



An
Assessment of
the Economic
Impact of the
BBC

**A report for the BBC for
Financial Year 2019/20**

March 2021

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1 Executive Summary

1.1 Headline findings

KPMG has conducted a comprehensive independent study assessing the BBC's economic contribution to the UK economy, including its role in supporting the UK's creative sector.

The UK's Creative Industries are an important part of the economy. DCMS figures for 2019¹ show that the creative sector contributed £115.9bn to the UK economy, with growth of the sector outperforming that of the UK economy as a whole since 2011.

The BBC plays an important role in supporting the economic output of the creative and digital sectors, making a significant positive economic contribution across each of the UK's nations and regions through its spending and wider activities.

That contribution can be measured, in part, by the BBC's gross value added (GVA). However, the BBC's wide-ranging economic impacts on the UK economy and creative industries extend beyond this. They include additional contributions and spillover effects generated through valuable activities such as: investment in IP creation and commissioning from independent producers; nurturing British talent; and advancing technologies. The BBC's investment in these areas, driven by its unique mission and public purposes, means these wider impacts are significant and are likely to be higher than for commercial organisations.

Headline findings from the report are:

- For every £1 of direct economic output (GVA) generated by the BBC, the BBC generated a further £1.63 of economic output in the rest of the UK economy, making its total economic contribution £2.63. The BBC's total GVA multiplier of 2.63 is substantially higher than the average GVA multiplier of 1.84 for the BBC's sub-sector², meaning that the BBC contributed approximately £1.5bn more in total GVA in FY 2019/20³ than would be expected on average by firms in its sub-sector.
- In total in FY 2019/20, the BBC generated an estimated £4.9bn of economic output, measured by GVA, in the UK economy, including direct, indirect and induced impacts.
- At least £3.1bn (over 60%) of the BBC's total GVA was generated in the UK creative sector.⁴
- The BBC's direct GVA accounted for 8.5% of all GVA in the "Film, TV, video, radio and music" subsector in FY 2019/20.
- Approximately half of the BBC's direct GVA impact was generated outside of London, compared to 20% for the BBC's sub-sector⁵ as a whole.
- Similarly, half of the BBC's *total* GVA was generated outside of London in FY 2019/20. This total economic contribution across the UK's nations and regions is growing, up from an estimated 32% in 2012.⁶
- The BBC has contributed to the development of a creative and digital cluster around MediaCityUK in Salford – employment in the creative and digital sector⁷ in the area has seen growth of 142% since 2010, and the number of digital or creative businesses has grown by 70%. There is also

¹ DCMS, 2019. [DCMS Economic Estimates 2019 \(provisional\): Gross Value Added](#)

² "Film, TV, video, radio and music" sub-sector comprising SIC codes 59 and 60. See:

<https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007>

³ This is based on the BBC's actual total GVA vs applying the subsector GVA multiplier to the BBC's direct GVA.

⁴ See Appendix 1 for ONS Standard Industry Classification (SIC) codes included in the creative sector.

⁵ "Film, TV, video, radio and music" industry comprising SIC codes 59 and 60. See:

<https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007>

⁶ BBC, 2013. [The Economic Value of the BBC: 2011/12.](#)

⁷ See Appendix 1 for ONS Standard Industry Classification (SIC) codes included in the creative and digital sector.

evidence of an emerging creative cluster in Cardiff, where the BBC has expanded and invested over recent years.

- The BBC's activity supported a total of 53,600 full time equivalent (FTE) jobs in the UK economy in FY 2019/20. For every 1 job directly created by the BBC, a further 1.7 jobs were created in the wider economy.
- The BBC has invested over £100m in skills and training over the last 4 years, including through internal BBC training, for example apprenticeship programmes, and through partnerships with other providers, such as ScreenSkills. In FY2019/20, the BBC funded a total of 335 apprenticeships and evidence suggests that the potential lifetime earnings uplift associated with these apprenticeships could total an estimated £91m.⁸
- The BBC supports the generation of valuable creative IP in the UK. In 2019 the BBC was by far the highest spending commissioner of new IP among UK broadcasters in the UK, spending around £235m⁹ on new external commissions, and it worked with over 350 producers, 54% of which were indies.¹⁰
- Through its commissioning, preferential terms of trade¹¹ and wide audience reach in the UK and globally the BBC has supported creative businesses to better exploit their IP, leading to enhanced UK exports and the growth of UK independent producers – these economic impacts are additional to the BBC's GVA contribution.
- Between FY 2016/17 and FY 2019/20 the BBC invested a total of £70m in R&D, generating a range of economic and social benefits such as cost savings, productivity improvements and knowledge and technological spillovers to the creative and digital sector and wider UK economy.

1.2 Scope of report

The BBC recognises the importance of being able to demonstrate and evidence the contribution it makes to the UK economy, particularly given its role as a national Public Service Broadcaster (PSB) which is principally funded through the licence fee paid by UK households.

Therefore, in November 2020 the BBC commissioned KPMG to produce an independent assessment of its economic impact in the UK. This provides updated analysis and new insights to add to the evidence base of the BBC's impact on the UK economy and society gathered through wider reports the BBC has commissioned in recent years (see Section 2.2).

The focus of this study is the BBC's activity in the UK, including both the BBC's PSB functions and its commercial subsidiaries – including BBC Studios and BBC Studioworks – which support the delivery of the BBC's mission and public purpose through investment in programming and annual cash dividends to BBC Group.¹²

This study comprises two main elements:

1. A quantified assessment of the BBC's contribution to the UK economy in terms of GVA, a measure of the organisation's contribution to UK gross domestic product (GDP). The analysis includes quantification of the direct, indirect and induced GVA generated by the BBC (see Section 3.1 for more detail), presented on a national and regional basis.

⁸ See: <https://www.suttontrust.com/wp-content/uploads/2019/12/Levels-of-Success3-1.pdf>; BIS, 2011. [The Returns to Higher Education Qualifications](#); BIS, 2013. [The Impact of University Degrees on the Lifecycle of Earnings: some further analysis](#) Based on information provided by the BBC for evidence on returns to apprenticeships.

⁹ Including BBC, ITV, Channel 4 and Channel 5

¹⁰ <http://downloads.bbc.co.uk/commissioning/site/bbc-commissioning-supply-report-2019.pdf>

¹¹ The terms of trade set out the rights available to UK broadcasters under their primary commissioning licence and the revenue sharing arrangements relation to the subsequent use of commissioned IP. Importantly, they give independent producers control over the 'secondary rights' to their content, and therefore the ability to monetise content they have produced in international markets. See Box 3, p.26.

¹² BBC, 2020. [BBC Group Annual Report and Accounts 2019/20](#).

2. A largely qualitative assessment of the role of the BBC in supporting the growth of the creative and digital sector, as well as the wider UK economy. This is based on case studies selected by the BBC looking at the impact of the BBC in terms of:
 - local investment and clustering effects;
 - creative innovation and IP creation;
 - investment in R&D; and
 - investment in people, skills and training.

Combining these two areas of the analysis within this study provides a more holistic and complete assessment of the different channels through which the BBC generates and supports economic activity in the UK, in both the creative sector and beyond. We note, however, that the case studies do not attempt to be representative of all impacts generated by the BBC or cover the full breadth of its activities. They instead aim to provide illustrations of the type and scale of some of the impacts the BBC generates in the wider economy.

Whilst our study assesses the overall economic contribution of the BBC in the UK, the scope of the study does not extend to all possible areas of contribution, whether positive or negative, of the BBC and is not a full cost benefit analysis of the BBC.

For example, the study does not take account of non-economic impacts such as the educational value of its programming, the societal/ public value of having a trusted source of news and access to content that may not otherwise be available, or any opportunity cost associated with audiences consuming BBC content rather than engaging in other activities.

In addition, our study assesses the gross contribution of the BBC rather than its net impact (i.e. the additional economic activity it supports in the UK economy). To assess the net impact it would be necessary to consider the counterfactual scenario for the BBC, which is difficult to establish robustly and is beyond the scope of this study.

Details of our analytical approach, assumptions and data sources are included in Sections 3.1 and 4.1 and Appendix 2.

1.3 Key findings: Gross value added (GVA)

The BBC's total GVA contribution

The BBC makes a significant economic contribution to the UK economy in the form of economic output, measured by GVA. This impact includes the direct value of its output and the people it employs, as well as the wider economic activity it supports in other parts of the economy as a result of this activity.

We estimate that in FY 2019/20, the BBC generated a total of £4.9bn of GVA¹³ in the UK economy, of which at least £3.1bn was generated in the creative sector.

As shown in Figure 1 below, this was comprised of an estimated:

- **£1.9 bn of direct GVA** generated by the BBC's own activity in delivering television, radio, and digital services. This is equivalent to 8.5% of the total GVA generated by the entire 'Film, TV, video, radio and music' sub-sector¹⁴ in the UK in 2019.

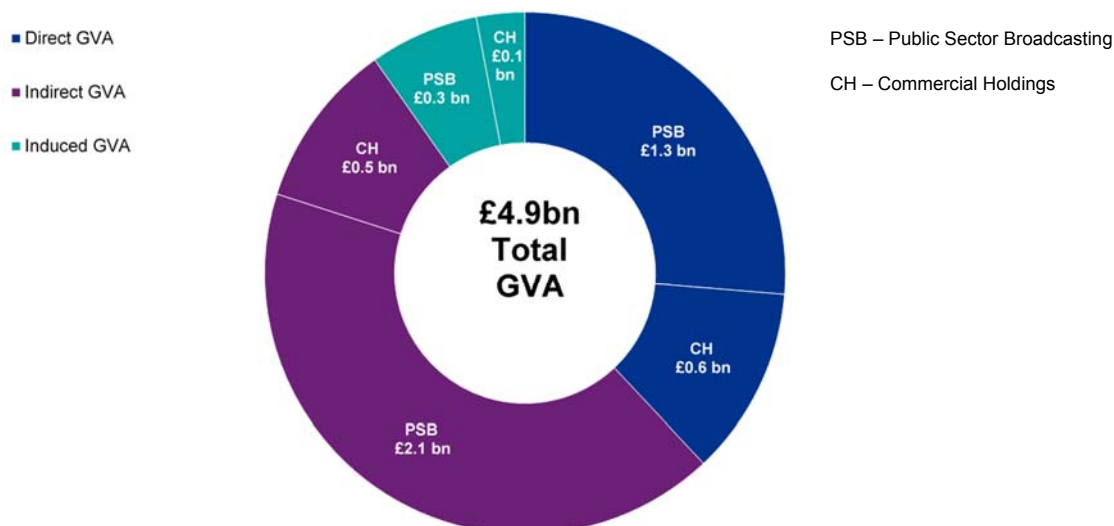
¹³ GVA is a measure of the economic value of the goods and services produced at an individual company, industry or sector level, net of intermediate consumption (i.e. the goods and services that are used in the production process).

¹⁴ SIC code 59 and 60, See:

<https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007> and https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/829114/DCMS_Sectors_Economic_Estimates_-_Methodology.pdf

- **£2.6bn of indirect GVA** driven by the BBC’s significant levels of spending with its 14,000-plus UK suppliers¹⁵ – indirect GVA of over twice as much as would be typical for the sub-sector¹⁶ based on the BBC’s direct GVA.
- **£0.5bn of induced GVA** in the UK economy driven employees’ wage spending linked to their direct or indirect employment with the BBC.

Figure 1: BBC GVA contribution in the UK, FY 2019/20



Source: KPMG Analysis of BBC data

For every £1 of direct economic output (GVA) generated by the BBC, a further £1.63 of economic output was generated in the rest of the UK economy through the BBC’s indirect and induced impacts.

This implies a total GVA multiplier of 2.63, substantially higher than the average multiplier of 1.84 for the wider sub-sector the BBC operates within (‘Film, TV, video, radio and music’). Thus, based on its direct GVA, the BBC contributed £1.5bn more in total GVA in FY 2019/20 than would be expected on average for the sub-sector¹⁷ in which it operates.

Our analysis indicated that the BBC’s significant total GVA contribution would be higher if the BBC operated as a purely profit-driven organisation. This is because GVA captures the value that an organisation adds to its bought-in inputs, reflected in the value added by its employees (estimated through salary costs) and by its activities (estimated through operating profit). For the sub-sector in which the BBC operates, on average 60% of an organisation’s GVA is accounted for by operating profit.¹⁸

Instead, directed by its mission and public purpose, BBC PSB reinvests its income, for example in R&D, skills and training, and development of new content for audiences, making a **significant contribution to the broader creative sector and the wider UK economy, on top of what is captured in the quantified GVA impact of the BBC.**

¹⁵ Tier 1 suppliers refer to firms that BBC contracts from directly, tier 2 denotes firms higher up the supply chain.

¹⁶ SIC code 59 and 60, See:

<https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007> and https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/829114/DCMS_Sectors_Economic_Estimates_-_Methodology.pdf

¹⁷ SIC code 59 and 60, See:

<https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007> and <https://www.gov.uk/government/publications/dcms-sectors-economic-estimates-methodology>

¹⁸ ONS [Input Output Supply and Use Tables](https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007), 2020.

Over 70% of the BBC's spend in FY 2019/20 was with firms in the creative sector, supporting jobs and growth. While our analysis covers the pre-COVID period, to the extent to which the BBC has maintained its spend in this sector over the last year, this will be helping to protect jobs in the sector – a sector which is expected to have seen an estimated 25% drop in GVA in 2020 as a result of the pandemic.¹⁹ Figures provided by the BBC indicate that it estimates it will spend over ██████ with indies in FY 2020/21 compared to ██████ in FY 2019/20²⁰ and will have worked with over 340 indies, 66 of which are new relationships. It has also introduced a package of measures to support the broadcasting industry including increasing investment in the Small Indie Fund from £1m to £2m.²¹

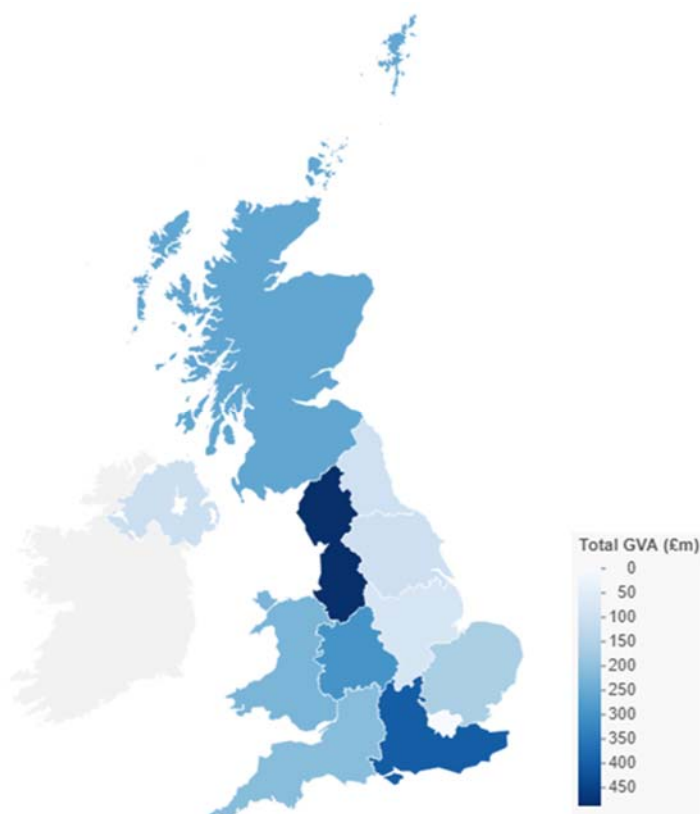
The BBC's GVA contribution across the UK's nations and regions

Local economic performance is driven, among other factors, by the economic activity of the businesses located within each local area.

Our analysis shows that the BBC generates economic impacts throughout the UK through its activities and local partnerships, strengthened by the BBC's growing presence outside of London.

The BBC supported economic activity across all the UK's nations and regions with approximately 51% of the BBC's direct GVA impact generated outside of London.²² This is significantly higher than across the sub-sector²³ as a whole, in which only 20% of GVA is generated outside of London.

Figure 2: BBC total GVA impact outside of London, by NUTS 1 region, 2019/20



Source: KPMG analysis

¹⁹ Oxford Economics, 2020. [The projected economic impact of Covid-19 on the UK Creative Industries](#)

²⁰ Spend figures are based on cash payments rather than accrued spend.

²¹ See: <https://www.bbc.co.uk/mediacentre/latestnews/2020/coronavirus-independent-production-sector>

²² Our regional analysis uses the Nomenclature of Territorial Units for Statistics (NUTS) 1 definition of regions, the largest sub-national statistical area used by Eurostat and the ONS, which divides the UK into 12 areas.

²³ "Film, TV, video, radio and music" industry comprising SIC codes 59 and 60. See:

<https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007>

As illustrated in Figure 2 above, the largest share of the BBC's economic contribution outside of London is generated in the North West of England (31% of the BBC's direct GVA and 19% of its total GVA), reflecting the BBC's significant activities in Salford.

Across the nations, Scotland, Wales and Northern Ireland account for 10%, 9% and 4% respectively of BBC's total GVA outside of London.²⁴

The evidence points to the BBC's GVA contribution shifting increasingly away from London.

Comparing the geographic distribution of GVA impacts found in this study to those impacts reported in the BBC's 2013 economic impact report²⁵ indicates that between FY 2011/2012 and FY 2019/20 the proportion of the BBC's total economic impact generated outside of London has increased from 32% to 50%.

As we analyse in Section 4.2 of our report, this shift has been supported by the growth of BBC operations and expenditure outside of London, its role in supporting the creation of creative and digital clusters surrounding its out-of-London hubs, and its wider activity supporting growth of the creative sector beyond London, including through its partnerships across the regions and nations of the UK.

While half of the BBC's economic contribution in FY 2019/20 was generated in London, this reflects the BBC's ongoing large presence in London at its headquarters as well as the concentration of 'Film, TV, video, radio and music' sub-sector and overall creative sector businesses in this region. Many of these businesses are in the BBC's supply chain, with London contributing 80% of 'Film, TV, video, radio and music' sub-sector's UK GVA output and 50% of the creative sector's UK GVA output.

1.4 Key findings: Wider economic impact

The BBC's economic impact in the nations and regions, and across the UK as a whole, is not limited to its GVA contribution. Through its activities, for example to support the commercial exploitation of intellectual property (IP) and to invest in skills and talent development, the BBC has additional wider economic impacts across the creative sector that are not captured within the estimates of its GVA contribution.

Evidence suggests that the scale of economic spillover impacts generated through the BBC's activities – including network and cluster spillovers, knowledge spillovers and technological spillovers²⁶ – are likely to be higher for the BBC than commercial organisations.

To fulfil its mission and public purpose the BBC invests in value-adding activities, such as R&D and training, and does so in a way that supports the wider creative sector, for example through collaborations and partnerships and the provision of open-source technologies.

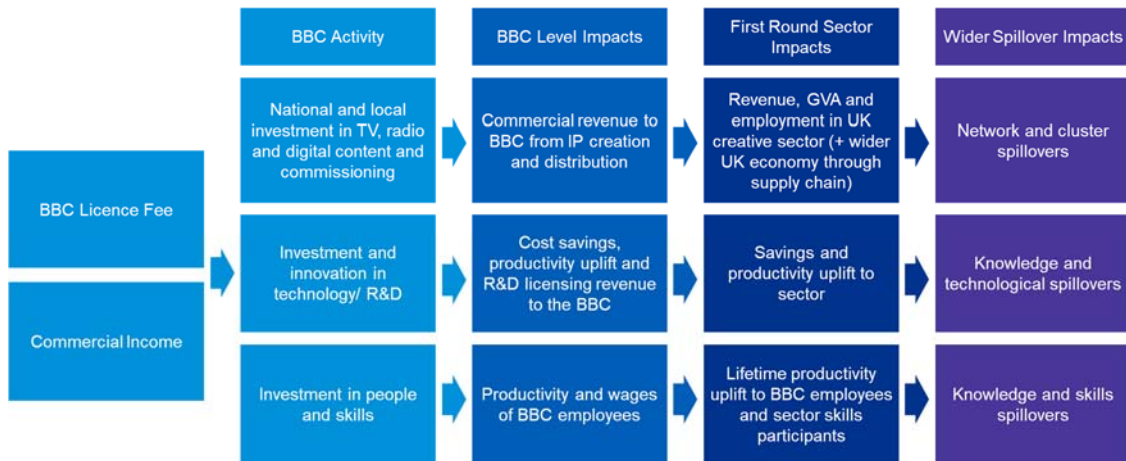
The mechanisms through which the BBC generates wider economic impacts, and the nature of these impacts is illustrated in framework for analysing the BBC's wider economic impacts shown in Figure 3.

²⁴ The contribution of the nations to BBC's total GVA outside of London are: Scotland: 10%, Wales: 9% and Northern Ireland:4%.

²⁵ BBC, 2013. [The Economic Value of the BBC: 2011/12.](#)

²⁶ See Box 1, page 27 for explanations

Figure 3: Illustration of flow of BBC activities to wider economic impacts



Source: KPMG analysis

Key themes emerging from our assessment of how the BBC’s activities generate wider economic impacts and spillover effects are summarised below.

Impacts associated with the BBC’s local investment and presence

The BBC generates economic impacts throughout the UK across its activities and through local partnerships. This has been strengthened by its growing presence outside of London which has helped to grow its local impact.

— **The BBC’s activities across the nations and regions supported a total of approximately 53,600 FTE jobs in FY 2019/20, over half of which were outside of London.**²⁷

- As of 31st March 2020, the BBC directly employed 20,121 FTE employees across the UK and a further 15,153 freelance, casual and agency workers (equating to 2,269 FTEs). This employment accounts for approximately 13% of employment in the ‘Film, TV, video, radio and music’²⁸ sub-sector in the UK.
- Given the BBC’s significant direct employment outside of London - in 2020, over half of the BBC’s staff were based outside of London - its employment accounts for a larger share of the sub-sector’s total employment in specific nations and regions. The BBC’s relative employment contribution is greatest in Northern Ireland where it makes up 44% of sub-sector employment, followed by Wales, the North West of England, and Scotland where the BBC contributed 25%, 21% and 20% of employment in the sub-sector respectively.²⁹

— **Commissioning of programmes at the local level, particularly with independent producers, supports greater economic activity in the creative sector across the UK.**

- In 2019, 51% of the BBC’s network TV production spend was on programmes produced outside of London,³⁰ with over £1.6bn of TV production spend based outside of London from FY 2016/17 to FY 2019/20.
- This production spend by the BBC leveraged an additional £1.2bn of third-party production spend in 2019, of which 60% was outside of London.

²⁷ This includes the BBC’s direct, indirect and induced employment impacts.

²⁸ SIC codes 59 – ‘Motion picture, video and television programme production, sound recording and music publishing activities’ and 60 – ‘Programming and broadcasting activities, including television and radio broadcasting’.

²⁹ BBC Employment data received in December 2020, and ONS Business Register and Employment Survey (BRES) open access data. See: <https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=189>

³⁰ Based on the [Ofcom Regional Production Guidance criteria](#).

- The BBC's spend with indies outside of London has grown by a third since 2016. In 2019, over 50% of its spend was with independent production companies, supporting a total of 128 indies across 266 titles.

— **Network and cluster spillovers have been generated by the BBC through its role in creating local specialist clusters of creative and digital talent, in particular the cluster which has built up around the BBC at MediaCityUK in Salford.**

- In 2010, the BBC established a new base at MediaCityUK in Salford. Employment in the creative and digital sector in Salford has since grown by 142%, from 6,310 employees in 2010 to 15,275 employees in 2019,³¹ compared to growth of 26% in these sectors across Great Britain over the same period.
- The BBC directly accounted for 34% of this growth, with the remainder being in the wider creative and digital sector, at least in part driven by wider firms clustering around the BBC in MediaCityUK and benefitting from BBC spending with them.
- This is reflected in the number of digital or creative businesses³² in Salford which has grown by 70% since 2010, from 565 to 955, compared to growth of 44% in these sectors in the UK as a whole.
- Location quotient ("LQ")³³ analysis evidences the growth of this cluster –where a sector specialism is indicated by an LQ of above 1. The LQs for Salford (excluding BBC employees) for the digital sector and creative sector in 2019 were 1.48 and 1.12 respectively, compared to 0.92 and 0.63 in 2010, suggesting the development of a digital and creative cluster around the BBC since its move to the area.
- As we discuss in Section 4.2, clusters of this kind can form when firms locate together, leading to knowledge sharing, collaboration, innovation and a shared specialist supply chain. This can lead to productivity uplifts for the organisations involved and support innovation and business creation, supporting the growth of the sector and its overall economic contribution.

— **There is evidence of an emerging creative cluster in Cardiff, generating knowledge sharing and capability in TV production in the area.**

- In 2012, the BBC opened Roath Lock, a new studio centre in Cardiff Bay, which provides a permanent home for three flagship BBC dramas – Casualty, Pobol y Cwm and Doctor Who – as well as providing capacity for other new productions in Wales.
- Following this, a number of new studios have been built in the area including Chepstow, Dragon, Pinewood, and Swansea Bay³⁴ and more recently Wolf Studios in Cardiff.³⁵
- According to the British Council, Cardiff is now one of the UK's largest media centres outside London, with BBC Wales, S4C and ITV Wales all based there.³⁶
- Since 2012 there has been 54% growth in the creative sector in Cardiff, from 5,470 employees in 2012 to around 8,430 in 2019, compared to growth of 31% in the sector across Great Britain.
- Over the same period the number of businesses in the creative sector in Cardiff has grown by 52% from just under 900 to 1,350, compared to growth of 40% in the sector as a whole across the UK.

³¹ ONS, Business Register and Employment Survey, 2019

³² Based on DCMS definitions of the Digital Sector and Creative Industries, see: <https://www.gov.uk/government/publications/dcms-sectors-economic-estimates-methodology>

³³ This is a summary statistic that can be used to measure the level of employment of a particular sector within a particular spatial area (such as a city or region) compared to the economy as a whole. A value of >1 indicates a greater concentration of employment in the sector compared to the national average. In our analysis we have calculated the LQ for Salford excluding BBC employment, in order to understand the strength of the cluster not accounted for by the BBC's own employment (i.e. the extent to which a wider cluster has formed around them).

³⁴ BOP Consulting, 2015. The Economic Impact of BBC Wales: Roath Lock Studios and new BBC Wales Broadcasting Centre in Central Square

³⁵ See: <https://bad-wolf.com/wolf-studios/>

³⁶ British Council, 2016. [Creative Hubs report](#)

Impacts associated with the BBC's Intellectual Property (IP) creation

IP is vital to the success of the UK TV production industry. By commissioning and developing creative content under preferential terms of trade the BBC supports the industry both through the investment it makes directly and by providing a wide-reaching, globally recognised platform for this IP, enhancing the opportunities for its value to be maximised, for example through the follow-on sale of programmes and formats worldwide. This supports the growth of the overall sector and its economic contribution.

- **In 2019 the BBC was by far the highest spending commissioner of new IP among UK broadcasters in the UK**³⁷, commissioning a total of £561m of content in 2019, of which £235m was on new external commissions, accounting for over a third of all spend on new commissions among UK PSBs.³⁸
- **The BBC works with a large number of UK producers** – over 350 in FY 2019/20, 54% of which were indies.³⁹ As a result it has enhanced the revenue generation and economic contribution of these firms in the UK economy.
- **The BBC supports the generation of IP through both its creative input and via the scale and breadth of exposure the BBC offers**, with a global reach of 468.2m people a week on average in 2020.⁴⁰ Importantly this not only helps independent producers to develop their IP, but also to maximise its value by enhancing their opportunities to sell their programmes or formats to other UK channels and international markets. This amplifies the growth and revenue generation of the UK's independent production industry and wider creative sector. For example, BBC's work with Studio AKA on the development of Hey Duggee, has grown the value of its IP internationally, with the programme having been sold into over 150 territories worldwide.
- **These wider economic impacts (not captured within the GVA estimates for the BBC) are enhanced through the favourable terms of trade the BBC works under** - revenues which would otherwise flow to the BBC instead flow back to the UK creative sector. This rewards the investment and innovation in television content and formats that is needed for 'hits' such as the Blue Planet, Strictly Come Dancing and MasterChef to be uncovered and their market potential realised.
- **Furthermore, in addition to its commissioning of content, the BBC also generates and exploits its own IP via BBC Studios Productions.** In FY2019/20 the BBC generated revenues of £267m from sales of the existing programme catalogue of BBC owned IP. This includes show formats such as Strictly Come Dancing/ Dancing with the Stars as well as its own successful productions such as Dr Who, both of which have been global successes. The revenues generated through BBC IP support its own GVA contribution as well as enabling greater investment in new programming and services.

