Contribution of the arts and culture industry to the UK economy

An updated assessment of the macroeconomic contributions of the arts and culture industry to the national and regional economies of the UK

Report for Arts Council England

November 2017

Cebr

Authorship and acknowledgements

This report has been produced by Cebr, an independent economics and business research consultancy established in 1992. The views expressed herein are those of the authors only and are based upon independent research by them.

The report does not necessarily reflect the views of Arts Council England.

London, November 2017

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Executive summary

This is a summary of Cebr's report for Arts Council England on the economic contribution of the arts and culture industry to the UK and its constituent national and regional economies. This is a second refresh of the original study, which was undertaken in 2013, with the first refresh in 2015.

Scope and methodological overview

The report is based largely on official data provided by the ONS. Since our last report in 2015, which presented the results of our assessment based on data up to 2013, two further years' data have become available, specifically 2014 and 2015.

The Annual Business Survey discloses economic indicators, including revenues, costs of production and value-added across hundreds of disaggregated industries. These are broken down according to the SIC framework, allowing us to identify the 'business economy' segment of the arts and culture industry. National accounts are used to establish the additional contributions made through government and third sector provision of arts and culture. These sources enabled our estimates of the direct macroeconomic contributions of the arts and culture industry in the UK.

We estimate the wider multiplier impacts of the arts and culture industry using our UK and regional input-output models. These models are used to trace the industry's economic footprint through its supply chain relationships. This generates output and employment in those sectors and increases earnings and employee spending in the wider economy.

Direct economic contributions of the arts and culture industry

On the direct economic contributions of the arts and culture industry, our main findings are that:

- The **market segment of the industry generated £15.8 billion in turnover in 2015**, an increase of 9.5 per cent since 2013. **Book publishing, performing arts and artistic creation were the largest categories** of arts and culture industry activities based on turnover, accounting for 33, 24 and 20 per cent of the entire industry, respectively.

- However, **based on the** alternative **national accounting measure of gross domestic output at basic prices** – which excludes imports, non-VAT indirect taxes and distributors' margins from turnover but **which facilitates the inclusion of the non-market segment, that involves direct government or third sector provision** – the measure of the gross output of **the entire arts and culture industry registers an estimated £20 billion in 2015**.

- **Private enterprises in the arts and culture industry contributed an estimated £8.5 billion in gross value added (GVA) contributions to GDP in 2015**. This represents **staggering growth of 12 per cent on the 2014 estimate** of £7.6 billion. On this measure, the **largest contributor is book publishing**, accounting for a 35 per cent share. But artistic creation is larger (25 per cent) in GVA terms than performing arts (19 per cent), reversing the picture suggested by the turnover data.

- **Non-market provision of arts and culture resulted in the generation of an additional £2.1 billion in GVA contributions to GDP**, consisting mainly of the employee compensation required to be expended to deliver these activities. The **non-market segment accounted for an estimated 20 per cent** of the GVA contribution **of the entire arts and culture industry**.

- **In 2015, the arts and culture industry employed an estimated 131,200 people in the UK** as a whole. **In England, the industry employed an estimated 119,000 people** in the same year. **Performing arts was the largest contributor** to total employment, amounting to 35 per cent of total employment in the industry as a whole.
- **The compensation of those employed in the arts and culture industry is**, as in most industries, **the largest element of its GVA contribution to GDP, amounting to almost £5.4 billion in 2015**. The market segment (as represented by private enterprise) accounts for 89 per cent of this total, whilst government and third sector provision account for 8 and 3 per cent, respectively.

Wider multiplier impacts of the arts and culture industry

Based on our analysis of the arts and culture industry within the ONS national accounting framework, specifically the supply-use tables and Cebr's input-output models, we conclude that in the UK:

- **For every £1 of GVA generated by the arts and culture industry, an additional £1.30 of GVA is generated in the wider economy through wider indirect and induced multiplier impacts of the industry**. Indirect impacts are generated in the supply chains supporting the arts and culture industry, whilst induced impacts are generated in the wider economy when the direct and indirect (supply chain) employees spend their earnings on the goods and services required by households.
- Once these impacts are taken into account, **the arts and culture industry's aggregate GVA impact reaches an estimated £24.5 billion in 2015**.
- The same logic applies to **the arts and culture industry's estimated employment multiplier of 2.77**, **meaning that for every job supported by the arts and culture industry, an additional 1.77 jobs are supported in the wider economy**, again through these indirect and induced multiplier impacts.
- **Accounting for these** wider multiplier impacts **and adding them to the direct employment contribution**, produces an **aggregate employment impact of the arts and culture industry of approximately 363,800 jobs in 2015**.
- An **employee compensation multiplier of £2.38 means that, for every average gross salary of £30,789 earned by a person employed in the arts and culture industry, an estimated additional £42,420 in gross salary was earned elsewhere in the economy** through the same indirect and induced multiplier impacts.

Impacts of the arts and culture industry in the UK nations and English regions

- A national and regional split of the £10.6 billion of direct GVA contribution to GDP generated by the entire UK arts and culture industry in 2015 reveals that **the lion's share (almost £9.4 billion) was generated in England, with £3.4 billion generated in London alone**. **Arts and culture's share of the regional economy is also highest in London**, at an estimated 0.89%.
- The industry's **share of the Wales economy is lowest at 0.43%**, which compares with a 0.64% share of the UK economy as a whole and a 0.66% of England's economy. **In absolute terms**, **the contribution** of the arts and culture industry **to the Northern Ireland economy is lowest** at an estimated £151 million in 2015.
- The arts and culture industry **employed the most people in London in absolute terms - about 58,500**. Our estimates suggest that the fewest are employed by the industry in Northern Ireland. The

arts and culture industry in **London (1.16 per cent) and Northern Ireland (0.19 per cent) also represent the highest and lowest percentage shares of total employment in each**.

- **The arts and culture industry in the South West and East of England have the largest GVA and employment multiplier impacts** of all the UK nations and English regions. This would **suggest that the arts and culture activities in these regions can be expected to have relatively more localised impacts** compared to other areas of the UK.
- **Wales and the North East of England appear to have the lowest 'in-region' multiplier impacts**, which is **indicative of the regional economy being** relatively **less able to provide for all** of the **intermediate input needs** of the arts and culture industry in those regions. This means that **more of these inputs need to be sourced from outside those regions, reducing the multiplier effects realised within them**.
- The employment multiplier in the South East of England appears low. This is most likely traceable to the discontinuation of an ONS dataset that allowed us to account for the flows of workers and employee earnings between the South East (and the East) of England and London. In our previous reports, this had the effect of boosting the 'in-region' multiplier estimates for the South East and East of England and reducing those for London.
- **The arts and culture industry in London and the South East produce by far the greatest aggregate GVA impacts**, once these 'in-region' indirect and induced multiplier impacts are accounted for. Those impacts **reached £6 billion and £4 billion, respectively, in 2015**. The lowest impact is estimated to be in Northern Ireland, with an aggregate GVA impact of an estimated £281 million.
- The picture is similar for employment. **England is dominant at the national level, whilst London is the dominant English region**. **Northern Ireland** is again the nation/region in which the impact of the arts and culture industry **is the lowest in absolute terms**.

Other aspects of the economic contribution of the arts and culture industry

We have also given consideration to some other aspects of how the industry contributes to the economy. We consider labour productivity and, for the first time, international trade, as well as exchequer contributions. Our findings are outlined below.

- **Labour productivity is often analysed in terms of GVA per worker**, as it provides a useful indicator of what a given supply of labour in a sector has been able to produce with the fixed capital and technological progress available to them. **GVA per full-time equivalent (FTE) employee**, which takes account of the mix of full-time and part-time employment in the arts and culture industry, **is estimated to have averaged £66,000 per annum over the period 2009-15**. This is **greater than the equivalent figure for the UK as a whole, which was £46,800** over the same period.[1]
- This **indicates that many workers in the arts and culture industry produce value at a high rate**. Indeed, this is **particularly true in book publishing and sound recording & music publishing, in which GVA per FTE is estimated to have been close to £100,000 per annum** over the 2009-15 period. But it is also estimated to have been **higher than the average for the industry as a whole in**

[1] This corresponds to the UK business economy only. Total economy productivity would be expected to be even lower than this more confined measure.

both artistic creation and support activities to the performing arts, at over £84,000 and £70,000 per annum, respectively.

- International trade can be associated with significant productivity benefits. It increases the potential for businesses to exploit efficiencies like economies of scale and density. By reducing average unit costs of production or service provision, firms can maintain or improve competitiveness domestically and internationally. Economies of scale increase the overall supply potential of the economy.

