

**PUBLIC AND PRIVATE BROADCASTERS ACROSS
THE WORLD - THE RACE TO THE TOP**

December 2013

I. Overview

It has occasionally been argued that the existence of the BBC in particular and public service broadcasting (PSB) in general crowds out commercial media investment and innovation. This argument misunderstands the dynamics at play in the UK creative sector. In practice, the BBC's presence has had the opposite effect. One of the reasons for this is that the BBC helps create 'competition for quality' between different institutions that grows the overall market.

The licence fee represents just 23% of TV revenues yet supports a BBC which accounts for 43% of all expenditure on UK originations, creating content of global renown. The UK has highly successful commercial players in the production sector and a pay TV sector, led by BSkyB, adding welcome investment in quality content. Through the publicly-owned but privately funded Channel 4 and the commercial public service broadcasters (PSBs), ITV and Channel 5, the UK has a unique model for PSB delivery beyond the BBC.

The UK broadcast market works as a 'virtuous circle' with the public and private sectors competing for audiences but not for funding sources. The result has been better programmes for audiences, creative innovation and growth of the overall economic pie.

This report presents new research showing that while the UK is a world leader among both public and private media, the competitive dynamics underpinning that success are also at work in other markets.

The analysis from Dr Jonathan Simon of Inflection Point looks at 14 markets across the globe and uses data from new and bespoke sources – with the UK as just one data point among many. It is an empirical approach which assesses the health of both public and private provision judged by revenues, levels of investment in originations, diversity of schedule and audience perceptions of quality.¹ It tests the 'competition for quality' hypothesis from an international experience.

The findings are clear and consistent, showing positive correlations between the health of public broadcasting and the health of private broadcasting. They run counter to the theory that high levels of public funding 'crowd out' private investment (for which one would expect negative correlations). Instead, the research suggests that PSBs must be of scale to influence their markets most positively. PSB is at its most effective when it not only delivers high quality programmes but also exerts pressure on commercial competitors to do the same. In summary, the analysis finds:

- Overall, countries with well-funded PSB investing in high-quality, diverse new content tend also to have commercial markets which generate strong revenues and levels of investment in high-quality, diverse new content. This pattern is most pronounced in the Nordic countries, Australia and the UK
- On each of the assessment criteria, strong public broadcasting correlates positively with a strong commercial market; specifically there is –
 - a positive correlation between public funding and commercial revenues
 - a positive correlation between investment in originations by the lead public TV channel and investment in originations by the lead private TV channel

¹ These are not the only criteria by which to judge the health of the public or private broadcasting sector. They do not account for the many areas of national specificity, such as history and culture, nor the variation in PSB remits around the world. Nonetheless, the criteria selected are important indicators of the economic and cultural impact of both sectors. Crucially, they are criteria for which it was possible to get reliable comparable data which is rare for international broadcasting markets

- a strong positive correlation between diversity of schedule (assessed by the proportion of key public service genres) in the main public and the main private TV channels
 - a strong positive correlation between audience perceptions of quality of the main public TV channels and the main private TV channels²
- The trends show that countries where PSB is less strong tend to have a less strong market, such as seen in Portugal and Italy.

These findings are not simply a function of market scale and wealth. Revenues and investments are analysed on a per capita basis, and all correlations have been tested to account for variations in wealth and remain statistically significant. Nor do the findings diminish the distinctiveness of public service broadcasting. On investment, diversity and quality, PSBs tend to lead their markets, as warranted by their public revenues.

Rather, this research supports the theory that public broadcasters drive a virtuous circle by raising audience expectations of all broadcasters, requiring commercial broadcasters to invest in diverse, high-quality output and thereby further challenging PSBs to raise their game.

In this way, public-private competition in the UK market and elsewhere has led not to lower standards and a 'race to the bottom' but a 'race to the top' and ever higher levels of innovation and quality. In the face of digital transition and the recent global recession, this 'race to the top' has helped the global TV industry remain remarkably resilient, culturally³ and economically⁴.

2. Introduction

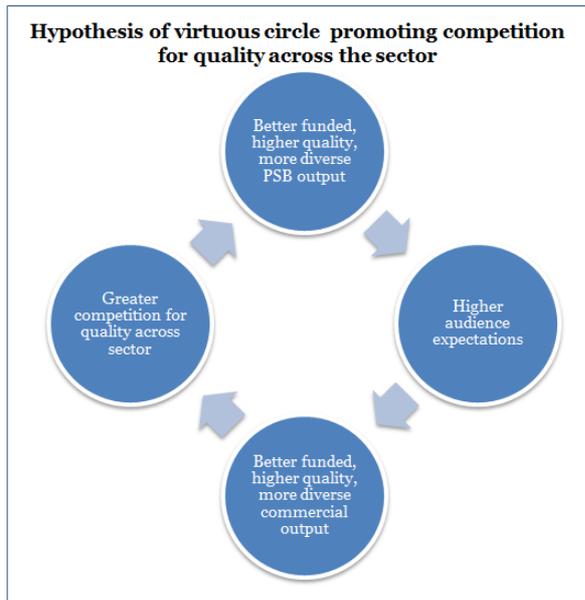
Public service broadcasting (PSB) can no longer be justified on the basis of scarcity alone, and public broadcasters must do more than ever before to earn public support and funding. Private broadcasters can no longer rely on mass audiences shared among a small number of oligopoly providers. Both sectors are impacted by the fragmentation of television audiences. The main challenge for PSB is sustaining high levels of reach, impact and value to audiences. For private media, there is real pressure on traditional business models. It is becoming harder to spread the high costs of content investment across a broad audience base, and to justify the risk of a commissioning flop on the basis of a potential hit. It is increasingly difficult to maintain channels that help bring the nation together around a diverse schedule of content that informs, educates and entertains against competition from niche channels and services. These pressures could potentially lead to a 'race to the bottom', with channels focusing increasingly on low-risk, low-investment programmes, from reality TV to cheap US imports.

These evolving market dynamics raise important questions about the role of public service broadcasting, both in terms of public service broadcasters' own output and also their influence on the market. As broadcasters face increasing competition, some have questioned whether PSB channels still offer something distinctive from commercial networks. And with audiences fragmenting over a growing number of channels, others have expressed concern that public funds crowd out commercial investment. Against this, there are arguments that public service broadcasters are as important now as ever. Strong public service broadcasters continue to play an important role as a guarantor of quality and supplier of a diverse range of programmes.

