day (150 minutes per 6-day week) this is equivalent to $(6.71m \times 150)/51m$ equals an average of 20 minutes/week across the adult population. <http://www.mediauk.com/newspapers/13707/the-sun/readership-figures>; http://wiki.answers.com/Q/What_is_the_adult_population_of_the_UK.

Appendix D: Other Policy Options

Numerous alternative policies have been proposed other than the current one of gradually reducing the real income of BBC TV (by holding down the licence fee and using it to pay for more and more services in addition to UK broadcasting and BBC Online) while the commercial television market continues to grow. Detailed discussion of these is beyond the scope of this report, but we here briefly comment on the main ones.

Funding the BBC from General Taxation

The benefit of funding the BBC out of general taxation is that poorer households would pay less (apart from those that currently pay nothing because they include at least one household member aged 75 or more). The big disadvantage is that it would make the BBC much more vulnerable to political pressure. Further, in the current state of the public finances, this option has little if any political traction.

Privatising the BBC

In economic terms, this is exactly the same as our no-BBC counterfactual, apart from the assumption that a privatised BBC would inherit enough of its tangible and intangible assets¹⁸⁵ to enable it, at least initially, to continue investing in content, including first-run content, more than the current subscription-funded broadcasters. But it would only be a matter of time before pressure from shareholders led a privatised BBC to reduce this investment in order to maximise profits and shareholder value.

Nothing in our analysis suggests that the non-PSBs are inefficient. The reasons why they invest less than the PSBs as a proportion of revenue in content, especially first-run UK content and minority-interest content, is the underlying economic structure of their ownership and business model. But similarly, nothing in our analysis suggests that the BBC is especially inefficient – rather the opposite.

Therefore, we see little chance that a privatised BBC would enjoy significant efficiency gains and no chance that the resulting savings would be more than the necessarily higher overheads (marketing, dividends, etc.) that limit the non-PSBs' content investment, especially their investment in first-run UK content. Nor do we see any evidence that a privatised BBC would be better at content innovation or cost reduction than the current BBC. The one area where it might be more efficient is in technology management, where the BBC's track record is mixed.

Leaving aside the economics, a privatised BBC would have to be funded mainly by subscriptions and its programmes would no longer be universally available. This would especially penalise poorer families and those living alone, who would tend to be priced out of the market by a profit-maximising privatised BBC. The cost per viewer-hour for those willing and able to pay would be significantly higher than with licence fee funding. Insofar as its subscription revenue were supplemented by advertising, the effect would be to reduce the price of TV advertising (cost per thousand viewers) as discussed in section 2.2 and Appendix A, significantly damaging the existing advertising-funded channels.

Privatising the BBC would lead to a very powerful commercial player that, unlike today, would compete head-to-head for the same revenue sources as the other commercial broadcasters. It would have no incentive to invest in loss-making public service content or to support programmes such as superfast broadband rollout. In order to induce it to do these, it would have to be financially incentivised by the government.

The only rational argument we see for privatising the BBC (or part of the BBC) is that it would generate a windfall for the Treasury. But this would involve

¹⁸⁵ Talent and expertise, organisational culture and processes, corporate, channel and programme brands, studios and offices, archive, supplier and talent relationships, etc.

selling a unique, internationally admired asset built up over the last 90 years for a limited short-term financial gain and clearly at the expense of future generations.

Rightly, in our view, there is currently no political momentum behind the idea of privatising the BBC.

Keeping the BBC in Public Ownership But Replacing the Licence Fee with Subscriptions¹⁸⁶

The economic and non-economic effects of this option would be the same as for privatisation, with two differences. First, there would be no windfall for the Treasury. Secondly, however, it would be possible to exercise some continuing control over programming policy to limit the reduction in the range and quality of output of the privatisation option, although this option would again pit the BBC in direct competition for subscriptions against other pay TV broadcasters.

But universality would again be lost, overheads would again be higher, and the cost per viewer-hour would rise. We regard it as highly unlikely that this option could be turned into a policy that benefited consumers relative to continuing with a universal licence fee.