- **Including tourism spend in the UK on arts and culture activities, we estimate that almost £5.2 billion of arts and culture-based goods and services were exported from the UK in 2013**. In the same year, the latest for which these data are available, **non-EU-exports account for a** rather surprisingly **large share of 84%** of the total, with the remaining 16% corresponding to exports to the EU.

- The benefits of trade are not confined to exports. The ability to access wider markets facilitates UK business in accessing cheaper and better inputs in which other countries have a comparative advantage. This enables UK business to be more cost competitive, as well as to take advantage of foreign know-how and greater specialisation in activities in which the UK holds comparative advantage. UK firms' exposure to foreign competition from imported goods and services can also be expected to encourage greater efficiency amongst domestic suppliers. An estimated **£5.4 billion of arts and culture-based goods and services were also imported into the UK in 2013**. Unfortunately, the same split between EU and non-EU is not available.

- The arts and culture industry is a significant recipient of public funding. But, as a result of its productive revenue and value-generating activities, it also contributes to the exchequer via taxation. **The estimated contribution of the arts and culture industry to the exchequer in 2015 stood at over £2.6 billion**.

- Based on these estimates, combined with our estimate of annual average funding of the arts and culture industry (using data provided by Arts Council England), **Cebr estimates that, for every £1 of public funding of the arts and culture, £5 of tax is contributed by the arts and culture industry**.

Other economic characteristics of the arts and culture industry

- The **industries that make up our definition of the arts and culture industry**, as detailed in the Appendix, **comprise of a large number of small enterprises**. Large organisations typically account for a relatively small proportion of the total enterprises within the arts and culture industry.

- **Firms with one or no employees make up 92 per cent of the businesses** operating within the wider sectors from which we take our definition of the arts and culture industry. **This contrasts with firms employing 250 or more employees**, which **accounted for less than 0.1 per cent of businesses** in 2016**. In the wider economy, the share** of firms with one or no employees **is much lower**, accounting for **76 per cent** of businesses. **Education is the only sector with a comparably high proportion of firms of this size, at approximately 94 per cent, in 2016**.

- **In creative, arts and entertainment activities (SIC90), average full-time gross pay in 2015 was £39,474**. Over the period 2008-15, full-time earnings increased by 24 per cent. Part-time earnings increased by 11 per cent.

- There is **significant variation in earnings trends across the** six SIC three- and four-digit **categories of arts and culture activities that are included within our definition of the** arts and culture **industry**.

On average, **over the period 2008–15, book publishing and artistic creation had the highest levels of gross average pay** of any of the activities within our definition.

- The **geographical distribution of earnings in the arts and culture reveals divergences in the levels of pay across the different regions of England and nations of the UK**. **Employees in the creative, arts and entertainment sector in London achieved the highest levels of gross annual pay, at approximately £39,000 on average in 2015**. This is the **only region that has a notably higher level of annual pay than the UK average for the industry**. It is only slightly higher in the West Midlands.
- The ONS produces annual data on household final consumption expenditure (HHFCe) as part of the supply-use tables, themselves derived from the national accounts. We combined this dataset with our definition of arts and culture to derive the HHFCe on arts and culture across time. The scope of these estimates is unavoidably wider than our definition of the arts and culture industry from the supply-side. For example, they go beyond expenditure on published books to cover expenditure on all publications including, for instance, newspapers, magazines and stationery. Likewise, the estimates go beyond spend on music, to take in motion picture, video and TV.
- In 2014, **household final consumption expenditure (HHFCe) on arts and culture (as defined more broadly for this demand-side data) stood at an estimated £21.4 billion**, a **3 per cent decrease on** the **2013** value of £22.2 billion. However, HHfce on arts and culture increased steadily in the period 2006-13, from £18.5 billion to £22.2 billion. Despite the fall in 2014, the latest year for which data are available, HHfce stood well above pre-recession levels, observing a 16 per cent increase between 2006 and 2014.
- **In 2014, the average weekly HHfce on arts and culture stood at £15.42, a 4 per cent decrease on the 2013 value of £15.98**.
- In contrast, **data from** an alternative source, **the family spending survey**, **suggests that average weekly spending on 'recreation and culture' stood at £68.80 in 2014, a 7 per cent increase on the 2013 value, but a decline of 1.4 per cent is suggested by the 2015 data**. Note that this family spending category is also broader than our definition of the arts and culture industry. For instance, it includes historical monuments, national parks, zoological and botanical gardens, as well as license fees and subscriptions for TV networks.
- **Based on data provided by National Portfolio Organisations** (NPOs) for financial years 2014-15 and 2015-16, **the importance of the different income streams for this subset of the arts and culture industry that receives regular funding from the Arts Council can be analysed**. These **NPOs received a total £1.49 billion in 2015/16**, an increase of 5 per cent on 2014/15. The l**argest contributor was earned income** (**54 per cent of the total** in 2015/16, up 6 per cent on the previous year).
- Taken together, **Arts Council, local authority and other public subsidies make the next largest contribution, amounting to 33 per cent** of total income. However, between 2014/15 and 2015/16, Arts Council subsidies fell in aggregate by 1 per cent. Similarly, there was a 5 per cent decrease in other public subsidy. However, there was an increase of 8 per cent in local authority subsidy.
- **Contributed income was the third most significant individual component** of total income **in 2015/16**, **accounting for 13 per cent** (£201 million), an increase of 14 per cent from 2014/15.

1 Introduction

This is a report by the Centre for Economics and Business Research (Cebr), on behalf of Arts Council England, on the economic contribution of the arts and culture industry to the UK and its constituent national and regional economies. This is the second refresh of the original study, which was undertaken in 2013, with the first refresh in 2015.

1.1 Background and aims of the study

The purpose of the report is to provide an up-to-date picture of the contributions that arts and culture activities in England and the UK as a whole contribute to national and regional economic indicators like GDP and jobs.

Arts Council England is a public body that supports a range of activities across the arts, museums and libraries. Its remit for the arts includes a wide range of visual, performing and literary art forms. It has funding responsibilities for regional museums and a development role across libraries and the wider museums sector. Arts Council England works with its parent government department - Department for Culture, Media and Sport (DCMS) - to make the arts and the wider culture of museums and libraries an integral part of everyday public life, accessible to all, and understood as essential to the national economy and to the health and happiness of society.

Cebr's original 2013 report (*The contribution of arts and culture to the national economy*) provided a wide-ranging exploration of the spillover impacts of arts and culture – from developing skills, nurturing innovation and contributing to and fostering growth in the commercial creative industries to the improvement of national productivity through arts and culture's educational partnerships, its support of research activities and of further education and community learning. As pointed out then, the definition of economic indicators of such benefits are difficult to define, measure and monetise, but the qualitative indications produced by the research apply just as much today as in 2013, when it was carried out. As such, these spillover impacts are beyond the scope of this report.

This report is confined to the analysis how the arts and culture industry contributes to and impacts on the UK economy and the economies of each of the UK's four nations and nine English regions. Contributions to macroeconomic indicators such as gross value added (GVA) contributions to GDP, employment and household incomes are assessed. But we also examine the indirect and induced multiplier impacts that can be associated with the arts and culture industry, through its supply chain linkages with the rest of the economy and through the activities stimulated when employees of arts and culture spend their earnings in the wider economy on the goods and services required by households.

1.2 Structure of the report

The report is structured as follows:

- Section 2 explains how we have defined the arts and culture industry and the scope of the study. It also gives an overview of our methodology.
- Section 3 assesses the direct macroeconomic contributions of the arts and culture industry to the UK economy. We consider this in terms of employment, turnover and value-added contributions. For the first time, we provide estimates of the additional direct contributions of arts and culture activities undertaken by the non-market sector, that is, by arms of government and by the third sector. These contributions are additional to the contributions flowing through the business

economy – all the commercial arts and culture enterprises, large and small, that make up the arts and culture industry.

- Section 4 sets out our findings on the multiplier impacts of the arts and culture industry, including indirect (supply chain) impacts and induced (employee spending) impacts. This section firstly estimates the contributions to gross domestic product (GDP), GVA, employment and household incomes in the UK and England. It then examines the impacts across other UK nations and English regions.
- Section 5 considers other aspects of the economic contributions of the arts and culture industry, such as labour productivity and, for the first time, international trade, as well as exchequer contributions.
- The Appendix provides a Standard Industrial Classification (SIC)-based definition of the arts and culture industry used in this study in tabular form.