² The methodological reasons for choosing these comparisons are explained throughout the report but in general are based on ensuring analysis of the most accurate and comprehensive available data

³ Consumption of TV is 214 minutes per person per day across a range of major TV markets and has been stable or increased in most markets in recent years - Ofcom International Communications Market Report (December 2012)

⁴ Global revenues have increased at 5.2% CAGR in the past four years – *ibid*



In addition, public service broadcasters play an important role in conditioning the TV markets in which they operate. Their own investment in programming, and the quality and diversity of their schedules, can trigger a ‘virtuous circle’ by raising audiences’ expectations, and thereby incentivising commercial broadcasters to offer more diverse and higher quality schedules, which in turn incentivises public service broadcasters to up their own game. The upshot of this virtuous circle is a ‘race to the top’ which leads to an overall raising of standards across the sector, with audiences better served by public service and commercial channels alike.

This paper seeks to examine the validity of this hypothesis, by taking an empirical approach that brings together high-level data from a range of

TV markets around the world. The sample includes a diversity of countries, in terms of their population size, wealth and the strength of the PSB sectors – defined for the purposes of this paper as comprising broadcasters that are publicly-owned and in receipt of public funds.⁵ While international studies of this kind pose significant methodological challenges (key issues are summarised in the report and footnotes), this analysis allows a picture to be built up of the characteristics of the PSB and commercial sectors in each country, which in turn allows us to look at correlations between PSB characteristics and those of the broader TV market.

A McKinsey report for the BBC in 1999⁶ looking at trends in TV markets around the world included an analysis of the correlation between the proportion of key genres in the schedules of the PSB and commercial channels in seven countries. This provided some evidence for the virtuous circle hypothesis, with “a strong correlation between the distinctiveness of the PSB and the distinctiveness of the commercial broadcasters, the linkage driving the overall quality of the market”. A more recent analysis by McKinsey, used by Ofcom in its first PSB Review in 2004,⁷ looked at correlations between public and commercial funds, and between levels of public funding and the proportion of production that is domestic. Ofcom reported that “the likelihood is that the funding of broadcasting would be considerably lower if public funding did not exist [... and] that the share of domestically produced output in the UK would also fall”.

This report, which is based on analysis by Dr Jonathan Simon of Inflection Point, takes a similar approach, in that it examines correlations between individual PSB and commercial market characteristics.

⁵ An implication of this definition is that broadcasters with PSB characteristics but which are not both publicly-owned and in receipt of public funds are allocated to the commercial sector. This includes some private broadcasters (such as ITV in the UK) with PSB obligations. It also includes a small number of broadcasters, such as Channel 4 (UK) and TV2 (Denmark), which are publicly-owned but financed in the marketplace. This choice of the dividing line between the PSB and commercial sectors is not intended to dismiss these broadcasters’ often significant public service contributions. Rather, it is to ensure that the PSB sector across the sample comprises broadcasters with a core set of shared institutional characteristics that most frequently characterise PSB models around the world

⁶ Public Service Broadcasters Around the World, McKinsey & Company, January 1999

⁷ Review of public service television broadcasting, Phase 2 – Meeting the digital challenge, Ofcom, 2004

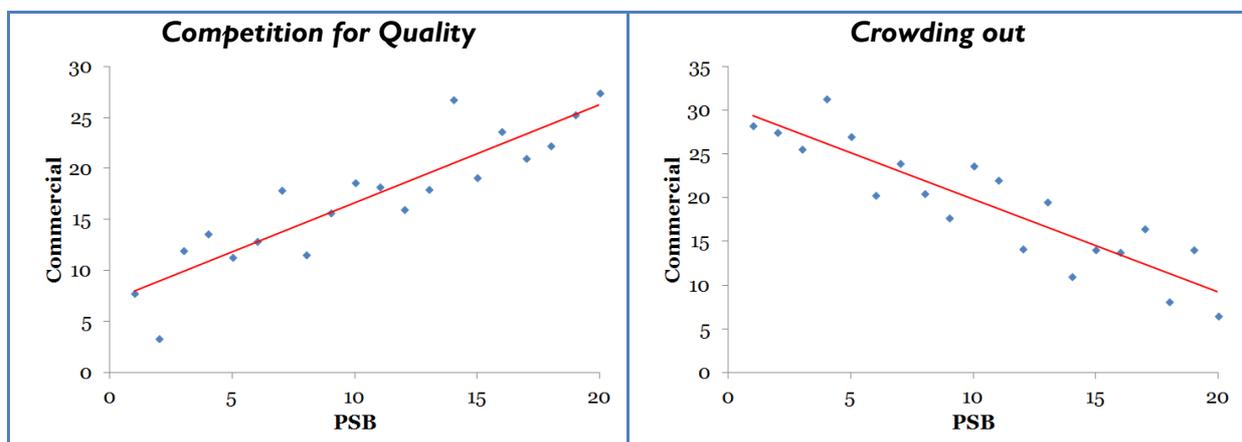
It draws on comprehensive sources covering 14 international markets (see right) from the likes of Screen Digest, Ofcom and the European Audiovisual Observatory (supplemented by primary sources where necessary).

The analysis presented here represents an advance on the earlier studies in two respects. First, by drawing on newly-available data sets, including results from a global audience research study commissioned by the BBC, it is able to look at a broader range of indicators of the health of the public and private broadcasting sectors. Specifically, the report looks at:

- Levels of public and commercial funding per capita (see Section 3)
- Investment in originated programming per capita (see Section 4)
- The proportion of key public service genres in the main channels' schedules (see Section 5)
- Audience perceptions of the quality of the main channels (see Section 6).

Countries in sample	
Country	Code
Germany	DE
Denmark	DK
Spain	ES
France	FR
UK	GB
Italy	IT
Netherlands	NL
Norway	NO
Portugal	PT
Sweden	SE
Australia	AU
Brazil	BR
Japan	JA
USA	US

For each of these indicators, the report looks at the correlation between the PSB and commercial sectors in each country. Strong positive correlations – as illustrated in the left-hand chart below – are consistent with the virtuous circle hypothesis: they indicate that a healthy public service broadcasting sector tends to be matched by healthy commercial market outcomes. Conversely, strong negative correlations point to crowding out (see right-hand chart): strong or healthy PSB sectors tend to be associated with weak or unhealthy commercial markets. Finally, results in which the correlation is weak (neither strongly positive nor negative) suggest that there is no relationship between PSB strength and commercial market outcomes.