Impacts associated with the BBC's Research and Development (R&D)

The BBC invests in R&D to support technological developments in the broadcasting and media industry.⁴¹

- **Between FY 2016/17 and FY 2019/20 the BBC invested a total of £70m in dedicated R&D activities.**
- **Based on a 2017 report by DotEcon, every £1 of such R&D investment could, on average, generate a further £5 - £9 of social and economic benefit for the UK economy.** This includes

³⁷ Pact, 2020. UK television production Survey. A report by Oliver & Ohlbaum Associates for Pact. See: <https://www.pact.co.uk/news-detail.html?id=huge-international-growth-generates-record-revenues-for-independent-tv-production-sector>

³⁸ Including BBC, ITV, Channel 4 and Channel 5

³⁹ <http://downloads.bbc.co.uk/commissioning/site/bbc-commissioning-supply-report-2019.pdf>

⁴⁰ Ofcom, 2020. [Media Nations 2020: UK report](#)

⁴¹ See: <https://www.bbc.co.uk/rd/about/history>

benefits to the BBC as well as knowledge and technological spillovers to the creative and digital sector and wider UK economy.⁴²

- These spillovers, resulting from the exchange between individuals/ businesses (voluntary or involuntary) of knowledge and technical information, can lead to wider adoption of technologies and new innovations and technological improvements. In turn, this can lead to productivity improvements and wider societal benefits for example in the form of improved health and wellbeing.
- Case studies show that the impacts of the BBC's R&D activity include:
 - **Cost savings, productivity enhancements and licensing revenue benefits** as a result of the BBC's own use of the products and technologies it develops and licensing of this to others in the sector where appropriate.
 - **Cost savings and productivity enhancements to the wider digital sector** where the BBC's developments are adopted through open-sourcing and technology transfer.⁴³
 - **Knowledge and technological spillovers to the sector** resulting from the knowledge gained from developing and using the new BBC technologies, particularly where they are open-source and made widely available to the market on non-commercial terms. These spillovers help to generate further productivity uplifts for the sector.
 - **Audience benefits** as a result of improved services and viewing experiences.
- Recent examples of BBC R&D projects, including programmes to develop more efficient satellite transmitters and to build a model for end-to-end broadcasting using Internet Protocols (the 'IP Studio'), are starting to demonstrate benefits in the form of cost savings, productivity benefits and improved quality of outputs.

Impacts associated with the BBC's skills and training activities

The BBC has invested over £100m in skills and training over the last 4 years⁴⁴, training almost 100,000 participants, including through internal BBC training and partnerships with other providers. Through this activity the BBC both boosts its own GVA and the productivity of its employees, and of the wider individuals and organisations that also benefit from its skills and training initiatives. It also generates wider economic impacts in the creative sector through human capital development and knowledge spillovers:

- **Participation in skills and training can raise the productivity of employees.** By investing in the skills and training of its employees, for example through its delivery of internal training and apprenticeships through the BBC Academy, the BBC boosts its own GVA for the period over which the trainee is employed by them and generates spillovers to future employers through a lifetime productivity uplift. For example, in FY2019/20, the BBC funded a total of 335 apprenticeships. Evidence suggests that the potential lifetime earnings uplift associated with these apprenticeships could total an estimated £91m.⁴⁵
- The productivity benefit to the BBC can be further amplified through knowledge spillovers among BBC colleagues, as knowledge and skills from the training spreads beyond those directly trained.
- **The BBC also invests in supporting skills development with individuals and organisations in the wider creative sector**, for example through initiatives such as Writersroom and programmes delivered through BBC partnerships with the National Film and Television School, ScreenSkills and wider organisations. **This helps to develop UK talent across the creative sector and more broadly, building the UK creative sector's capacity and capabilities.**

⁴² It should be noted that we have not independently verified the analysis and findings presented by DotEcon and are reporting on the findings directly as presented in their study.

⁴³ See: <https://www.nesta.org.uk/blog/public-service-coding-the-bbc-as-an-open-software-developer/>

⁴⁴ From FY 2016/17 to FY 2019/20

⁴⁵ See: <https://www.suttontrust.com/wp-content/uploads/2019/12/Levels-of-Success3-1.pdf>; BIS, 2011. [The Returns to Higher Education Qualifications](#); BIS, 2013. [The Impact of University Degrees on the Lifecycle of Earnings: some further analysis](#) Based on information provided by the BBC for evidence on returns to apprenticeships.

- Similar to the investment in training its own employees, economic evidence suggests that this will support improvements in UK productivity and economic activity, as well as generate human capital improvements and potentially wage uplifts for the beneficiaries themselves.
- **Additional knowledge spillovers to the wider creative sector are likely to be supported as a result of the BBC’s training and skills investment, both for its own employees and the wider sector.** As those beneficiaries of the training collaborate and share knowledge more widely, for example through networks, this facilitates the spread of skills and knowledge across the creative sector.⁴⁶ Examples of this occurring include the launch of new production company Bad Wolf in South Wales by former BBC executives (see Section 4.2.4).

⁴⁶ BIS, 2012. [BIS research Paper no.74: the impact of investment in intangible assets on productivity spillovers](#)

2 About the study

2.1 Background and context

About the BBC

The British Broadcasting Company was formed in October 1922 by a group of leading wireless manufacturers. Daily radio broadcasting commenced the following month, sharing news, music drama and ‘talks’ across the nation, and the broadcasting of a regularly scheduled television service followed in 1936. Just over four years later, in January 1927, it gained its Royal Charter status as the British Broadcasting Corporation (BBC). The Royal Charter provides the constitutional basis for the BBC and defines its objectives, powers and obligations. It continues to be updated to reflect the changing role of the BBC – the current Charter began on 1 January 2017 and ends on 31 December 2027.⁴⁷

Its long history makes the BBC the world’s longest running national broadcaster.⁴⁸

The BBC is also the most used media organisation in the UK with 87% of the UK adult population using the BBC each week in FY 2019/20⁴⁹ rising to 94% in March 2020 as the COVID-19 pandemic took hold. 2020 also saw the BBC’s global reach increase to an average of 468.2m people a week; an 11% year on year rise.⁵⁰ These are the highest global reach figures in the BBC’s history. At a time when audiences require a combination of trusted news, educational support and stimulating entertainment, the relevance of the BBC’s mission, as set out in the Royal Charter, is clear.

“To act in the public interest, serving all audiences through the provision of impartial, high-quality and distinctive output and services which inform, educate and entertain.”

Whilst the BBC’s impact on audiences is an important way in which the BBC adds value to society, analysis of this is not within the scope of our study. However, as we do analyse in this study the BBC contributes to the performance of the UK economy and the development of talent, ideas and technology in the UK’s creative, digital and cultural sectors, and beyond, through the delivery of its mission. Full details of the scope of this study are set out in Section 2.2.

The BBC activities which drive this economic contribution are principally funded by the television licence fee, although the BBC also generates revenue streams through its commercial operations⁵¹ which additionally support the BBC’s UK PSB through investment in new programming and the annual dividend to BBC Group.⁵²

Figure 4 below presents the structure of the BBC across its UK PSB and commercial divisions. In the remainder of the report where we refer to ‘the BBC’ we mean the full entity (PSB plus Commercial Holdings) unless otherwise stated.

⁴⁷ See: <https://www.bbc.com/aboutthebbc>

⁴⁸ See: <https://www.bbc.com/historyofthebbc/timelines>

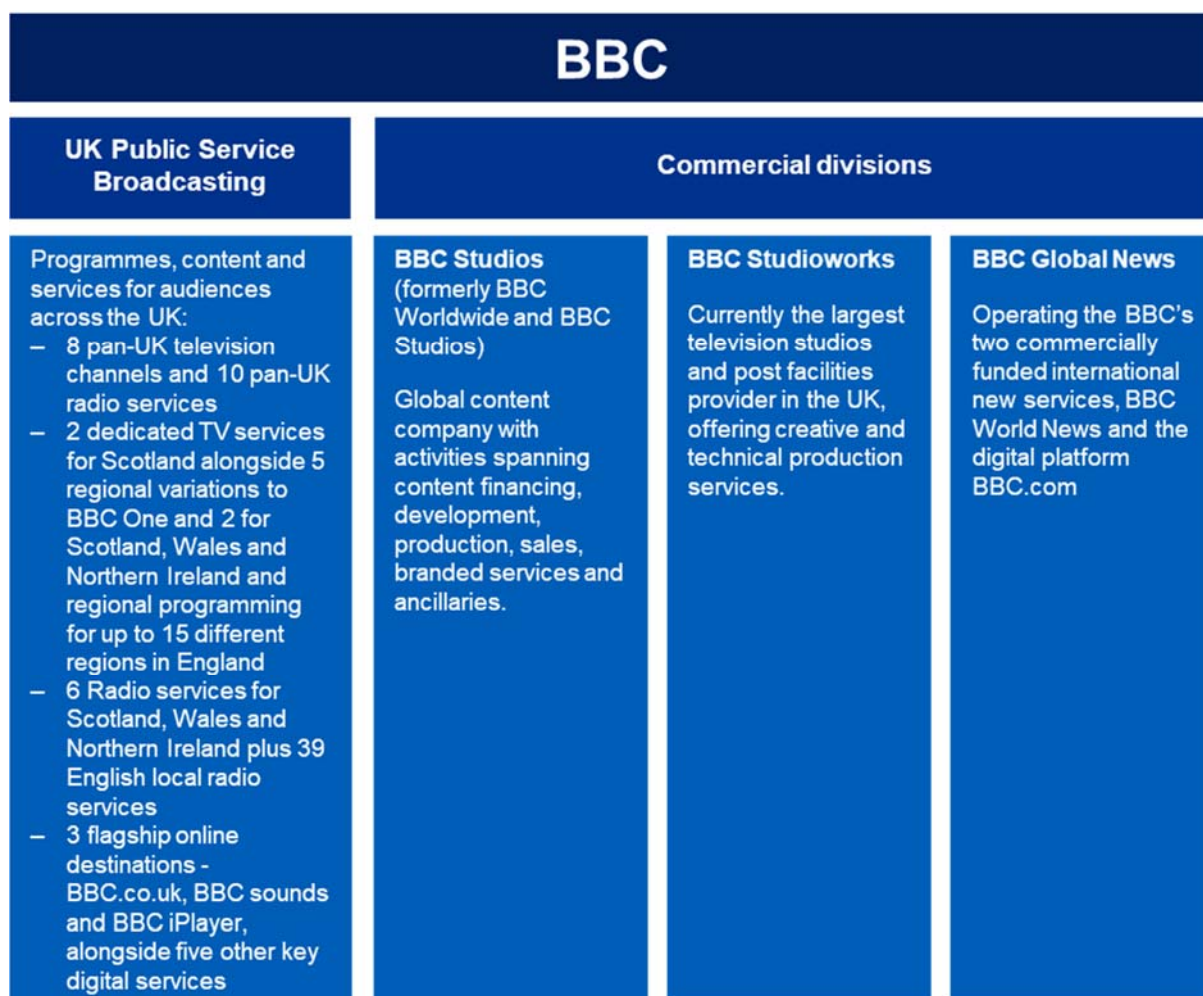
⁴⁹ Ofcom, 2020. [Ofcom’s Annual Report on the BBC](#)

⁵⁰ Ofcom, 2020. [Media Nations 2020: UK report](#)

⁵¹ See: <https://www.bbc.com/academy-guides/what-do-i-need-to-know-about-the-bbc>

⁵² BBC, 2020. [BBC Group Annual Report and Accounts 2019/20](#).

Figure 4: Structure of the BBC



Source: BBC^{53 54}

Across its PSB and commercial divisions, the BBC now employs around 22,700 staff in the UK (in full time equivalent terms including freelance, casual and agency workers), the majority of whom (approximately 19,500) are employed in the PSB arm of the BBC, working across television, radio and digital services.⁵⁵

Though its headquarters are in London, the BBC operates across the UK and its presence outside of London has grown substantially over the last 10 years. There is also an ambition to grow this further and to move more decision making out of London. Tim Davie, Director General of the BBC, has stated, “We will look to make the BBC less rather than more London-based, taking the learnings from this year - and building a more sustainable organisation in the process.”⁵⁶

At present, the BBC's Nations and Regions division, which manages the BBC's key operations across England (outside of London) and in Scotland, Wales and Northern Ireland, is already one of the BBC's largest divisions. There are now nearly 6,000 staff working in the BBC's Nations and Regions division⁵⁷ and over 4,000 more working within other divisions outside of London. More than half of the BBC's employees are now out of the London area.⁵⁸

⁵³ See: <https://www.bbc.com/aboutthebbc/whatwedo/publicservices>

⁵⁴ See: <https://www.bbc.com/aboutthebbc/whatwedo/commercialservices>

⁵⁵ BBC, 2020. [BBC Group Annual Report and Accounts 2019/20](#).

⁵⁶ See: <https://www.bbc.co.uk/mediacentre/speeches/2020/tim-davie-intro-speech>

⁵⁷ See: <https://www.bbc.com/aboutthebbc/whoware/ken-macquarrie>

⁵⁸ BBC, 2020. [BBC Group Annual Report and Accounts 2019/20](#).

An overview of the media and creative sector in the UK

The BBC operates in an evolving market and the last 5 years in particular have seen significant change in the way media is accessed and consumed in the UK and globally.

Growth in ownership of connected devices and improvements in broadband capacity have shifted patterns of media consumption towards digital content and video-on-demand over recent years.⁵⁹ As of 2019, more than four in five households in the UK have a fixed broadband connection⁶⁰; 57% of these superfast or ultrafast, compared to 22% in 2014.⁶¹ Improvements in mobile technologies, 4G and the development of 5G, also provide faster mobile broadband and greater data capacity to support online viewing.

Ownership of connected devices has also grown. In 2020, 63% of households connected their TV to the internet, either through an internet connected smart TV, or using a 'smart' device (such as streaming sticks, games consoles or set top boxes), up from 32% of UK households in 2015.⁶² One in five UK households now owns a smart speaker.⁶³

This has led to both an increase in the number of viewers watching TV programmes and films online, and the amount of content they watch, facilitated by improved internet speeds and capacity.⁶⁴

The increase in ways in which media can be accessed has also led to increased choice for audiences. Live broadcast television viewing is supplemented with content on broadcast video-on-demand (BVoD) services – such as BBC iPlayer and ITV Hub – or the growing offers from subscription video-on-demand (SVoD) streaming services such as Netflix and Amazon Prime Video and more recently Apple TV+, BritBox and Disney+. This increased choice has led to an increase in overall viewing, although shifts across mediums.⁶⁵

There is some evidence to suggest that this trend has also been accelerated by COVID-19, which has pushed more users towards online and digital tools (including media consumption as well as the use of virtual collaboration tools and online shopping and banking).⁶⁶ Other impacts of COVID-19, such as the uplift in viewing of broadcast TV, are less likely to be sustained.⁶⁷

While the overall lasting impact of COVID-19 is yet unknown, the long-term trend in the creative and digital sectors, the most significant sectors to which TV and radio contribute, has been positive, with strong growth over the last 10 years.

Data from the Department of Culture, Media and Sport (DCMS)⁶⁸ shows that in 2019 the creative sector contributed £115.9bn to the UK economy and the digital sector contributed £150.6bn.⁶⁹ As shown in Figure 5 below, growth in these sectors has outperformed that of the UK economy overall between 2010 and 2019, with respective increases of 43.6% and 26.5% in real terms, relative to growth of 17.7% across the UK economy as a whole.

⁵⁹ Ofcom, 2020. [Small Screen: Big Debate – a five-year review of Public Service Broadcasting \(2014-18\)](#)

⁶⁰ See: <https://www.ofcom.org.uk/research-and-data/telecoms-research/broadband-research/improving-broadband-and-landline-standards>

⁶¹ Ofcom, 2020. [Small Screen: Big Debate – a five-year review of Public Service Broadcasting \(2014-18\)](#)

⁶² Ofcom [Technology Tracker 2020](#).

⁶³ Ofcom, 2020. [Small Screen: Big Debate – a five-year review of Public Service Broadcasting \(2014-18\)](#)

⁶⁴ Ofcom, 2020. [Small Screen: Big Debate – a five-year review of Public Service Broadcasting \(2014-18\)](#)

⁶⁵ Ofcom, 2020. [Media Nations 2020: UK report](#)

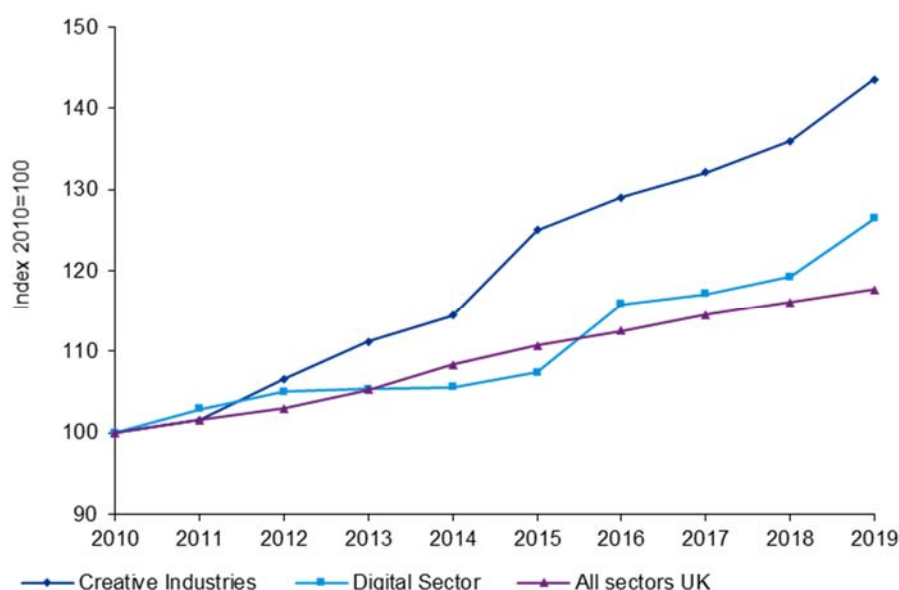
⁶⁶ Ofcom, 2020. [Online Nation – 2020](#)

⁶⁷ Ofcom, 2020. [Media Nations 2020: UK report](#)

⁶⁸ See: <https://www.gov.uk/government/statistics/dcms-economic-estimates-2019-gross-value-added>

⁶⁹ Note, due to the way in which these sectors have been developed and defined by DCMS, there is overlap between these sectors and therefore their contribution is not additive. See Appendix 1 for a full breakdown of each of these sectors.

Figure 5: Indexed growth of creative and digital sectors in the UK 2010-2019



Source: KPMG analysis of DCMS Economic Estimates 2019

Within the creative and digital sectors, the BBC operates in the 'Film, TV, video, radio and music' sub-sector.^{70,71} In 2019, this subsector contributed £23.0bn in GVA to the UK economy, accounting for around a fifth of the creative sector, a seventh of the digital sector and two-thirds of the cultural sector. From 2010 to 2019 the sub-sector has seen growth of 31.7%, again significantly faster than the UK average of 17.7% over this period.

Within this context, the BBC plays a central role in supporting the growth of the creative and digital sectors. Through its own output and GVA it contributes to the size of the 'Film, TV, video, radio and music' sub-sector and through its activities such as: spending with suppliers; commissioning from independent producers; investing in and nurturing British talent; and advancing technology it contributes toward the broader creative, digital and cultural sectors.

2.2 Scope of the study

The BBC recognises the importance of being able to demonstrate and evidence the contribution it makes to the UK economy, particularly given its role as a national PSB, principally funded through the licence fee paid by UK households. Reflecting this, in recent years the BBC has commissioned a number of reports on its impact on the UK economy and society. Recent reports of note include:

- a 2013 study by the BBC to quantify the BBC's overall national economic impact on the UK;⁷²
- a 2015 KPMG report analysing the role of the BBC in supporting economic growth, including in the North West of England through the relocation to Salford;⁷³
- a 2018 study by BOP Consulting, looking at the BBC's relocation to Wales;⁷⁴ and
- a 2018 DotEcon review of the impact generated from the BBC's R&D activity.⁷⁵

⁷⁰ DCMS, [Sectors Economic Estimates Methodology](#).

⁷¹ This subsector comprises subcategories 'Motion picture, video and television programme production, sound recording and music publishing activities' and 'Programming and broadcasting activities, including television and radio broadcasting'.

⁷² BBC, 2013. [The Economic Value of the BBC: 2011/12](#).

⁷³ KPMG, 2015. [The role of the BBC in supporting economic growth](#).

⁷⁴ BOP Consulting, 2018. [BBC Wales - Economic Impact of the new BBC Wales broadcasting centre in Central Square, Cardiff](#)

⁷⁵ DotEcon, 2018. [Analysis of Research and Development Investment](#)

As explained above, since the last assessment of the BBC's national economic impact was undertaken in 2013, the BBC and the wider creative and digital sector – the two main sectors the BBC contributes to – have seen substantial change.

In order to obtain updated analysis and new insights on the overall economic contribution of the BBC, in November 2020 the BBC commissioned KPMG to assess its economic impact in the UK.

The focus of this study is the BBC's activity in the UK, including both Public Sector Broadcasting and the BBC's commercial subsidiaries, including BBC Studios and BBC Studioworks.

This study comprises two main elements:

1. A quantified assessment of the BBC's contribution to the UK economy in terms of GVA, a measure of the organisation's contribution to UK gross domestic product (GDP). The analysis includes quantification of the direct, indirect and induced GVA generated by the BBC (see Section 3.1 for more detail). This analysis is presented on a national and regional basis.
2. A largely qualitative assessment of the role of the BBC in supporting the growth of the creative and digital sector, as well as the wider UK economy. This is based on case studies⁷⁶ selected by the BBC looking at the impact of the BBC in the following areas:
 - local investment and clustering effects;
 - creative innovation and IP creation;
 - investment in R&D; and
 - investment in people, through skills and training.

Collectively the two areas of the analysis within this study provide a more holistic and complete assessment of the different channels through which the BBC generates and supports economic activity in the UK, in both the creative sector and beyond. This captures the impacts in terms of GVA – a core measure of economic contribution – as well as the wider impacts, for example associated with investment, innovation, employment and skills development.

Whilst our study assesses the overall economic contribution of the BBC in the UK, the scope of the study does not extend to all possible areas of contribution, whether positive or negative, of the BBC and is not a full cost benefit analysis of the BBC.

For example, the study does not take account of non-economic impacts such as the educational value of its programming, the societal/ public value of having a trusted source of news and access to content that may not otherwise be available, or any opportunity cost associated with audiences consuming BBC content rather than engaging in other activities.

In addition, our study assesses the gross contribution of the BBC rather than its net impact (i.e. the additional economic activity it supports in the UK economy). To assess the net impact it would be necessary to consider the counterfactual scenario for the BBC, which is difficult to establish robustly and is beyond the scope of this study.

The economic analysis of GVA is based on the BBC's activity in financial year (FY) 2019/20 only. However, the qualitative assessment takes a broader view of the BBC's impact, focusing on the impact so far during the current Charter period, which commenced on 1 January 2017.

⁷⁶ Specific case studies were selected in conjunction with the BBC to provide examples of the BBC's impact in these areas and should not be considered representative of all of the BBC's activity in each of the relevant areas.

Full details of the assumptions applied in our analysis are detailed in Sections 3.1 and 4.1 and in Appendix 2.

The report has been produced independently by KPMG and all analysis has been conducted with reference to the UK Government appraisal methodologies set out in HM Treasury's Green Book.⁷⁷ Further details of the scope of our work and the economic framework used to assess the impacts are set out in Sections 3.1 and 4.1.

2.3 Sources of evidence

Our analysis draws on a range of data, information and wider evidence gathered from the BBC and external sources including:

- financial data, employment data and procurement data provided by the BBC;
- official statistics published by the ONS;
- existing research and analysis sourced from the BBC;
- existing studies from external sources including academics, think tanks and other stakeholders;
- interviews with BBC staff and third-party stakeholders to inform our analysis.

Details of data sources are included in Sections 3.1 and 4.1 and in Appendix 2.

2.4 Structure of the report

The remainder of our report presents the findings of our analysis. This is structured as follows:

- Section 3 presents our analysis of the GVA contribution of the BBC, including the economic framework for our analysis and our results, presented in aggregate and by BBC division and by UK region.
- Section 4 presents our qualitative analysis of the wider impact of the BBC, based on a series of case studies across four areas of impact:
 - local investment and clustering effects;
 - creative innovation and IP creation; and
 - investment in R&D.
 - investment in people, through skills and training;
- Appendix 1 presents DCMS sector definitions.
- Appendix 2 presents the details of our methodological approach for estimating BBC GVA and employment impacts.
- Appendix 3 presents the results of the regional GVA analysis in more detail.

⁷⁷ HM Treasury, 2020. 'The Green Book'. Available from : https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf

3 Assessment of the GVA generated by the BBC in the UK

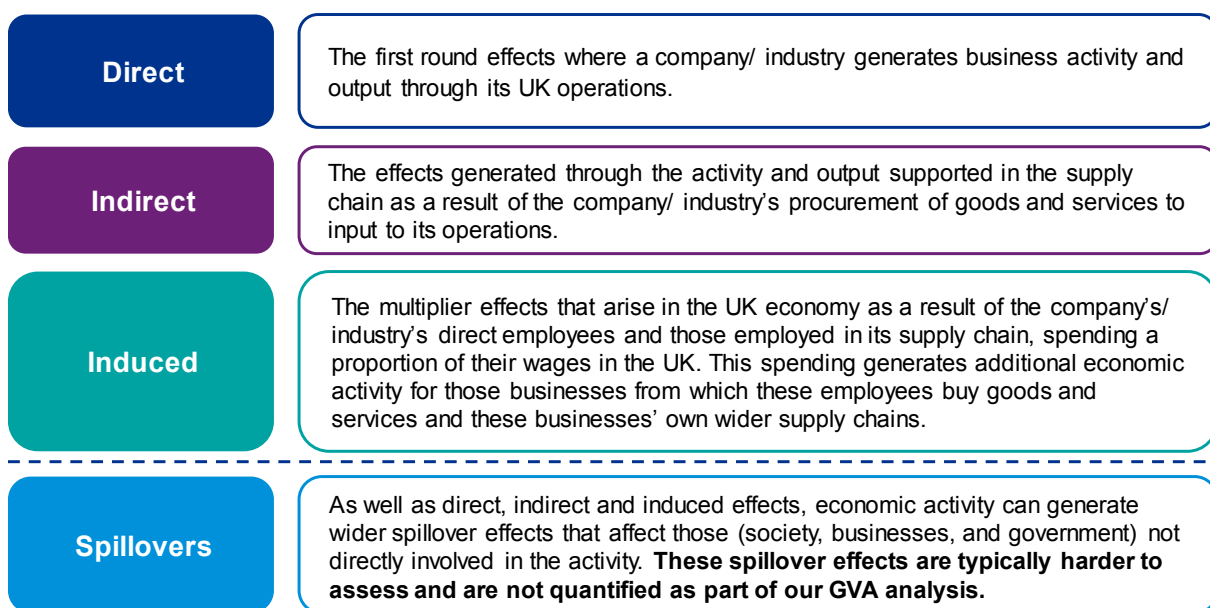
3.1 Framework for assessing the GVA generated by the BBC

Our approach

In our analysis, one of the measures of economic contribution used to capture the impact of the BBC in the UK is its total GVA contribution.

GVA is a measure of the economic value of the goods and services produced at an individual company, industry or sector level, net of intermediate consumption (i.e. the goods and services that are used in the production process). GVA estimates the difference between the value of goods and services produced and the cost of inputs, such as unprocessed materials, used to create those goods and services. A nation's GDP includes the sum of the GVA of all economic agents within the economy.⁷⁸

The BBC adds GVA to the UK economy through the television, radio, and digital services it delivers, the employment it generates within its entities, and through the inputs (e.g. products and services) used to deliver its activity. We estimate the GVA contribution of the BBC generated via three main routes, direct, indirect and induced effects.⁷⁹ Economic activity may also generate spillover effects (See Box 1, p.27 for explanation), though these are not quantified as part of our GVA analysis and are instead assessed in Section 4 of the report.