The much overhyped but genuine growth of internet television does raise a question about how to ensure that those who watch only online continue to pay the licence fee. The Charter renewal debate will certainly need to address this executional issue. But from both a consumer welfare and a citizenship perspective, it is hard to see how any system based on subscription funding could lead to a better outcome than the universal licence fee, even if some other form of funding could be found for BBC Radio, BBC Online, the BBC World Service, support for new technologies, S4C, BBC Monitoring, etc.

Advertising Funding

The idea of wholly or partly funding the BBC through advertising was examined in detail by the 1985–6 Peacock Committee and rejected. The main attraction of advertising funding is that it is ‘free’ – or rather, invisible and relatively painless for the consumer. Another benefit is that it is more progressive than a fixed licence fee or subscriptions. However, it has some big disadvantages.

- It tends to lead to a narrowing of choice because some minority interest genres and programmes which are viable with other funding methods are not viable with advertising funding. This was the main reason why Peacock rejected advertising on the BBC. It is especially true for television because TV audiences are only weakly segmented (e.g. compared with the readership of print media).
- Because of the price elasticity of TV advertising, the amount of incremental revenue available is limited (see section 2.2 and Appendix A). The majority of BBC TV advertising revenue would therefore come from other broadcasters, mainly the commercial PSBs.
- Insofar as advertising on the BBC did lead to an increase in total TV advertising revenue, this would be largely at the expense of the display advertising revenue of other media, especially newspapers, which are already struggling financially.
- Viewers generally prefer TV without commercial breaks.

For these reasons, we see no political traction behind the idea of the BBC carrying advertising.

¹⁸⁶ Broadcasting Policy Group, *Beyond the Charter*.

Contested Funding (an 'Arts Council of the Air')¹⁸⁷

The 1985–6 Peacock Committee recommended replacing the licence fee with voluntary subscriptions for the BBC's main funding but retaining a degree of public funding (from money raised through auctions of ITV franchises and/or spectrum) to subsidise public service content which the market would not. This funding would be allocated, in response to competitive bids from broadcasters, by a Public Service Broadcasting Council, sometimes described as an 'Arts Council of the Air'.¹⁸⁸

In 2004, Professor Peacock spelt out how his vision of contested funding for public service content might be implemented:

There would be a separate budget to be allocated to programmes that conform with the stated aims of public service broadcasting as translated into a list of approved types of TV productions. Competitive bids would emanate from [broadcasting] companies . . . The decisions would be taken by an appointed council with half of its members representing viewers and listeners.¹⁸⁹

This approach would face a number of practical challenges:

- The difficulty of specifying what constitutes PSB content;
- The inflexibility of a 'list of approved types of TV productions', which might discourage creativity and innovation;
- The difficulty of striking the right balance between the non-commercial PSB criteria and broadcasters' willingness to apply for funding;
- The relatively high transaction costs.

As far as we know, the only real-world examples of this approach are the Irish 'Sound and Vision' programme and the New Zealand On Air (NZOA) funding. The Irish programme allocates 7% of licence fee income to a contestable fund. To date, the great majority of its funding has gone to the public service broadcaster(s).¹⁹⁰ The New Zealand approach defines public service as reflecting identity and culture, drama and documentaries, and programming for Maori, women, children, the disabled, and minorities. It is funded out of general taxation. Current funding is NZ\$87 million (£43.4 million). About two-thirds of its total funding goes to television production but, even with this support, less than a quarter of all TV programmes broadcast are domestic productions.¹⁹¹

This option has little political support in the UK.

Shared Licence Fee Funding

Another option, which would avoid many of the practical problems of contested funding, would be for a small proportion of licence fee revenue to be allocated to other public service broadcasters on a long-term basis, rather than programme by programme. This already happens through the BBC's support for S4C and now local TV but could be extended:

An example of the way this would work is that the BBC could decide that investing £20 to £30 million in programming first shown on C4 or E4 might be a better way to reach the 16 to 35 year old audience with programming of public value than spending £100 million a year on BBC3.¹⁹²

¹⁸⁷ Peacock, *Public Service Broadcasting without the BBC?*

¹⁸⁸ Peacock Report, 148–9.

¹⁸⁹ Peacock, *Public Service Broadcasting without the BBC?*, 45.