Second, as well as looking at correlations between these individual components, the report creates composite PSB and commercial sector scores for each country that are built up from the individual components. These scores provide a useful means to summarise the overall strength of the PSB and commercial sectors in each country, and allow us to look at the degree of correlation between them. This final analysis (presented in Section 7) allows us to examine whether there is a positive relationship between the presence of healthy public service broadcasting (defined as being those that are well-funded, investing significant amounts in originated programming with a diverse schedule offering high quality programmes) and healthy commercial market outcomes (characterised in a similar way).

3. Per capita funding levels

Funding levels determine the extent to which broadcasters can invest in programming and, by doing so, create jobs, economic opportunities and growth. In general, the strength of a TV sector will be enhanced both by a diverse range of sources of income and from each of these revenue streams being as large as possible. However, the main TV revenue streams – advertising and subscription revenues for commercial broadcasters, and public funding (usually from licence fees or grant-in-aid) for public service broadcasters – are not necessarily independent of each other.

From the perspective of the virtuous circle hypothesis, an important issue is whether there is a relationship between the levels of public and commercial funds. More specifically, looking across the countries in our sample, is there evidence of high levels of public funding crowding out other income sources, thereby strengthening public service broadcasters at the expense of their commercial rivals? Or, conversely, does competition for quality (via the mechanism summarised in the virtuous circle illustrated above) mean that high levels of public funding coexist with high levels of commercial funds, thereby leading to an economically successful broadcasting sector?

As expected, there is a fair degree of variation between levels of public funds and commercial revenues across the 14 countries in the sample, due to a range of TV market, macroeconomic and regulatory factors.

The US emerges as a strong outlier: on a per capita basis, it has the lowest level of public funding and the largest level of commercial revenues in the sample. Its unique position is even more apparent in absolute terms: with a population of more than 300 million, it is 50% bigger than Brazil (the next biggest country in the sample) and comparable in size to 10 of the 14 countries in our sample taken together. The resulting economies of scale enable the US commercial networks to sustain extremely high levels of programming investment, while the appeal of English-language programming allows the US to exploit its content globally (it is the biggest exporter in the world), justifying even higher levels of investment. The US also has a unique model for funding its public broadcasting, where for every \$1 of federal funding, the US public TV network, PBS, raises \$6 in donations (or “membership contributions”).⁸ This is based on a broader US tradition of individual philanthropy for aspects of public life like education and culture, a model that does not exist to the same extent (and is not readily replicable) in other countries. Overall then, commercial TV revenues in the US accounted for 55% of all commercial revenues across the 13 countries for which income data were available, while public funding represented just 1.5% of all public funds across the 13 countries.

Setting aside the US – given its unique position – the data shown in Figure 1 shows a clear positive relationship between public and commercial per-capita revenues. The calculated line of best fit indicates a strong positive correlation between public funds and commercial revenues (the correlation coefficient⁹ is 0.65). Under the corresponding linear regression, of commercial revenues against public funds (and an intercept), the coefficient for public funds was statistically significant at the 95% level. This is based on the standard approach of statistical hypothesis testing, from which we can conclude that there is a probability of more than 95% that public per-capita revenues influence commercial per-capita revenues¹⁰.

⁸ Paula Kerger, President and CEO of PBS, speech to PBI Conference (2011)

⁹ Correlation coefficients provide an indication of the strength of correlation between two sets of data. The coefficient can vary from +1 to -1. A perfect positive correlation is indicated by a coefficient of 1, while a perfect negative correlation is indicated by a coefficient of -1. A coefficient close to zero indicates weak correlation between the data

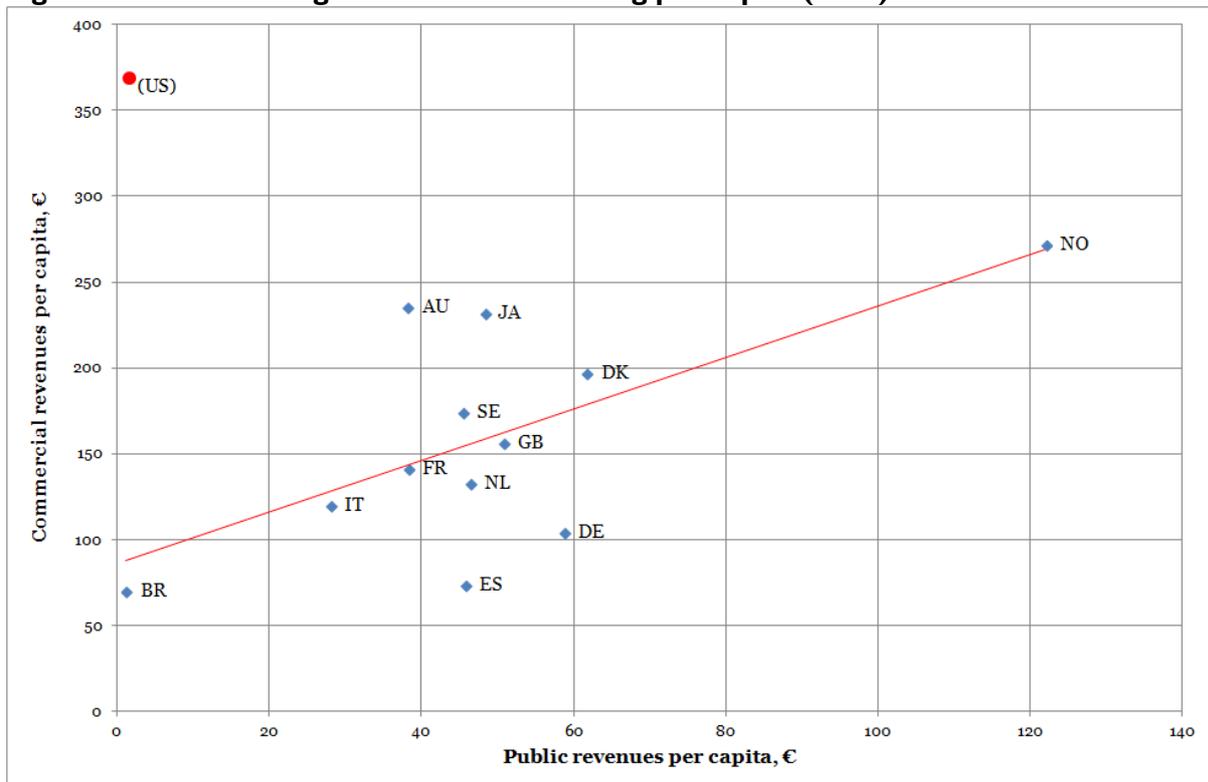
¹⁰ Technically, the statistical test allows us to reject the 'null hypothesis' that there is no relationship between the two variables

Inevitably, some countries lie further from the estimated line of best fit than others: Australia and Japan have particularly high levels of commercial income per capita, while others, such as Germany and Spain, have lower levels of commercial income per capita (relative to the corresponding levels of public funding).