2 Scope and methodology

The scope of the study and the methodology used are broadly the same as in the previous reports. This section recaps the definition we use for the arts and culture industry, and the scope of the study.

2.1 Scope of the study

We continue to use a definition of the arts and culture industry that is linked to industry classification and national statistics. The SIC system provides the underlying data collection framework for much of the economic data produced by the ONS. This includes the UK business economy and national accounting frameworks, which are the foundation on which the macroeconomic models, developed by Cebr, are used to estimate the impact of the arts and culture industry presented in this report.

In defining the arts and culture industry under this framework, the objective is to capture the value to the economy of the six art forms that are funded by Arts Council England - theatre, dance, literature, visual arts, music and combined arts. On a SIC basis, arts and culture consists of sets and/or subsets, dependent on the level of aggregation, of the product and industry groups defined under the SIC system. The definition used in this and our previous reports includes the following set of activities, identified by 3-4-digit SIC codes: [2]

- 58.11 - book publishing (1-digit Section J)
- 59.2 - sound recording and music publishing (1-digit Section J)
- R90.01 - performing arts (1-digit Section R)
- R90.02 - support activities to performing arts (1-digit Section R)
- R90.03 - artistic creation (1-digit Section R)
- R90.04 - operation of arts facilities (1-digit Section R)

As with our previous reports, the creative industries, museums and libraries remain outside the scope of the assessment presented herein. A more detailed SIC-based definition of the arts and culture industry used in this study (incl. a breakdown of the activities listed above), are provided in the Appendix. This traces the definition from the relevant one-digit SIC classifications through to the relevant five-digit activities.

2.2 Overview of approach and methodology

To undertake our analysis of the macroeconomic contributions and impacts of the arts and culture industry, we have used official data provided by the ONS. Since our last report in 2015, which presented data up to 2013, two further years' data have become available, specifically 2014 and 2015.

[2] The SIC system breaks down the economy into 21 broad sectors (officially 'Sections' A to U) at the one-digit level. Section R, for example, is the 'Arts, Entertainment and Recreation' sector. However, Section R does not include a range of activities related to literature and music, two of the six art forms that the study was to cover. For these, we looked to Section J, the 'Information and Communications' sector. The next level of disaggregation is the two-digit divisions, however, this includes a range of industry groups at that are not within Arts Council England's remit, such as gambling and betting and sports activities. Drilling deeper into the three- and four- digit SIC levels brought us closer to the required level of industry disaggregation.

The Annual Business Survey discloses economic indicators, including revenues, costs of production and value-added across hundreds of disaggregated industries. These are broken down according to the SIC framework, as discussed above. This allows us to identify the ‘business economy’ elements of the arts and culture industry. National accounts data in the supply-use tables and input-output tables can be used to establish the additional contributions of arts and culture activities provided directly by government and by the third sector. These are the broad steps involved in establishing estimates of the direct macroeconomic contributions of the arts and culture industry in the UK.

We estimate the multiplier impacts of the arts and culture industry using our input-output models, which again draw on the ONS’ national accounting framework. The input-output models use data on the sectors from which the arts and culture industry purchases its inputs (for example, from set materials to advertising services to paper clips). They trace the industry’s economic footprint through its supply chain relationships with other sectors. This generates output and employment in those sectors and increases earnings and employee spending in the wider economy.

3 The direct economic contributions of the arts and culture industry

This section provides an assessment of the importance of the arts and culture industry to the UK economy in terms of turnover, GVA and employment. We examine the performance of these indicators over the period 2008–15.

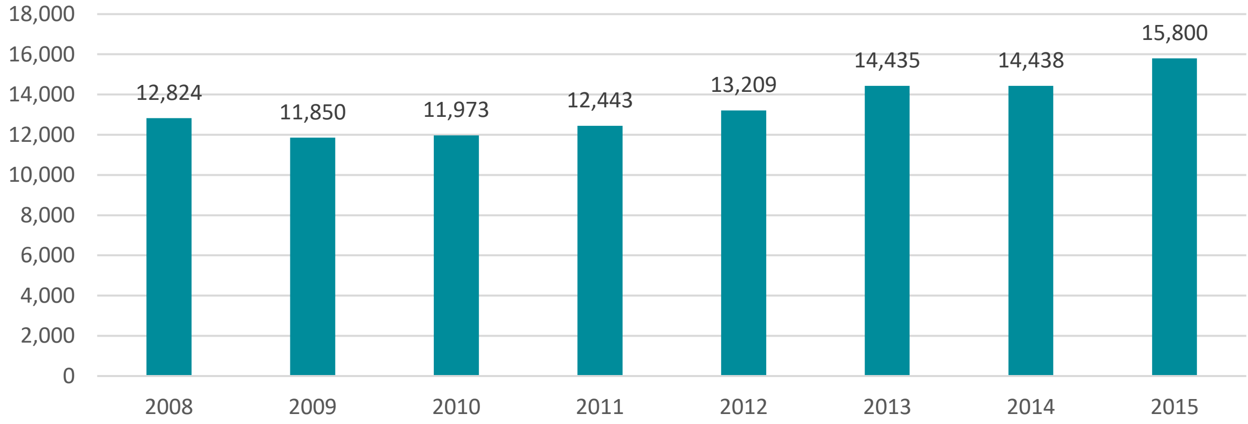
The analysis of turnover in 3.1 below is limited to data on arts and culture enterprises, as contained in the ONS Annual Business Survey (ABS).[3] The gross value added contributions to GDP made by these enterprises is the subject of subsection 3.2 and is also based on ABS data. Subsection 3.3 uses ONS national accounts, supply-use and input-output data to present estimates of the additional GVA contributions generated by non-market providers of arts and culture.

The ONS Business Register and Employment Survey (BRES)[4] is used to update our estimates of the employment contribution of the arts and culture industry. This covers the market and non-market elements of the industry. The same national accounts, supply-use and input-output data are used to update our estimates of employee compensation.

3.1 Turnover contributions of arts and culture enterprises

Turnover is defined as revenues generated by businesses as a result of undertaking productive value-adding activities. Subsidies and donations received by the arts and culture industry are transfers of value that have been generated elsewhere in the economy and passed to government through taxation or to charities through donations, and are therefore excluded.

Figure 1: Turnover generated by the arts and culture industry in the UK, 2008-15, £m current prices



Source: ONS Annual Business Survey 2008-15, Cebr analysis

Figure 1 illustrates the turnover generated by the market (private sector) segment of the arts and culture industry from 2008 to 2015. In 2015, arts and culture businesses contributed £15.8 billion in turnover to

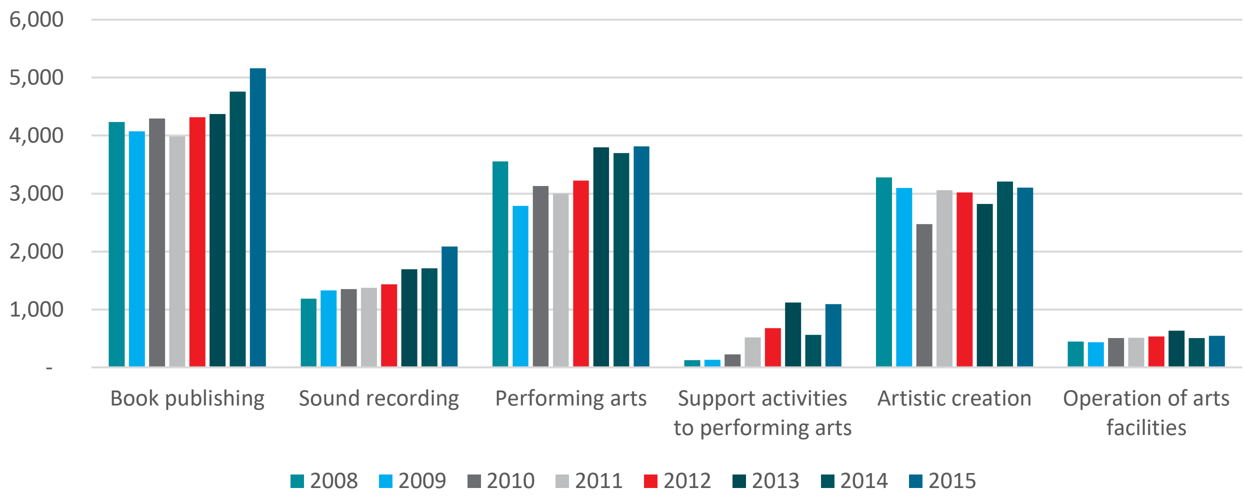
[3] Annual Business Survey 2015 published by the ONS in June 2017.