¹⁹⁰ *Economics of Television in a Digital World*, 20. See also Broadcasting Authority of Ireland, *Sound & Vision II*: www.bai.ie/?page_id=92.

¹⁹¹ New Zealand, Broadcasting Act, 2009, and Jeremy Mayhew and Luke Bradley-Jones, 'Contestable Funding: Lessons from New Zealand', in *Can the Market Deliver? Funding Public Service Television in the Digital Age* (John Libbey, 2005), 151–69; Paul Norris and Brian Pauling, *NZ On Air: An Evaluative Study, 1989–2011* (Mar. 2012): <http://www.nzonair.govt.nz/media/65429/nza4022%20evaluative%20study%20doc%20final%20web.pdf>.

¹⁹² Oliver, *Changing the Channel*, 9.

Evaluating the costs and benefits of this approach would depend on the specific proposals and falls outside the scope of this report. The bigger issue for us is that, if the current policy of 'salami-slicing' continues, before very long there will be little or no licence fee revenue to share.

Appendix E: Limitations and Areas for Further Research

Like every study, this one has limitations. Some of these are to do with the *limited scope* of the analysis, others are about the limitations of *the analysis itself*. Although we are confident in the results of our analysis, we believe that addressing these limitations will reduce the range of uncertainty captured in our pessimistic and optimistic scenarios.

Under the first heading (scope), the study has focused on UK television, especially BBC TV, from a consumer perspective, although the results also have clear implications for UK programme production. In principle, the approach we have used – comparing the actual world, including the BBC, with a range of counterfactuals without the BBC – could also be applied to BBC Radio, BBC Online, and other BBC activities and to specific aspects of the BBC’s impact on the UK public as citizens. In fact, PwC’s analysis of the BBC’s contribution to the UK economy used the same approach.¹⁹³ (Our results and approach may also be relevant to policy debates beyond the UK, despite the many differences between different national contexts and markets.)

We here focus on the second heading, the limitations of the analysis itself, and some ways in which these might be addressed in future research.

The Static Nature of This Research (Section 1)

Because this study focuses on the impact of the BBC in the market using 2012 data, it does not forecast how the television market with and without the BBC might change in future years as a consequence of changing technologies, potential new entrants, expansion of online TV, and possible changes in audience behaviour. These are a potential area for future research but the outcomes would be speculative and highly debatable so we have avoided them in this study.

Net Impact on Revenue (Section 2)

Our optimistic and pessimistic revenue scenarios represent very unlikely extremes and our base case revenue scenario is simply the midpoint between them. In the event, our conclusions turn out to be remarkably robust, but it would still be good to reduce the range of uncertainty and to develop a base case that is ‘most likely’ rather than merely the midpoint of two highly unlikely extremes.

The biggest absolute uncertainty is for subscription revenue if there were no BBC. Because of the price elasticity of TV advertising, subscriptions represent the only potential source of a big increase in commercial broadcaster revenue.

It should be possible to narrow the range of uncertainty about subscription revenue by exploring (i) how many free-TV-only households would be willing to subscribe to pay TV and (ii) how many pay TV households would be willing to upgrade to a higher-priced package if there were no BBC (and in both cases, how much they would be willing to spend) with some realistic assumptions about the extent to which the pay TV broadcasters and commercial PSBs might be offering more than today.¹⁹⁴

In this research, it would be helpful to segment the market along the lines discussed in section 4.3, allowing for different levels of BBC viewing and different demographics (household size, income, and perhaps age distribution).

It would also be helpful to distinguish not only between free-TV-only homes and pay TV homes but also between those with different levels of pay TV, especially those with and without premium sport and movie channels. We can conjecture that the removal of the BBC would lead to relatively little increase in the take-up of

¹⁹³ See n. 13.

¹⁹⁴ As noted in Section 1.2, the way we address the circularity or ‘endogeneity’ in the relationship between revenue, content investment, and popularity is through internally consistent scenarios. Only if the results of the willingness-to-pay research suggested that subscription revenue would be so much higher/lower than expected that the content investment assumptions used had been materially too low/high would it be necessary to repeat the WTP research with higher/lower content investment assumptions.

premium sport channels (for which demand is quite highly segmented and the BBC is no longer a major competitor) but more for packages with general entertainment channels (perhaps including movie channels), factual channels, and children's channels.