In our analysis, the direct GVA impacts are measured using the income approach to calculation of GVA.⁸⁰ The indirect and induced GVA impacts are assessed based on an input-output modelling approach using a bespoke analysis of the supply chain associated with the BBC and the Office for

⁷⁸ GVA is a key component of gross domestic product (GDP), which is a measure of the value of production and is a key indicator of the state of the economy. GVA is used in the estimation of GDP, by aggregating GVA across all industries and sectors in the economy and adjusting for taxes and subsidies at the whole economy level.

⁷⁹ We estimate indirect and induced GVA and employment impacts using sector specific GVA and employment multipliers sourced from the ONS and Scottish Government. The sector specific Type I and Type II GVA multipliers used in this calculation were sourced from the Scottish Government, because the ONS does not produce Type II multipliers.

⁸⁰ This defines direct GVA as follows: $GVA = \text{Operating Profit (before tax)} + \text{Employee Costs} + \text{Depreciation} + \text{Amortisation}$

National Statistics (“ONS”) input-output tables and the Type I and Type II multipliers derived from these.⁸¹ Input-output tables show, in matrix form, the interlinkages between sectors of the economy in terms of the value of goods and services (inputs) that are required to produce each unit of the output in given sectors of the economy.

Using the measures of economic contribution detailed above, our study assesses the gross contribution of the BBC, i.e. it does not consider how resources used to deliver the BBC activities would alternatively be used if the BBC did not exist. Nor does it consider any economic activity displaced as a result of household spending on the licence fee, though we would expect the impact of household spending in alternative uses to be lower given expected leakages e.g. spending on imports and lower economic multipliers on average associated with this spending. To assess the BBC’s net impact (i.e. the additional economic activity it supports in the UK economy once accounting for any displaced economic activity, leakage out of the UK, deadweight in terms of impacts that would be generated in any case without the BBC, and substitution effects) it would be necessary to consider the counterfactual scenario for the BBC. Establishing such a counterfactual is difficult to do robustly and is beyond the scope of this study.

The ‘leakage’ of economic impacts associated with the BBC is, however, analysed. The study only captures contributions of the BBC to the UK economy and excludes any activity associated with the BBC that takes places outside of the UK, for example, procurement spending with international suppliers. The economic contributions of the BBC are assessed at both the national level, and, where data permits, across the UK’s regions based on an adaptation of the national level input-output modelling approach to reflect the ratios of local level economic activity to national level economic activity, at the sector level, using a form of location quotient analysis.⁸²

Sources of evidence

Our analysis of the economic contribution of the BBC in the UK is primarily based on data provided by the BBC, including:

- financial data for the BBC relating to FY 2019/20, including revenues, operating profit and costs by division group;
- employment data for the BBC for FY 2019/20, including the number of employees by contract type, division group and location of employment; and
- details of the FY 2019/20 supply chain spend for the BBC, including the name, location and total spend with BBC direct suppliers.⁸³

Additionally, we sourced data and information from external public sources, including official statistics published by the ONS.

Details of all assumptions and data sources used in the process of this study have been set out in Appendix 2.

3.2 The GVA contribution of the BBC in the UK

3.2.1 The total GVA contribution of the BBC

The BBC generates economic impact in the UK through the direct value of the economic output it produces and the people it employs (direct impacts), as well as the wider economic activity it supports

⁸¹ ONS (2019), [UK input-output analytical tables](#).

⁸² This is based on the widely used approach developed by the academics Flegg and Webber. See: Flegg and Webber. 2000. ‘Regional Size, Regional Specialization and the FLQ Formula’. *Regional Studies*. 34(6): 563-569.

⁸³ BBC supplier spend data was uplifted to match the level of supplier spend in the financial data. See Appendix 2 for details of our approach.

through its supply chain (indirect impacts) and in the wider economy through spending by employees (induced impacts).

Based on financial information provided by the BBC, we estimate that across all its activities – both the PSB side of the organisation and the commercial divisions – the BBC generated £1.9bn of direct GVA in the UK economy in FY 2019/20, of which £1.3bn was generated by PSB.

This direct GVA of the BBC is equivalent to approximately 8.5% of the total GVA generated by the entire ‘Film, TV, video, radio and music’ sub-sector⁸⁴ in the UK economy in 2019.⁸⁵

This significant direct economic contribution is generated despite the fact the BBC is largely not profit-driven (the PSB side of the BBC accounts for 68% of the total BBC Group⁸⁶), which means a significant proportion of its potential GVA is not realised. This is because using the ‘income approach’ to assessing GVA, GVA is principally made up of operating profit (which the BBC does not make) and employee costs.⁸⁷ On average, across all organisations in the ‘Film, TV, video, radio and music’ sub-sector operating profit makes up around 60% of GVA⁸⁸ – a sizeable amount which is not reflected in the BBC’s £1.9bn of annual direct GVA.

Instead, rather than capturing any excess revenues as profit, directed by its mission and public purpose, BBC PSB reinvests its income, for example in R&D, skills and training, and development of new content for audiences. While some of these investments will themselves contribute to the BBC’s GVA over time, they also generate economic benefits to the broader creative sector and the wider UK economy which are not captured in the BBC’s own GVA impact. We assess impacts associated with these investments separately in Section 4.

As well as its direct GVA contribution, the BBC also contributes GVA to the economy through its spending with UK suppliers. In FY 2019/20 the BBC spent a total of £2.4bn on inputs of goods and services. 90% of this spend was retained in the UK, across more than 14,000 Tier 1 (direct) UK suppliers to the BBC.⁸⁹

The scale of this spending in the UK means the BBC’s impact through its supply chain is significant, and larger than average for the sector.

Taking into account the BBC’s spend on Tier 1 suppliers and the subsequent trickle-down effect through the lower tiers of the supply chain, we estimate that the BBC generated approximately £2.6bn of indirect GVA in FY 2019/20, of which:

- approximately £1.6bn is estimated to be generated by Tier 1 suppliers; and
- £0.9bn through the wider supply chains across the UK.⁹⁰

Furthermore, much of this impact was in the creative sector. As Figure 6 shows, the creative sector, accounted for approximately 70% of the BBC’s UK spend, of which 67% was in the ‘Film, TV, video, radio and music’ sub-sector. A further 5% was spent elsewhere in the digital sector, meaning,

⁸⁴ SIC code 59 and 60, See:

<https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007> and https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/829114/DCMS_Sectors_Economic_Estimates_-_Methodology.pdf

⁸⁵ ONS 2018 GVA figure is £13,001m for SIC code 59, and £8,791m for SIC 60, see:

<https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalandrealregionalgrossvalueaddedbalancedbyindustry>. Figures were inflated to 2019 prices based on ONS CPI times series. Available at

<https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/l522/mm23>.

⁸⁶ This is based on the percentage of BBC Group revenues which sit in PSB.

⁸⁷ This defines GVA as follows: GVA = Operating Profit (before tax) + Employee Costs + Depreciation + Amortisation

⁸⁸ ONS [Input Output Supply and Use Tables](#), 2020.

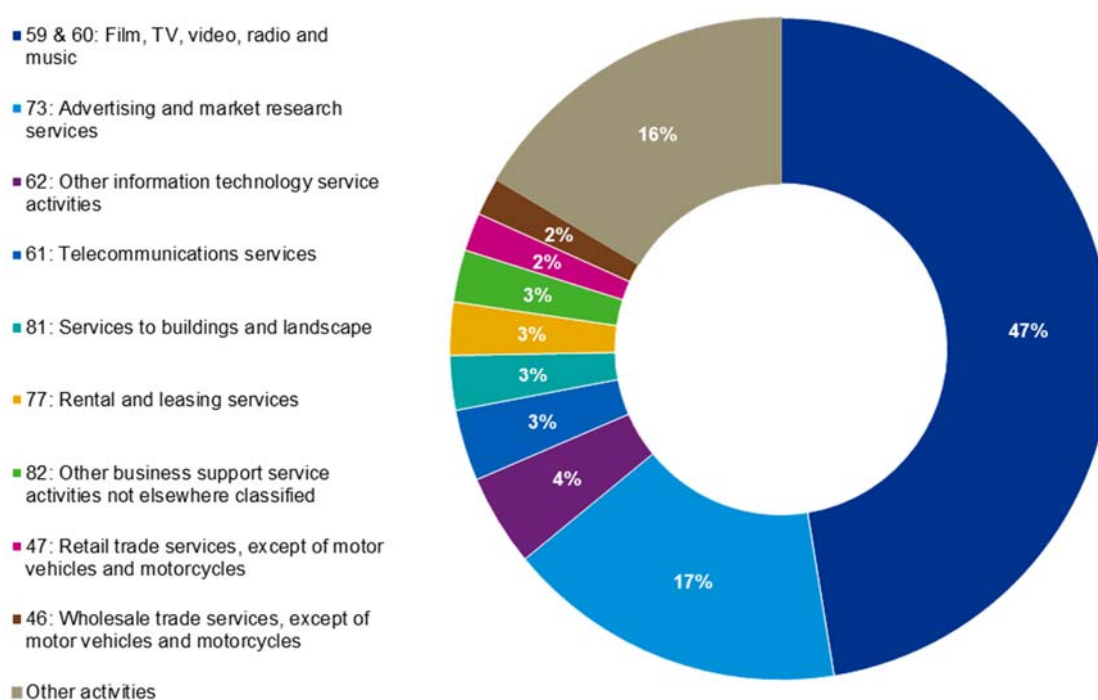
⁸⁹ Tier 1 suppliers refer to firms that BBC contracts from directly, tier 2 denotes firms higher up the supply chain.

⁹⁰ Figures do not sum to £2.6bn due to rounding.

combined the BBC spent approximately 75% of its UK supplier spend with creative and digital businesses⁹¹, therefore supporting jobs and growth in these sectors.

While our analysis covers the pre-COVID period, to the extent to which the BBC has maintained its spend in this sector over the last year, this will be helping to protect jobs in the sector which is expected to have seen an estimated 25% drop in GVA in 2020 as a result of the pandemic.⁹² Figures provided by the BBC indicate that it estimates it will spend over ██████ in FY 2020/21 with indies compared to ██████ in FY 2019/20⁹³ and will have worked with over 340 indies, 66 of which are new relationships. It has also introduced a package of measures to support the broadcasting industry including increasing investment in the Small Indie Fund from £1m to £2m.⁹⁴

Figure 6: Proportion of BBC expenditure with Tier 1 suppliers by sector, FY2019/20



Source: KPMG analysis of BBC data, ONS

Finally, the BBC also generated induced GVA in the UK economy through BBC employees, and the employees supported within its supply chain, spending a proportion of their wages on UK goods and services. This spending of wages is estimated to have added a further £0.5bn of GVA, in induced terms, to the UK economy in FY 2019/20.

In total, through the direct, indirect and induced economic impacts, we estimate that in FY 2019/20, the BBC generated a total of £4.9bn GVA in the UK economy, of which at least £3.1bn was generated in the creative sector.

This means that for every £1 of direct GVA generated by the BBC, its generated a further £1.63 of economic output in the rest of the UK economy, implying a total GVA multiplier of 2.63. This

⁹¹ This includes spending in the following SIC codes: 59, 73, 60, 62, 61, 90, 63, 58. Please note that due to the small %, some of these SIC codes have been included under 'Other activities'.

⁹² Oxford Economics, 2020. [The projected economic impact of Covid-19 on the UK Creative Industries](#)

⁹³ Spend figures are based on cash payments rather than accrued spend.

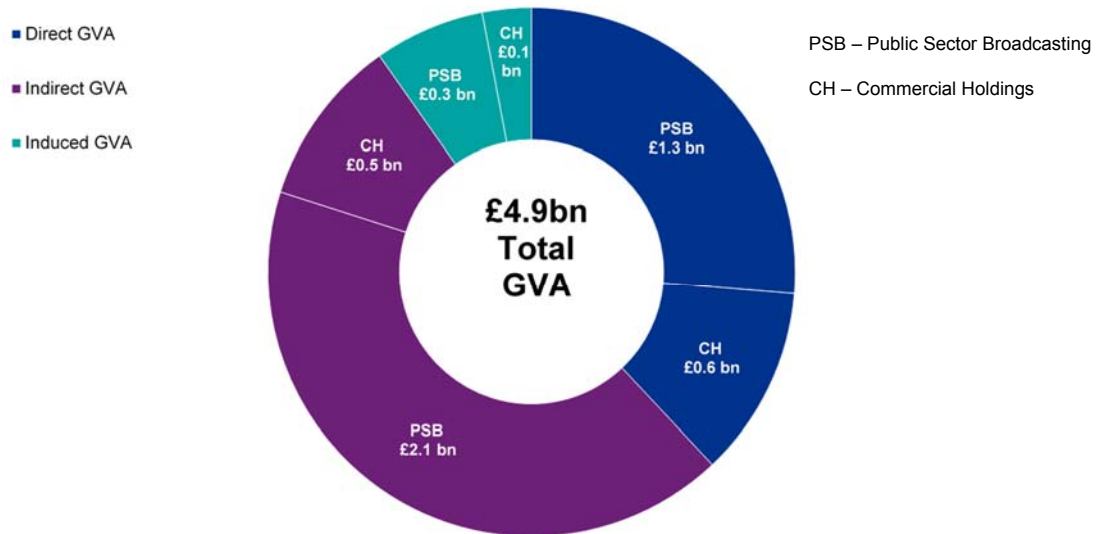
⁹⁴ See: [BBC announces package of measures to maintain creative health of the independent production sector during the COVID-19 pandemic - Media Centre](#)

is substantially higher than the sector average multiplier of 1.84 for the wider sub-sector the BBC operates within ('Film, TV, video, radio and music'⁹⁵).

Thus, based on its direct GVA, the BBC contributed approximately £1.5bn more in total GVA in FY 2019/20 than would be expected on average by the sub-sector in which the BBC operates.

Figure 7 below shows the distribution of GVA impacts by type of impact. This demonstrates the significance of the BBC's impact through spending with UK suppliers, representing over 50% of the BBC's total GVA contribution.

Figure 7: BBC GVA contribution in the UK, FY 2019/20



Source: KPMG Analysis of BBC data

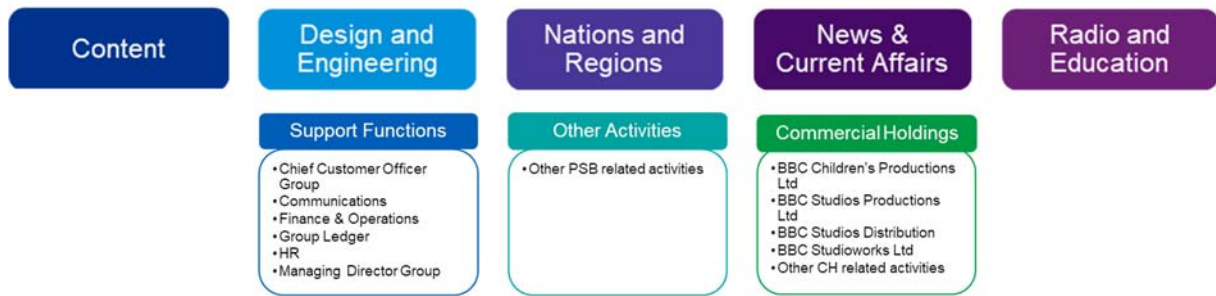
3.2.2 The GVA contribution of individual BBC departments and divisions

We have analysed how this total £4.9bn of GVA supported by the BBC in the UK economy is driven by the activities of the various divisions of the BBC.

According to information provided by the BBC, the BBC is structured across 18 division groups. However, to aid reporting we have grouped some of the similar division groups to form 8 overarching groups, as illustrated in Figure 8 below:

⁹⁵ "Film, TV, video, radio and music" sub-sector comprising SIC codes 59 and 60, See: <https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007>

Figure 8: BBC Division Groups⁹⁶

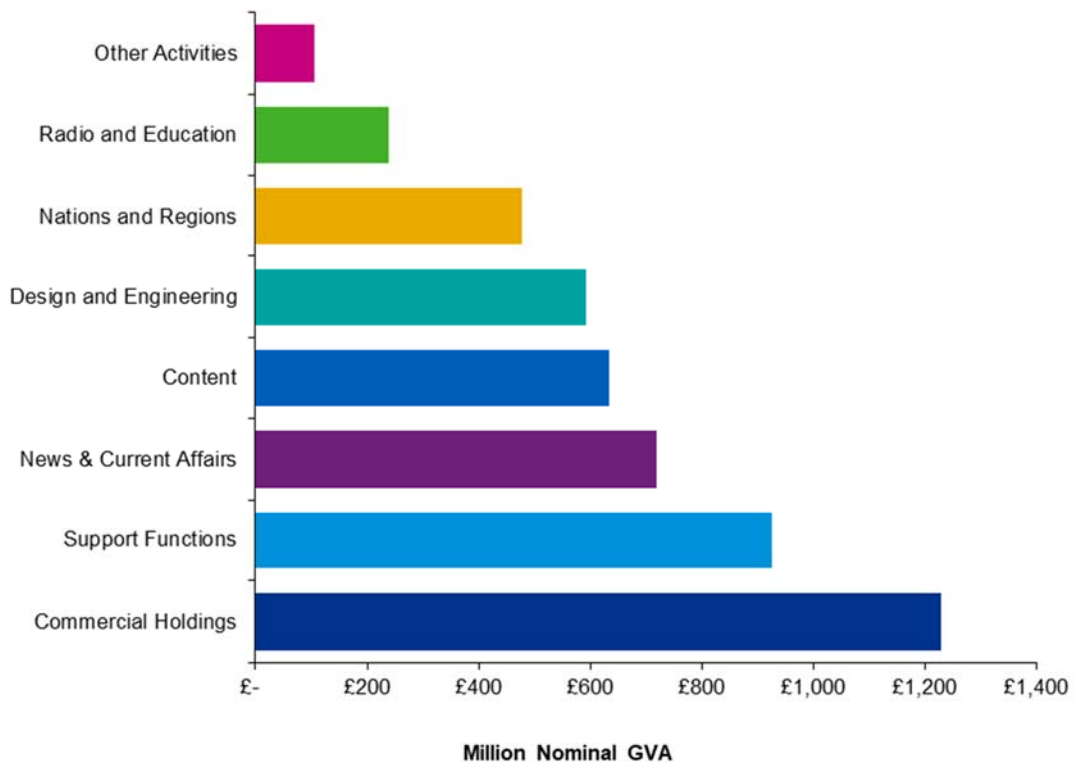


Source: KPMG and BBC

While these divisions reflect the way in which the BBC is structured, it is important to note that the 'Nations and Regions' division group does not include all the BBC activities undertaken outside of London. For instance, learning activities undertaken in Cardiff are categorised by the BBC within the 'Radio and Education' division rather than 'Nations and Regions'.

Looking at the GVA contribution of the BBC, our analysis estimates that 75% of the BBC economic contribution in FY 2019/20 was generated by the PSB divisions combined, while the remaining 25% of the BBC total economic contribution to the UK economy was generated by the BBC's commercial activities.⁹⁷ The estimated split of the GVA contributions across all BBC division groups is shown in Figure 9 below.

Figure 9: Total GVA by Division Group, FY 2019/20



Source: KPMG analysis

⁹⁶ 'Other PSB related activities' and 'Other CH related activities' include entities (e.g. 'BBC Studios HS') which do not exist anymore, and their activities refer to old projects winding down, or entities (e.g. 'Studios Limited') which are used to transfer dividends to Commercial Holdings.

⁹⁷ This includes BBC Children's Productions Ltd, BBC Studios Productions Ltd, BBC Studios Distribution, BBC Studioworks Ltd, Other (CH)

This distribution of total GVA across divisions is driven by staff costs, non-licence fee revenues and operating costs (which contribute to indirect GVA). For example, the greatest level of staff costs was in the 'News & Current Affairs', driven by the large share of direct FTEs it employed. This drives its relatively high GVA contribution. Commercial Holdings' large share of the operating expenditure (excluding staff costs) in FY 2019/20 contributed towards its £1.2bn of total GVA contribution.

3.2.3 The GVA contribution of the BBC across the UK's nations and regions

Local economic performance is driven, among other factors, by the economic activity of the businesses located within each local area. As set out by the Government in its latest Budget (March 2020), it is committed to levelling up across the UK by raising productivity and growth in all nations and regions. To reflect this, the Government's guidance on appraising projects and programmes (as set out in the HM Treasury Green Book⁹⁸) has been updated to set the expectation that appraisal should assess the likelihood and extent of differential place-based impacts where it appears likely to be significant, or else explain why it is unnecessary.

- Given that the BBC's activities are spread across the UK, and to reflect its fourth public purpose – *"to reflect, represent and serve the diverse communities of all of the United Kingdom's nations and regions and, in doing so, support the creative economy across the United Kingdom"* – we have analysed how the BBC supports economic activity across the regions of the UK through: the direct GVA that is generated by BBC's own activities;
- the indirect GVA generated by the BBC in businesses in its overall supply chain (both Tier 1 suppliers and suppliers in the wider supply chain) that operate in that region; and
- the additional economic activity that is generated in the region through the direct and indirect employees' spending of their wages linked to the BBC.

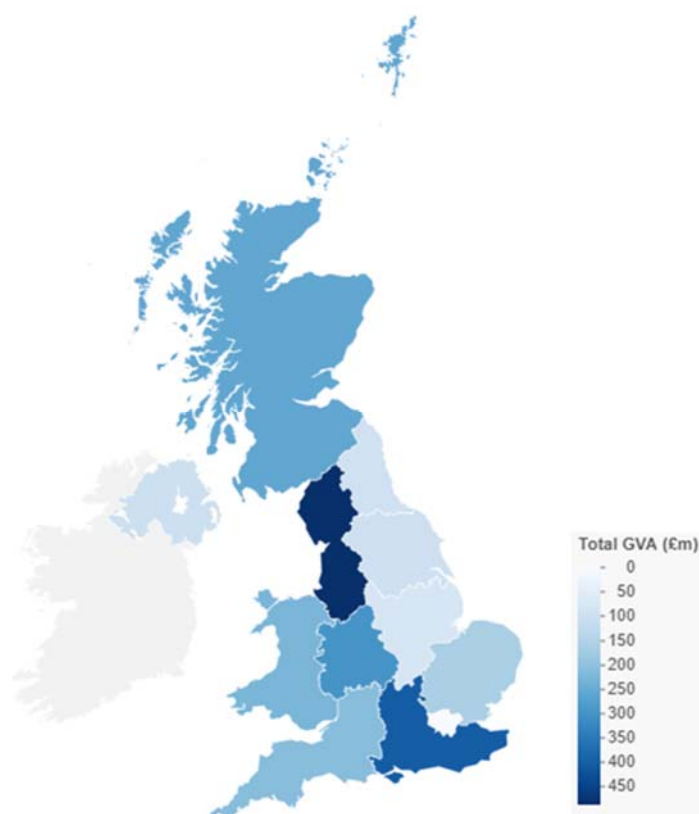
This regional analysis uses the Nomenclature of Territorial Units for Statistics (NUTS) 1 definition of regions, the largest sub-national statistical area used by Eurostat and the ONS, which divides the UK into 12 areas.

It should be noted that our geographic analysis of the BBC's supply chain, and the indirect impacts associated with this, is based on BBC procurement data and the invoicing postcode of the BBC's Tier 1 suppliers. It is likely that the invoicing address is not fully representative of the geographic location in which supplier activity takes place, affecting the results of our geographic analysis, likely skewing it toward locations in which businesses tend to be headquartered.

As can be seen from Figure 10 below, the BBC generated GVA across all of the UK's nations and regions in FY19/20, with the scale of economic impact in each area driven by the location of the BBC's activity – both its own operations (its direct GVA impact) and those of the organisations through the BBC's full UK supply chain (its indirect impact).

⁹⁸ HM Treasury. 2020. 'The Green Book'. Available from : https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/937700/Green_Book_Review_final_report_241120v2.pdf

Figure 10: Total GVA outside of London, by NUTS 1 region, 2019/20



Source: KPMG analysis

Approximately 50% of the BBC's total GVA contribution, summing to £2,478m in FY 2019/20, was generated outside of London. The largest share was generated in the North West of England, reflecting the BBC's activities in Salford. The North West makes up approximately 31% of the BBC's direct GVA outside of London and 19% of its total GVA outside of London. The BBC's total GVA in the North West of £453m in FY 2019/20 accounted for approximately 0.2% of the region's GVA in 2019.⁹⁹

Across the nations, Scotland, Wales and Northern Ireland account for 14%, 14% and 7% respectively of BBC's direct GVA outside of London, and 10%, 9% and 4% respectively of the BBC's total GVA contribution outside of London.

The remaining half of the BBC's total GVA contribution in FY 2019/20 was generated in London.

This reflects both the BBC's extensive activities that continue to be provided from London as well as the concentration of creative sector businesses in the region, many of which are in the BBC's supply chain. London contributes approximately 80% of the UK's total GVA from the 'Film, TV, video, radio and music' sub-sector and 50% of the UK's total GVA output from the creative sector.

As we analyse in Section 4.2 of our report, the growth of BBC operations and expenditure outside of London, and its role in supporting the creation of creative and digital clusters surrounding its out-of-London hubs, seem to be supporting a shift in the geographic location of the BBC's economic contributions over time. This is both in terms of its direct contribution, by increasing activity out of London, and its impact through its supply chain, by supporting growth of the creative sector outside of London.

⁹⁹ North West, ONS 2018 GVA figure is £186,272m for this region, see: <https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalandrealregionalgrossvalueaddedbalancedbyindustry>. Figure was inflated to 2019 prices based on ONS CPI times series. Available at <https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/l522/mm23>.

Comparing the geographic distribution of GVA impacts found in this study to those impacts reported in the BBC's 2013 economic impact report demonstrates a growth in the BBC's economic contribution outside of London.¹⁰⁰ It indicates that **between FY 2011/2012 and FY 2019/20 the proportion of the BBC's total GVA economic impact generated outside of London has increased from 32% to 50%.**

¹⁰⁰ BBC, 2013. [The Economic Value of the BBC: 2011/12.](#)

4 The BBC's wider impact on the creative sector and UK economy

4.1 Framework for assessing the wider impact of the BBC

As explained in Section 2, the economic contribution of the BBC extends beyond the GVA impacts generated by its activity to deliver creative content to audiences and meet its mission as set out in the Charter.

GVA is one measure of the economic contribution it supports in the UK, but the BBC's activities that generate GVA also create wider impacts across the creative sector. This produces additional value for the sector (e.g. through commercial exploitation of intellectual property (IP)) as well as supporting the longer-term capacity and capabilities of the BBC, the sector and the economy overall (e.g. through investing in talent and skills development).

In this section we analyse the nature of these broader economic contributions and the routes through which the BBC generates them, including the spillover benefits to the creative sector and wider UK economy. Our approach to this analysis took the following steps:

- 1 We identified the main routes through which the activity of the BBC generates economic spillovers and wider impacts. This was based on a literature review of relevant economic theory, previous studies of the impact of the BBC and consultation with BBC stakeholders.
- 2 Having established categories of impact for inclusion, we then worked with the BBC to consider and agree relevant case studies that illustrate and evidence these impacts.
- 3 We then gathered data and evidence to assess each case study, drawing on data and insight provided by the BBC and external stakeholders, as well as findings from third party reports and studies.
- 4 Where possible we sought to obtain data that would allow us to quantify impacts. Where this was not possible, we drew on qualitative information and insights in order to assess the nature and scale of impacts.