[4] Business Register and Employment Survey 2015 released in September 2016.

the UK economy, a 9.4% increase on the 2014 estimate of £14.4 billion and 9.5% up on the 2013 estimate, the end of the period covered by our last report.

Figure 2 shows disaggregated estimates of turnover for individual categories of activity that make up our SIC-based definition of the arts and culture industry. Book publishing, performing arts and artistic creation are the three largest categories of activity, accounting for 33, 24 and 20 per cent respectively, of the turnover of the arts and culture industry in 2015.

Figure 2: Turnover in the arts and culture industry by SIC three- and four-digit productive activity, 2008-15, £m current prices



Source: ONS Annual Business Survey 2008-13, Cebr analysis

Operation of arts facilities represents the smallest share of the sector's turnover at £546 million. Sound recording saw the largest percentage increase in turnover between 2013 and 2015, increasing by 23 per cent from £1.7 billion to £2.1 billion over the period. In 2013, artistic creation was the only category of activity that had yet to recover to 2008 turnover levels. While this category of activity has increased since then, this was still the case in 2015.

3.2 Gross value added contributions of arts and culture enterprises

This section examines the economic contribution of the arts and culture industry in terms of the gross value added (GVA) contributions made by arts and culture enterprises to UK GDP.[5,6]

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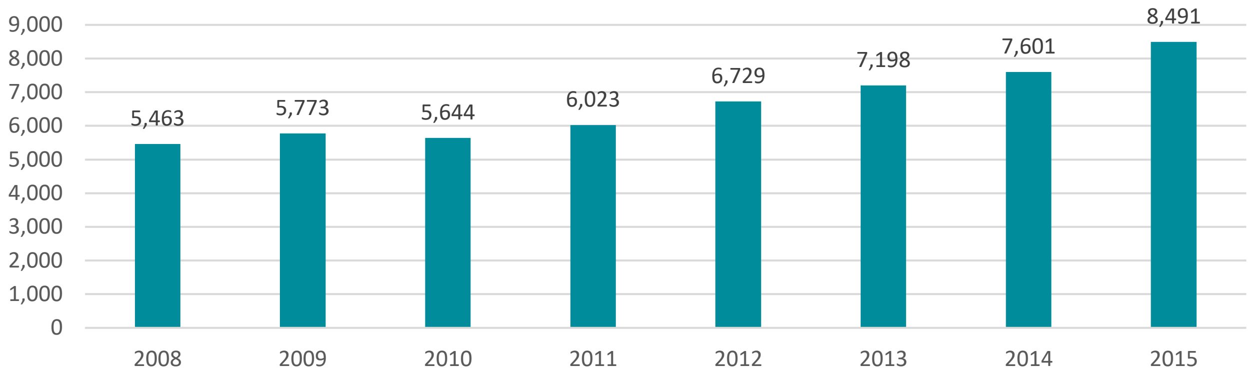
[5] The Annual Business Survey refers to this measure as 'approximate gross value added at basic prices'.

[6] GVA is a measure of the value from production used in the national accounts and can be thought of as the value of gross domestic output less the value of inputs used to produce that output. That is, the value of what is produced less the value of the intermediate goods and services used as inputs to produce it. GVA is also commonly known as income from production and is distributed in three directions – to employees, to shareholders and to government. GVA is linked as a measurement to GDP, both being measures of economic output. That relationship is (GVA + Taxes on products - Subsidies on products = GDP). Because taxes and subsidies on individual product categories are only available at the whole economy level (rather than at the sectoral or regional level), GVA tends to be used for measuring things like gross regional domestic product and other measures of economic output of entities that are smaller than the whole economy, like the arts and culture. GVA must be distinguished from turnover measures, which capture the entire value of sales. By contrast, GVA captures the value added to a set of inputs by a firm on their journey from raw materials to finished consumer products. Thus the value added of a firm that uses oil imports to make plastics is equal to the price that it sells the plastic for minus the cost of the oil it uses as inputs. Similarly the value added

Figure 3 illustrates that the GVA contribution of the market segment of the arts and culture industry amounted to an estimated £8.5 billion in 2015. This represents substantial growth of 12 per cent on the 2014 estimate of £7.6 billion, which came on top of the 6 per cent growth that had already occurred during 2014. This returns us to the £7.2 billion estimate for 2013, the end of the period of our previous report.[7]

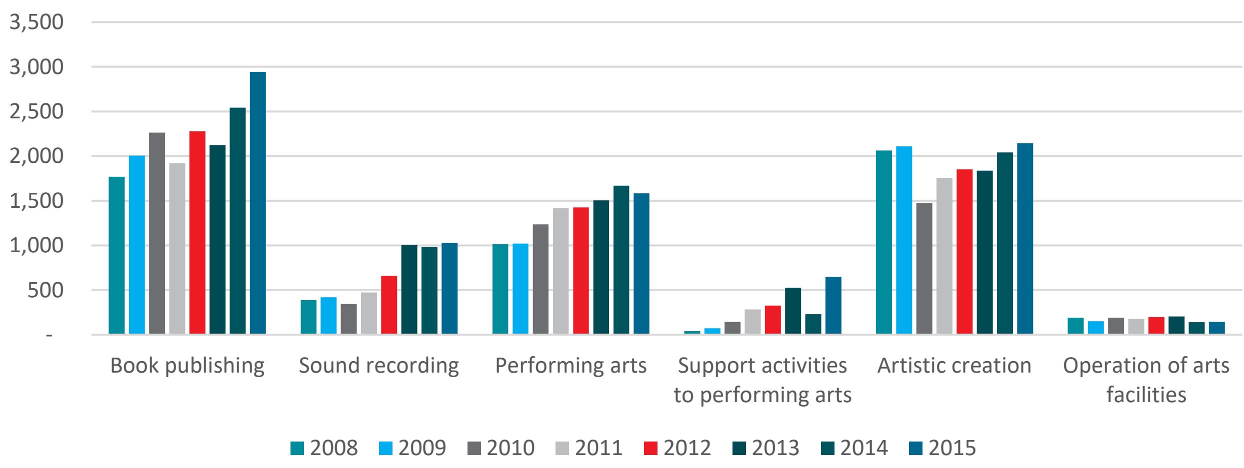
Figure 3: Approximate GVA at basic prices of the arts and culture enterprises in the UK, 2008-15, £m



Source: ONS Annual Business Survey 2008-15, Cebr analysis

As with turnover, Figure 4 shows the GVA contributions made by the individual three- and four- digit SIC activities that constitute the arts and culture industry, over the period 2008-15.

Figure 4: Approximate gross value added at basic prices of arts and culture enterprises by SIC three- and four-digit productive activity, 2008-15, £m



Source: ONS Annual Business Survey 2008-15, Cebr analysis

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of a manufacturer that uses that plastic to make a bus shelter is equal to the price that it sells the bus shelter for minus the cost of the plastic it uses as an input. The concept of added value enables the avoidance of double counting when estimating the size of an economy.

[7] This is down from the £7.7 billion estimate presented in our 2015 report which means that, as often happens, the historic ABS data have been retrospectively revised downwards.

Book publishing, artistic creation and performing arts are the three largest sets of productive activities. They accounted for 35, 25 and 19 per cent respectively, of the GVA of the enterprise-based arts and culture industry in 2015.

Until 2009, artistic creation was the category of arts and culture activity with the highest GVA contribution, but this was surpassed by book publishing in 2010. This reflects the fact that growth in artistic creation has been one of the weakest, declining over the period 2008-13 by 11 per cent before only recovering to the pre-2010 levels in 2015.

The strongest growth over the 2013-2015 period is observed in book publishing, which saw its GVA increase by 39 per cent to over £2.9 billion. Support activities to performing arts also performed well in this period, with its GVA increasing by 23 per cent from approximately £530 million to almost £650 million.

3.3 Additional GVA from government and non-profit arts and culture activities

Table 1 below provides details of the direct GVA contributions through the market segment of the arts and culture industry, alongside the additional direct contributions arising from arts and culture provision by government and by non-profit institutions. The breakdown is available for 2013, which we have used to forecast forward to 2015.