The other significant uncertainty is for advertising and sponsorship revenue although even the optimistic scenario does not assume that this would increase hugely if there were no BBC (while the pessimistic scenario assumes that it would actually go down). The expected outcome largely hinges on the highly contested issue of the price elasticity of TV advertising. For reasons discussed in the technical appendix, we believe that there are fundamental reasons why price elasticity cannot be reliably estimated in this market using econometric methods – which is why different econometricians have reached contradictory conclusions (although all agree that any large increase in commercial exposures would lead to a large reduction in the cost per thousand viewers).

One option would be to replicate the IFF Research survey of leading advertisers from the time of the Peacock Committee in 1985–6.¹⁹⁵ This used a 'what-if?' survey method somewhat similar to the willingness-to-pay research for consumers recommended above, asking major TV advertisers the following question:

If there were advertising on the BBC (and the cost of airtime went down by perhaps 30%) would you expect your company's total expenditure on television advertising to: go up, go down, or stay about the same?

The net impact projected from the responses was a 5.3% increase in total advertising expenditure – almost exactly in the middle of the range implied by econometric estimates of price elasticity.

There is also uncertainty about what other commercial revenue (£0.54bn in 2012, Table 2.1) and revenue from online TV (£0.25bn in 2012)¹⁹⁶ would be if there were no BBC. However, neither of these contributes materially to the overall uncertainty about what industry revenues would have been in 2012 without the BBC, although online TV (video-on-demand, or VoD) is likely to become material before and during the next BBC Charter. As we wrote in our last report,

Despite all the uncertainty, the evidence suggests that VoD will continue growing from its current low base . . . but that it will not revolutionise TV viewing (e.g. replace TV channels) in the foreseeable future. Having said that, many would still disagree with this view and things may indeed change faster and more radically than expected.¹⁹⁷

More generally, the implications of digital convergence and online TV for the future of the BBC and commercial PSBs represent an important area for further research, including in the run-up to the new BBC Charter.

Net Impact on Content Investment (Section 3)

Our analysis of content investment if there were no BBC was constrained by limitations in the data we have been able to access. This suggests a number of potential areas for further research:

- The non-PSBs' total content investment and investment in first-run UK content expressed on the same basis as the Ofcom data for the PSBs (i.e. the cost of content transmitted in a given time period);
- Equivalent figures for online TV services;

¹⁹⁵ IFF Research, *Advertising and the BBC: Top Advertisers' Expenditure Expectations* (Nov. 1985). The issue explored is closely related to the one addressed here. See Appendix A for more detail.

¹⁹⁶ CMR 13, fig. 2.53.

¹⁹⁷ *Economics of Television in a Digital World*, 42.

- Total and first-run content investment broken down by genre using consistent genre definitions for all broadcasters;
- Data on total and first-run content investment by the commercial PSBs as broadcasters, i.e. including for their portfolio channels. (The current Ofcom data treat only ITV1 and the main C4 and C5 channels as PSB channels.¹⁹⁸)

These data would enable researchers to produce more reliable and fine-grained analyses of the current market and to explore how the removal of the BBC might differentially impact investment in different genres.

The other investment issue that would benefit from further research is the economics of content investment for different commercial broadcasters, including potential new entrants as well as incumbents. In this study, we have

- Hypothesised that the greater the level of competitive intensity, the more commercial broadcasters will need to invest in content;
- Perhaps optimistically assumed in our base case that the commercial PSBs and the non-PSBs (including any new entrants) would each maintain their content investment as a percentage of revenue despite the likely reduction in competitive intensity caused by the removal of the BBC.

It would be helpful if further research investigated not only the economics of content investment for the different types of commercial broadcaster but also the likely competitive dynamics, including the potential role of new entrants and the regulatory authorities (given BSkyB's market dominance). This research could also look at the likely short- and long-term supply-side implications of losing the BBC, i.e. on the markets for UK production and talent and acquired content and rights.