Overall, however, the data indicates that, other things being equal, markets with higher levels of public funds per head tend also to be associated with higher levels of commercial revenues per head. This allows us to conclude that there is no evidence that high levels of public funding crowd out commercial funds. Further, the data is consistent with a market conditioning theory.

We consider the separate effects of GDP and of the PSB sector on the commercial sector in the final section.

Figure 1. Public funding vs commercial funding per capita (2011)



Source: Revenue data from Ofcom (available for 11 of the countries in survey) and Screen Digest (Denmark and Norway). Population data from World Bank DataBank. US excluded from calculation of line of best fit.

4. Investment in originated programming

Original content is a key driver of the economic and cultural success of broadcasting sectors. New domestic content can play a major role in sustaining a broad range of jobs and skills in the creative industries in national markets. It can be an engine for export-led growth opportunities and a vehicle for exporting the best of the culture and values of its homeland. Given the cultural, social and linguistic differences between countries, domestic programmes also play a vital role in meeting audiences' needs, for example by reporting on domestic news and current affairs, reflecting and portraying different groups in society, providing a showcase for national cultural events and celebrations, and so on. While public service broadcasters typically invest in original programming as a result of their remit and funding, commercial broadcasters can also deliver public value by investing in original content, leading to a healthier sector overall.

This section sets out to test whether there is evidence of a virtuous circle whereby high levels of investment in originations by public service broadcasters encourages commercial broadcasters rivals to likewise invest in originations. It draws on a new data set with programme investment levels for the main TV channels in 10 countries in our sample¹¹). Our analysis focuses on levels of per-capita spend on originations by the biggest PSB and commercial channels¹², on the grounds that competition for quality is likely to be most intense between the biggest network channels in each country.

Biggest PSB and commercial channels			
Country	Code	PSB	Commercial
Germany	DE	ARD1	RTL
Denmark	DK	DR1	TV2
Spain	ES	La 1	Tele Cinco
France	FR	France 3	TF1
UK	GB	BBC One	ITV1
Italy	IT	Rai Uno	Canale 5
Norway	NO	NRK1	TV2
Sweden	SE	SVT1	TV4
Australia	AU	ABC1	Network 9
USA	US	PBS	ABC

Figure 2 plots per-capita expenditure on originations for the biggest PSB channel against that of the biggest commercial channel in each country (see table for channels). There is a clear and statistically significant positive correlation: in countries in which the biggest PSB channel invests high levels in originated programming per capita, the biggest commercial channel likewise typically invests high levels in originated programming per capita. This positive relationship (the correlation coefficient was 0.53) provides further evidence in support of the virtuous circle (similar results were obtained when we looked at

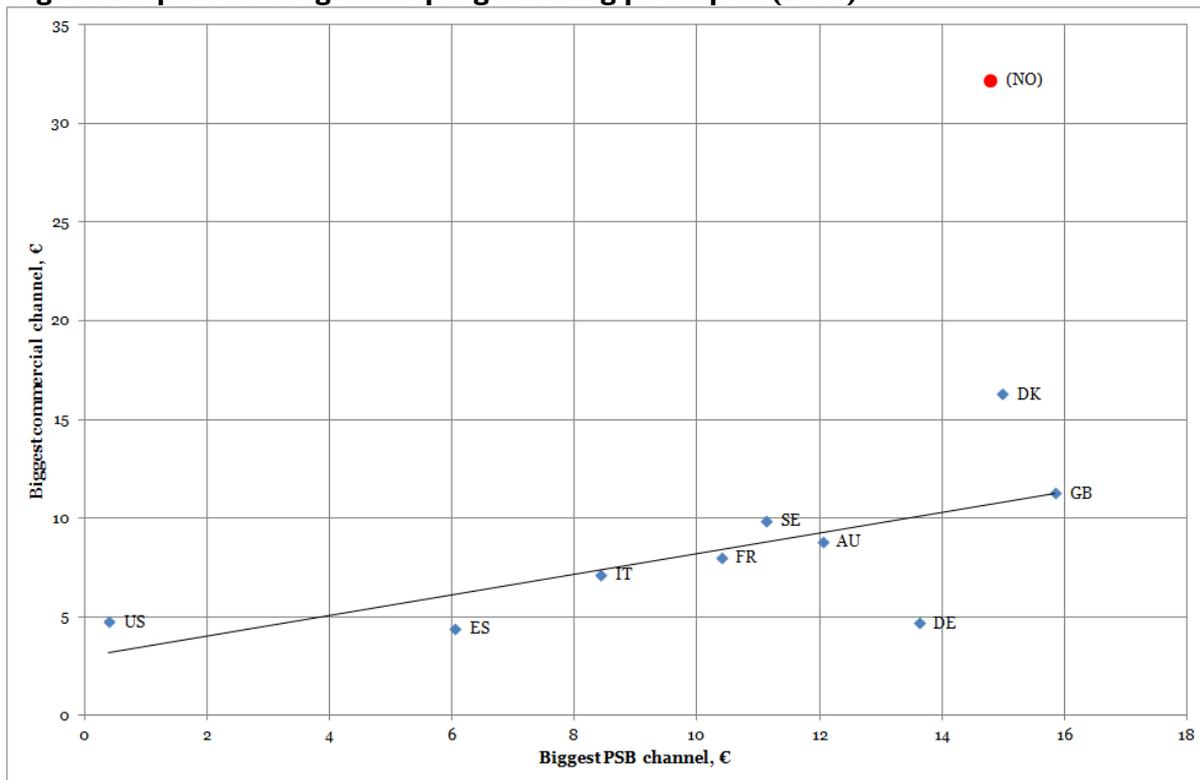
average per-capita spend on originations by the biggest three PSB and commercial channels in each country).