According to our estimates, non-market provision of arts and culture resulted in the generation of an additional £2.1 billion, consisting mainly of compensation of the employees required to deliver these activities. The market segment corresponded to the largest set of productive activities in GVA terms in 2015, accounting for £8.5 billion of the total £10.6 billion, an 80 per cent share of the GVA of the entire arts and culture industry in 2015. The second largest contributor is the Government sector (14 per cent), followed by the third sector contributing 6 per cent.[8]

Table 1: Arts and Culture GVA breakdown, £ million

Arts and culture	GVA 2013	GVA 2014	GVA 2015	Percentage of total
Market	7,189	7,601	8,491	80%
Government	1,277	1,348	1,506	14%
NPISH	526	555	620	6%
Total	**9,001**	**9,505**	**10,617**	**100%**

Source: ONS Annual Business Survey 2013, ONS supply use tables, Cebr analysis

3.4 Employment provided by the arts and culture industry

We have calculated employment in the arts and culture industry using the ONS Business Register and Employment Survey (BRES). In 2015, the arts and culture industry was responsible for the employment of approximately 131,200 people in the UK as a whole. In England, the industry employed 119,000 people in the same year.

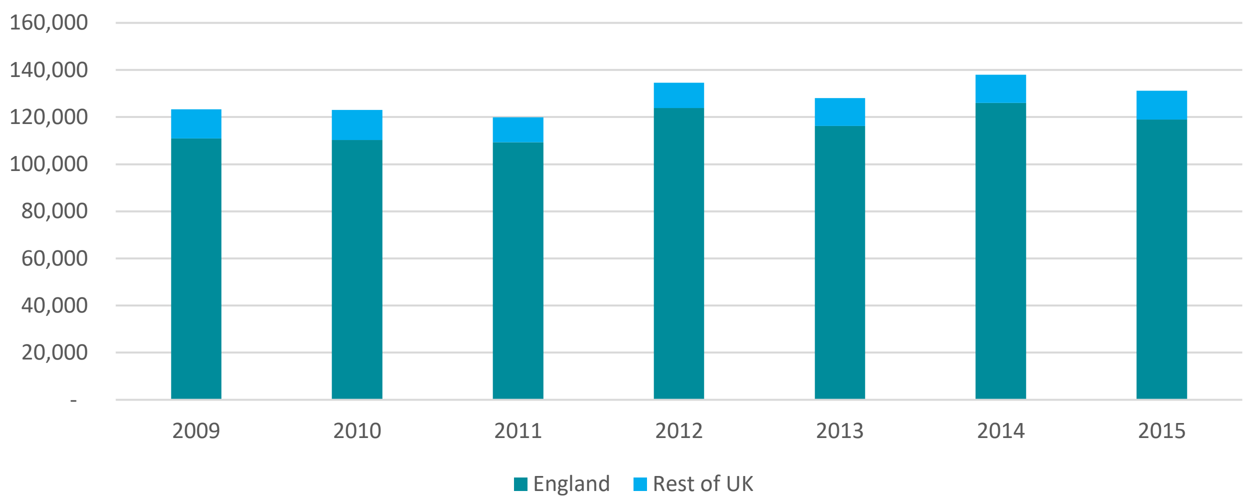
[8] We estimate that, on a combined basis, the arts and culture industry accounts for approximately 0.5 per cent of UK GDP and 0.8 per cent of UK GVA.

Employment in arts and culture has followed a quite volatile trend. The arts and culture industry experienced a peak in employment in the UK in 2012 and in 2014. UK employment in the arts and culture increased by 12 per cent in 2012, taking it to 134,600 jobs before reducing by 5 per cent in 2013 to 128,100, increasing again by 8 per cent in 2014 to 137,900, and decreasing once more by 5 percent in 2015 to 131,200 jobs.

As illustrated in Figure 5, the majority of employment in the arts and culture is in England. The employment trends in England have followed those of the rest of the UK arts and culture industry, increasing by 13 per cent in 2012 to 123,900 jobs before falling again, by 6 per cent to 116,300 jobs.

In both England and the UK as a whole, even with the fall in employment in 2015, there was still an overall increase in employment from 2009-15. Employment in the arts and culture in England increased by 7 per cent over the period, from around 110,900 jobs in 2009 to 119,000 jobs in 2015. In the UK, arts and culture employment increased by 6 per cent over the same period, from approximately 123,300 jobs in 2009 to 131,200 FTE jobs in 2015.

Figure 5: Employment in the arts and culture industry, UK

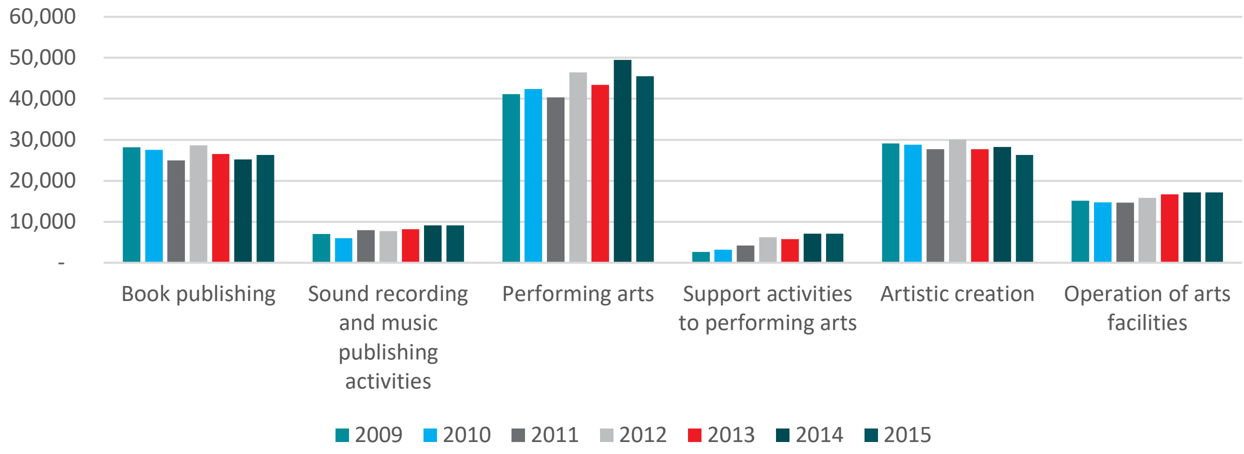


Source: ONS Business Register and Employment Survey 2009-15, Cebr analysis

As illustrated in Figure 6, the performing arts category was the largest contributor to employment in the arts and culture industry, responsible for 45,500 jobs in the UK in 2015. This is equivalent to 35 per cent of employment in the entire industry. Artistic creation was the next largest activity by employment, responsible for 20 per cent in 2015, or 26,300 jobs. Book publishing was also responsible for approximately 20 per cent of employment in the UK arts and culture industry in 2015 at 26,280 jobs.

The smallest activity by employment size in 2015 was support activities to performing arts. This activity was responsible for 5 per cent of arts and culture employment in the UK, or 7,000 jobs.

Figure 6: Arts and culture employment by activity, FTE jobs



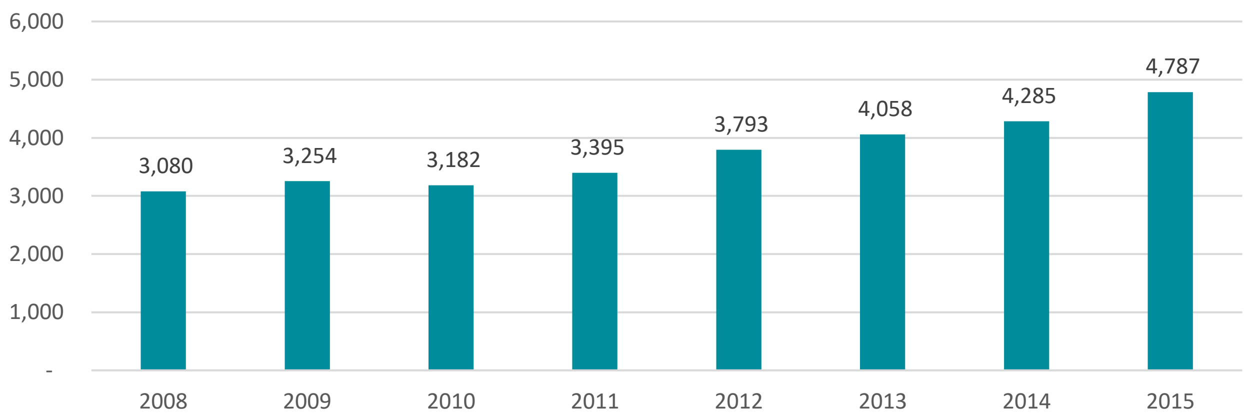
Source: ONS Business Register and Employment Survey 2009-13, Cebr analysis

3.5 Employee compensation in the arts and culture industry

This section examines the economic contribution of the arts and culture industry through employee compensation, normally accounting for the largest share of any industry's GVA contributions to GDP. Compensation of employees is the total remuneration, in cash or in kind, payable by an employer to an employee in return for work done.[9]

Figure 7 illustrates that the employee compensation contribution of the market segment of the arts and culture industry amounted to £4.8 billion in 2015. This represents staggering growth of 12 per cent in 2015 alone, which was preceded by 6 per cent growth in 2014. This mirrors precisely the path of GVA as a whole over these two years.