Net Impact on Viewers (Section 4)

As with content investment, our analysis of the net impact on viewers was somewhat constrained by data limitations. In particular, the relatively high average cost of the non-PSBs per household (£7.65/week) and per viewer-hour (24.9p) in Table 4.1 combines both basic and premium pay TV households. The equivalent figures for basic TV households separately (i.e. those without higher-priced sport and/or movie channels) are doubtless significantly lower.

This could be important for modelling purposes if, as we hypothesise, the main growth in subscription revenue if there were no BBC would come from free-TV-only homes upgrading to pay TV and basic pay TV homes upgrading or switching to a higher-priced package but not, in most cases, including premium sport channels. It therefore represents a significant area for potential further research.

A second such area – beyond the recommended analysis of the economics of content investment for the different types of broadcaster – is exploring the underlying reasons for the differences in the cost per viewer-hour in Table 4.1.

In discussing that table, we noted that the cost per viewer-hour of the BBC was slightly higher than for the commercial PSBs (9.2p versus 8.0p¹⁹⁹) and hypothesised that this reflected (i) the BBC's greater investment in first-run content, especially regional and minority-interest content, (ii) its need to provide more content per hour because of the absence of commercial breaks, and (iii) the commercial PSBs' somewhat greater ability to generate commercial revenue from other sources. This is a crucial issue for debates about the BBC's efficiency and the value for money of the licence fee. It would therefore be very helpful to have some research on it, including tests of our hypotheses.

¹⁹⁸ This presumably reflects the COSTA regulations under which these channels are still not allowed to sell as many minutes of commercial airtime per hour as the other commercial channels, including the same broadcasters' portfolio channels. See *Economics of Television in a Digital World*, 25.

¹⁹⁹ Using Ofcom's figures for net advertising revenue and sponsorship as the indirect consumer cost of advertising-funded channels, i.e. excluding commercial production costs and agency fees.

Thirdly, our analysis of costs doesn't include the opportunity cost of the spectrum used for digital terrestrial TV (DTT). DTT accounts for a higher proportion of the PSBs' viewing than the non-PSBs.

A fourth, very important, issue is different viewers' willingness to trade off a slightly lower probable cost for television without the BBC (a saving of just under 12p per household per day for the average household in our central base case, section 4.2) against a significant reduction in choice (including a reduction of 16% of total content investment and 40% of investment in first-run UK content). We have conjectured that few households would see this as an improvement in value for money, but it would be extremely helpful to have some consumer research testing this.

Finally, as discussed in section 4.3, our analysis of how the impact of losing the BBC would vary between different types of household was again highly conjectural. It would be possible to draw clearer and stronger conclusions if we had an analysis of the value for money of the BBC and television in general (cost per week and per viewer-hour) for different types of household, broken down by (i) whether they had free TV only, basic pay TV, or premium pay TV and (ii) their combined individual viewing of the BBC and television in general, together with their demographics, especially household size and income level.

Explaining the Results (Section 5)

Section 5 discusses a range of explanations for the results of our analysis in Sections 2–4, a combination of high-level facts about the market (e.g. the much higher monthly cost of pay TV compared with the television proportion of the BBC licence fee), the generic economics of television, and some specific features of the UK market and the BBC.

The more generic issues, such as viewers' general preference for first-run domestic content, are the subject of long-term academic research but two of the more specific issues would benefit from more focused, applied research.

- The extent to which the compulsory licence fee leads to lower revenue collection costs than for pay TV (and perhaps also advertising-funded TV). Analytically, this is a relatively straightforward forensic accounting question but the ability to answer it will depend on the availability of the relevant data.
- The interlinked behavioural factors (brand, reach, audience flow, channel portfolio, EPG positioning, and the absence of advertising breaks) that reinforce the BBC's popularity and therefore its value for money. Here, there are plenty of relevant data but the issues are complex, interdependent, and hard to separate. From a policy perspective, the relative contributions of these factors may not matter. What does matter is acknowledgement of them by policy-makers and recognition that, by reinforcing the value for money of the licence fee, they benefit the public.

Implications for BBC Charter Review (Section 6)

The revenue projections for 2016, the last year of the current BBC Charter (Table 6.1), use the latest industry estimates. One area for further research is to update these as the market develops, although the broad picture seems unlikely to differ much from these projections. The greatest relative uncertainty is for online TV revenue, projected to increase by a factor of 2.44 between 2012 and 2016, but the absolute impact is limited.