In addition to supporting the virtuous circle hypothesis, this data also reveals that the main PSB channels tend to lead their commercial competitors in levels of investment in original content – as warranted by public funding – this being the case in seven out of the 10 markets analysed.

¹¹ The new Screen Digest dataset split between originations and acquisitions (and a third category for sports)

¹² Defined as being those that spend the largest amounts on originations

Figure 2. Spend on originated programming per capita (2011)



Source: Screen Digest (total spend on originations), World Bank DataBank (population data). Norway excluded from calculation of line of best fit

As would be expected, the market outcomes across public and commercial broadcasters varied between countries, with the highest levels of per capita investment in originations found in the UK, Denmark and Norway. Norway’s position in the chart is striking, showing it to have particularly high per capita commercial revenues. This is accounted for by the fact that Norway is an exceptionally small, rich country: with a population of just 5 million, it is the smallest country in our total sample. In per capita terms, it is one of the wealthiest countries in the world, and has by far the largest GDP per capita in our sample, more than double that of the US (without adjusting for purchasing power parity). The level of investment in originated programmes by TV2, the main commercial channel in Norway, was not exceptionally high in absolute terms compared to the biggest channels in other countries, but was much higher than that of any other channel when calculated on a per-capita basis. While its particular economic circumstances and TV2’s special status (see footnote 5) account for its high levels of per-capita investment in originations (and mean that the correlation coefficient rises to 0.66 if Norway is excluded from the calculation of the line of best fit), the overall outcome in Norway is not inconsistent with the market conditioning hypothesis, as per capita investment levels are high for both the biggest PSB and commercial channels.¹³

¹³ It is also worth commenting on the low level of expenditure indicated in the chart for the biggest commercial channel in the US, which may seem surprising given the high production standards associated with much US programming, and the success of the US networks in exporting their content globally. This apparent anomaly is due to the fact that the analysis is conducted on a per-capita basis. Our data shows that, in absolute terms, the biggest US commercial channels spend far more on programming than those in any other country (as might be expected). ABC is estimated to have a programme budget more than double the size of the biggest channel outside the US in 2011. A second reason for the low level shown in the chart is that by focusing on the biggest channel, it does not reflect the range of US channels that invest significant amounts in programming, including the biggest free-to-air networks (ABC, CBS and NBC) and cable networks such as HBO and Showtime

5. Diversity and the proportion of key public service genres in schedules

Public service broadcasters' schedules are shaped by their public remits. For example, the BBC's public purposes (set out in the Royal Charter and Agreement) are to sustain citizenship and civil society; promote education and learning; stimulate creativity and cultural excellence; represent the UK, its nations, regions and communities; bring the UK to the world and the world to the UK; and deliver to the public the benefit of emerging communications technologies and services. Public purposes such as these influence the nature of the PSB channels' output, including the range of programming, subject matter, tone and diversity of voices on screen.

These elements all contribute to the overall diversity of a channel's schedule insofar as they offer a range of genres not guaranteed by the market alone. For the purposes of the 'competition for quality' hypothesis, we wish to consider whether more diverse schedules on the main PSB channels can be seen to lead to more diverse output on the main commercial channels. To make this tractable, we need to define a measure of diversity that is quantitative and which can be assessed in a consistent manner across broadcasters in different countries.

Our approach is to look at the proportion of the schedule of the main PSB and commercial channels in each country devoted to a set of key public service genres.¹⁴ Using data from the European Audiovisual Observatory (EAO), which records the output of each TV channel under a common genre classification system, we have defined the following genres as being a set of key public service genres: Arts, Humanities and Science programmes; Children's programmes; Education; Religion; Music; News and Information. These genres are generally recognised as being central to the provision of democratic, cultural and social value in any country.

The main genres that were not counted as key public service genres were Entertainment, Fiction and Sport. While programmes in these genres undoubtedly contribute to PSB purposes, they were excluded on the grounds that each genre spanned a large volume of output, and it was not possible to separate out the sub-genres with strong PSB characteristics (such as high-end drama) from other high-volume sub-genres (such as acquired US feature films).

Figure 3 shows the proportion of this set of key public service genres on the main PSB and commercial channels in each of the 8 countries for which EAO data was available (see table below for channels).¹⁵ While the proportion of such genres varies across countries for both the PSB and the commercial channels, it is worth noting that in every country the PSB channels offered a higher proportion of such public service genres than the main commercial channels.

The chart shows a strong positive relationship between the proportion of these key public service genres on the main PSB and commercial channels in each country (the correlation coefficient is 0.83, statistically significant at the 95% level). The UK, Germany and Denmark enjoyed the most diverse schedules on their PSB and commercial channels (the UK commercial sector's strength is due in part

¹⁴ We define the "main" PSB and commercial channels in each country as those with an audience share of 5% or more. We focused on the largest channels in each country as these are the ones that compete most intensely for mainstream audiences

¹⁵ Obtaining relevant information for this exercise was particularly challenging. Many broadcasters do not publish genre-level data. While Ofcom provides data on the main UK TV channels, few other communications regulators provide similar data in their countries. The EAO most recently published genre output data in its 2008 Yearbook. While these figures are five years old, a separate analysis that we undertook looking at the output of three UK channels (BBC One, BBC Two and Channel 4) over the last five years, using genre-level data published in the broadcasters' own Annual Reports, suggested that the overall proportion of key public service genres on each channel tends to be reasonably stable over the period, with shifts in the volumes of individual genres largely cancelling each other out

to its unique model for PSB delivery beyond the BBC comprising publicly-owned but privately funded Channel 4 and the commercial public service broadcasters (PSBs), ITV and Channel 5).