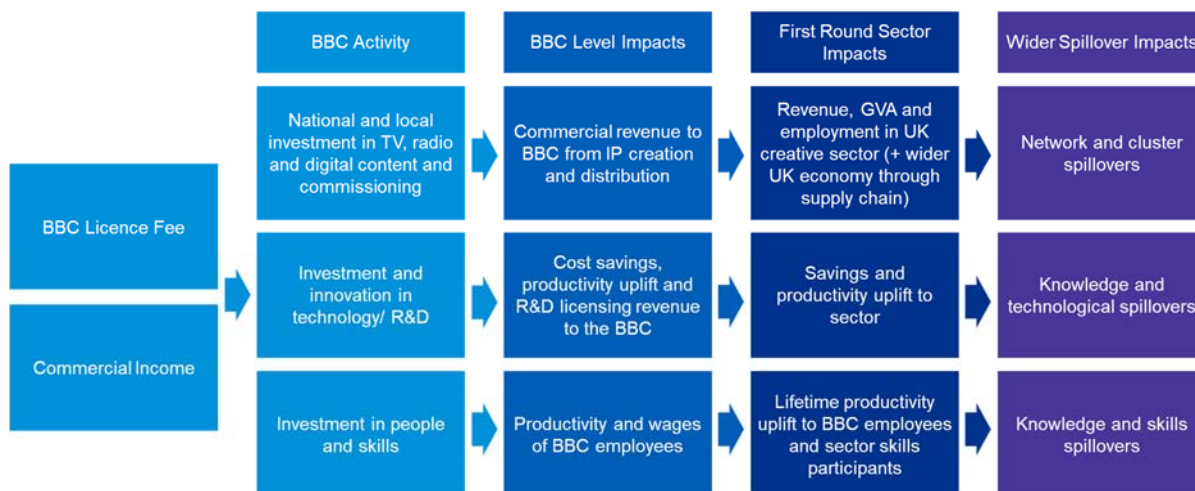
Through this we identified four main routes through which the BBC generates wider impacts and economic spillover effects:

- **Local investment and presence** – this relates to the impact the BBC has across the UK through its activity and investment in the UK's nations and regions – supporting economic growth and contributing toward reducing regional disparities. In addition to the GVA impacts considered in Section 3.2, we look at the employment supported in the local areas, as well as **network and cluster spillovers** from BBC investment, activity and partnerships.
- **Intellectual Property (IP) creation through commissioning content** – this relates to the commercial revenues generated for the BBC (captured in our GVA calculation) and **the additional value generated for UK independent production companies** and wider economy in the form of revenue, GVA and employment through the generation of new ideas, concepts and IP in programme development and commissioning.
- **Skills development and training** – this relates to the impact the BBC's investment in its people, through investment in skills and training, has had on the **productivity and wages** of training participants as well as the **knowledge spillovers for those in the wider creative sector**. This includes through internal BBC training and partnerships with other providers.

- **Research and Development (R&D)** – this relates to the extensive investment the BBC makes into R&D in digital technologies, and the **knowledge and technological spillovers** this has into the digital sector and wider UK economy.

These mechanisms through which the BBC’s activity in these areas translates into economic impacts is shown in Figure 11 below:

Figure 11: Illustration of flow of BBC impacts



Source: KPMG analysis

The spillover impacts generated through these routes are important as it is through these that the BBC generates wider economic benefits to the creative sector across the UK. The nature of these spillover impacts is explained further in Box 1.

Box 1: Economic spillovers

Economic Spillovers

‘Spillover effects (sometimes called externalities) are impacts of economic activity that affect economic actors (society, businesses, and government) that are not directly undertaking the activity.’¹⁰¹ The nature of spillovers are more easily described looking at specific examples:

Network and cluster spillovers can be generated when there is a concentration of competing, collaborating and interdependent companies and institutions which are connected by a system of market and non-market links – generating a cluster.¹⁰² The co-location of businesses in the same sector can generate network and cluster effects through the competitive environment, knowledge sharing collaboration, innovation, and shared benefit of a specialist supply chain – generating benefits in the form of higher productivity compared to if they were located elsewhere.¹⁰³

Knowledge and technological spillovers refer to the voluntary exchange or involuntary leakage of knowledge and technical information between individuals and/or companies. These spillovers can lead to adoption of already developed technologies as well as the transfer of knowledge to aid new innovations and technological improvements. Such technological improvements can lead to higher productivity among firms accessing this technology and knowledge, as well as potential broader benefits in the form of improved health and wellbeing. In of itself leading to increased productivity at the economy level.¹⁰⁴¹⁰⁵

¹⁰¹ See: <https://www.bls.gov/opub/mlr/2015/beyond-bls/how-knowledge-spillover-contributes-to-economic-growth-in-metro-areas.htm>

¹⁰² UK Department of Trade and Industry (1998) DTI White Paper.

¹⁰³ Porter, M. (1998) Clusters and the New Economics of Competition. Harvard Business Review November-December 1998.

¹⁰⁴ OECD, 2001. *R&D and productivity growth: panel data analysis of 16 OECD countries. OECD Economic Studies.*

¹⁰⁵ Royal Society, 2019. *Investing in UK R&D.*

Human capital spillovers (knowledge and skills spillovers) refer to the transfer of skills and knowledge (i.e. increased human capital) between individuals or organisations leading to productivity gains. This can happen through labour mobility – that is employees moving jobs between organisations and applying their skills and knowledge to their new role – or through agglomeration effects – that is the transfer of skills and knowledge as a result of working alongside and learning from co-workers.¹⁰⁶ For example, there is evidence that working alongside highly educated workers increases the productivity of a worker.¹⁰⁷

Positive spillovers outside of an organisation from its investment activity (be that in skills, R&D or other activity) can lead to underinvestment from a societal point of view. This is because if only accounting for the private benefits, or returns, from the investment the socially optimal level of investment will be higher than the investment the organisation chooses for itself.¹⁰⁸

The examples and case studies we include under the four main categories of impact (presented in the sections below) do not attempt to be representative of all impacts generated by the BBC or cover the full breadth of the BBC's activity and impacts. They instead aim to provide illustrations of the type and scale of some of the impacts the BBC generates in the wider economy, in order to aid understanding of the ways in which it delivers impact beyond the core GVA impacts reported in Section 3.

4.2 Local investment, presence and clustering

The BBC generates economic impacts throughout the UK across all its activities and through local partnerships. This has been strengthened by its growing presence outside of London which has helped to grow its local impact.

The effort made by the BBC to expand activity outside of London reflects its fourth public purpose “to reflect, represent and serve the diverse communities of all of the United Kingdom’s nations and regions and, in doing so, support the creative economy across the UK”.¹⁰⁹

This BBC's impact across the nations and regions of the UK is generated in through:

- spending with suppliers in the local area and through employing local talent;
- commissioning of programmes at the local level, particularly with independent producers, which supports greater economic activity in the creative sector at the local level and generates revenues for the sector through IP creation (as discussed in Section 4.3).
- generating further local spillovers through its role in creating local specialist clusters of creative and digital talent which have amplified the BBC's impact. As we discuss in Section 4.2.2, clusters of this kind can generate productivity uplifts for the organisations involved, supporting the growth of the sector.

The mechanism through which the BBC's local investment and presence translates into economic impacts is these benefits arise is shown in Figure 12 below.

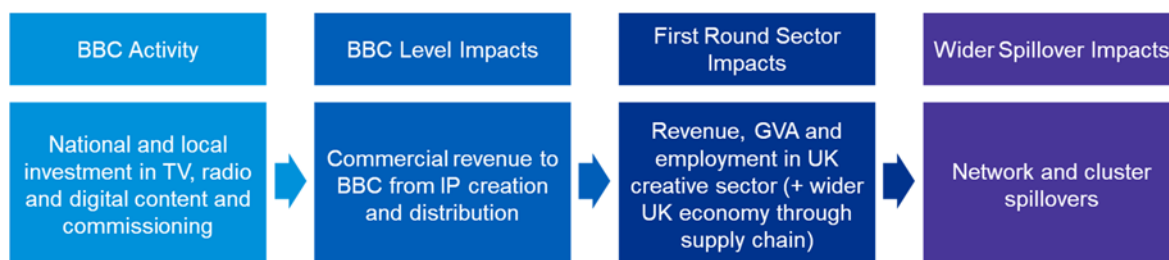
¹⁰⁶ BIS, 2012. [BIS research Paper no.74: the impact of investment in intangible assets on productivity spillovers](#)

¹⁰⁷ Moretti, E. (2004). Workers' Education, Spillovers, and Productivity: Evidence from Plant-Level Production Functions. *The American Economic Review*, 94(3), 656-690. Retrieved January 21, 2021, from <http://www.jstor.org/stable/3592947>

¹⁰⁸ BIS, 2012. [BIS research Paper no.74: the impact of investment in intangible assets on productivity spillovers](#)

¹⁰⁹ See: <https://www.bbc.com/aboutthebbc/governance/mission>

Figure 12: Illustration of flow of BBC impacts relating to its local investment and presence



Source: KPMG analysis

In the remainder of this section we first summarise the BBC’s activity outside London, including employment and expenditure.

We then look at how the BBC’s presence outside of London can support economic growth across the UK, both through direct and indirect employment, and through positive spillover to the creative and digital sector through cluster effects.

We then look at two case studies which evidence how the BBC has supported local creative and digital clusters in the UK, specifically:

- the digital cluster that has developed at MediaCityUK in Salford; and
- the creative cluster that has built up in Cardiff and South Wales.

4.2.1 Overview of BBC activity outside of London

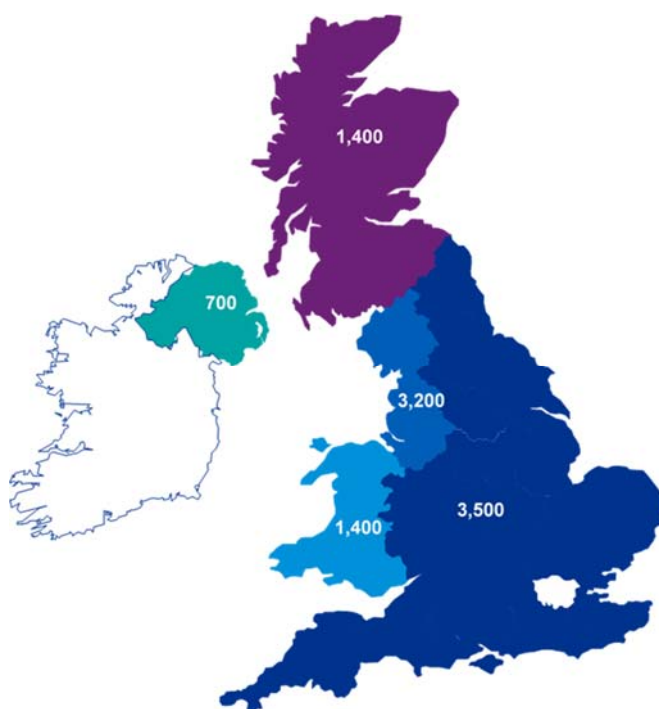
Employment

Based on data provided by the BBC, **as at 31st March 2020 the BBC directly employed 20,121 FTE employees across the UK** and an additional 174 FTEs overseas.¹¹⁰ In addition, in FY 2019/20 the BBC also employed a further 15,153 freelance, casual and agency workers (equating to 2,269 FTEs).

A large proportion of these UK employees were based outside of the BBC’s London headquarters, reflecting the BBC’s growing presence in the UK’s nations and English regions beyond London. **In 2020, over half of the BBC’s spending and over half its staff were based out of London.**

¹¹⁰ This figure includes ‘Overseas’, ‘Based at home’, ‘No settled base’ FTEs.

Figure 13: BBC direct employment outside of London, FY 2019/20



Source: BBC HR Data FY 2019/20

As shown in Figure 13, the BBC's largest presence outside of London is in the North West of England with around 3,200 FTE employees in FY 2019/20, largely concentrated at the BBC's base at MediaCityUK in Salford. Scotland and Wales had broadly equal shares of employment, each with around 1,400 FTE employees, whilst the rest of the BBC's employment was distributed across the rest of England (around 3,500 FTEs spread across various English regions) and Northern Ireland, where approximately 700 FTEs were employed.

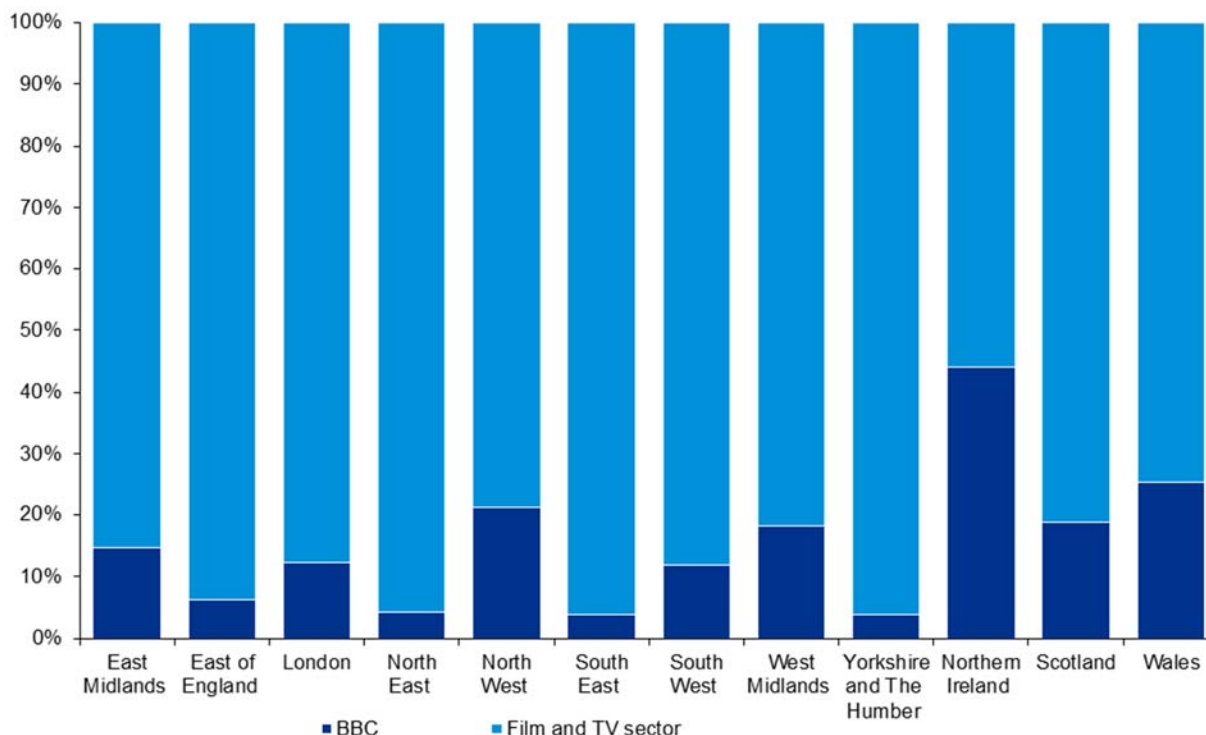
The BBC's presence across the UK means that its employment makes a significant contribution to 'Film, TV, video, radio and music'¹¹¹ sub-sector in the UK's nations and regions. Direct employment of the BBC (which generates the direct GVA contributions explained in Section 3.2) makes up about 13% of employment in the 'Film, TV, video, radio and music'¹¹² sub-sector in the UK. Its relative contribution is greatest in Northern Ireland where it makes up 44% of employment in the sub-sector, followed by Wales, the North West of England, and Scotland where the BBC contributed 25%, 21% and 20% of employment in the sub-sector respectively.¹¹³

¹¹¹ SIC codes 59 – 'Motion picture, video and television programme production, sound recording and music publishing activities' and 60 – 'Programming and broadcasting activities, including television and radio broadcasting'.

¹¹² SIC codes 59 – 'Motion picture, video and television programme production, sound recording and music publishing activities' and 60 – 'Programming and broadcasting activities, including television and radio broadcasting'.

¹¹³ BBC Employment data received in December 2020, and ONS Business Register and Employment Survey (BRES) open access data, See: <https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=189>

Figure 14: BBC direct employment as a proportion of total film and TV sector¹¹⁴ employment, 2019



Source: KPMG analysis of BBC HR data, ONS

The BBC’s employment contribution to local economies is then enhanced through production spend and broader supplier spend which generates indirect employment (linked to the indirect GVA analysed in Section 3.2.1).

In terms of the BBC’s overall activity and spend, we estimate that in 2019/20 the BBC supported an additional 30,400 indirect FTEs in the UK as a result of the external expenditure required to deliver the BBC activities. This includes employment generated by the additional activity at the Tier 1 suppliers involved in providing inputs to the BBC (such as third-party content that was commissioned by the BBC), as well as through their wider UK supply chains.

Similar to the GVA impact detailed in Section 3.2.1, the ‘Film, TV, video, radio and music’ sub-sector accounts for a large share (30%) of indirect FTEs supported by the BBC, while including the wider creative and digital sector means these sectors overall account for over half (51%) of indirect FTEs supported by the BBC.

An additional 3,100 induced FTEs were also supported in the UK economy in FY 2019/20 as a result of the BBC’s direct and indirect employees spending the wages associated with their direct or indirect work for the BBC.

In total, we estimate that in FY 2019/20 the BBC supported 53,600 FTE jobs in the UK. For every 1 job directly created by the BBC, a further 1.7 jobs were created in the wider economy.

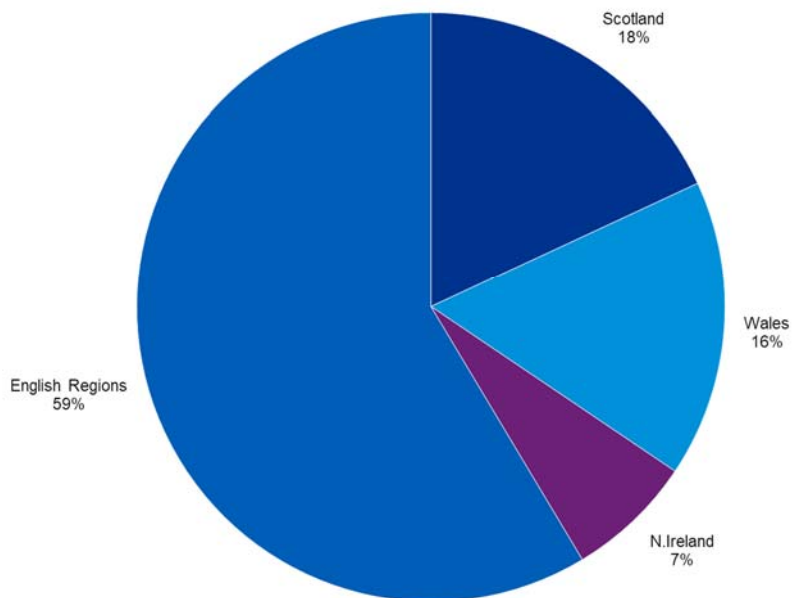
¹¹⁴ SIC codes 59 – ‘Motion picture, video and television programme production, sound recording and music publishing activities’ and 60 – ‘Programming and broadcasting activities, including television and radio broadcasting’.

Production spend

Within the BBC's total supplier expenditure, spend with third-parties on production plays an important role in supporting UK TV production, particularly independent producers, outside of London. There has been a significant shift in this activity over the last 10 years, with the proportion of network TV programmes produced¹¹⁵ in Scotland, Wales and Northern Ireland doubling in a decade¹¹⁶, to 51% in 2019.

Over the period FY 2016/17 to FY 2019/20, over £1.6bn of the BBC's TV production spend, was with firms based outside of London - averaging over £400m per annum. The geographic distribution of this across the UK's nations (excluding London) is shown in Figure 15 below. As can be seen, the majority of this was spent across the English regions out of London, with 18% spent on Scotland based productions, 16% spent on Wales based productions and 7% spent on Northern Ireland based productions.¹¹⁷

Figure 15: BBC network TV production spend by substantive base¹¹⁸ outside of London



Source: BBC data

In addition to the TV production spend, **a further £41m was spent on network radio production outside of London in FY 2019/20.**

We have analysed key characteristics of the BBC's TV production spend over recent years:

- Of the total BBC network TV production spend outside of London, just over 50% was with indies, supporting a total of 128 indies across 266 titles in 2019.
- Most notably, in Scotland and Northern Ireland 72% and 83% respectively of BBC network TV production spend went to indies, whilst in Wales the proportion going to indies was 53%. This

¹¹⁵ Based on the [Ofcom Regional Production Guidance criteria](#).

¹¹⁶ BBC, 2020. [BBC Group Annual Report and Accounts 2019/20](#).

¹¹⁷ Sourced from the BBC

¹¹⁸ Based on the [Ofcom Regional Production Guidance criteria](#).

supported 29 different indies in Scotland, 17 in Northern Ireland and 20 in Wales in 2019 alone.¹¹⁹

- Network spend on indies outside of London has increased by a third since 2016, most significantly:
 - spend on indies in Wales has increased more than threefold between 2016 and 2019 to £32.8m in 2019, and now makes up 50% of the BBC's total production spend.
 - Northern Ireland's share of network TV production spend that goes to indies has increase by 50% since over the period.

Furthermore, in 2019, the BBC's production spend leveraged an additional £1.2bn of third-party production spend, of which 60% was outside of London.

This production spend provides support for the creative and digital sector across the UK's nations and regions, supporting employment and talent development for cast, crew and extras. Beyond this, it also supports jobs in the regional and national economy through the purchasing of goods and services and from employees spending.

This support for the independent production sector is important for growth and sustainability of the UK creative sector as a whole helping to:^{120,121}

- promote cultural diversity and innovation in new ideas;
- stimulate the growth of small and medium enterprises, thus nurturing and growing new British talent and creativity, leading to greater growth; and
- promote competition and reduce buyer concentration and the degree of vertical integration in the UK programme supply market, which in turn promotes greater efficiency, productivity and creativity by reducing in-house production.

By commissioning programmes outside of London, the BBC not only supports growth of the creative sector but also supports the wider economy in these areas, as demonstrated through the case study example set out in Box 2.

Box 2: Line of Duty in Northern Ireland

Line of Duty in Northern Ireland

Line of Duty is a BBC police corruption drama, first aired on BBC Two in 2012. The first series was filmed in Birmingham. Its success led to the BBC commissioning a second series which saw production move to Northern Ireland in 2013, where it has remained for subsequent seasons, including for the making of Season 6 which is due to be aired in 2021.¹²²

Over the last few seasons of Line of Duty, the scale of production has grown. Between Season 4 (which aired in March 2017) and Season 6, the production budget for Line of Duty has doubled from [REDACTED] to [REDACTED].

Increasingly the production has drawn on local talent and resources, thereby retaining a greater share of production spend in Northern Ireland and supporting the local creative sector and wider economy. For example:

- Between Season 4 to 6 there has been an increase in full time crew employed - from 88 to 109 - with over 90% of the off-screen talent in each series from Northern Ireland.

¹¹⁹ Sourced from the BBC

¹²⁰ Ofcom, 2020. [Small Screen: Big Debate – a five-year review of Public Service Broadcasting \(2014-18\)](#)

¹²¹ See: https://www.ofcom.org.uk/data/assets/pdf_file/0027/79551/o_o_annex_trends.pdf

¹²² See: <https://www.radiotimes.com/tv/drama/2020-08-03/line-of-duty-series-one-filmed>

- For Season 6 over 70% of the total production budget was spent in Northern Ireland, providing a sizeable boost to the local economy.
- To build and maintain the pipeline of talent and grow local capacity, the BBC has invested in the skills and training of local production crew, spending around £50,000 per annum on trainees ranging from 'Costume' and 'Make Up' trainees to 'Camera' and 'Graphics' trainees.

Furthermore, the Line of Duty production supports both the film and TV sector in the area and the local economy more broadly through other local spend. This includes spend in the film and TV sector including location fees, equipment hire and post-production, as well as wider spend on food, travel and accommodation for crews.

Through this ongoing spend in the local area the production boosts the local economy and builds the capacity of the film and TV in Northern Ireland, which could help to attract other productions to the area.

Partnerships

The BBC further supports the growth of the creative sector outside of London and therefore the economic contribution of the sector, through local partnerships. Some examples of these are included below (see Sections 4.2.4 and 4.5.2 for further details on the initiatives).

- Partnerships with the National Film and Television School in Scotland and Wales, to support emerging talent and strengthen skills development in the creative sector within the region.
- Partnerships with Screen Agencies in Wales, Scotland and Northern Ireland, including supporting network development, local production and representation, and developing up and coming talent in order to support the sustainability of the sector in the nations.
- Partnership with the National Library of Wales, through which the BBC supports knowledge sharing and learning by providing access to digitalised content.

4.2.2 Local investment and clustering effects

A key way in which the BBC's spending and investment in the UK's nations, regions and local areas generates wider economic impacts, beyond those discussed above, is through the economic spillover effects this generates, particularly network and cluster effects. These are particularly important as they magnify the economic impact of the BBC's spend and wider activities and, as a result, have a greater positive effect on the performance of local economies.

Recent research has shown that the UK has some of the highest levels of regional inequality among OECD countries¹²³ with London noticeably ahead of all other UK nations and regions, particularly Wales, the North-East of England and Northern Ireland, in terms of GDP per head.¹²⁴ A similar gap is also present across earnings, education and skills and life expectancy.¹²⁵

Drivers of growth such as capital investment, job creation, skills investment and innovation outside of London can all contribute to supporting economic growth across the UK and reducing regional disparities.

Furthermore, where the right conditions prevail, movement of large operations to an area can create a cluster effect, which can act to magnify the economic impact in an area.

¹²³ McCann, 2019. Perceptions of regional inequality and the geography of discontent: insights from the UK. Regional Studies. Vol 54. See: <https://www.tandfonline.com/doi/epub/10.1080/00343404.2019.1619928?needAccess=true>

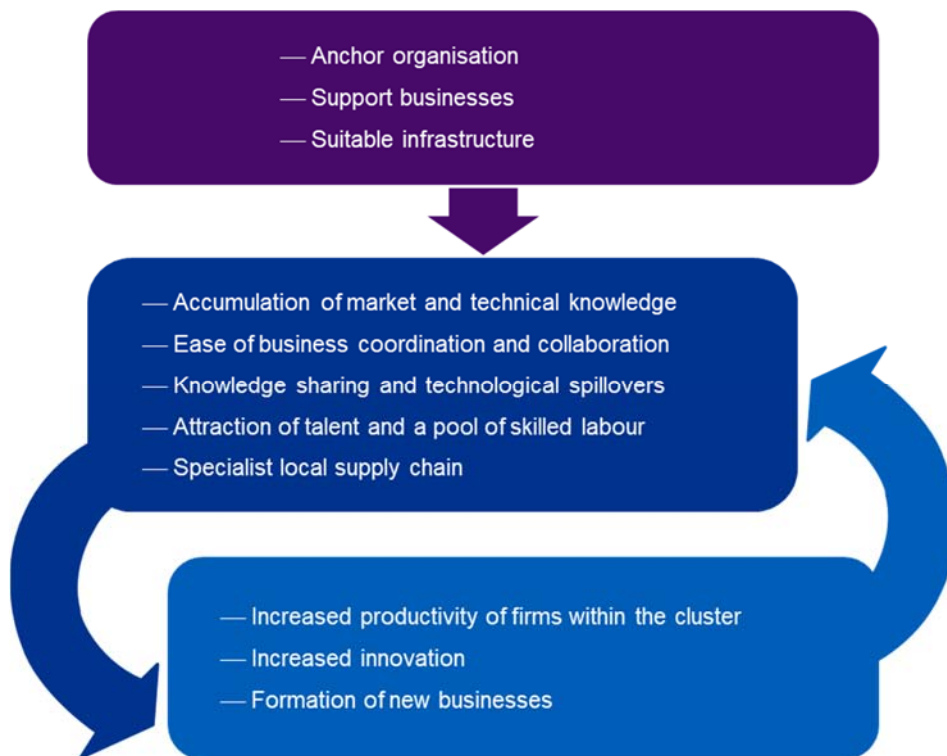
¹²⁴ KPMG, 2020. [UK regions: a framework for growth](#)

¹²⁵ KPMG, 2020. [UK regions: a framework for growth](#)

A cluster can be defined as the concentration of competing, collaborating and interdependent companies and institutions which are connected by a system of market and non-market links.¹²⁶ This often features organisations from the same industry¹²⁷ but can also include other firms in the supply chain, customers and governmental, academic and other institutions who provide support through training, education, information, research and skills.¹²⁸

The core of a successful cluster usually comprises large anchor organisations which play a catalytic role in cluster creation by being a source of talent for start-ups and creating demand for a specialist supply chain. The co-location of businesses in the same sector, if supported by suitable infrastructure, and availability of skilled labour, can benefit from a competitive environment and higher productivity compared to if they were located elsewhere.¹²⁹ This attracts new businesses to the cluster, thus perpetuating the growth of the cluster. The routes through which this happens are shown in Figure 16 below.