The bigger issues are to do with the implications of a continuation beyond 2016 of year-on-year reductions in the real (inflation-adjusted) revenue available to BBC TV while total commercial TV revenue continues (including online) to grow in real terms. This could happen either because of continuous 'salami-slicing' (driven by public sector budget pressures and ministers increasingly using the licence fee to fund their pet projects) or as a result of a deliberate policy to reduce the scale and market impact (or 'distortion') of the BBC.

This sets the agenda for several significant areas of potential further research:

1. Longer-term broad-brush projections or scenarios for commercial TV revenue (subscriptions, advertising, online TV and other), ideally to 2026.
2. The likely impact of these longer-term projections/scenarios for commercial broadcasters' investment in content, especially first-run UK content.
3. Within this, the longer-term prospects for, and implications of, online TV and digital convergence more generally. This will be an increasingly important issue beyond 2016, with potential implications not only for revenue and content investment, but also for licence fee enforcement and spectrum policy.
4. Within the wider market context implied by 1–3, the impact on the BBC of a reducing real revenue base and a continuously reducing revenue share: what would be the implications for content investment and the range and quality of services?
5. The public's willingness to continue supporting the BBC if the range and quality of its services are reduced as a result of either continuing 'salami-slicing' or a deliberate policy of cutting back the scale of its operations. Is there a potential 'tipping point' below which public support for the BBC (currently high, despite recent challenges) goes into a downward spiral?
6. Clarifying what those calling for a smaller BBC are actually proposing, and the implications for content investment, value for money, etc., as well as how, if at all, they propose to pay for BBC Radio, the World Service, and other (BBC and non-BBC) activities currently funded by the licence fee.

Finally, in this study we have discussed other proposed options for the BBC (general taxation, privatisation, subscriptions, advertising, contested funding) only briefly. We have not analysed these in detail because we do not currently see much political momentum behind them and also because none of them have themselves been developed in very much detail. Should any of these options start gaining significant political traction, they would of course need to be analysed in much more detail than we have done. We believe our main analysis (what the market would be like if there were no BBC and no licence fee) should help.

Evidence-Based Policy

One final implication is not so much about the specific policy issue – Charter renewal – as about how such a policy should be developed and evaluated. Our approach is in the tradition of rational, evidence-based policy. In this approach, the available evidence – of which in this case there is plenty – is used to judge the likely consequences of alternative policy proposals.

Ideally for evidence-based policy, the evidence comes from carefully controlled randomised controlled trials (RCTs) as in medical research. We are now starting to see RCTs – or at least, scientifically designed pilot projects – starting to be used in public policy, although their applicability has so far been largely limited to minor executional issues such as testing alternative wordings in communications to the public. The Cabinet Office's Behavioural Insights Team ('Nudge Unit') is encouraging the use of RCTs to test more complex policy proposals.

Where – as in this case – an RCT is not feasible and there is considerable uncertainty about the likely consequences of alternative policies, the analysis should reflect that uncertainty by considering a range of possible scenarios to test the robustness of the conclusions, as we have done. We believe that our analysis shows that, in the case of proposals for a much smaller BBC or a privatised or publicly owned BBC funded by subscriptions and perhaps advertising, it is possible to reach solid conclusions about the likely consequences despite great uncertainty about the details.

We hope that, in future, those making assertions such as Philip Booth's, 'Public service broadcasting should consist of supplying consumer wants where such

wants, for some reason, cannot be provided through the market'²⁰⁰ (a typical example of the 'market failure' view), should be challenged to (i) spell out what they are proposing in sufficient detail for it to be evaluated and (ii) provide at least some evidence and analysis to suggest that the consequences would benefit the public and the economy.

It is certainly not self-evident that, as Mr Booth and many others assume, limiting the BBC to providing only the types of programme that commercial broadcasters will not provide would benefit the public. In fact, our evidence-based analysis strongly suggests exactly the opposite.

²⁰⁰ Philip Booth, introduction to Peacock, *Public Service Broadcasting without the BBC?*, 18.

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