Figure 7: Employee compensation of the arts and culture enterprises in the UK, 2008-15, £m



Source: ONS Supply Use Tables, Cebr analysis

[9] This includes employers' social contributions, mainly consisting of employers' actual social contributions (excluding apprentices), employers' imputed social contributions (excluding apprentices) and employers' social contributions for apprentices. Source: http://webarchive.nationalarchives.gov.uk/20160106000937/http://www.ons.gov.uk/ons/guide-method/method-quality/specific/labour-market/glossary-of-labour-market-terms/index.html

Table 2 below provides details of the additional contributions of the non-market segments of the industry. According to our estimates, non-market provision of arts and culture resulted in the generation of an additional £604 million in employee compensation, on top of the £4.8 billion generated by private enterprise. The latter accounts for an 89 per cent share, whilst government and third sector provision account for 8 and 3 per cent shares, respectively.

Table 2: Arts and Culture GVA breakdown, £ million

Arts and culture	Employee compensation 2013	Employee compensation 2014	Employee compensation 2015	Percentage of total
Market	4,058	4,285	4,787	89%
Government	361	381	425	8%
NPISH	151	160	179	3%
Total	**4,570**	**4,825**	**5,390**	**100%**

Source: ONS supply use tables, Cebr analysis

4 The wider multiplier impacts of the arts and culture

This section sets out our re-assessment of the wider multiplier impacts of the arts and culture industry, including through indirect (supply chain) and induced (employee spending) sources.[10]

The economic modelling framework starts with the ONS supply-use tables, from which direct contributions to gross industry output and value added are established. Using this framework to analyse the arts and culture industry is one of the best means of ensuring consistency with the national accounting framework. The set of productive activities that make up the arts and culture industry (as defined under the SIC framework) is then assigned an explicit role within Cebr's input-output models. By doing this we provide the foundation for estimating the indirect and induced multiplier impacts of the arts and culture industry on the UK economy and its constituent countries and regions.

4.1 Gross domestic output multiplier impacts

Conceptually, gross domestic output is analogous to aggregate economy-wide turnover in business accounting. It is comprised of all revenues earned before any costs are subtracted. Excluding taxes and subsidies, these revenues must cover wages paid to employees, a reasonable rate of return on capital and what is paid to suppliers for the inputs required for the relevant industry's production process. This measure is typically larger than GVA as it still includes the costs of intermediate inputs, but is generally smaller than turnover because it excludes all non-VAT indirect taxes on goods and services. (As with turnover, VAT is also excluded).

The gross domestic output of the entire arts and culture industry (including the market and non-market segments) is estimated at £17.1 billion in 2013.[11] We estimate that this has increased to £20.2 billion in 2015.

In providing its products and services, the arts and culture industry draws upon inputs from many sectors of the economy. Our input-output modelling suggests that the arts and culture industry's gross domestic output multiplier is 2.30, as illustrated in Figure 8. This means that for every £1 of arts and culture output, the economy-wide impact including direct, indirect and induced impacts is £2.30.

This multiplier effect and the arts and culture industry's direct contribution to gross domestic output of £20.2 billion in 2015 combines to produce an estimated aggregate contribution, including indirect and induced multiplier impacts, of £46.5 billion.

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[10] Note that the estimates of the macroeconomic impacts of the arts and culture industry presented in this section do not take into account 'additionality'. The concept of 'additionality' in this context would be concerned with the impacts that are additional as a result of the existence of the arts and culture industry and that would not have been generated elsewhere in the absence of the industry.

[11] This is, of course, higher than the £14.4 billion enterprise turnover estimate for 2013, as presented in subsection 3.1 above. This reflects the inclusion of the non-market segment of the arts and culture industry in the gross domestic output estimates.

Figure 8:'Industrial' output multiplier for the arts and culture[12]

Source: Cebr analysis

4.2 GVA multiplier impacts

Our input-output modelling has also produced estimates of the indirect and induced multiplier impacts of the arts and culture industry's GVA contributions to GDP. This is presented in deconstructed form in Figure 9.

We estimate that for every £1 of GVA generated by the arts and culture industry, an additional £1.30 of GVA is generated in the wider economy though indirect and induced multiplier impacts. Based on the direct GVA contribution in 2015 of £10.6 billion, we estimate that its aggregate GVA contribution to GDP, including the additional indirect and induced multiplier impacts, amounted to £24.5 billion in the same year. Of this, at least £19.6 billion is attributable to the direct and multiplier impacts of the market segment of the industry.

Figure 9: The arts and culture industry's GVA multiplier

Source: Cebr analysis

4.3 Employment multiplier impacts

Our estimate of the direct employment contribution of the arts and culture industry to employment is outlined in Section 3, where we presented an estimate of 131,200 in employment in the arts and culture industry. But, again, the employment impact of the arts and culture industry is not confined to these direct contributions.

As illustrated in Figure 10, using our input-output models, we find that the arts and culture industry has an employment multiplier impact of 2.77. This means that for every job directly provided by the arts and culture industry, an additional 1.77 jobs are supported in the wider economy, through indirect and induced multiplier impacts. This employment multiplier produces an estimated aggregate employment impact of about 363,000 jobs in 2015.

[12] The number

Figure 10: The arts and culture industry's employment multiplier

Source: Cebr analysis

4.4 Employee compensation multiplier impacts

Based on official earnings data taken from the Annual Survey of Hours and Earnings (ASHE), the arts and culture industry paid a median salary of £30,789 per employee in 2015. This compares with a median salary of £27,948 in 2013 and £27,291 based on 2010 data for the purposes of the original study.

Using our input-output modelling, we estimate that for every £1 of income from employment generated in the arts and culture, an additional £1.38 of income from employment is generated in the wider economy through indirect and induced multiplier impacts, as illustrated in Figure 11.

This means that for every average gross salary of £30,789 paid by the arts and culture industry, a further £42,421 of gross salary was earned elsewhere in the economy through the industry's indirect and induced multiplier impacts.

Figure 11: The arts and culture industry's income multiplier

Source: Cebr analysis

5 The arts and culture industry’s impacts in the nations and regions

This section provides an updated assessment of the impacts of the arts and culture industry in the constituent nations and regions of the UK. Estimates of direct GVA contributions to GDP and to employment are provided for each of the four nations and nine English regions. These estimates of direct contributions are sourced directly from ONS sources. We have used Cebr’s regional input-output model to also provide updated estimates of the indirect and induced multiplier impacts of the arts and culture on these macroeconomic indicators in each UK nation and English region.

5.1 Direct contributions to the national and regional economies of the UK

Table 3 illustrates the importance of the arts and culture industry in terms of GVA contributions to regional GDP. Of the estimated £10.6 billion of direct GVA generated in 2015 by the arts and culture industry in the UK, almost £9.5 billion was generated in England, with £3.4 billion generated in London alone, where arts and culture’s share of the region’s economy is the highest at 0.89%. The industry’s share of the Wales economy is lowest at 0.43%, which compares with a 0.64% share across the UK as a whole and a 0.66% across England. In absolute terms, the contribution of the industry to Northern Ireland is lowest at £151 million in 2015.

Table 3: Direct GVA contributions of the arts and culture industry to UK nations and English regions, 2015

UK nation/English region	Direct GVA 2015 £m	Percentage of area's GVA
UK	**10,617**	**0.64%**
Total England	**9,437**	**0.66%**
London	3,355	0.89%
South East	1,962	0.79%
North West	928	0.59%
East of England	834	0.57%
Scotland	790	0.62%
West Midlands	611	0.51%
South West	564	0.45%
Yorkshire & The Humber	484	0.44%
East Midlands	440	0.45%
North East	259	0.52%
Wales	238	0.43%
Northern Ireland	151	0.44%

Source: Cebr analysis

The arts and culture industry’s importance in employment terms in presented in Table 4 below. The industry employed the most people in London in absolute terms - about 58,500. Northern Ireland again appears to employ the fewest. London and Northern Ireland also represent the highest and lowest percentage shares of total employment, respectively, at 1.16% in the case of London and 0.19% in Northern Ireland.