Figure 16: Causes and impacts of clusters



Source: Porter, M. (1998) *Clusters and the New Economics of Competition*. Harvard Business Review November-December 1998

As discussed in the following section, there is evidence of this type of clustering effect happening as a result of BBC's presence and activity outside of London, most notably in the digital sector in Salford and the production sector in South Wales.

¹²⁶ UK Department of Trade and Industry (1998). UK Competitiveness White Paper - Our competitive future: Building the knowledge driven economy

¹²⁷ See: <https://www.economist.com/news/2009/08/24/clustering>

¹²⁸ Porter, M. (1998) *Clusters and the New Economics of Competition*. Harvard Business Review November-December 1998.

¹²⁹ Porter, M. (1998) *Clusters and the New Economics of Competition*. Harvard Business Review November-December 1998.

4.2.3 Development of a digital cluster in Salford

The BBC's move to Salford

It is approaching 10 years since the BBC moved into MediaCityUK in Salford.

Construction of MediaCityUK at Salford Quays was completed over a period of 4 years, from 2007 to 2011, and involved initial investment of £650m into the site.¹³⁰

Following completion, in 2011 the BBC moved five of its digital products and largest brands, including BBC Sport, Children's, Radio 5 live, the BBC Philharmonic, BBC Learning and some of BBC's News, to MediaCityUK. The initial move involved 2,100 BBC staff locating at the BBC Salford site, with a third coming from London, a third from Manchester and a third being new hires, making BBC Salford the BBC's second largest site in terms of staff.

Since then, the BBC's presence in Salford has grown further, and with it, the creative and digital cluster that has formed around it.

In 2015, KPMG reported that there were over 2,500 staff in FTE terms at BBC Salford. This, combined with the further 116 FTE employees in other sites across the North West, accounted for approximately 80% of the BBC's employment in the North of England and 12% of the BBC's total employment in the UK, and made up 2% of Salford's total employment.¹³¹

The latest BBC data for FY 2019/20 shows that the BBC now supports 3,048 direct FTE jobs in Salford. This includes the additional BBC roles in Design and Engineering (D&E) which are now predominantly in Salford following the BBC's migration of its digital products there. There are now 982 BBC D&E roles in Salford, making up 30% of all BBC D&E roles across the UK.

In addition to this direct employment, our analysis indicates that the BBC supports approximately 159 indirect FTEs in Salford through supply chain expenditure.

One can look at the extent to which a sectoral cluster has formed using a location quotient ("LQ"). This is a summary statistic that can be used to measure the level of employment of a particular sector within a particular spatial area (such as a city or region) compared to the economy as a whole. A value of >1 indicates a greater concentration of employment in the sector compared to the national average. In our analysis we have calculated the LQ for Salford excluding BBC employment, in order to understand the strength of the cluster not accounted for by the BBC's own employment (i.e. the extent to which a wider cluster has formed around them).

Our analysis identified a LQ, excluding BBC employees, for the digital sector in Salford of 1.48 and for the creative sector of 1.12 (based on 2019 data). This compares to 0.92 and 0.63 respectively in 2010. **This suggests that there is now a strong specialism in the digital sector in Salford and an above average specialism in the creative sector among non-BBC firms in the area, providing evidence of the formation and growth of a creative and digital cluster around the BBC since the BBC's move.**

The BBC's role in starting the creation of a media and creative and digital cluster in Salford

Since the BBC's move to MediaCityUK in 2011, many large organisations have also relocated key operations to the area. In some cases, there is evidence to suggest a direct link to the BBC's move to the area, examples include:

¹³⁰ See: <https://www.mediacityuk.co.uk/newsroom/mediacityuk-marks-10-years-since-construction-started/>

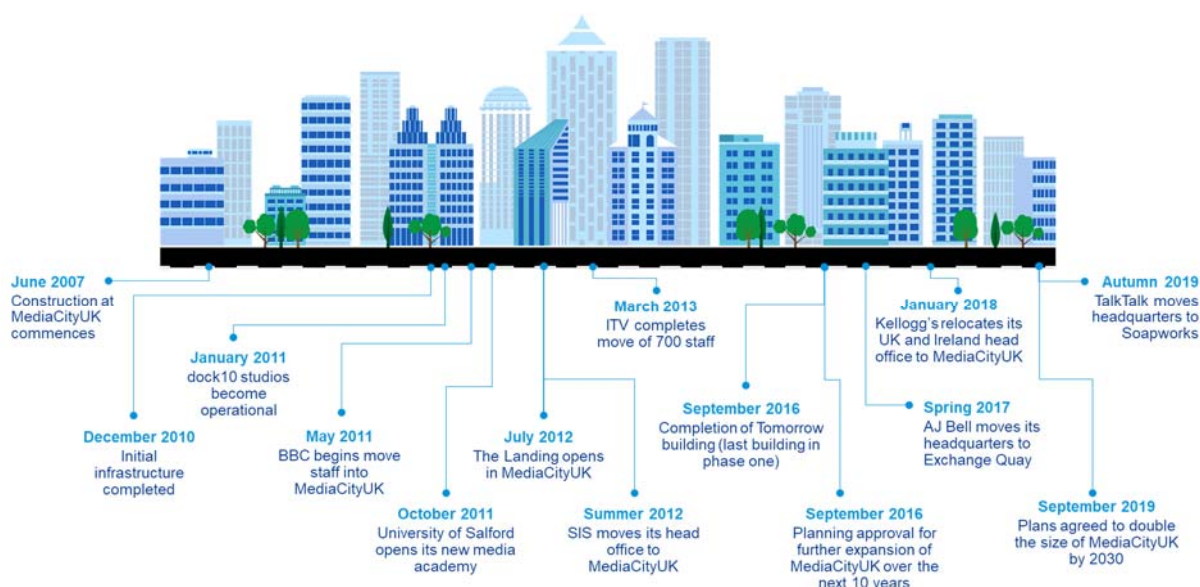
¹³¹ KPMG, 2015. [The role of the BBC in supporting economic growth.](#)

- **SIS**, the television broadcasting firm, moved its head office to MediaCityUK in 2012, with a plan to broaden its range of services to include more programme production. The move relocated 30 jobs from London and create 70 new jobs in Salford. SIS Chief Executive David Holdgate stated that part of the reason for the move to Salford was to “*build a capability to do more production work and win business from the BBC, ITV and independent production companies*”.¹³²
- **ITV**, which moved 700 staff to Salford in 2013¹³³ – the decision to make the move was made in 2010 following the BBC’s commitment to Salford.¹³⁴
- **Ericsson**, which established a new broadcast and media services facility in MediaCityUK in 2016/17, in order to delivery playout and media management services for clients, including the BBC.¹³⁵

Other large organisations who have moved to Salford Quays following its growth include:

- **AJ Bell**, one of the UK’s largest providers of online investment platforms and stockbroker services, which moved its headquarters to Salford Quays in 2017, bringing 450 staff to the site. Employment at the site has since almost doubled to 856.¹³⁶
- **Kelloggs**, which moved its UK and Ireland headquarters, involving 420 staff, to MediaCityUK in 2018.¹³⁷
- **TalkTalk**, which moved its headquarters to Salford in 2019 and now employs over 1,800 people in Salford Quays.¹³⁸

Figure 17: Timeline of activity at MediaCityUK



Source: MediaCityUK and BBC

¹³² See: <https://www.manchestereveningnews.co.uk/business/media/sis-to-move-hq-to-mediacityuk-1233864>

¹³³ See: <https://www.mediacityuk.co.uk/newsroom/mediacityuk-marks-10-years-since-construction-started/>

¹³⁴ See: <https://www.theguardian.com/media/2010/dec/16/coronation-street-mediacity-salford>

¹³⁵ See: <https://www.manchestereveningnews.co.uk/business/media/mediacityuk-move-global-telecoms-giant-11279960>

¹³⁶ Sourced from Salford City Council

¹³⁷ Sourced from the BBC

¹³⁸ See: <https://www.talktalkgroup.com/article/talktalkgroup/2019/Blog--Committing-to-the-Northern-Powerhouse>

BBC Salford and the growth of MediaCityUK as a media centre has also attracted smaller organisations, suppliers and start-ups to the region (referred to as support businesses in Figure 17 above) by creating a marketplace for innovation that actively helps them grow.

Additionally, in 2011, the University of Salford opened a brand-new digital learning, teaching and research space at MediaCityUK, aimed at encouraging “*creative collaboration between students, specialist technicians, academics, and the media production industry.*”¹³⁹

Wider initiatives have also emerged to support such creative and digital collaboration, for example, the Landing, a co-working and proto-typing space that opened at MediaCityUK in 2012, provides digital SMEs and micro-business a flexible workplace, allowing them to benefit from the business community based at MediaCityUK.¹⁴⁰ More recently in 2017 Tomorrow Building, a new creative and tech flexible workspace, opened at MediaCityUK.

Dan Storer from Manchester’s Inward Investment Agency said, “*The BBC move to Salford has had a catalytic impact on the Manchester creative, digital and tech industry, further underpinning what has become a world-class industry cluster.*”¹⁴¹

The impact of the cluster

According to ONS data, the number of digital or creative businesses¹⁴² in Salford has grown by 70% since 2010, from 565 to 955. This has been driven by growth in “Computer programming, consultancy and related activities”, in which the number of companies has grown by almost 150% from 155 to 380 and ‘Film, TV, video, radio and music’ in which the number of companies has more than tripled since 2010, from 35 to 110.

Linked to the increase in the number of companies, employment in Salford within these sectors has also seen significant growth. Between 2010 and 2019 the number of jobs in the creative or digital sector businesses in Salford grew by 142% from 6,310 in 2010 to 15,275 in 2019, driven by job growth at MediaCityUK and Salford Quays¹⁴³ which contributed 8,000 of these jobs over that period.¹⁴⁴

Of this, BBC contributed 3,048 FTE jobs in FY 2019/20, meaning the BBC accounted for 34% of job growth in Salford and 38% of job growth at MediaCityUK and Salford Quays, with the remaining jobs representing growth among other employers.

Again, this has been driven by growth in ‘Film, TV, video, radio and music’ in which employment has grown 22 fold, from 260 employees in 2010 to almost 6,000 in 2019, of which 3,048 were created by the BBC, and “Computer programming, consultancy and related activities”, which has seen the number of jobs more than double from around 800 in 2010 to 1,850 in 2019.

¹³⁹ See: <https://www.salford.ac.uk/our-facilities/mediacityuk-campus>

¹⁴⁰ ResPublica, 2017. Escape Velocity: Growing Salford’s Digital & Creative Economy

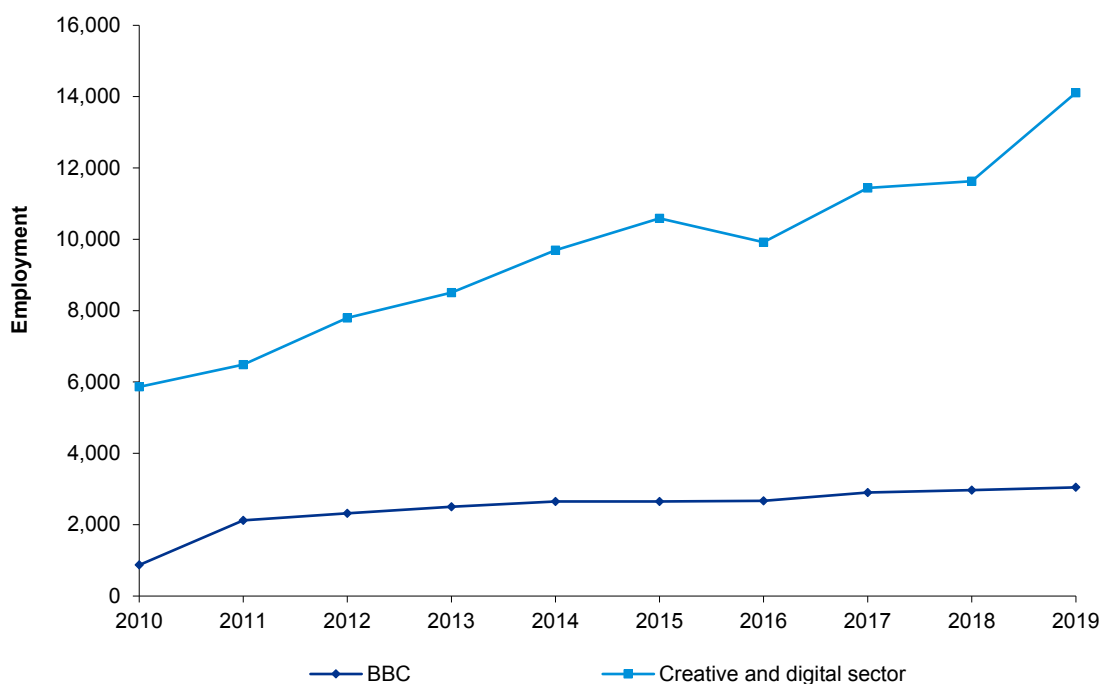
¹⁴¹ Sourced from the BBC

¹⁴² Based on DCMS definitions of the Digital Sector and Creative Industries, see: <https://www.gov.uk/government/publications/dcms-sectors-economic-estimates-methodology>

¹⁴³ The level of geography used is ‘Middle layer super output area’ (MSOA): E02001184 : Salford 028 which is the most accurate statistical geography to apply to the area referred as ‘MediaCityUK and the Quays’. Middle Layer Super Output Areas (MSOA) are a geographic hierarchy designed to improve the reporting of small area statistics in England and Wales.

¹⁴⁴ ONS, Business Register and Employment Survey, 2019

Figure 18: Salford FTE employment and BBC FTE employment in the creative and digital sector 2010 - 2019



Source: ONS NOMIS

Given the higher productivity associated with firms and employees in the creative and digital sector – in 2019, the average GVA per employee for the creative and digital sector was £95,826¹⁴⁵ compared to £57,344 for the UK GVA per employee¹⁴⁶ – the growth in jobs in these sectors supports the wider economic value of activity and output in the Salford area and wider region.

In terms of attribution of the impact of the cluster to the BBC, recent ongoing research by an academic team at the Centre for Economic Performance at LSE has found that by 2017, each job created by the BBC added just over 1 additional job in the creative sector in Salford, relative to an estimated counterfactual.¹⁴⁷

However, this does not consider potential displacement of employment from other areas, particularly from Greater Manchester and across the North West. A 2017 report by the Centre for Cities¹⁴⁸ identified that, whilst there had been undeniable growth at MediaCityUK, in the first five years after the BBC’s move much of this growth had reflected the relocation of businesses from other areas, particularly from elsewhere in Manchester.¹⁴⁹ We note that this analysis is based on data up until 2016 and therefore does not take into account more recent growth of MediaCityUK and Salford Quays. Furthermore, it does not consider the employment impact of self-employed workers, which make up for 35% of the creative sector, meaning the impacts could be underestimated. This issue is being further examined as part of the ongoing work by the Centre for Economic Performance.

¹⁴⁵ We note that the figure is for GVA per employee. Sourced from: <https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/datasets/uknonfinancialbusinesseseconomyannualbusinesssurveysectors>. The data is from 2018 but has been estimated for 2019 based on ONS CPI times series. Available at <https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/l522/mm23>

¹⁴⁶ We note that the figure is for GVA per employee. Sourced from: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/datasets/subregionalproductivitylabourproductivityqvaperho> [unworkedandqvaperfilledjobindicesbyuknuts2andnuts3subregions](https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/datasets/subregionalproductivitylabourproductivityqvaperho). Data is for 2018 but has been estimated for 2019 based on ONS CPI time series. Available at: <https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/l522/mm23>

¹⁴⁷ The analysis is not yet published – this evidence was provided as part of an interview with the academic team from LSE.

¹⁴⁸ Centre for Cities, 2017. [Should we move public sector jobs out of London?](#)

¹⁴⁹ Prof. Max Nathan et al, Unpublished report assessing the impact of the BBC move to Salford, 2020.

Even in the presence of some displacement from other areas, the economic benefits of a cluster can be strong, with the sum of the impact generated by organisations being greater than their individual impacts would be outside of the cluster. As noted previously in this section, by firms clustering together in a given geography, organisations not only increase employment within that geography, but generate cluster spillovers in the form of productivity gains and increased innovation among organisations within the cluster, generating wider economic benefits.

Wider regeneration

Evidence also suggests that it is not just the creative and digital sector that has benefitted from the growth of the cluster at Salford Quays.

Sean Anstee, Greater Manchester Combined Authority's lead for employment and skills, and leader of Trafford Council, said, "*The BBC's move to Salford has benefited not just Salford, but Greater Manchester as a whole and indeed the entire North West. As well as the direct benefits of the thousands of people that are now employed across Greater Manchester as a result of the BBC's relocation, the move North has been instrumental in sparking a creative and digital revolution in the city region.*"¹⁵⁰

The regeneration of the Salford Quays, Media City and the surrounding area and continuing inward investment means there has been rapid overall economic output and employment growth within the area. Between 2010 and 2019 there was growth of 23,000 jobs in Salford.¹⁵¹ The level of economic activity generated in Salford (measured by GVA) also grew - by £2.5bn (49%)¹⁵² between 2010 and 2018 compared with GVA growth of £17.5bn (33%) in Greater Manchester and £466.2bn (32.3%) nationally.¹⁵³

There is also evidence of more people being attracted to work and live in the area from the growing job market that has developed. Between the years 2010 and 2020, Salford's population grew by 26,900 (an 11.6% increase), compared with 6.8% growth in Greater Manchester and 7.1% growth nationally.¹⁵⁴ This also helps to further stimulate regeneration on the area – there has been increased growth of residential development in the region – with housing completions reaching a 15 year high of over 3,330 in FY 2018/19.¹⁵⁵

Over the next 10 years, MediaCityUK is set to double in size with a £1bn investment. Developer Chapman Taylor, has begun Phase 2 of the construction of ten development plots, totalling 210,000m², which is intended to provide 1,800 resident units and 50,000m² of commercial space.¹⁵⁶ The growing investment in Salford, in particular MediaCityUK and the Quays, is likely to reflect the success of the creative cluster that has grown in the city.

4.2.4 Development of a creative cluster in South Wales

The BBC's out of London presence is not only in Salford, however. As part of the analysis of the BBC's role in supporting the creative economy through network and cluster spillover effects, we have also analysed evidence linked to the BBC's activity in Wales to understand if similar positive economic spillover effects have arisen there.

BBC Cymru Wales was established in 1964 and has grown its presence in Wales over the period since. As we set out in the subsections below, it primarily generating impacts in Wales through activity

¹⁵⁰ Sourced from the BBC

¹⁵¹ ONS, Business Register and Employment Survey, 2019

¹⁵² ONS, 2019. [Regional Gross Value Added, 2019](#)

¹⁵³ ONS, 2019. [Regional gross value added \(balanced\) by industry: all NUTS level](#)

¹⁵⁴ Information provided by Salford City Council from the Oxford Economics, Greater Manchester Forecasting Model, 2019.

¹⁵⁵ Salford City Council. Residential development monitoring. See: <https://www.salford.gov.uk/planning-building-and-regeneration/planning-policies/research-and-monitoring/monitoring/residential-development-monitoring/>

¹⁵⁶ See: <https://www.chapmantaylor.com/projects/mediacityuk-phase-2>

at the BBC's Central Square headquarters, its production studios – Roath Lock – in Cardiff Bay, and through numerous partnerships across Wales.

As at 2019/20 our analysis indicates that the BBC employed 1,400 FTEs in Wales and through its activities in Wales the BBC generated estimated direct GVA of £130.3m in the Welsh economy. It also supported GVA and employment through its supply chain expenditure, of which 2% was spent with Welsh suppliers, and through wage spending by employees in the economy.

Overall, we estimate that the BBC's activity in FY 2019/20 contributed £211.3m of total GVA and supported 2,246 FTEs in the Welsh economy.

The activity of the BBC in Wales, and its support for the wider production sector, suggests a creative cluster could be starting to form in South Wales.

As noted in our analysis of the BBC's move to Salford, one can look at the extent to which a sectoral cluster has formed using a location quotient ("LQ").

Our analysis identified a LQ for the creative sector in Cardiff of 0.76 (based on 2019 data). This suggests that **although there is not yet evidence of a stronger creative specialty in Cardiff compared to the UK economy, as we set out in this section, there is evidence this may be starting to form given the growing activity and the initiatives in place.**

Roath Lock Studios

Recent expansion of BBC production in Wales started in the late 2000s. In 2008, the BBC made a commitment to double TV production in Wales¹⁵⁷, with new BBC productions such as Doctor Who, Torchwood, Upstairs' Downstairs and Casualty; and independent commissions including Life on Mars, Ashes to Ashes, Being Human and Sherlock being produced there.

As part of this commitment to increase production in Wales, in 2012 the BBC opened Roath Lock, a new studio centre in Cardiff Bay, which provides a permanent home for three flagship BBC dramas – Casualty, Pobol y Cwm and Doctor Who – as well as providing capacity for other new productions in Wales. According to BBC data, since 2008 network production in Wales¹⁵⁸ (excluding new and non-network programmes) has grown from £31.6m to £66.6m in 2019.

Box 2 on p.34 (Line of Duty in Northern Ireland) illustrates how filming and producing shows, can generate a significant impact both through building the talent and capacity of the local creative sector as well as supporting the wider local economy. In the case of Cardiff, productions such as Dr Who, Casualty and His Dark Materials (see below) are filmed and produced locally.

It has been estimated that in its first two years of operation, between 2012 and 2014, Roath Lock Studios added £42.4m in GVA to the Cardiff City Region economy and £28.4m of GVA to the economy of Wales.¹⁵⁹

There is also evidence to suggest that the BBC's activity in Wales and the growth of production at Roath Lock has helped strengthen the creative sector within Cardiff and the wider Welsh region and a strong independent TV production industry. Between 2012 and 2015, a number of new studios were built in the area including Chepstow, Dragon, Pinewood, and Swansea Bay.¹⁶⁰ Since then, in 2017,

¹⁵⁷ See: http://www.bbc.co.uk/pressoffice/pressreleases/stories/2011/01_january/20/roath_lock.shtml

¹⁵⁸ Based on the [Ofcom Regional Production Guidance criteria](#).

¹⁵⁹ BOP Consulting, 2015. The Economic Impact of BBC Wales: Roath Lock Studios and new BBC Wales Broadcasting Centre in Central Square, Cardiff

¹⁶⁰ BOP Consulting, 2015. The Economic Impact of BBC Wales: Roath Lock Studios and new BBC Wales Broadcasting Centre in Central Square, Cardiff

independent production company Bad Wolf opened a new film and television studio in Cardiff - Wolf Studios.¹⁶¹

As activity around these studios increased over time, it created a pool of skills and talent within the region. According to the British Council, Cardiff is now one of the UK's largest media centres outside London, with BBC Wales, S4C and ITV Wales all based there.¹⁶²

This is evidenced through:

- the **significant increase in employment in the creative sector in Cardiff since Roath Lock opened** - a 54% increase from around 5,470 employees in 2012 to around 8,430 in 2019, compared to growth of 31% in the sector across Great Britain;
- the **increase in number of businesses in the creative sector in Cardiff which has grown by 52% over the period 2012 to 2019** from just under 900 to 1,350, compared to growth of 40% in the sector as a whole across the UK; and
- the **launch of new production companies in Cardiff**, including the independent production company Bad Wolf, and the opening of a Wales base by independent production company Plimsoll Productions, both of which provide examples of the way in which the BBC has created spillover effects in the local economy as explained below.

Box 3: Bad Wolf in Cardiff

Bad Wolf

Bad Wolf is an independent production company headquartered in Cardiff. It was founded in 2015 by former BBC executives Jane Tranter and Julie Gardner who had previously worked for BBC Cymru Wales producing programmes such as Doctor Who and Torchwood. This is an example of the creative spillovers associated with the BBC's activities in South Wales, with the company founders utilising the knowledge and expertise gained through working at the BBC to launch their own production company in Cardiff.

Since launching, Bad Wolf has produced BBC shows such as His Dark Materials which is largely filmed in South Wales. In 2020, series two of His Dark Materials was launched in the UK with over 5.8 million views on BBC One and over 30 million requests on BBC iPlayer for both series 1 and 2, with viewing figures increasing throughout series 2. In December 2020, BBC One and HBO announced that a third series of His Dark Materials had been commissioned from Bad Wolf and production would commence in Cardiff later in 2021.

Another example of the knowledge and skills spillovers resulting from the BBC's activities in Wales is the opening in 2017 of a new office in Wales by Plimsoll Productions - a UK-based independent production company based in Bristol.¹⁶³

Grant Mansfield, CEO of Plimsoll said in a statement, "Cardiff is an obvious expansion of our commitment to out-of-London production, tapping into the creative talent base that has grown up there, including BAFTA award winner James Smith [who was appointed executive producer]."¹⁶⁴

The growth of new indies in Cardiff has led to an increased capacity and capability among indies in Wales, meaning they can support more production. This is reflected in the share of BBC network production that goes to indies in Wales – which has grown from 20% to 50% between 2016 and 2019, with the total value of spend on indies growing from £10m in 2016 to £32m in 2019.

¹⁶¹ See: <https://bad-wolf.com/wolf-studios/>

¹⁶² British Council - *Creative Hubs report* (British Council, 2016)

¹⁶³ See: <http://www.plimsollproductions.com/smith-lead-new-plimsoll-office/>

¹⁶⁴ See: <http://www.plimsollproductions.com/plimsoll-productions-opens-weish-office/>

The Welsh Government has recognised the success to date of the creative sector in South Wales and in January 2020 announced that they are planning to invest in the Welsh creative sector to help drive growth across the whole creative sector. The Deputy Minister said, “My vision for Creative Wales is for an organisation that will take the existing successes in the screen industry and build on these to drive growth across the whole creative sector; developing a skills base that is world class, expanding support beyond film and tv and positioning Wales as the place to locate a creative business.”¹⁶⁵

Central Square

In 2014 it was announced that BBC Wales would be moving its headquarters from Llandaff, on the outskirts of Cardiff, to Central Square in Cardiff city centre.¹⁶⁶ The BBC’s move began in 2019 and in July 2020, BBC Wales begun live broadcasting from the new headquarters.

The new £120m BBC building is part of the wider redevelopment of Central Square, involving one million sq ft (around 93,000 sq m) of office, residential and retail space.¹⁶⁷ According to the 2015 BOP Consulting report¹⁶⁸, BBC Wales’ decision to sign a 20-year lease at Central Square in Cardiff was an important driver for the development of Central Square.

*“Securing the BBC as the key tenant within Central Square has acted as a catalyst which is likely to accelerate the delivery of the whole scheme significantly.”*¹⁶⁹ – Stephen Widnall, site developer Rightacres.

*“The positive economic impact of this investment will be not only felt by Cardiff itself, but by the whole of Wales. The BBC’s commitment will also attract other major occupiers to the area, therefore fuelling jobs growth, as well as other social, cultural and economic benefits.”*¹⁷⁰ – Laura Mason, development funder Legal & General Capital.

In the 2015 report, BOP Consulting estimates that the relocation of BBC Wales’ Broadcasting Centre HQ will add a further £1.1bn to the GVA of Cardiff City region and 1,900 FTE jobs over the next ten years.¹⁷¹

BBC Wales’ Central Square office is also designed to aid the development of relationships and collaborations, which helps build on the supply of creative skills in the Cardiff region. By being built with a neurodiverse design (as the first building of its kind to have these considerations embedded into the building brief from the outset¹⁷²) the building aims to be as open and accessible as possible, with the BBC’s intention of allowing for greater collaboration,¹⁷³ inclusivity and diversity.