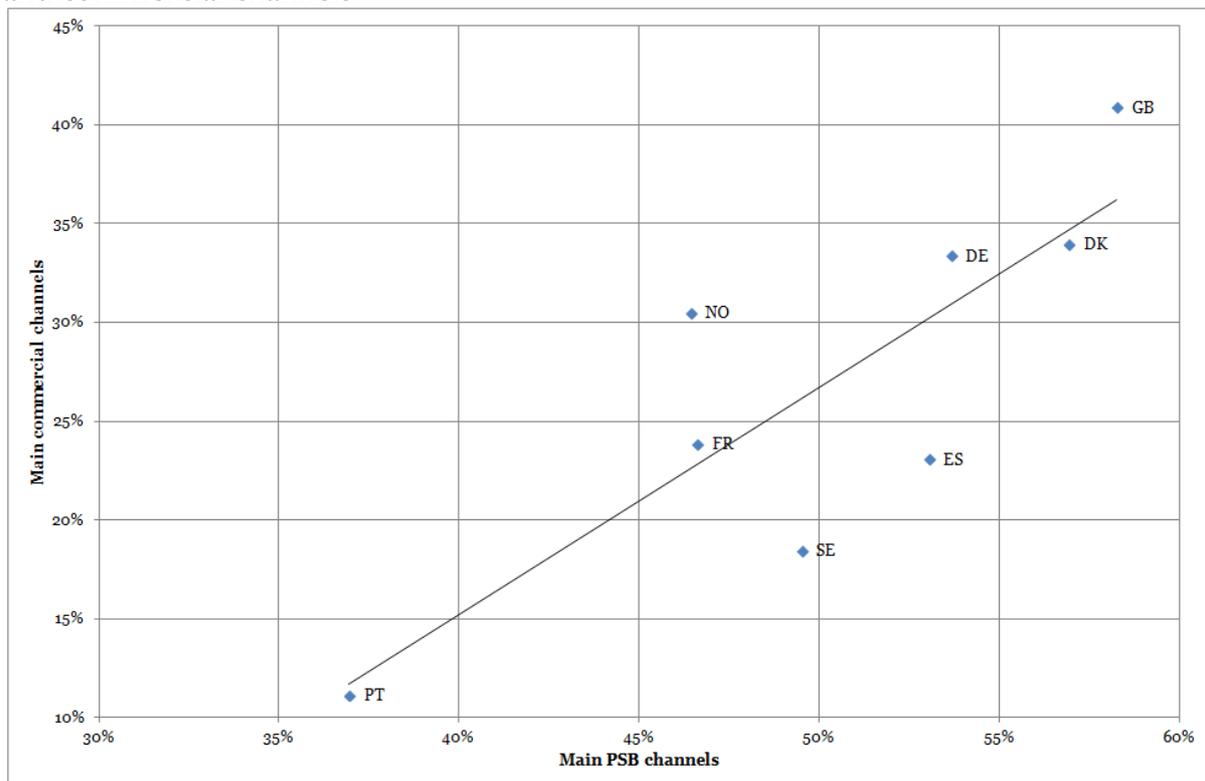
Main channels in each country (audience share >5%)			
Country	Code	PSB	Commercial
Germany	DE	ARD1, ZDF, ARD3 (regional)*	RTL, SAT.1, ProSieben, Vox*
Denmark	DK	DR1	TV2
Spain	ES	La 1	Antena 3, Cuatro, Tele Cinco, La Sexta*
France	FR	France 2, France 3	TF1, M6
UK	GB	BBC One, BBC Two	ITV1, Channel 4
Norway	NO	NRK1, NRK2, NRK3/Super*	TV2, TV3*, TV Norge*
Portugal	PT	RTP1	TVI, SIC
Sweden	SE	SVT1, SVT2	TV3, TV4, Kanal 5

* Not included in EAO analysis

It is worth recalling that the chart does not show the total proportion of PSB programmes by the lead public and commercial broadcasters in each market – many PSBs strive to show programmes with PSB characteristics in every genre.

The proportions of relevant programmes illustrated in the chart instead are a proxy for PSB programmes and schedule diversity chosen on the basis of the best available data.

Figure 3. Correlation between proportion of a set of key public service genres on PSB and commercial channels



Source: European Audiovisual Observatory Yearbook 2008, Inflection Point analysis. In countries with more than one PSB channel, a weighted average is used based on audience share

More generally, the correlation suggests that higher proportions of these key public service genres on the main PSB channels in any country tend to be associated with higher proportions of such genres on the main commercial channels in that country. This is consistent with the virtuous circle hypothesis, which suggests that the presence of healthy public service broadcasting – in this case, the amount of key public service genres in their schedules – helps ensure desirable market outcomes across all the main TV channels.

6. Audience perceptions of quality

While previous sections have focused on measures related to inputs and outputs – the revenues available to broadcasters, the amounts they spend on original programming, and the proportions of their schedules devoted to key public service genres – it is important also to consider indicators of audience-focused outcomes.

The quality of the TV channels that audiences watch represents a key indicator of the strength of a broadcasting sector. Quality-based metrics are not readily available for TV channels around the world. By their nature, such data needs to be derived from bespoke audience surveys. The BBC commissioned an international audience survey to look at viewer perceptions across a range of areas. The survey included questions asking respondents for their views on the quality of each of the main television channels in 13 of the countries in our sample (see table below).¹⁶ Each channel was given a quality score calculated as the proportion of respondents who regarded the quality of the channel as being ‘very good’. Average quality scores for the main PSB and main commercial channels were then plotted against each other (see Figure 4).

Main channels in each country (audience share >5%)			
Country	Code	PSB	Commercial
Italy	IT	Rai Uno, Rai Due, Rai Tre	Italia 1, Rete 4, Canale 5
Netherlands	NL	Nederland 1, Nederland 2, Nederland 3	RTL4, SBS6
Australia	AU	ABC1	Network 7, Network 9, Network Ten
Brazil*	BR	TV Cultura, TV Brasil	Globo, Record, SBT
Japan – Kanto (main market)	JA	NHK1	Fuji TV, NTV, TBS, TV Asahi, TV Tokyo
USA*	US	PBS	ABC, NBC, CBS
<i>Germany, Denmark, Spain, France, UK, Portugal, Sweden: see table in Section 4</i>			
<i>* Largest PSB channels are shown (shares less than 5%)</i>			