Table 4: Direct employment contributions of the arts and culture industry to UK nations and English regions, 2015[13]

UK nation/English region	Direct employment 2015	Percentage of area's employment
UK	**131,245**	**0.43%**
Total England	**119,000**	**0.46%**
London	58,500	1.16%
South East	18,500	0.44%
North West	9,100	0.28%
South West	8,150	0.33%
East of England	7,300	0.27%
Scotland	6,725	0.26%
West Midlands	6,500	0.26%
East Midlands	4,375	0.21%
Yorkshire & The Humber	4,225	0.18%
Wales	4,000	0.31%
North East	3,825	0.35%
Northern Ireland	1,520	0.19%

Source: Cebr analysis

5.2 Multiplier impacts of the arts and culture industry in the nations and regions

Table 5 presents the results of our updated input-output modelling of the arts and culture industry at the level of the UK nations and regions. Separate (Type II) multipliers[14] are shown for each of the variables GVA and employment and are ordered according to the magnitude of the GVA multiplier.

These multipliers capture the so-called 'in-region' impacts of the arts and culture industry in each UK nation and English region. The arts and culture industry in any one region will draw inputs in from other regions, in which case, a proportion of the indirect and induced impact can be expected to 'leak' to those other regions. The UK-level analysis excludes imports from abroad when establishing the supply chain of the arts and culture industry, so as to focus on the impact on the domestic economy. At the regional level, the input-output analysis seeks to exclude imports from other regions and nations of the UK, which are equally a source of impact 'leakage' at the regional level.

[13] Note that the sum of the English regions is higher than the total for England. This is a feature of the raw ONS data and we do not have an explanation for it, except to suggest that it could be due to some element of double-counting or individuals reporting having multiple arts and culture jobs in different regions.

[14] Type II multipliers capture direct, indirect and induced impacts.

Table 5: Type II multipliers by country and region[15]

UK nation/English region	GVA	Employment
UK	**2.03**	**2.34**
Total England	**2.00**	**2.31**
South West	1.99	2.30
East of England	1.97	2.29
Yorkshire & The Humber	1.95	2.26
East Midlands	1.92	2.23
North West	1.91	2.21
West Midlands	1.90	2.20
London	1.90	2.18
Northern Ireland	1.86	2.14
South East	1.86	2.12
Scotland	1.85	2.14
Wales	1.84	2.12
North East	1.83	2.10

Source: Cebr analysis

These estimates suggest that the arts and culture industry in the South West and East of England have the largest GVA and employment multiplier impacts of all the nations and English regions. Arts and culture activities in these regions can, thus, be expected to have more of a localised impact compared to other areas of the UK.

Wales and the North East appear to have the lowest 'in region' multiplier impacts, which is indicative of the regional economy being relatively less able to provide for all of the intermediate input needs of the arts and culture industry in that region. This means that more of these inputs need to be sourced from outside the region, reducing the multiplier effects realised within the region itself. The South East of England's employment multiplier is as low as that for Wales.

The table below summarises the direct and aggregate GVA contributions and impacts of the arts and culture industry in the UK nations and regions. The industry in London and the South East produce by far the greatest 'in-region' impacts, at £6.4 billion and £3.6 billion, respectively. The lowest impact is estimated for Northern Ireland, with an estimated aggregate GVA impact of £281 million.

[15] Note that changes in the multiplier estimates since our 2015 report is due to Cebr's input-output models have been refreshed and refined for new ONS input-output data for the year 2013. The 2015 report was based on 2010 input-output data. As such, the multipliers presented in this report can be expected to better reflect the structure of the economy today.

Table 6: Arts and culture GVA contributions and impacts by country and region, 2015

Regional GVA contributions and impacts 2015	Direct GVA 2015 £m	Type II GVA multiplier	Aggregate 'in-region' GVA impact £m
Total England	9,437	2.00	18,870
London	3,355	1.90	6,370
South East	1,962	1.86	3,642
North West	928	1.91	1,769
East of England	834	1.97	1,642
Scotland	790	1.85	1,464
West Midlands	611	1.90	1,163
South West	564	1.99	1,122
Yorkshire & The Humber	484	1.95	945
East Midlands	440	1.92	846
North East	259	1.83	473
Wales	238	1.84	438
Northern Ireland	151	1.86	281

Source: Cebr analysis

Table 7 provides the equivalent table for the regional employment impacts of the arts and culture industry. The picture is very similar. England is dominant at the national level, whilst London is the dominant English region. Northern Ireland is again the nation/region in which the impact of the arts and culture industry is the lowest in absolute terms.

Table 7: Arts and culture employment contributions and impacts by country and region, 2015

Regional employment contributions and impacts 2015	Direct employment 2015	Type II employment multiplier	Aggregate 'in-region' employment impact
Total England	119,000	2.00	237,941
London	58,500	1.90	111,061
South East	18,500	1.86	34,337
North West	9,100	1.91	17,337
East of England	7,300	1.97	14,373
Scotland	6,725	1.85	12,452
West Midlands	6,500	1.90	12,373
South West	8,150	1.99	16,208
Yorkshire & The Humber	4,225	1.95	8,257
East Midlands	4,375	1.92	8,412
North East	3,825	1.83	6,990
Wales	4,000	1.84	7,353
Northern Ireland	1,519	1.86	2,823

Source: Cebr analysis

6 Other aspects of the economic contribution of the arts and culture

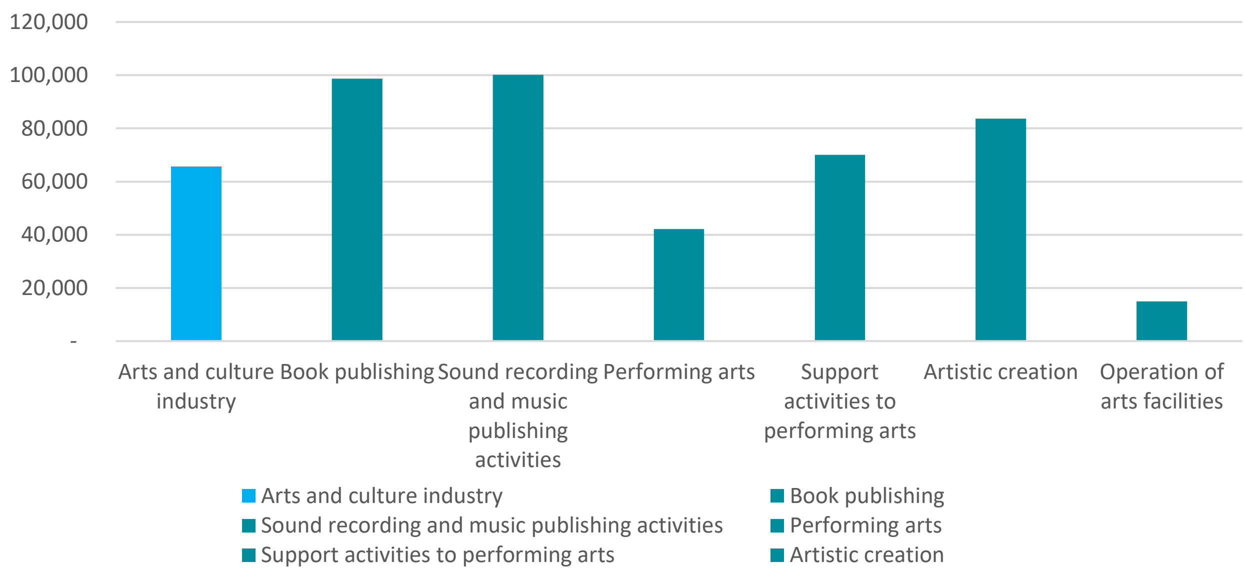
This section considers some other aspects of how the industry contributes to the economy. We consider labour productivity and, for the first time, international trade, as well as exchequer contributions.

6.1 Labour productivity

This section considers the potential contribution of the arts and culture industry to economic growth through its apparent levels of labour productivity. In an efficient labour market, the contribution of an employee should reflect the employer's valuation of their marginal or average productivity to the business – that is, the value of the output that they should be capable of generating. Labour productivity is often analysed in terms of GVA per worker, as it provides a useful indicator of what a given supply of labour in a sector has been able to produce with the fixed capital and technological progress available to them.

We have used the direct GVA contributions of the arts and culture industry in the UK along with employment data to produce estimates of apparent levels of worker productivity the industry as a whole and in the different categories of activity that fall within our industry definition.