Examples of collaborations include BBC Wales’ apprenticeship schemes, its partnership and commitment with Creative Wales and its relationship with the Journalism School at the University of Cardiff which is based next to the BBC’s building. This is expected to contribute toward the creation of a local speciality of creative skills within the region.¹⁷⁴

Other partnerships the BBC has in Wales, through which its activities support the local creative sector and have potential wider economic impacts, include:

— **National Library of Wales (NLW)** – National Library of Wales (NLW), through which the BBC supports knowledge sharing and learning by providing access to BBC Wales’ £2.5m worth of

¹⁶⁵ See: <https://gov.wales/new-priorities-support-growth-wales-creative-industries>

¹⁶⁶ See: <https://www.bbc.co.uk/news/uk-wales-27781784>

¹⁶⁷ See: <https://www.bbc.co.uk/news/uk-wales-south-east-wales-43782811>

¹⁶⁸ BOP Consulting, 2015. The Economic Impact of BBC Wales: Roath Lock Studios and new BBC Wales Broadcasting Centre in Central Square, Cardiff

¹⁶⁹ BOP Consulting, 2018. [BBC Wales - Economic Impact of the new BBC Wales broadcasting centre in Central Square, Cardiff](#)

¹⁷⁰ See: <https://www.propertyfundsworld.com/2015/11/17/233836/bbc-central-square-deal-triggers-lq-investment>

¹⁷¹ This is based on construction impacts, agglomeration impacts, tourism and housebuilding on the previous site. See: BOP Consulting, 2015.

The Economic Impact of BBC Wales: Roath Lock Studios and new BBC Wales Broadcasting Centre in Central Square, Cardiff

¹⁷² See: <https://www.building.co.uk/buildings/projects-new-broadcasting-house-bbc-cymru-wales-cardiff/5104374.article>

¹⁷³ BOP Consulting, 2018. [BBC Wales - Economic Impact of the new BBC Wales broadcasting centre in Central Square, Cardiff](#)

¹⁷⁴ BOP Consulting, 2018. [BBC Wales - Economic Impact of the new BBC Wales broadcasting centre in Central Square, Cardiff](#)

digitalised content in all country record offices in Wales and by working with NLW to provide online content.¹⁷⁵

- **National Film and Television School (NFTS) Wales and Creative Wales** – NFTS Wales is based at BBC Wales’ new broadcasting centre in Central Square and is backed by funding from Creative Wales in order to support emerging talent and strengthen skills development within the region.¹⁷⁶
- **Training partnership with Channel 4 and S4C** – The training partnership with Channel 4 and S4C aims to support the development and growth of factual television in Wales.” The programme offers tailored development and training to six individuals in Wales who wish to pursue a career as series producers, driving factual growth in Wales. Nick Andrews, BBC Wales Head of Commissioning, said, *“Everybody knows Wales has become a major destination for drama. But all the broadcasters have big plans for factual too - and we want to work together to ensure Wales is well-placed to meet the growing demand for high-end factual production.”*¹⁷⁷
- **BBC Three, BBC Wales and Creative Wales** partnership – BBC Three, BBC Wales and Creative Wales partnership aimed to discover new and innovative programme formats. It invites independent production companies based in Wales to pitch new ideas for programmes that reflect the life experiences of 16-24-year olds. The partnership also aims to develop Wales-based companies and increase the supply of programmes from Welsh producers to BBC Three.¹⁷⁸
- **Welsh language channel S4C** – BBC Wales has historically provided a range of content for transmission on S4C and since 2013 the BBC has been responsible for providing the majority of the public funding for S4C from the licence fee. Currently, the BBC provides a minimum of 520 hours of programme each year to S4C and S4C’s content is also available on BBC iPlayer. Since 2019, BBC Wales and S4C share technical broadcasting services at the BBC Broadcasting Centre in Central Square, Cardiff.¹⁷⁹

4.3 Creative innovation and Intellectual Property (IP) creation

IP is vital to the success of the UK TV independent production industry, which in turn is important for the UK broadcast economy¹⁸⁰ and wider creative sector.

By commissioning and developing creative content under preferential terms of trade¹⁸¹ the BBC supports the industry both through the investment it makes directly and by providing a wide-reaching, globally recognised platform for this IP, enhancing the opportunities for its value to be maximised, e.g. through the follow-on sale of programmes and formats worldwide and favourable terms of trade relating to this.

“The independent sector has helped to bring new creative ideas to broadcasters as well as providing an important source of third-party funding at a time of restricted budgets. Independent producers are supported by PSB investment and the retention of secondary rights to use abroad.”¹⁸²

Figure 19 below shows the flow through which the BBC’s activities, in terms of investment in content and commissioning, translate into economic contributions and summarises the broad types of impacts generated.

¹⁷⁵ See: <https://www.bbc.co.uk/news/uk-wales-48624924>

¹⁷⁶ See: <https://www.bbc.co.uk/mediacentre/2020/nfts-wales>

¹⁷⁷ See: <https://www.bbc.co.uk/mediacentre/latestnews/2019/factual-tv-production-training-in-wales>

¹⁷⁸ See: <https://www.bbc.co.uk/mediacentre/2020/nfts-wales>

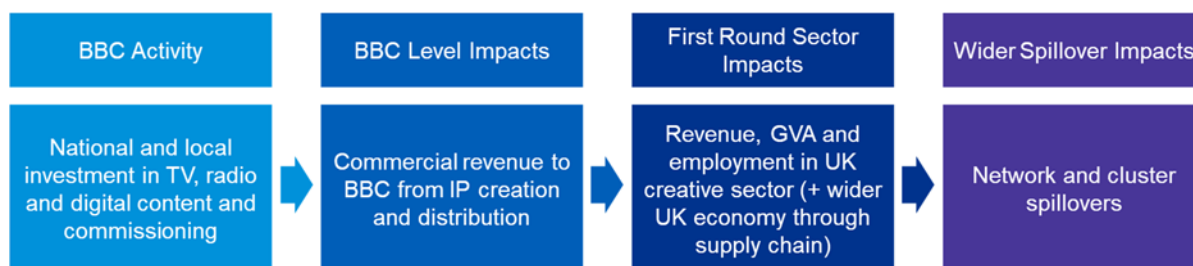
¹⁷⁹ See: <https://www.bbc.co.uk/aboutthebbc/governance/s4c>

¹⁸⁰ Ofcom, 2015. [Public Service Broadcasting in the Internet Age](#).

¹⁸¹ The terms of trade set out the rights available to UK broadcasters under their primary commissioning licence and the revenue sharing arrangements relation to the subsequent use of commissioned IP. Importantly, they give independent producers control over the ‘secondary rights’ to their content, and therefore the ability to monetise content they have produced in international markets. See Box 3, p.26.

¹⁸² Ofcom, 2015. [Public Service Broadcasting in the Internet Age](#).

Figure 19: Illustration of flow of BBC impacts relating to its IP creation and commissioning



Source: KPMG analysis

The remainder of this section analyses these impacts in detail.

We first summarise the BBC's activity in terms of developing IP and how it commissions programmes, and the importance of IP creation and how it drives value and to whom.

We then look at some examples of where the BBC has successfully developed creative IP, specifically:

- Supporting UK producers to develop and exploit their IP through BBC spend of £561m in FY 2019/20 on external commissions with 350+ producers, and by leveraging the scale and presence of the BBC to showcase this to global audiences. An example of this is the popular children's animation, Hey Duggee, which now has a footprint in over 150 territories.
- In-house IP generation, both through the development of successful programme formats (e.g. Strictly Come Dancing/ Dancing with the Stars) and programme content (e.g. Dr Who and Natural History Unit productions) which are then sold internationally and in the secondary UK market. The distribution sales of BBC catalogue generated revenues of £267m in FY 2019/20.¹⁸³ The revenues generated are reinvested into new programming and services, generating greater value by supporting the BBC's expenditure and activity alongside the licence fee revenue it receives.

4.3.1 BBC content and commissioning and the importance of creative innovation and IP creation

The BBC acts as both a commissioner of content and a content producer. As such it produces and supports the generation of creative IP in the UK through two main routes.

First, the BBC grows UK IP through buying programmes from UK producers, providing creative and editorial input and growing programme audiences, and then distributing in the UK and/or internationally. By commissioning content, the BBC not only provides initial revenue to the industry, but it brings the opportunity for subsequent growth and development of IP, helping to maximise its value both in the UK and globally.

- **In 2019 the BBC was by far the highest spending commissioner of new IP among broadcasters in the UK¹⁸⁴, commissioning a total of £561m of content in 2019, of which £235m was on new external commissions, accounting for over a third of all spend on new commissions among UK PSBs.¹⁸⁵**

¹⁸³ Including consumer products, live events and other associated activities

¹⁸⁴ Pact, 2020. UK television production Survey. A report by Oliver & Ohlbaum Associates for Pact. See: <https://www.pact.co.uk/news-detail.html?id=huge-international-growth-generates-record-revenues-for-independent-tv-production-sector>

¹⁸⁵ Including BBC, ITV, Channel 4 and Channel 5

- **Through this spend the BBC supports IP growth in UK TV production, particularly among independent producers.** In 2019 the BBC worked with over 350 producers, 54% of which were indies.¹⁸⁶
- **The BBC supports IP creation by working closely with producers and providing creative input to help to shape and develop programme content.** The case study examples further below demonstrate the contributions the BBC has made to enhancing the value of IP in these ways.
- **The value of IP generated or supported by the BBC is grown via the extensive, globally recognised distribution platform it can provide for programmes.**
 - The scale and breadth of the BBC’s services means that not only can programmes be aired on broadcast TV channels, but audiences can be grown through iPlayer, BBC radio, the BBC website, and social media, with global audiences reaching 438m per week, thus enhancing the value of the initial IP created.
 - The global brand of the BBC adds to this, providing ‘big name’ backing to the content, which the BBC considers helps to drive sales to other UK channels and to the international market.
 - This amplifies the growth and revenue generation of the UK’s independent production industry and wider creative sector. For example, BBC’s work with Studio AKA on the development of Hey Duggee, has grown the value of its IP internationally, with the programme having been sold into over 150 territories worldwide.
 - We also note that, through a separate route, BBC Studios globally distributes IP from a larger number of UK independent producers, representing them in the international market with global distribution sales of £476.2m¹⁸⁷ in FY 2019/20 – bringing scale to their catalogue. It also invests in a small number of UK independent producers, many of them start-ups; demonstrating another route through which the BBC supports the growth of independent producers.
 - Distributors in the market also recognise the important role the BBC plays, as reflected in the BBC’s repeated position in recent years in the top two most highly ranked UK broadcast distributors in the Broadcast Distributor Survey peer poll.¹⁸⁸
- **The benefits to the UK TV production industry of BBC commissioning are further enhanced through the favourable terms of trade the BBC works under.**
 - These terms mean that when the BBC works with production companies as the primary broadcast commissioner, the majority of the sale or licensing revenue from content IP is retained by the producers – 90% for global revenues and 80% for UK revenues – meaning that this money flows directly into the sector.
 - This contrasts with many commercial agreements whereby independent producers typically receive a larger upfront payment to ‘buy out’ the rights, leaving them with no or little share of content rights going forward.¹⁸⁹
 - This rewards the investment and innovation in television content and formats that is needed for ‘hits’ such as Great British Bake Off, Peaky Blinders and MasterChef to be uncovered and their market potential realised.

Second, the BBC creates IP through the development of its own TV content IP, primarily via BBC Studios Productions, which supports its own GVA contribution as well as enabling greater investment in new programming and services.

¹⁸⁶ <http://downloads.bbc.co.uk/commissioning/site/bbc-commissioning-supply-report-2019.pdf>

¹⁸⁷ Broadcast, Distributors Survey, 2020

¹⁸⁸ Broadcast, Distributors Survey, 2020: BBC Studios came second in the Broadcast Distributor Survey’s peer poll in 2020 for the third year running.

¹⁸⁹ Information provided by the BBC

- **In FY 2019/20, BBC Studios was the most commissioned creator of new TV content in the UK**, winning 77 new commissions, 49 of which were for the BBC, and generating around 2,500 hours of new content. The BBC also generates in-house educational content e.g. GCSE bitesize and, over the last year, additional content to support home schooling.
- **Not only does this create audience value (analysis of which is beyond the scope of this study) but also generates economic contributions.** The BBC monetises some of this IP, including through licensing programme formats, selling international rights, merchandising and through ventures such as BritBox¹⁹⁰ and UKTV and BBC branded international channels such as BBC America. This brings revenues to the BBC's commercial divisions and increases the economic output (and GVA contribution) of the BBC. It also generates export revenue for the UK creative sector.
- The BBC has over 50 years' experience of making creative content, with many worldwide successes stemming from this.¹⁹¹ This includes development of show formats such as Strictly Come Dancing/ Dancing with the Stars as well as its own successful productions such as Dr Who, both of which have been global successes. **In FY 2019/20, the BBC generated revenues of £267m¹⁹² from sales of the existing programme catalogue of BBC owned IP¹⁹³ which supports its own GVA contribution as well as enabling greater investment in new programming and services.**
- **However, the value of IP created or supported by the BBC is not fully reflected in the BBC's revenue.** In terms of the BBC's own IP, only a proportion of programme content will be commercialised and sold. Much of the BBC's IP is available only to UK audiences. Whilst not generating commercial returns, this IP creates additional value to UK audiences in the form of educational and human capital spillover benefits as well as, in some cases, mental health, social and wellbeing benefits, not captured in this report.

Box 4: BBC Terms of Trade¹⁹⁴

BBC Terms of Trade

The terms of trade were introduced in 2004 and set the minimum terms agreed between PACT (the UK trade association representing and promoting the commercial interests of independent feature film, television, digital, children's and animation media companies) and the BBC.

The terms of trade set out the rights available to UK broadcasters under their primary commissioning licence and the revenue sharing arrangements relation to the subsequent use of commissioned IP. Importantly, they give independent producers control over the 'secondary rights' to their content, and therefore the ability to monetise content they have produced in international markets.

In May 2020, the terms of trade were updated to provide producers with a greater share of revenue streams, with the BBC reducing its backend cut from global distribution revenue from 15% to 10%, and reducing its backend cut on UK sales from 25% to 20%.

Developing content and IP under these terms of trade provides an important source of value for the UK independent producers and means that when analysing the GVA contribution of the BBC alone, its impact on the industry as a whole is undervalued. These revenues that producers go on to make from the IP initially sold to the BBC, and developed, nurtured and given a wide-

¹⁹⁰ Britbox is a Joint Venture with ITV available in the UK, North America and Australia

¹⁹¹ See: <https://www.bbcstudios.com/our-work/our-programmes/>

¹⁹² Including consumer products, live events and other associated activities

¹⁹³ This is income attributable to sales of BBC content i.e. developed by the BBC and funded by the Licence Fee.

¹⁹⁴ BBC, Terms of Trade. See: http://downloads.bbc.co.uk/commissioning/site/Terms_Of_Trade.pdf

reaching platform by the BBC, aid the growth of independent production in the UK, rewarding the generation of new concepts, ideas and knowledge in the industry.¹⁹⁵

Such innovation¹⁹⁶, in the form of scripts for new dramas, new programme formats or production techniques, is important for UK TV production, as it leads to growth of new IP and subsequent revenues for the creative sector. It is recognised that television is a ‘hit-driven’ business involving a high level of unpredictability.¹⁹⁷ Innovation in television content and formats is therefore needed in order for ‘hits’ such as Great British Bake Off, Peaky Blinders and MasterChef to be uncovered and their market potential realised.

Creative innovation and IP development can also have benefits to society through knowledge and network spillovers.¹⁹⁸ For example, successful aspects of innovative programme formats or content can be used to inform the development of new programmes or other innovations, such as a 5G augmented reality app that the BBC is involved with, inspired by a BBC One’s forthcoming documentary The Green Planet (see Section 4.3.2). The strong networks in the creative sector can facilitate sharing of knowledge, ideas and concepts that can then be translated into new applications and new IP¹⁹⁹, thus further growing the sector.

In the following sections we highlight some examples of successful IP creation for the BBC, which have led to large audience shares and commercial revenues to both the BBC and the UK production industry.

4.3.2 Examples of successful IP creation supported by the BBC

Strictly Come Dancing

Strictly Come Dancing (‘Strictly’), a BBC One entertainment show, was first aired by the BBC in 2004. It took the ballroom competition from the BBC’s long running ‘Come Dancing’ and brought it up to date with the introduction of celebrities and a more modern format.²⁰⁰

Strictly provides an example of how the BBC can leverage a successful programme format and adapt and grow its IP worldwide. Following a successful first series in the UK, the BBC created a modified version of Strictly for an international audience and sold the format under the title Dancing with the Stars. The first international version was aired in Australia in 2004 and by the following year the concept had taken off, airing in 13 countries in 2005. Since then its success has continued to grow and it has now been licenced in 60 territories worldwide achieving significant audience shares.

The success of Strictly is reflected in its global revenues – more than £50m per annum, 14 years after the first season, driven by the production of international versions such as Dancing with the Stars.

The value of this IP flows back to the BBC, allowing it to be recycled back into additional IP creation, including:

- Ongoing innovation in the Strictly format, which is then shared with Dancing with the Stars production teams, with the aim of maintaining the value and quality of the brand.
- Investment into new programmes, both in-house and with third-party producers, generating a multiplier effect from the BBC’s initial format development.

¹⁹⁵ Oliver & Ohlbaum, 2018. The impact of Terms of Trade on the UK’s television content production sector. See: <https://cmpa.ca/wp-content/uploads/2019/01/Appendix-C-Oliver-Ohlbaum-Associates-2018-The-impact-of-the-UK-te.-1.pdf>

¹⁹⁶ Innovation, as defined by the European Central Bank, is the development and application of ideas and technologies that improve goods and services or make production more efficient.¹⁹⁶

¹⁹⁷ Picard, R. 2005. Unique Characteristics and Business Dynamics of Media Products, Journal of Media Business Studies, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/288110/bis-14-653-economic-analysis-of-spillovers-from-programmes-of-technological-innovation-support.pdf

¹⁹⁹ Nesta, 2018. Creative Nation: How the creative industries are powering the UK’s nations and regions.

²⁰⁰ See: <https://www.bbc.com/historyofthebbc/anniversaries/may/strictly-come-dancing>

Dr Who

Dr Who is the BBC's longest running sci-fi drama, having first hit UK screens in 1963.²⁰¹ It is one of the BBC's most successful programmes globally, with global awareness of 60% in 2020. The show continues to be a strong success in the UK and abroad. In the UK the 2021 New Year's Day episode was one of the most watched programmes on New Year's Day, watched by 6.2 million viewers.²⁰²

Since the show was first produced, the BBC has continued to develop the programme, growing its TV audience as well as the value of the global brand through social media and merchandise. The programme has now been sold into 239 territories worldwide and has a global community of more than 10 million fans on social media. This translates into significant sales of ancillary products including DVDs, published material (e.g. books and magazines), action figures and 'Sonic Screwdrivers'.²⁰³ This has translated into significant revenues for the BBC.

The BBC's success in continually refreshing and innovating in the Dr Who concept, including in the programme content, production techniques and wider media, has resulted in its ongoing popularity among younger audiences – Season 12's launch episode – as well as leading to new innovative developments including games and virtual reality content for use across mobile, consoles and computers, which further grow the value of the IP and maximising the returns from the BBC's investments.

Natural History Unit

The BBC's Natural History Unit (NHU) is a department of the BBC which produces natural history programmes, such as the award-winning Blue Planet II and Planet Earth II, which have been watched by more than a billion people globally.

The NHU first made its name with Life on Earth with David Attenborough in 1979. Since then the breadth of its programming has grown and now includes: Seven Worlds, One Planet presented by Sir David Attenborough; Primates; Springwatch, Bears About the House; and Andy's Aquatic Adventures, among a number of other notable titles.

However, the scale and cost of many of the NHU programmes means that they cannot be funded by the BBC alone. Through long-term and strategic partnerships with major customers and the strong reputation it has developed, the BBC is able to leverage wider finance to allow it to continue to invest in premium programming, to the benefit of both BBC viewers in the UK and international audiences. For example, the majority of the BBC's natural history programming is supported by longstanding partners including BBC AMERICA, PBS and Discovery in the US, ZDF in Germany, FTV in France and CCTV9 and Tencent in China.²⁰⁴

This co-production model allows for a greater scale of production and provides a risk sharing mechanism for BBC Studios – meaning that it facilitates investments that would otherwise not go ahead, enabling the development of new IP and to further grow the value of this, for example through wider audience reach and global revenues. For example, Seven Worlds, One Planet attracted 12 million viewers across TV and iPlayer in 2020, and the BBC's natural history landmark programmes are sold into 230 territories worldwide, generating significant revenues to the BBC. Whilst local production houses are used in some cases, much of the production, and therefore economic impact, is UK-based.

The experience and expertise of the NHU also allows the BBC to go further than it would otherwise in terms of innovation in programming. The BBC's ability to combine facts, storytelling and technological innovation has been recognised most recently through DCMS' award of funding to the BBC, as part of a consortium, to create a 5G augmented reality application inspired by the forthcoming BBC One's

²⁰¹ See: <https://www.bbc.com/historyofthebbc/anniversaries/november/doctor-who-first-episode>

²⁰² BBC data 2020

²⁰³ BBC data 2020

²⁰⁴ BBC, 2020. [BBC Group Annual Report and Accounts 2019/20](#).

The Green Planet. The app will help prove "*how new technology can reconnect us with the natural world*" according to Minister for Digital Infrastructure, Matt Warman.²⁰⁵

Hey Duggee

Hey Duggee is a popular BBC children's animation, available on CBeebies and iPlayer. Its success provides an example of the way in which the BBC works with independent production companies to develop and grow the IP and provides a platform to enable and promote audience growth and global success.

The background to Hey Duggee is that the idea for it was first presented to the BBC by independent producers Studio AKA at the European pitching event Carbon Forum in 2013. At the time Studio AKA was primarily an advertising agency with little experience of children's animation. Following the pitch, the BBC worked closely with Studio AKA to develop and refine the content for a CBeebies audience, before Hey Duggee was first aired in 2014.

Over the last 5 years, the BBC has worked with Studio AKA to promote the programme across the BBC platforms, including promotion on the BBC website and on social media, through the CBeebies apps and online games, on BBC radio and via other BBC outlets such as BBC's Children in Need, the CBeebies magazine and CBeebies Land at Alton Towers:

This 360° brand exposure has helped grow Hey Duggee audiences abroad as well as in the UK.

- Following its first play on CBeebies in 2014, Hey Duggee has consistently been one of the most popular children's TV shows in the UK, receiving almost 2 million iPlayer (ranking number 1 for CBeebies requests) in 2020. In the same year Hey Duggee made up 4.4% of all CBeebies TV viewing in 2020.
- The show has a significant social media following, with 239,000 followers on Facebook, 54,000 followers on Instagram and 814,000 subscribers on YouTube. There were also almost 3.3m visits to Hey Duggee content either on the Hey Duggee mobile app or website, or on CBeebies Playtime Island, Go Explore or Get Creative apps in 2020.
- Hey Duggee also now has a footprint in over 150 territories, including the USA, Canada, Australia, New Zealand and many European countries and is broadcast on multiple global channels including Nick Jr., France 5, Kika (South Africa), ABC 2 (Australia) and Clan (Spain).

As a result of this, the value of the IP in Hey Duggee has grown beyond the initial and ongoing BBC expenditure on the content. Whilst a small proportion of the revenues from the wider sales of Hey Duggee TV content and ancillaries flows back to the BBC, the majority (as per the terms of trade) are retained by Studio AKA, thus allowing it to grow, invest and innovate in other areas.

The value of this IP therefore is largely captured by Studio AKA itself and in the economic activity associated with the UK TV production rather than the BBC's own GVA contribution. However, it is clear from the evidence that the BBC plays an important role in generating this value and it forms part of the BBC's wider economic contribution. Furthermore, Studio AKA is just one of 350 independent producers the BBC works with and supports to grow IP, meaning impacts extend across the sector.

4.4 Research and Development (R&D)

R&D has played a significant role in the activity and impact of the BBC since it was established. Many major technology developments in broadcasting were initiated through R&D activity that first took place at the BBC, including noise-cancelling microphones in the 1930s, the first transatlantic television

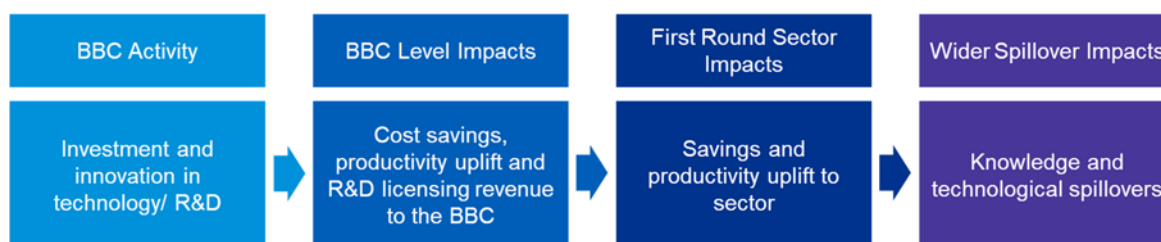
²⁰⁵ See: <https://www.bbc.co.uk/news/entertainment-arts-55632033>

transmission in the 1950s, Ceefax in the 1970s, digital radio in the 1990s and digital TV in the 2000s.²⁰⁶

As we evidence in this section of the report, the BBC's extensive work in the field of technological R&D, and its collaborative approach to research, knowledge sharing and open standards has led to new technologies which generate benefits in the form of increased productivity and cost savings for the BBC, an improved experience for its audiences, and technological spillovers for the wider creative and digital sector, which in turn can lead to productivity improvements and further innovation.

The mechanism through which the BBC's R&D investment translates into economic impacts is illustrated in Figure 20 below.

Figure 20: Illustration of flow of BBC impacts relating to its R&D investment



Source: KPMG analysis

In the remainder of this section we go on to look at the academic literature and economic theory relating to the importance of investment in R&D and the knowledge and technological spillovers that can be generated from these.

We then present the evidence relating to the economic impact of the BBC's R&D investments, looking at a previous study by DotEcon (Section 4.4.2).

Finally, in Section 4.4.3 we provide some examples of more recent R&D projects, which are starting to show evidence of generating benefit to the BBC and TV audiences and wider spillovers to the creative sector.

4.4.1 The importance of R&D and technological development

Over recent years, the broadcasting and media market has seen significant change including a transition towards the use of more online and digital tools.²⁰⁷ The BBC has led a number of significant technological developments during this period. For example, evidence suggests that through its development of BBC Online and the BBC iPlayer the BBC helped build consumer interest and take-up of digital and on-demand services²⁰⁸ and accelerated market development and competition through open-sourcing and technology transfer.²⁰⁹ Most recently the BBC has engaged in the research and development of a range of new and emerging technologies including in the space of High Dynamic Range (HDR), 3D graphics, virtual reality and 360 video.

Furthermore, the BBC contributes to the development of open standards, which are designed to enable interoperability and encourage competition. The BBC currently participates in

²⁰⁶ See: <https://www.bbc.co.uk/rd/about/our-purpose>

²⁰⁷ See: https://www.ofcom.org.uk/data/assets/pdf_file/0010/200503/media-nations-2020-uk-report.pdf

²⁰⁸ Ofcom, Proposed changes to BBC Three, BBC iPlayer, BBC One and CBBC Market Impact Assessment, June 20

²⁰⁹ See: <https://www.nesta.org.uk/blog/public-service-coding-the-bbc-as-an-open-software-developer/>

approximately 20 standards bodies and industry groups internationally as well as a large number of subgroups of these bodies.²¹⁰

The importance of R&D as a key driver of long-term economic growth is well recognised.

R&D drives economic growth through increasing the stock of knowledge and using this to generate new applications.²¹¹ This leads to advances in our economy, social wellbeing and health, and boosts the capacity of the economy to produce more in the long term, i.e. increasing productivity.^{212,213}

Investment in R&D is therefore important at both the organisational and societal level.

However, R&D does not just benefit the organisation undertaking the investment. There are positive externalities associated with R&D investment which mean that firms are unable to appropriate all the returns to R&D. This is the result of spillovers to other players in the market, for example knowledge spillovers through the movement of personnel between firms.²¹⁴ This can generate wider benefits in the form of:

- the new applications being adopted by others; and
- knowledge used in the development of other new applications.

Evidence suggests that these spillovers can be quite substantial: Griliches (1992) found that “If R&D spillovers are present, their magnitude may be quite large, and social rates of return remain significantly above private rates.”²¹⁵ In quantified terms, literature suggests that while the net rate of private return to R&D is, on average, in the region of 10-30%, the social rate of return is in the range 20-100%.^{216,217}

The presence of externalities, or spillovers, from R&D activity, alongside the other market failures²¹⁸ mean that in the absence of Government intervention, private companies and individuals would underinvest in R&D, to the detriment of the economy and society as a whole.