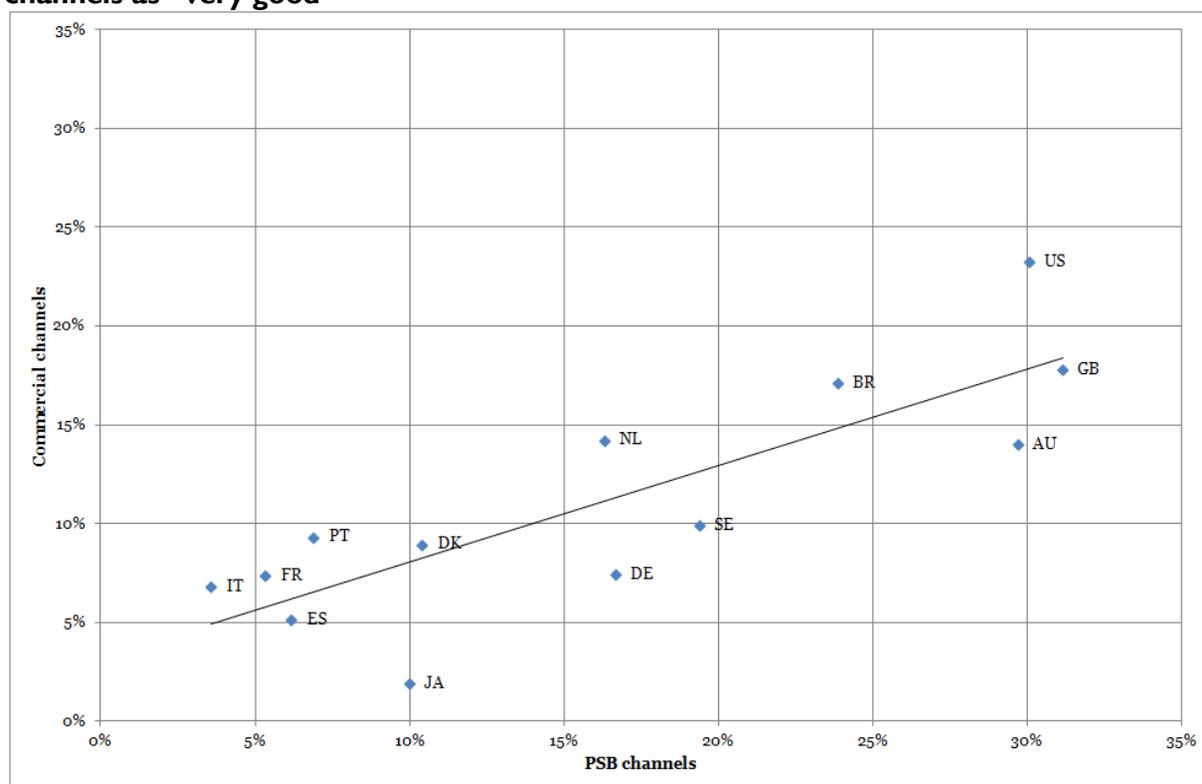
The results showed that the scores for PSB channels varied considerably, from around 77% of respondents who considered the BBC channels to be ‘fairly good’ or ‘very good’ and between 65-70% for PSB channels in Australia, USA and Netherlands, down to below 50% in Spain and Italy. There was also a significant degree of variation for the commercial channel scores, ranging from above 50% for the UK, Australia, USA and Netherlands, down to around 30% or less for Spain, Italy, Germany and Japan. However, in every country, the PSB channels were judged by audiences to be higher quality than the commercial channels.

In the analysis, as the chart below shows, we have concentrated on the proportion of respondents who regarded the quality of the channel as being ‘very good’. The chart shows that there is a strong (and statistically significant) positive correlation between the quality of PSB channels and commercial channels in each country (the correlation coefficient was 0.83). In most countries, the PSB channels scored higher for ‘very good’ quality than the commercial channels (the exceptions being countries where PSB quality perceptions were the weakest). Overall, these results provide strong evidence in support of the virtuous circle hypothesis: countries with PSB channels that are regarded as being of a high quality also tend to have high-quality commercial channels.¹⁷

¹⁶ For each channel, respondents were asked: “To what extent do you think the quality of programmes on [channel] is good or poor?” Answers were given on a five point scale: very good quality, fairly good quality, neither good quality nor poor quality, fairly poor quality, and very poor quality

¹⁷ Similar results were obtained when we looked at the proportion of respondents who rated each channel as being “very good” or “fairly good”: there was a strong positive correlation (coefficient of 0.76), and the rankings of countries tended not to change

Figure 4. Proportion of respondents in each country rating the quality of the TV channels as “very good”



Source: Audience survey commissioned by BBC (September 2013), Inflection Point analysis. Each score is an average of the relevant channels weighted by audience share

7. Indicators of overall PSB and market strength

Having looked at individual components of PSB and market strength in the previous sections, this final section draws these components together in order to make an overall assessment. To do this, we have constructed a stylised composite indicator of PSB health, or strength, for each country that brings together data for each individual component.

It is important to reiterate that these PSB components are by no means the only elements that define a public service broadcaster’s success in meeting its public goals (which themselves vary from one broadcaster to another). Rather, they are a set of important PSB characteristics which can be measured in a consistent format for broadcasters around the world. With that in mind, bringing together the PSB components used in this paper, we can define a healthy PSB sector as one that is characterised by well-funded public service broadcasters that invest high levels in originated programming, and whose TV channels offer a diverse schedule (i.e. have a high proportion of programming in key public service genres) and are regarded by audiences as being of high quality.

The composite PSB indicator is an artificial construct that is intended to capture these elements in a single metric, in such a way that each country’s PSB score denotes the health of its PSB sector relative to that in other countries, thereby enabling comparisons with corresponding indicators of commercial strength. To achieve this, we assigned countries a score from 1 to 4 for each component of PSB health based on their rankings relative to the other countries in the sample. So for public funding per head, for example (for which we had data on 13 of the 14 countries in our sample), the four countries with the highest levels of public funding per head are given a score of 4,

the next three highest-ranking countries are given a score of 3, the next three highest-ranking countries are given a score of 2, and the three lowest-ranking countries are given a score of 1. The overall PSB score for each country is then calculated as the average of its scores across the various components.

This approach has a number of benefits. First, it provides a means for a diverse range of PSB components – specified in terms of currency, audience survey results and percentages of TV schedules' output – to be summarised through a single metric for each country. Second, the scores are calculated in a simple and objective manner that avoids qualitative judgements about whether one PSB component is more important than another. And third, the approach enables PSB scores to be calculated even when some data sets are incomplete, simply by taking an average for each country across those measures for which data is available.

Exactly the same approach is used to calculate the corresponding indicator for the health of the commercial TV sector in each country. Reflecting the individual components, a strong market outcome – as captured by the composite score – is defined as one in which commercial broadcasters generate significant revenues per capita, invest in high levels in originated programming per capita, and whose TV channels offer a diverse schedule (ie. have a high proportion of programming in key public service genres) and are regarded by audiences as being of a high quality. Bringing everything together, we can look at the composite PSB and market strength scores for the 14 countries in the sample, and the correlation between them. This is illustrated in Figure 5. The chart shows that there is some clustering of the scores, which is inevitable given that they are derived from a small basket of indicators each ranging from 1 to 4, which limits the amount of variation.