Furthermore, to the extent that organisations are able to internalise some of the returns to R&D through the use of patents and other IP protection (which are needed in order to create an incentive for private R&D), the benefit to society is reduced from its full potential.

By contrast in its role as a PSB, the BBC’s R&D investment decisions are not wholly determined by the profits that can be generated by internalising the returns to innovation and restricting the extent to which other organisations can exploit their intellectual property. Instead, in line with its commitments under the Royal Charter, the BBC must²¹⁹:

“promote technological innovation and maintain a leading role in research and development”

“seek to work in partnership with other organisations; and share, as far as is reasonable, its research and development knowledge and technologies”.

²¹⁰ See: <https://www.bbc.co.uk/rd/about/standards>

²¹¹ OECD, 2001. [R&D and productivity growth: panel data analysis of 16 OECD countries. OECD Economic Studies.](#)

²¹² OECD, 2001. [R&D and productivity growth: panel data analysis of 16 OECD countries. OECD Economic Studies.](#)

²¹³ Royal Society, 2019. [Investing in UK R&D.](#)

²¹⁴ BIS, 2014. [The case for public support of Innovation \(publishing.service.gov.uk\)](#)

²¹⁵ IFS, 2000. [How important is R&D for economic growth - how and should the Government promote it \(ifs.org.uk\)](#)

²¹⁶ BIS, 2014. [An economic analysis of spillovers from programmes of technological innovation support.](#)

²¹⁷ NBER, 2018. [Have R&D spillovers changed?](#)

²¹⁸ Market failures occur when there is an inefficient allocation of resources in a free market. Other relevant market failures in this context include information asymmetries and coordination failures.

²¹⁹ BBC, 2016. [BBC Charter.](#)

“[consider] the value that might be delivered to the public and the UK economy by making new developments widely and openly available”

It seeks to achieve these purposes through:

- investment in R&D with an aim to provide a ‘centre of excellence’ for R&D in broadcasting and the electronic distribution of audio, visual and audio-visual material; and
- commitment to the development of open standards, collaboration with partners and use of open licensing when appropriate.

Due to these wider objectives, the BBC undertakes R&D that would not be undertaken by a purely profit-driven organisation. Furthermore, through the BBC’s emphasis on knowledge sharing and collaboration, rather than attempting to internalise benefits through intellectual property rights protection, the spillovers generated by BBC R&D are likely to be larger than if undertaken by a profit maximising organisation.

4.4.2 Evidence of the spillovers from BBC’s R&D investment

Research by DotEcon for the BBC in 2018 used a number of case studies to estimate the societal returns to investment in R&D by the BBC.²²⁰ It found significant benefits from BBC investment in R&D, including:

- **Cost savings, productivity enhancements and licensing revenue** benefits as a result of the BBC’s own use of the products and technologies it develops and licensing of this to others in the sector where appropriate.
- **Cost savings and productivity enhancements to the wider sector** where the BBC’s developments are adopted through open-sourcing and technology transfer.²²¹
- **Knowledge and technological spillovers** to the sector resulting from the knowledge gained from developing and using the new BBC technologies, which themselves are expected to generate further productivity uplifts for the sector.
- **Benefits to audiences** as a result of improved services and viewing experiences.

In quantitative terms, the research found that, among the specific case studies examined, the societal returns to investment were in the range of 10:1 and 71:1.²²² In order to scale up these impact across the BBC’s portfolio of R&D projects, the study applied assumptions about the probability of success of projects. **Using this approach the study estimates that across all of the BBC’s R&D spend from 2007- 2016, every £1 of BBC spend on R&D yielded between £5 and £9 of monetised societal benefits, including benefits to the BBC.**²²³ Box 5 below summarises the case studies reviewed and their benefits, as reported by DotEcon²²⁴:

Applying the ratio of R&D spend to benefits identified through the DotEcon study to the **BBC’s investment in dedicated R&D activities over the current Charter period (around £70m since January 2017)** indicates that if this spending generates the same societal return on investment, it **could be expected to yield total benefits of approximately £350m - £630m** notwithstanding that evidence from the DotEcon study shows there is a great deal of uncertainty and variability regarding the returns to individual R&D investments. Therefore, these potential societal impacts are indicative

²²⁰ DotEcon (2018). Analysis of Research and Development Investment. A DotEcon Report for BBC R&D

²²¹ See: <https://www.nesta.org.uk/blog/public-service-coding-the-bbc-as-an-open-software-developer/>

²²² DotEcon (2018). Analysis of Research and Development Investment. A DotEcon Report for BBC R&D

²²³ We note, however, that these estimates may understate the true societal benefit as the study did not seek to estimate all benefits and spillovers from the BBC’s R&D investment.

²²⁴ It should be noted that we have not independently verified the analysis and findings presented by DotEcon and are reporting on the findings directly as presented in their study.

only and the impacts associated with the latest BBC investments may be materially different, either higher or lower.

Box 5: DotEcon case studies

DotEcon case studies	
Piero sports graphics system	<p>The Piero sports graphics system is a tool for sports analysis on TV using 3D graphics and real-time image processing. The system provides visually engaging and informative effects and statistics for use when presenting sports on TV. Benefits identified by DotEcon include:</p> <ul style="list-style-type: none"> - Direct cost savings of around £375,000 per annum. - Audience benefits worth £15m per annum from enhanced viewing experience. - Cost savings to BBC competitors to whom the product was made available. - Knowledge spillovers contributing to the development of other sports analysis tools. - Total estimated benefits (as of 2017): £46m - £77m
Free-to-Air (FTA) connected TV platforms	<p>FTA connected TV platforms, incl. YouView and Freeview Play, seamlessly integrate digital terrestrial television (DTT) with catch-up services delivered over the internet. Development of these involved multi-organisation collaboration. Benefits identified by DotEcon include:</p> <ul style="list-style-type: none"> - Royalties to the BBC. - Audience benefits in the form of increased reach of BBC services, improved viewing experiences and a simplified process of using on-demand and catch-up services. - Benefits to other PSBs in terms of increased prominence and cost savings. - Total estimated benefits (as of 2017): £32.5m - £49.5m
Digital Video Broadcasting – Second Generation Terrestrial (DVB-T2)	<p>DVB-T2 is a standard created for the transmission of digital terrestrial television, to which the BBC directly contributed. It has enabled HD TV to be transmitted on the terrestrial platform and allowed three more BBC HD channels. Benefits identified by DotEcon include:</p> <ul style="list-style-type: none"> - Royalties to the BBC from DVB-T2 patents and from T2 Demodulator licences. - Audience benefits in the form of more HD channels and higher quality. - Spillover benefits to the wider industry though avoided spectrum costs. - Total estimated benefits (as of 2017): £76.7m - £151.7m
Development of a specification for file-based delivery of air-ready programming (AS-11)	<p>AS-11, a file specification for distribution of air-ready programming which the BBC played a major role in developing, has allowed the industry to move away from tape-based delivery to a common file-based approach. Benefits identified by DotEcon include:</p> <ul style="list-style-type: none"> - Easier procurement of external services due to a common specification. - Audience benefits from improved quality resulting from use of a single format. - Cost and time savings from increased reliability, compatibility and interoperability and reduced complexity of playout²²⁵ and post-playout services. - Development of a wider family of specifications in the broadcasting industry. - Total quantified benefits of improved operability: ~£12m
Subtitling	<p>BBC R&D's work on the development of subtitles, in particular the timing of live subtitles and automated subtitle recovery for online clips, has led to audience benefits, particularly for those with accessibility need. Benefits identified by DotEcon include:</p>

²²⁵ The transmission of radio or TV channels produced by a broadcaster

<p>Redux and Snippets</p>	<ul style="list-style-type: none"> - Cost savings as a result of time-savings to the BBC estimated at £80,000 to date. - Audience benefits as a result of increased quality and coverage of subtitles. - Social benefits from increased participation by those with accessibility needs. - Improvements to subtitling across the broadcasting industry. - Total estimated benefits (as of 2017): £25m+ <p>Redux is a system that records and stores TV/radio content (including subtitles) from off-air sources into an archive and extracts meta-data to improve searching for specific material. Benefits identified by DotEcon include:</p> <ul style="list-style-type: none"> - Cost and time savings to the BBC worth over £44m from 2007-2016. - Audience benefits from increased use of archive footage in programming. - Direct benefits to third party users of Redux of £10m - £15m. - Total estimated benefits (as of 2017): £53.2m - £58.7m
<p>BBC Internet Distribution Infrastructure (BIDI)</p>	<p>BIDI is the BBC's own content delivery network (CDN) used for the distribution of media streams to end users in the UK. Through this, the BBC has helped facilitate a shift to greater distribution of content over IP. Benefits identified by DotEcon include:</p> <ul style="list-style-type: none"> - Benefits to the BBC of increased control and flexibility over its distribution network. - Audience benefits through improved quality of streaming over internet protocol (IP).

Source: DotEcon (2018). *Analysis of Research and Development Investment*.

4.4.3 Examples of current BBC R&D projects and their impacts

Since the DotEcon study was carried out in FY 2017/18, BBC R&D has been working on a range of new projects, some of the benefits from which are now starting to materialise.

Recent examples of projects are included below. These represent just a subset of R&D activity over the last five years, and though some benefits have been estimated, the early stages many of these technologies are at in terms of being implemented means that the data required to enable robust quantification of all benefits is not yet available. None the less, there is evidence of benefits already being realised, the form of cost savings, productivity benefits and improved quality of outputs, and the potential for benefits to increase over time. Combined, these examples and those presented in the DotEcon report provide evidence of the value and spillovers generated by BBC investment in R&D – to the benefit of the BBC, the wider sector and TV and radio audiences.

Radio transmitters²²⁶

Amplitude Modulation (AM) Companding, or AMC, is a technique employed with AM radio broadcast transmitters to save electricity costs.

In 2018, the BBC identified the potential to make reductions in the energy consumption of radio transmitters and make associated electricity cost savings.

Following successful research and testing on the 2 AM transmitters used by the BBC, in July 2018 the BBC, in partnership with Arqiva, published a White Paper which showed how energy consumption of radio transmitters could be reduced. From FY 2018/19 to FY 2019/20 BBC R&D worked in partnership with Arqiva to implement the changes on 18 high-power AM transmitters used to broadcast BBC content.

²²⁶ BBC, 2018. [Research & Development White Paper, WHP333 \(bbc.co.uk\)](https://www.bbc.co.uk/rd/whitepaper/2018/07/whitepaper-2018-07)

The estimated benefits have now been realised by the BBC with no discernible impact to listeners in terms of reception quality. Arqiva has provided figures showing annual cost savings to the BBC alone as a result of the new technology being implemented to be in the region of **£220,000 per annum**, resulting from an energy saving of 2.3 GWh per annum.²²⁷ This equates to an environmental saving of **517 tons of CO₂**²²⁸ – the equivalent of around 600 return flights from London to New York.²²⁹

The BBC expects similar savings could be achieved for other transmitters and broadcasters in the UK – whilst there is some modification needed on the transmitter, the BBC considers this to be relatively straight forward and low cost, relative to the savings that can be made. Arqiva has stated that: *“AMC using the approach developed by BBC R&D is now common-place in modern AM transmitter design, following the BBC R&D white paper. Most manufacturers have modified their products accordingly. Should AM transmitter replacement be considered for either the BBC or commercial networks in the UK, then there would be a direct and immediate benefit from this work”*.

Applying these savings to the other AM transmitters in the UK that have not yet been adapted with AMC would be expected to save significant energy costs and further reduce the carbon footprint of radio transmission in the UK, e.g. a very high-power transmitter (10 times as powerful as the ones already switched to AMC) has been suggested as the next target for AMC testing by the BBC to Arqiva.

The BBC is looking into whether savings can be achieved by applying an AMC-like technique to FM transmitters in the UK, which could deliver additional savings, though further work is needed to assess the savings that could be achieved.

Capacity optimisation on satellite and terrestrial

Satellite transponders have a set capacity which limits the amount of content it can transmit. The BBC has undertaken two projects aimed at freeing up capacity and better utilising existing capacity on the finite spectrum: the first in FY 2011/12, through the reorganisation of services; and the second in FY 2018/19, launching BBC Two Wales HD and BBC Scotland HD without the need to purchase additional capacity. Once freed up, the capacity can then be used more efficiently for additional content (for example to deliver additional channels in HD) or sold to the market to be put to more valuable and productive use. Additionally, through optimising capacity, financial savings can be realised.

As part of these projects, the BBC has worked to reorganise the BBC’s services to free up capacity with minimal loss of service in line with the channel strategy. This involved the reorganisation of services on different transponders and ‘squeezing’ the existing capacity.

The saving per transponder is £4m per annum, meaning an annual saving of £8m per annum from FY 2011/12, with an additional £2.9m cost avoidance from FY 2018/19 which would take the total savings to **£10.9m per annum**.²³⁰ A potential further transponder could be avoided in FY 2021/22 through the launch of new services using existing capacity

High Dynamic Range (HDR) Television and Hybrid Log-Gamma (HLG)

High Dynamic Range produces more realistic images by capturing brighter whites and deeper blacks and enables a larger colour volume.

In 2013, commercial solutions started to be demonstrated for broadcasting HDR to the home. However, these solutions were not suitable for television broadcasting, where the metadata required

²²⁷ Based on assumed price of energy of £100 per MWh based on industry standard

²²⁸ Based on transmitter power of 1.17 MW, and Government published conversion factors for kilograms of CO₂ per KWh of electricity. See: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/901692/conversion-factors-2020-methodology.pdf

²²⁹ See: <https://calculator.carbonfootprint.com/calculator.aspx?tab=3>

²³⁰ This is comprised of £900k of cost avoidance associated with BBC Scotland on PSB1 (terrestrial) + 50% of the value of a transponder (i.e. £2m) based on 2 services saved on satellite with each service occupying 25% of a satellite transponder.

for HDR formats would be difficult to manage in live production, as it could easily become corrupt or out-of-sync. Moreover, the solutions proposed to maintain compatibility with non-HDR displays were complex and would consume additional bandwidth.

The analysis of these solutions led to “Hybrid Log Gamma” (HLG), launched in 2014 in partnership with NHK (Japan), as a solution to these shortcomings, with the aim of including the HLG solution in the relevant standards.

In FY 2017/18, while finalising the standardisation work, the BBC R&D team developed a new hybrid UHD SDR/HDR production workflow based on HLG that was tested for the Royal Wedding and Wimbledon, and later used standalone for the 2019 FA Cup.

The BBC believes this has not only improved the existing SDR and HDR quality and capability, but its adoption by the BBC across a range of programmes means that it has brought this improved quality to BBC audiences more quickly than would otherwise have been possible. There are two main reasons for this:

1. Supply side: the hybrid UHD SDR/HDR workflow makes it cost effective to produce live content in HDR, as there is no need for costly infrastructure upgrades or duplication of infrastructure (i.e. separate workflows for SDR and HDR); and
2. Demand side: HLG is compatible with UHD SDR screens, and older HDR screens can be easily upgraded to HLG with a firmware unlike other HDR formats.

In addition to generating benefits to the BBC’s audiences, there have been technological spillovers to other broadcasters and their audiences. Due to the BBC providing HLG as opensource technology, and associated lookup tables at low cost, the technology has been adopted by major broadcasters around the world, including as FOX Sports for the 2020 Super Bowl, Sky Deutschland for the German football Bundesliga, DirectTV, NBC Sports, CBS, and NHK for a series of live productions.²³¹

Of the 89 consumer-facing broadcasters and streaming services listed on the UltraHD Forum that have adopted some form of HDR, 49 (55%) have adopted HLG as their sole HDR solution, with a further 3 having adopted the format alongside other HDR formats.

This has meant that the benefits of HDR and the improved viewing quality it brings, can be realised by a much larger audience than it otherwise would. Whilst assessing the audience benefit of such a quality improvement is difficult, as an example, the Netflix Ultra HD package, which is required to enjoy HDR video, is £48 per year more expensive than the standard package.

In addition to audience benefits, there are expected to be efficiency benefits generated from the new improved workflow (e.g. no duplication of infrastructure for live events, cheaper production costs due to cheaper Outside Broadcasting trucks, etc.). However, we have not been able to quantify these at this stage due to a lack of robust data.

IP Studio

An example of the role that BBC R&D plays in developing new standards, with benefits to the wider industry, is its key role in the convergence of the broadcasting industry towards a common internet protocol (IP)-based production infrastructure.

In 2013, BBC R&D was involved in early conversations regarding the full potential of an IP infrastructure beyond the industry’s consensus at the time, which was simply looking to use IP networks to transport traditional Serial Data Interface (SDI) content over IP. Work was subsequently formalised in the “Joint Task Force on Networked Media”, and ultimately in the “SMPTE ST 2110”

²³¹ HLG was adopted by these broadcasters for HDR live content. However, they are not all using the hybrid SDR/HDR workflow.

suite of standards from the Society of Motion Picture and Television Engineers (SMPTE), describing how to send digital media over an IP network.

To demonstrate how IP networks could be used in production, the BBC built a demonstrator for end-to-end broadcasting using IP – the ‘IP Studio’. Through prototypes and trials, BBC R&D was able to demonstrate its feasibility, and then worked with industry partners to prove an open approach to interoperability. Through this work the BBC fed directly into the SMPTE ST 2110 standardisation effort, including defining use cases, the reference architecture, and family of standards.

The BBC further committed to the technology by using SMPTE ST 2110 in the BBC’s new Central Square building in Cardiff that opened in 2019, making it the first BBC facility in the UK to use the IP technology across both its production and broadcast operations.

The BBC considers that the potential for this technology is significant as it provides a cost-effective alternative to traditional infrastructure – it is estimated the BBC will save around £1.6m over 10 years by building the BBC’s Cardiff HQ infrastructure using SMPTE ST 2110. On top of this, the BBC believes that it offers greater functionality and flexibility. For example:

- The infrastructure can be scaled and upgraded more easily to meet changing user requirements, helping future-proof investment by avoiding the need for large-scale overhaul. E.g. users can upgrade only the end points (e.g. cameras) without having to upgrade the whole infrastructure.
- The infrastructure can use expertise and network resilience mechanisms developed for data centres and the Internet; these are cheaper compared to setting up a traditional duplicated broadcast infrastructure.
- The technology helps enable remote production and allows productions greater flexibility in where they locate their facilities. The BBC expects this to lead to productivity benefits and improved quality of output. It also opens the path to future automation and discoverability, which removes the need for manual intervention.
- The technology is geared towards a better interactive experience for viewers, including potential for added content/data and new applications.²³² This would generate audience benefits through an improved audience experience.

The BBC also considers that the use of IP networks has the potential to generate further efficiencies through economies of scale. While SMPTE ST 2110 is designed for on-premise IP-based infrastructure, it lays the groundwork for a fully cloud-based infrastructure which would allow for services to be fully utilised and all users to use the same cloud infrastructure with its “shared services”.

Longer term SMPTE ST 2110 is expected to ultimately enable remotely controllable infrastructure. This could enable machine-to-machine control, e.g. technical triggers automatically changing the broadcasting process, generating significant productivity improvements. This is currently possible on proprietary solutions but has the potential to be expanded in the future.

In January 2021, the SMPTE was awarded an Emmy Award (Technology and Engineering) for its standardisation work on SMPTE ST 2110.

4.5 Skills development and training

The BBC undertakes a range of activities to support the skills development of its own employees and individuals in the wider creative sector, including:

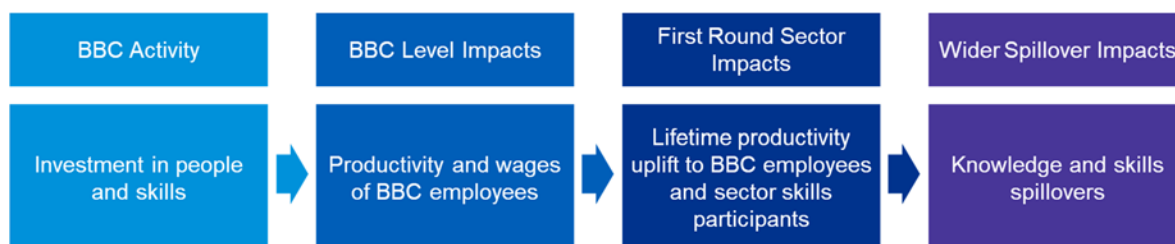
- internal training programmes;

²³² See: <https://www.smpete.org/smpete-st-2110-faq#Professional%20Media%20Defined>

- training provided by the BBC to external participants (for example Writersroom); and
- training provided through partnerships, for example with the National Film and Television School and ScreenSkills.

The mechanism through which its skills and training activity translates into economic impacts is illustrated in Figure 21 below:

Figure 21: Illustration of flow of BBC impacts relating to its investment in skills



Source: KPMG analysis

In the remainder of this section we first look at the economic theory and evidence regarding the importance of investment in skills and training, and the productivity impacts and knowledge spillovers associated with this.

We then look at two case studies relating to BBC investment in skills and training:

- BBC Academy and Apprenticeships, which covers the majority of the BBC training activity, primarily focused on its investment in its own employees; and
- Writersroom, which is run by the BBC but is available to freelance writers to provide a structured training programme for writers in the sector.

4.5.1 Importance of investment in skills

Participation in skills and training can raise the productivity of employees. There is broad agreement across academic literature²³³ that there is a positive relationship between skills and productivity. In general, higher skilled jobs are more productive, meaning that each job makes a larger contribution to the economy. For example, studies by the OECD show that, on average, a 1% increase in training days leads to a 3% increase in productivity,²³⁴ while growth accounting methodologies have estimated that the skill level of the labour force has accounted for between 15-20% of the growth in average labour productivity in the UK over recent decades.²³⁵

Not only does investment in skills increase the productivity (and wages) of the individual trained, and increase their ability to negotiate and secure jobs²³⁶ and enhancing both their capacity and opportunities to work, it also generates knowledge spillovers which positively impact the wider economy.²³⁷ This means the overall social returns to skills and education exceed the earnings premium received by individual workers.²³⁸ To the extent that the knowledge is transferable, such knowledge spillovers can result from knowledge sharing with co-workers, collaborations with other firms and staff turnover.²³⁹

²³³ BIS, 2015. [UK skills and productivity in an international context](#).

²³⁴ OECD, 2010. [G20-Skills-Strategy.pdf \(oecd.org\)](#)

²³⁵ BIS, 2015. [UK productivity and skills in an international context](#)

²³⁶ UKCES, 2014. [The Labour Market Story – The State of UK Skills](#)

²³⁷ UKCES, 2014. [The Labour Market Story – The State of UK Skills](#)

²³⁸ Mahony, M & Riley, R. 2012. [Human capital spillovers: The importance of training](#)

²³⁹ KPMG, 2020. [UK regions: a framework for growth](#)

However, despite these benefits, skills gaps exist across the creative sector.²⁴⁰ A key reason for the skills gap is that employers only consider their own private returns when making decisions about investment in skills. Whilst the societal returns to skills investment can be significant over an individual's lifetime, the returns to a single employer may be substantially lower due to spillovers.²⁴¹ This results in sub-optimal investment from a societal perspective.

Other barriers include a lack of information (information barriers) on the availability of suitable courses, the quality of courses and the benefits they provide²⁴²; and affordability, in terms of the availability of funding to pay upfront for training.

The drivers of these skills gaps are therefore not unique to the creative sector. **However, the distinctive structure of the sector, characterised by a prevalence of SMEs, start-ups, freelancers and project work, with a lack of structured career progression²⁴³ and high levels of employee churn²⁴⁴, heightens the barriers to skills investment.**

At the same time, the **high levels of networking that creative businesses and individuals engage in to share skills and do business²⁴⁵, mean greater opportunities for spillovers from investment in skills in the sector**, meaning greater societal benefits to be gained from investment. Furthermore, the growing importance of digital skills across all sectors²⁴⁶ means that spillovers will not only benefit other firms in the same sector, but can have far reaching benefits across the economy.

Initiatives which support training in the breadth of skills required in the media and creative sectors, including both creative and technical skills, are therefore critical for its successful growth. Furthermore, whilst employer provided training is important, there is also a need for initiatives that can be accessed by those working across the sector, including by self-employed and freelancers who may not otherwise have opportunities for training and career development.

In the following sections we look at the BBC's skills initiatives, both internal provision and provision to the wider sector, and how, through these, the BBC adds value by supporting skills development across the creative sector.

4.5.2 BBC skills initiatives

In order to support skills development and address skills gaps in the creative sector, the BBC invests in in-house skills and training, as well as external initiatives in partnerships with other organisations.

One way in which it does this is through the BBC Academy - an educational arm of the BBC, which trains current and prospective employees. The Academy includes apprenticeships for both existing staff and new entrants, as well as training and development schemes which provide continuous professional development for BBC staff and training programmes and partnerships with external organisations.

Since 2016, the BBC has invested over £100m on skills and training through the BBC Academy, with total spend in FY 2019/20 of just over £28.2m, facilitating training through 94,354 courses. In FY 2019/20, 94,354 participants completed a training course, an increase of 44% from 2016.

As can be seen in Figure 22, since 2016 the BBC's overall expenditure on training has grown by 20%, with expenditure at its highest in 2017/18, driven by the roll out of new mandatory training including a new Data Protection and Cyber Security course.²⁴⁷ Training expenditure growth over this period has

²⁴⁰ UKRI, [Creative Industries: Sector specific guidance](#)

²⁴¹ BIS, 2014. [Estimating Innovation Spillovers: an International Sectoral and UK Enterprise Study](#)

²⁴² UKCES, 2010. An appetite for learning: increasing employee demand for skills development

²⁴³ UKCES, 2012. [Creative Media and Entertainment: Sector Skills Assessment 2012](#)

²⁴⁴ Nesta, 2018. [Creative Nation: How the creative industries are powering the UK's nations and regions.](#)

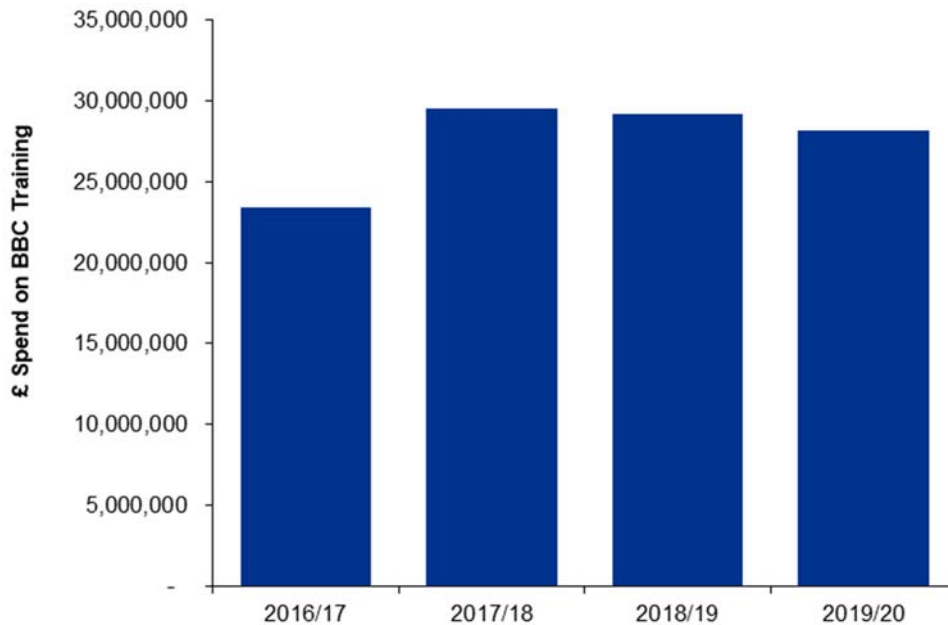
²⁴⁵ Nesta, 2018. [Creative Nation: How the creative industries are powering the UK's nations and regions.](#)

²⁴⁶ DCMS, 2019. [No Longer Optional: Employer Demand for Digital Skills](#)

²⁴⁷ Information provided by the BBC

also been driven by increased spending on Leadership Programmes, the BBC New Talent scheme - which targets less experienced individuals in the sector- and in providing apprenticeships.

Figure 22: Expenditure on BBC training, FY 2016/17 to 2019/20



Source: BBC 2020

BBC Apprenticeships

A significant part of the BBC's training offer from an economic impact perspective is its apprenticeships – including Staff Apprenticeships – available to existing BBC staff- and the Early Career Scheme – apprenticeships offered to those joining the BBC, generally either straight from education or following a career change.

In FY 2019/20, the BBC spent an estimated almost £7.4m²⁴⁸ on its apprenticeships, not including its Apprenticeship Levy payments. This expenditure contributed toward funding a total of 335 apprenticeship places in 2020.

As shown in Figure 23 below, these apprenticeships, provided via the BBC Academy, range from Level 3 to Level 7.²⁴⁹ In 2019/20 the majority of people on an apprenticeship scheme (36%) completed a Level 7 staff apprenticeship (equivalent to a post graduate qualification), the highest level offered by BBC. The large increase in Level 7 apprentices in 2020 was the result of the BBC starting to offer the Senior Leader Level 7 apprenticeship in conjunction with Cranfield University, involving a single cohort of 121 staff.

²⁴⁸ This includes payroll costs, training, travel and accommodation, technology and other costs and the BBC's estimated of additional costs which are distributed across participating divisions

²⁴⁹ These apprenticeship levels are equivalent to: Level 3 -A Level, Level 4 – 1ST Year Degree, Level 5 – 2nd Year Degree, Level 6 – Third Year Degree, Level 7 – Postgraduate.

Figure 23: Participants on BBC Apprenticeships 2018 - 2020

Participant Numbers						
Apprenticeship Level	Early Career Schemes			Staff Apprenticeships		
	Dec 2018	Dec 2019	Dec 2020	Dec 2018	Dec 2019	Dec 2020
Level 3	99	97	71	8	2	6
Level 4	7	6	3	30	28	17
Level 5	0	0	0	14	8	10
Level 6	74	71	75	0	11	19
Level 7	0	0	12	1	3	122
Total	180	174	161	53	52	174

Source: BBC 2020

For these BBC employees undertaking apprenticeships evidence indicates that it may generate substantial benefits for them over their lifetime, often reflected as increased earning power, as well as improved work opportunities in the future.²⁵⁰

While estimating the productivity uplift from specific informal training and continuous professional development is difficult due the variation in the nature, depth and quality of training provided, there is more evidence on the value of more formal training such as apprenticeships.

- A report by the Sutton Trust²⁵¹ compares the earnings potential of apprenticeships (Levels 3, 4 and 5) relative to no qualifications, A-level and undergraduate degrees. The results show lifetime earnings uplifts from apprenticeships above A-levels of £48,000 for Level 3 apprenticeships, rising to over £400,000 for level 4 apprenticeships and approximately £460,000 for Level 5 apprenticeships.
- Evidence from the Sutton Trust report provides data on the estimated lifetime earnings from a degree level qualification, whilst two BIS research papers^{252,253} find average earnings uplift from post graduate master's degrees of 9.4% and 11%. Although this relates to degrees rather than degree apprenticeships – for which there is less evidence of impact due to their more recent introduction in 2015²⁵⁴ – similar earnings impacts potentially could be expected given the Level 6 and 7 apprenticeships are equivalent to a graduate degree level and post graduate degree level qualifications respectively.

Based on these findings, and information from the BBC, we have estimated the potential lifetime earnings uplift associated with BBC's apprenticeships in 2020²⁵⁵ totals £91m. This can be compared to estimated apprenticeship costs of approximately £12.1m in 2020.²⁵⁶

To the extent that these apprentices stay at the BBC following their training, this will generate benefits to the BBC and contribute to the BBC's GVA through these employees increased productivity. However, these benefits will only accrue to the BBC during the period in which the individual remains at the BBC.

²⁵⁰ HM Government. 2017. [Industrial Strategy: Building a Britain fit for the future.](#)

²⁵¹ See: <https://www.suttontrust.com/wp-content/uploads/2019/12/Levels-of-Success3-1.pdf>

²⁵² BIS, 2011. [The Returns to Higher Education Qualifications](#)

²⁵³ BIS, 2013. [The Impact of University Degrees on the Lifecycle of Earnings: some further analysis](#)

²⁵⁴ See: <https://www.gov.uk/government/news/government-rolls-out-flagship-degree-apprenticeships>

²⁵⁵ Based on information provided by the BBC, we have made the following assumptions regarding the highest prior attainment of apprenticeships: Of those joining BBC Level 3 – Level 6 apprenticeships, 90% have either A-levels, Scottish Highers (assumed to be valued the same as A-levels) or Level 3 apprenticeship, and 10% have a degree. The split of A-levels (with Scottish Highers included within this) and Level 3 apprenticeships is based on the proportion of entrants to each qualification in England in 2019. Of those joining BBC Level 7 apprenticeships, 50% have A-levels, 25% have an undergraduate degree and 25% have a post-graduate degree.

²⁵⁶ This includes the Apprenticeship Levy, payroll costs, training, travel and accommodation, technology and other costs.

If individuals move to another organisation, these benefits will accrue to subsequent employers, representing a knowledge and human capital spillover impact. These spillovers may also arise whilst the qualified individual remains at the BBC, for examples as a result of networking, collaboration and informal engagement and knowledge sharing across the creative sector.

BBC's external facing programmes, including BBC Writersroom

As well as its in-house training (for both employees and freelancers) and apprenticeships, the total spend on skills and training includes funding for external facing programmes such as Writersroom and Digital Cities events, and partnerships with National Film and Television School (NFTS), Glasgow's Training Research Centre (TRC) and ScreenSkills.

As explained above, there are particular skills gaps in the UK creative sector and barriers to investment. However, through its external facing programmes and partnerships the BBC supports and **invests in the wider creative sector, helping to overcome these issues by providing training and developing the skills and capabilities of those that may otherwise not have had access to such programmes. This supports the skills and capabilities of the wider creative sector, contributing toward increased productivity and growth of the sector in the UK.**

BBC Writersroom

A particular challenge for the creative sector is the prevalence of self-employed or freelance workers for whom there is less access to employer training and a less structured career path. The BBC helps to address this issue by providing external training – open to applications from anyone in the sector – through the BBC Writersroom.

BBC Writersroom is a department for scripted content that works with new and experienced writers, across a range of genres such as Drama, Comedy, Children's, and Radio, with the key objectives to:

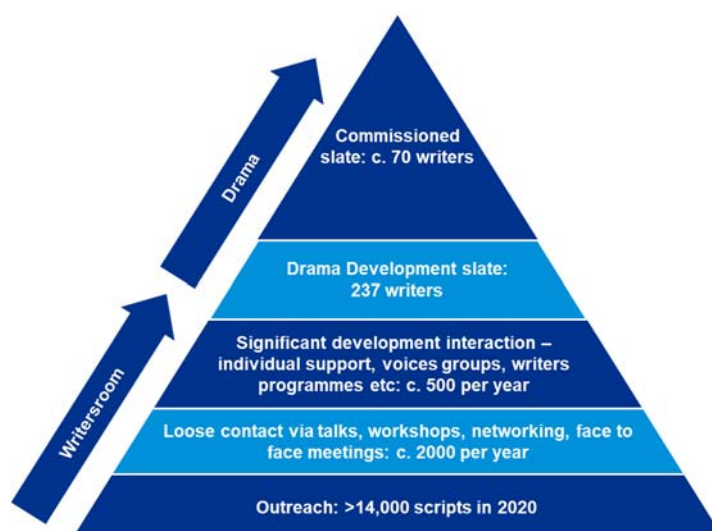
- “increase and widen the talent pool the BBC Content scripted genres have to work with; and
- provide a ladder for talent that ultimately ends with output on the BBC”.²⁵⁷

The BBC Writersroom focuses on identifying and developing talented scriptwriters through targeted writers' groups and supporting talent initiatives, offering bespoke career and script advice and championing the writers they work with to producers and commissioners. The schemes range from residential or online workshops and talks on specific aspects of storytelling or with established and experienced writers, to offering writers the opportunity to develop a fully funded first episode script for an original TV drama series (i.e. TV Drama Writers Programme).

Importantly for freelancers in the sector, the BBC Writersroom forms a key step in the BBC talent ladder, nurturing and developing grassroots talent, which is then built through BBC's 'development slate' – the process of developing projects – to commission. The BBC considers that this talent ladder, illustrated in Figure 24, provides important structure to freelancers who typically do not benefit from the same kind of structured career development pathway as is available for employees.

²⁵⁷ BBC Writersroom data

Figure 24: BBC Writersroom Development ladder



Source: BBC 2020

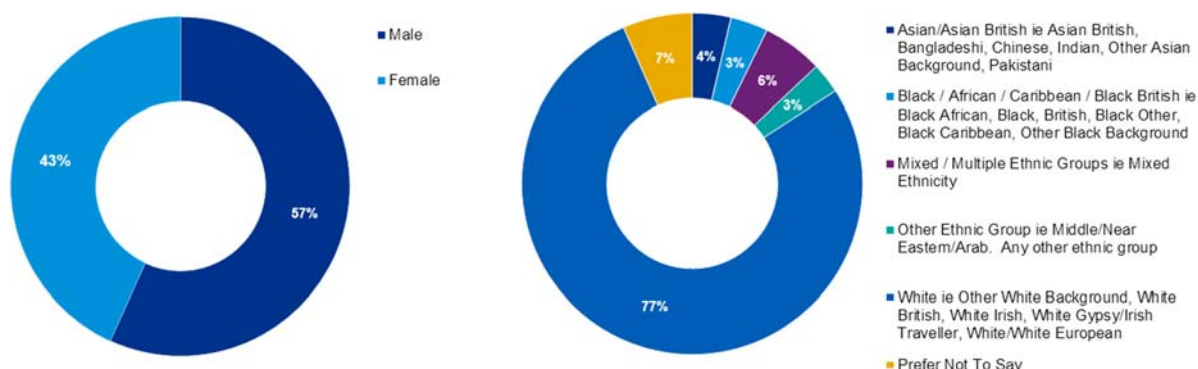
In 2020, there were 14,410 submissions to the BBC Writersroom initiatives, delivered through 17 schemes across London, Salford, Glasgow and Belfast.

In terms of the impact of the structured programmes delivered through Writersroom, evidence from the BBC covers two main areas:

- First, evidence points to the long-term approach to talent development resulting in a number of writers having greater opportunities and achieving success where they otherwise may not have done without the Writersroom support. For example, it has produced a number of now-established writers in Drama.
- Second, evidence from the BBC shows that by seeking out new voices and new stories these schemes support diversity and inclusion of employees in the TV sector in the UK – a sector in which women and those from Black, Asian and Minority Ethnic (BAME) backgrounds are underrepresented.

As illustrated in Figure 25 and the supporting evidence further below, participants in Writersroom were more diverse in terms of gender and ethnicity than in the industry as a whole, better reflecting the makeup of the UK population.

Figure 25: Gender and ethnicity breakdown, BBC Writersroom participants 2020



Source: BBC 2021

In 2020 approximately 43% of the Writersroom initiatives' participants were women, with a number of specific Writersroom programmes where the majority of participants were women (e.g. TV Drama Writers Programme 60%; CDS Directors Scheme 57% women). This is a far more proportionate representation of the UK population than the average for the sector, where women accounted for only 16% of working film writers and 14% of prime-time TV writers in the UK between 2005 and 2016.²⁵⁸

In addition, based on participants for whom information was available, in 2020 approximately 15.9% of participants were from BAME backgrounds, compared to 9.1% of writers working in UK television.²⁵⁹ This is relative to the UK BAME population share of 12.8%.

BAME representation was also much higher for specific Writersroom programmes, namely 'TV Drama Writers Programme' and 'CDC Directors Scheme' where approximately 50% and 34% of participants respectively in 2020 were from BAME backgrounds.

By providing investment in programmes such as Writersroom that offer greater opportunities and specific skills development support to emerging talent in the creative sector which may otherwise not be available, the BBC specifically supported the human capital development of those individuals.

This benefits the UK economy, for example through productivity gains and the wider knowledge spillovers to the sector, through networking, knowledge sharing and collaboration by scheme participants with others.

It also has wider benefits by enabling individuals from underrepresented groups to more successfully pursue careers in the film and tv sector – a sector which has higher labour productivity, on average, than for employment in the UK economy as a whole.

BBC skills programmes and partnerships

As noted above, in addition to its own skills programmes the BBC supports skills growth in the wider creative sector through external programmes and partnerships. Some examples of these are highlighted below.

- **Digital Cities:** an annual event delivered by the BBC Academy aimed at students and new entrants to the industry, as well as established professionals, who work within the broad creative sector. The events include sessions ranging from practical skills sections, to talent led

²⁵⁸ Writers' Guild of Great Britain, 2018. [Gender Inequality and Screenwriters](#).

²⁵⁹ Project Diamond 2020, [Race and Ethnic Diversity: a deep dive into Diamond data](#)

masterclasses. By 2019/20 approximately 5,000 people attended events across Manchester, Birmingham and Bristol with an additional 7,000 people approximately attending events online.

- **TRC ‘SuperSizer’ programme:** BBC Nations and Regions, together with Channel 4, Screen Scotland, and Scottish Enterprise, fund ‘SuperSizer’, a professional development programme aimed at Development Executives based outside of London and delivered by Glasgow-based training provider TRC.²⁶⁰ As of January 2021, the programme has supported 410 participants across 12 courses.
- **ScreenSkills:** a partnership which aims to develop sector specific, national and regional training initiatives with other industry partners.
- **NFTS:** in October 2020, BBC Academy and the NFTS have entered a three-year partnership, aiming to support emerging talent, and strengthen skills development in the Nations and Regions.²⁶¹

Finally, as well as supporting sector skills, the BBC also supports wider education and skills initiatives, including with the Open University (OU).

As part of the BBC’s delivery of its second public purpose: “*to support learning for people of all ages*”, the BBC has a partnership with the OU with the aim of reaching wide audiences with innovative and inspiring content. Its partnership with the OU is one the BBC’s longest running partnerships, having been established 50 years ago in 1971.

Through the partnership the BBC and OU co-produce programmes for BBC TV, radio, digital and online channels, producing up to 35 projects a year.²⁶² For each project, the OU assigns a nominated academic²⁶³ to give academic expertise on the programme, providing regular input into the production process.

By obtaining academic input from the OU, the BBC is able to enhance the educational content of its programmes, strengthen the learning experience of viewers when watching, listening or engaging with programmes and/or online content.²⁶⁴

²⁶⁰ See: <https://www.screen.scot/news/2019/09/trc-announces-successful-delegates-for-supersizer-programme>

²⁶¹ See: <https://nfts.co.uk/blog/bbc-announces-major-new-partnership-nfts-support-uk-creative-sector>

²⁶² See: <https://www.bbc.co.uk/commissioning/open-university#termsoftrade>

²⁶³ See: <https://www.bbc.co.uk/delivery/open-university>

²⁶⁴ See: <https://www.bbc.co.uk/commissioning/open-university#termsoftrade>

Appendix 1 DCMS sector definitions

Table 1: List of Standard Industrial Classification (SIC) codes included in the DCMS definition of creative and digital sectors²⁶⁵

SIC code	Creative Sector	Digital Sector	Cultural Sector
1820 : Reproduction of recorded media			✓
2611 : Manufacture of electronic components		✓	
2612 : Manufacture of loaded electronic boards		✓	
2620 : Manufacture of computers and peripheral equipment		✓	
2630 : Manufacture of communication equipment		✓	
2640 : Manufacture of consumer electronics		✓	
2680 : Manufacture of magnetic and optical media		✓	
3212 : Manufacture of jewellery and related articles			✓
3220 : Manufacture of musical instruments			✓
4651 : Wholesale of computers, computer peripheral equipment and software		✓	
4652 : Wholesale of electronic and telecommunications equipment and parts		✓	
4763 : Retail sale of music and video recordings in specialised stores			✓
5811 : Book publishing	✓	✓	
5812 : Publishing of directories and mailing lists	✓	✓	
5813 : Publishing of newspapers	✓	✓	
5814 : Publishing of journals and periodicals	✓	✓	
5819 : Other publishing activities	✓	✓	
5821 : Publishing of computer games	✓	✓	
5829 : Other software publishing	✓	✓	
5911 : Motion picture, video and television programme production activities	✓	✓	✓
5912 : Motion picture, video and television programme post-production activities	✓	✓	✓
5913 : Motion picture, video and television programme distribution activities	✓	✓	✓
5914 : Motion picture projection activities	✓	✓	✓
5920 : Sound recording and music publishing activities	✓	✓	✓
6010 : Radio broadcasting	✓	✓	✓
6020 : Television programming and broadcasting activities	✓	✓	✓
6110 : Wired telecommunications activities		✓	
6120 : Wireless telecommunications activities		✓	
6130 : Satellite telecommunications activities		✓	
6190 : Other telecommunications activities		✓	
6201 : Computer programming activities	✓	✓	
6202 : Computer consultancy activities	✓	✓	

²⁶⁵ See: [DCMS Economic Estimates - Sector definitions \(Standard Industrial Classifications\)](https://www.gov.uk/government/publications/dcms-sectors-economic-estimates-methodology) accessed from <https://www.gov.uk/government/publications/dcms-sectors-economic-estimates-methodology>

6203 : Computer facilities management activities		✓	
6209 : Other information technology and computer service activities		✓	
6311 : Data processing, hosting and related activities		✓	
6312 : Web portals		✓	
6391 : News agency activities		✓	
6399 : Other information service activities n.e.c.		✓	
7021 : Public relations and communication activities	✓		
7111 : Architectural activities	✓		
7311 : Advertising agencies	✓		
7312 : Media representation	✓		
7410 : Specialised design activities	✓		
7420 : Photographic activities	✓		✓
7430 : Translation and interpretation activities	✓		
8552 : Cultural education	✓		✓
9001 : Performing arts	✓		✓
9002 : Support activities to performing arts	✓		✓
9003 : Artistic creation	✓		✓
9004 : Operation of arts facilities	✓		✓
9101 : – Library and archive activities			✓
9102 : Museum activities			✓
9103 : Operation of historical sites and buildings and similar visitor attractions			✓
9511 : Repair of computers and peripheral equipment		✓	
9512 : Repair of communication equipment		✓	

Source: DCMS

Appendix 2 Methodology for estimating the GVA and employment contributions of the BBC

2.1 Approach to estimating GVA impacts

We estimated direct, indirect and induced GVA impacts associated with the BBC's activities in the UK, the sum of which gives the BBC's total GVA impact. The direct GVA impacts were measured using the income approach²⁶⁶, which defines direct GVA as follows:

$$\text{Direct GVA} = \text{Operating Profit (before tax)} + \text{Staff costs} + \text{Depreciation} + \text{Amortisation}$$

In order to estimate the indirect and induced impacts generated by the BBC, we used an input-output modelling approach, using multipliers sourced from the Input-Output tables developed by the Office for National Statistics (ONS) and the Scottish Government. The multipliers differ across industries to reflect the different input requirements to produce each unit of output and the relative productivity and value added of different activities.

For Tier 1 suppliers that the BBC contracts with directly, the BBC provided a list of its supplier spend in FY 2019/20. For each entry in the list, the BBC provided the invoice spend, the profit centre division group it related to, the category of spend (e.g. 'Costume & Make Up'), the geographic location of the supplier (at the postcode level), and the associated general ledger (GL) code.

Information regarding the industry of the supplier was incomplete therefore we used the category of spend as an indication of the industry of the supplier and assigned a Standard Industrial Classification (SIC) code to those entries based on this to fill these data gaps. In the limited cases where the category of spend was also not provided we assumed that the supplier spend was distributed across industries in the same way as the remainder of the spend of that division of the BBC.

We then estimated the indirect GVA in two stages:

1. We estimated Tier 1 indirect GVA impact by converting supplier spend into GVA using the relevant industry specific GVA to Output ratio sourced from the ONS.²⁶⁷
2. We estimated the wider supply chain effects by applying the relevant industry specific GVA multipliers from the ONS²⁶⁸ to the Tier 1 indirect GVA, based on the SIC code of the supplier.

We estimated induced GVA by applying the Type II GVA multiplier for the 'Film, TV, video, radio and music' sub-sector²⁶⁹, derived from Scottish Government Type I and Type II multipliers²⁷⁰, to our estimate of BBC direct GVA, as follows:

$$\text{Induced GVA} = \text{Direct GVA} * (\text{"Film, TV, radio and music" sector Type II multiplier} - \text{"Film, TV, radio and music" sector Type I multiplier})$$

2.2 Approach to estimating employment impacts

We estimated BBC's direct, indirect and induced employment impacts, the sum of which gives the BBC's total employment impact.

²⁶⁶ ONS, 2010. [Measuring the economic impact of an intervention](#), Paper One

²⁶⁷ ONS (2019) [Input-output supply and use tables](#)

²⁶⁸ ONS, 2015 [Input-Output Analytical Tables, Multipliers and effects \(product\)](#)

²⁶⁹ This sector comprises subcategories 'Motion picture, video and television programme production, sound recording and music publishing activities' and 'Programming and broadcasting activities, including television and radio broadcasting'. SIC code 59 and 60. See: <https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007>

²⁷⁰ Scottish Government, [Supply, Use and Input-Output Tables \(2017\)](#)

We report the BBC's direct employment impact using the BBC's internal HR data on FTEs as of 31st March 2020.

We estimated indirect employment associated with the BBC's spending with its Tier 1 suppliers using the Tier 1 indirect GVA, estimated as per the methodology above. We used the relevant industry specific GVA per FTE ratio (estimated using employment data sourced from the ONS)²⁷¹ to estimate the number of Tier 1 indirect FTE employees associated with the level of Tier 1 indirect GVA.

We then estimated employment in the wider supply chain by applying the relevant industry specific employment multiplier²⁷² to the Tier 1 indirect employment.

$$\text{Indirect FTE employment Tier 1} = \frac{\text{Indirect GVA Tier 1}}{\text{sector specific GVA per FTE}}$$

$$\begin{aligned} \text{Indirect FTE employment wider supply chain} \\ = \text{Indirect FTE employment Tier 1} \times (\text{sector specific UK employment multiplier} \\ - 1) \end{aligned}$$

$$\begin{aligned} \text{Indirect FTE employment} \\ = \text{Indirect FTE employment Tier 1} + \text{Indirect FTE employment wider supply chain} \end{aligned}$$

We estimated induced FTE employment by applying the Type II employment multiplier for the 'Film, TV, video, radio and music' sub-sector²⁷³, inferred from Scottish Government Type I and Type II multipliers²⁷⁴, to BBC direct FTE employment, follows:

$$\begin{aligned} \text{Induced FTE employment} = \text{Direct FTE employment} * \\ (\text{"Film, TV, radio and music" sector Type II multiplier} - \\ \text{"Film, TV, radio and music" sector Type I multiplier}) \end{aligned}$$

2.3 Approach to assessing the GVA and employment impacts at a regional level

We analysed the distribution of the estimated GVA and employment effects associated with the BBC across the UK's regions.

The BBC provided details of the geographic location (postcode) of its own activities and for the spending with its Tier 1 suppliers. These were used to assign the direct GVA and direct employment impacts of the BBC and the Tier 1 supplier indirect GVA and employment to the relevant region of the economy.

To estimate the geographic distribution of the GVA and employment impacts associated with the wider supply chain of the BBC we use an input-output modelling approach and tailor this to reflect the ratios of local level economic activity to national level economic activity (referred to as location quotients), at the sector level for each SIC category. Data available from the ONS showing the level of economic activity in each industry within each UK NUTS region was used in this analysis.²⁷⁵ For our analysis of

²⁷¹ To estimate the sector average GVA per employee, in FTE terms, we had to first estimate the number of FTEs for each SIC code as the ONS does not publish FTE breakdown by industry. We estimated this using total employment figures from the ONS Business Register and Employment Survey 2019, which states both full-time and part-time employment figures which was converted to FTE using an FTE conversion factor based on the average number of hours work per week by part-time workers sourced from the ONS. This figure was then used to estimate the GVA per FTE.

²⁷² ONS, Type I UK employment multipliers and effects, reference year 2015, See:

<https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/adhocs/009746typeiukemploymentmultipliersandeffectsreferenceyear2015>

²⁷³ This sector comprises subcategories 'Motion picture, video and television programme production, sound recording and music publishing activities' and 'Programming and broadcasting activities, including television and radio broadcasting'. SIC code 59 and 60, See:

<https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007>

²⁷⁴ Scottish Government, [Supply, Use and Input-Output Tables \(2017\)](#)

²⁷⁵ ONS, 2019. [Regional gross value added \(balanced\) by industry: all NUTS level](#)

the employment impacts, we accounted for differences in industry labour productivity using industry-specific GVA per FTE data.

2.4 Key assumptions and adjustments in GVA and employment analysis

The following assumptions and adjustments were applied in our analysis and should be considered when interpreting the results.

- 1 We redistributed the licence fee revenues (originally allocated in full to 'Chief Customer Officer Group' division) across the PSB division groups based on the percentage of operating costs incurred by each division group. Where the operating costs were negative (i.e. Group Ledger division) no licence fee was allocated to the group.
- 2 We identified that the BBC supplier spend data was incomplete for some divisions, as the total value of supplier spending in the dataset provided did not align to the operating costs reported in the financial accounts. Where this was the case, the supplier spend data was uplifted to match the level of supplier spend in the financial data. It was assumed that this spend was distributed across sectors (by SIC) and geographic regions in the same way as for the supplier spending detailed in the procurement dataset provided.
- 3 Indirect GVA and indirect employment generated by the Tier 1 BBC suppliers was assigned to a NUTS 1 region based on the postcode of each Tier 1 supplier. We note that this is linked to the invoicing address, often a head office location for a UK business. As a result of this, the analysis may not accurately capture the geographic location where the economic activity takes place, i.e. for suppliers with multiple locations across the UK but a central invoicing address.

Appendix 3 Detailed results of the regional distribution of the BBC's GVA impacts

Table 2: Total BBC GVA by NUTS 1 region, 2019/20, GBP millions, 2020 prices

Region	Direct GVA (Million)	Tier 1 supplier Indirect GVA (Million)	Wider supply chain Indirect GVA (Million)	Induced GVA (Million)	Total GVA (Million)	Proportion of Total BBC GVA	Proportion of Total Region's GVA ²⁷⁶
East Midlands	£25.34	£10.89	£36.67	£7.91	£80.80	1.6%	0.07%
East of England	£48.36	£44.09	£57.96	£16.32	£166.73	3.4%	0.10%
London	£920.86	£887.88	£427.10	£242.58	£2,478.43	50.3%	0.54%
North East	£15.89	£60.39	£17.54	£10.18	£103.99	2.1%	0.19%
North West	£294.52	£45.21	£69.36	£44.38	£453.47	9.2%	0.24%
South East	£39.32	£238.65	£110.50	£42.15	£430.61	8.7%	0.15%
South West	£82.07	£56.56	£49.06	£20.36	£208.05	4.2%	0.15%
West Midlands	£80.16	£148.35	£46.86	£29.88	£305.25	6.2%	0.21%
Yorkshire and The Humber	£31.22	£20.35	£41.54	£10.10	£103.22	2.1%	0.08%
Northern Ireland	£63.81	£9.38	£13.00	£9.35	£95.54	1.9%	0.22%
Scotland	£133.40	£36.91	£52.68	£24.19	£247.18	5.0%	0.17%
Wales	£130.32	£36.08	£24.18	£20.68	£211.25	4.3%	0.32%
Other England	£-	£19.46	£-	£2.11	£21.57	0.4%	-
Unknown	£7.45	£9.12	£-	£1.80	£18.37	0.4%	-

Source: BBC, ONS and KPMG analysis

²⁷⁶ Percentages based on ONS 2018 GVA figures, see: <https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalandrealregionalgrossvalueaddedbalancedbyindustry>. Figures were inflated to 2019 prices based on ONS CPI times series. Available at <https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/l522/mm23>.

Contact us

Heather Sharp

Director, KPMG Economics

T +44 (0) 7917 267 216

E heather.sharp@kpmg.co.uk

Ruth Beckett

Associate Director, KPMG Economics

T +44 (0) 7795 047 312

E ruth.beckett@kpmg.co.uk

www.kpmg.com

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