Notwithstanding this, the results show a clear and positive correlation between the scores for PSB strength and commercial market outcomes (the correlation coefficient is 0.66 and the regression was statistically significant at the 95% level). To further test the robustness of the analysis, we also conducted a multivariate linear regression analysis that included GDP per capita alongside the PSB score. The coefficient for the PSB score was again statistically significant at the 95% level (with a t-score of 2.4) while the GDP per capita coefficient was not statistically significant (its t-score was 1.6).¹⁸

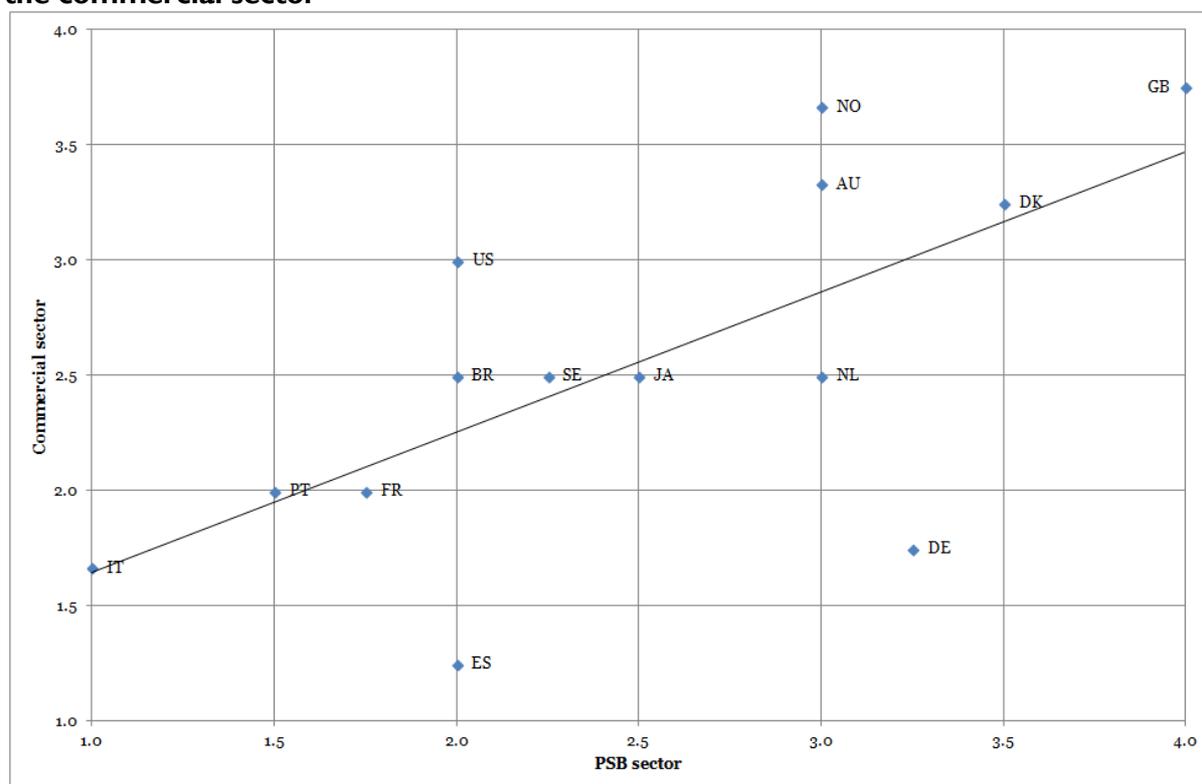
Examining the chart in more detail, there is a group of countries with high scores for both the PSB and commercial sectors (the UK, Norway, Denmark and Australia). At the other end of the scale, there are several countries with relatively low scores for both their PSB and commercial sectors (such as Portugal and Italy). These countries provide the strongest evidence of the virtuous circle hypothesis. There is also a central group of countries with similar mid-ranking PSB scores and a range of commercial scores that are reasonable close to the line of best fit. For these countries, there is a positive but weaker correlation between PSB and commercial strength.

There is an outlier that does not appear to conform to the virtuous circle hypothesis. Germany has a strong PSB sector and comparatively weak commercial sector (driven by low scores for commercial revenues and originated programme spend by the commercial channels).¹⁹ Excluding Germany, the correlation coefficient rises to 0.80).

¹⁸ This figure is the coefficient of determination, which indicates how well data points match the line of best fit. It ranges from 0 to 100%, with higher figures indicating a better fit

¹⁹ A range of highly specific factors may contribute towards Germany's position as something of an outlier in this survey, above all, on industry revenues. First, commercial TV was introduced to Germany three decades after many countries in the sample. This may be one factor in explaining why the share of total advertising revenues for German commercial TV is smaller than some other developed media markets (source: Zenith 2012). Second, cable in Germany is widely adopted and has historically been bought by consumers as a low-cost service included in renter's utility bills (see, for example, Ofcom's

Figure 5. Correlation between indicators of the health of the PSB sector and health of the commercial sector



Source: *Inflection Point analysis*

In conclusion, notwithstanding limitations in the degree of variation in the composite PSB and commercial market scores inherent in their construction, the results show a clear positive correlation between market outcomes in the PSB and commercial sectors. Other things being equal, countries with well-resourced public service broadcasters that invest high levels in originated programming, and which offer diverse TV channels which are regarded as being high quality tend also to have desirable market outcomes in which commercial broadcasters generate significant revenues per capita, invest in high levels in originations per capita, and offer diverse TV channels which are regarded as being high quality. As the previous sections showed, positive (and statistically significant) correlations were also evident in each of the separate components that made up the composite scores.

Overall, the results presented in this report support the virtuous circle hypothesis, where public-private competition leads to a ‘race to the top’ raising overall standards across the sector, with audiences better served by public service and commercial channels alike.

Pay TV Consultation). This, and the lesser role of premium TV channels on pay TV platforms in Germany, is likely to contribute towards the low ARPU for pay TV in Germany by comparison with other developed media markets (source: fig.3.24, Ofcom International Communications Market 2012)