Figure 12: Average labour productivity of the arts and culture industry and its subsets, measured in terms of total GVA per full time job, 2009-15, £ current prices



Source: ONS Business Register and Employment Survey and Annual Business Survey, 2009-13, Cebr analysis

As illustrated in Figure 12, GVA per full time job in the arts and culture industry averaged £66,000 over the period 2009-15. This is greater than the equivalent figure for the UK as a whole, which was £46,800 over the same period.[16] This indicates that many workers in the arts and culture industry produce value at a high rate. A number of segments of the arts and culture industry have very high productivity

[16] This corresponds to the UK business economy only. Total economy productivity would be expected to be lower.

compared to the industry as a whole. For example, GVA per full time job in book publishing, sound recording and music publishing activities were significantly above the average for the industry as a whole, with GVA per worker of approximately £99,000 and £100,000, respectively.

Apart from the operation of arts facilities, all categories have witnessed increases in labour productivity over the period 2009-15. The highest growth was in support activities to performing arts, which increased by 282 per cent over the entire period. Meanwhile, operation of arts facilities saw a decrease in productivity, at -20 per cent. Book publishing reached similar levels of GVA per worker as in sound recording and music publishing, which has traditionally been the most productive category of arts and culture activity.

This provides strong economic evidence that the arts and culture is contributing positively to UK productivity and to the growth of the economy.

6.2 International trade

International trade can be associated with significant productivity benefits. It increases the potential for businesses to exploit economies of scale by opening up new markets. This, by reducing unit costs of production, helps them to maintain or improve competitiveness on global markets. Economies of scale can also be seen in terms of improved productivity because they imply falling unit costs and increasing levels of value being generated at higher levels of output. Economies of scale, in other words, increase the overall supply potential of the economy.

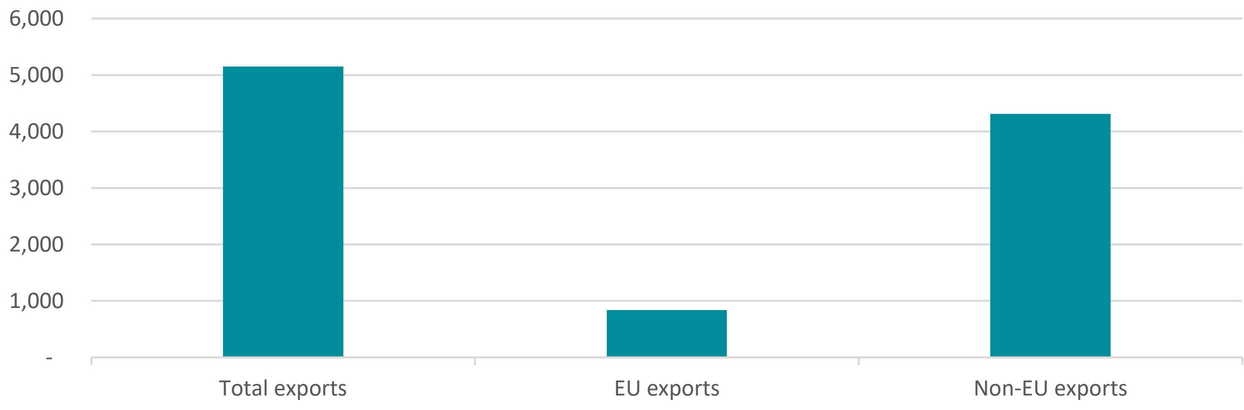
The benefits of trade are not confined to exports. The ability to access wider markets facilitates UK business in accessing cheaper and better inputs in which other countries have a comparative advantage. This enables UK business to be more cost competitive, as well as to take advantage of foreign know-how, and greater specialisation in activities in which the UK holds comparative advantage. UK firms' exposure to foreign competition from imported goods and services can also be expected to encourage greater efficiency amongst domestic suppliers.

Consumers also benefit positively from imports in the form of lower prices and greater choice and because domestic firms must improve efficiency to remain price-competitive. These effects can, in turn, lead to higher real incomes, greater discretionary spending and higher GDP than would otherwise have been the case.

The importance of international trade in arts and culture is accentuated when considered in the context of the UK's decision to leave the EU (Brexit). While the industry makes a significant contribution to the UK GDP and employment, arts and culture is also a vital element of the UK's tourism offer, attracting visitors who spend much more in the UK than the price of engaging in these activities.

Including tourism spend in the UK on arts and culture activities, we estimate that almost £5.2 billion of arts and culture-based goods and services were exported from the UK in 2013. Figure 13 below provides a breakdown by destination of exports and it is notable that non-EU-exports are responsible for 84 per cent of the total. In other words, only 16 per cent of total arts and culture exports were to the EU. There is reason to expect, therefore, that at least the export-oriented arts and culture industry in the UK could be insulated from the potential economic downturn that the uncertainty caused by Brexit is expected to catalyse in the short to medium term.

Figure 13: Composition of exports of arts and culture-based goods and services, 2013, £ millions



Source: ONS Supply and Use tables, Cebr analysis

We also estimate that £5.4 billion of arts and culture-based goods and services were imported into the UK in 2013. This includes UK tourist spending on the arts and culture offers of other countries.[17]

6.3 Exchequer contributions by the arts and culture industry

The arts and culture industry is a significant recipient of public funding. But, as a result of its productive revenue and value-generating activities, it also contributes to the exchequer via tax. The estimated contribution of the arts and culture industry to the exchequer, broken down by type of tax, over the period 2014-15 is illustrated in Table 8.

Table 8: Tax contributions of the arts and culture 2014-15, £m

Type of tax	Tax paid (£m)	Percentage of UK
VAT	1,186	1.30%
Corporation tax	265	0.60%
Income tax	486	0.30%
NICs	689	0.60%

Source: ONS, HMRC, Cebr analysis

Based on the data provided by Arts Council England on the public funding of NPOs for our analysis in Section 7.4, Cebr estimates that £5 of tax is contributed by the arts and culture industry for every £1 of public funding provided.[18]

[17] Unfortunately, the data are not available to allow arts and culture imports to be broken down by EU and non-EU in the same way as exports.

[18] Public funding includes the Arts Council England subsidy, local authority subsidy and other public subsidies. Note that this is based on a comparison of 2014/15 public funding (which totalled £493 million, excluding museums) taken from the Arts Council NPO annual submission.

7 Other economic characteristics of the arts and culture industry

This section considers some of the other economic characteristics of the arts and culture industry. This includes market structure, the structure of income from employment, the importance of household consumption of arts and culture and the structure of funding of the arts and culture.

7.1 Market structure of the arts and culture industry

Using the Business Population Estimates 2016 dataset[19], we examined the market structure of the broad industries from which the arts and culture industry, as defined for this report, is drawn. This helps to illustrate the numbers of enterprises in different employment size bands, as illustrated in Table 9. The industries that make up our definition of the arts and culture industry, as detailed in the Appendix, comprise of a large number of small enterprises. Large organisations typically account for a relatively small proportion of the total enterprises within the arts and culture industry.

Table 9: Market structure of the broader industry groups from which the arts and culture industry is drawn, enterprise size by employment in the UK, 2016

Employment size bands	SIC J58: Publishing activities		SIC J59: Motion picture, video and television programme production, sound recording and music publishing activities		SIC R90: Creative, arts and entertainment activities		All industries	
	# of firms	% of firms	# of firms	% of firms	# of firms	% of firms	# of firms	% of firms
With zero employees	38,325	85.3	45,900	86.3	136,080	94.1	4,172,185	75.9
1	155	0.4	245	0.5	1,235	0.9	156,690	2.9
2-4	3,095	8.1	5,030	9.5	5,335	3.7	683,095	12.4
5-9	1,070	2.8	995	1.9	1,105	0.8	241,640	4.4
10-19	640	1.7	555	1	490	0.3	133,430	2.4
20-49	385	1	250	0.5	175	0.1	70,120	1.3
50-99	135	0.4	105	0.2	65	0	22,005	0.4
100-199	50	0.1	40	0.1	20	0	9,375	0.2
200-249	15	0	5	0	5	0	1,930	0
250-499	30	0.1	15	0	5	0	3,695	0.1
500 or more	45	0.1	20	0	5	0	3,505	0.1

Source: Department for Business Innovation and Skills, Cebr analysis

Firms with one or no employees make up 92 per cent of the businesses operating within the wider sectors from which we take our definition of the arts and culture industry.[20] This contrasts with firms employing 250 or more employees, which accounted for less than 0.1 per cent of businesses in 2016. In the wider economy, the share of firms with one or no employees is much lower, accounting for 76 per

[19] https://www.gov.uk/government/statistics/business-population-estimates-2016

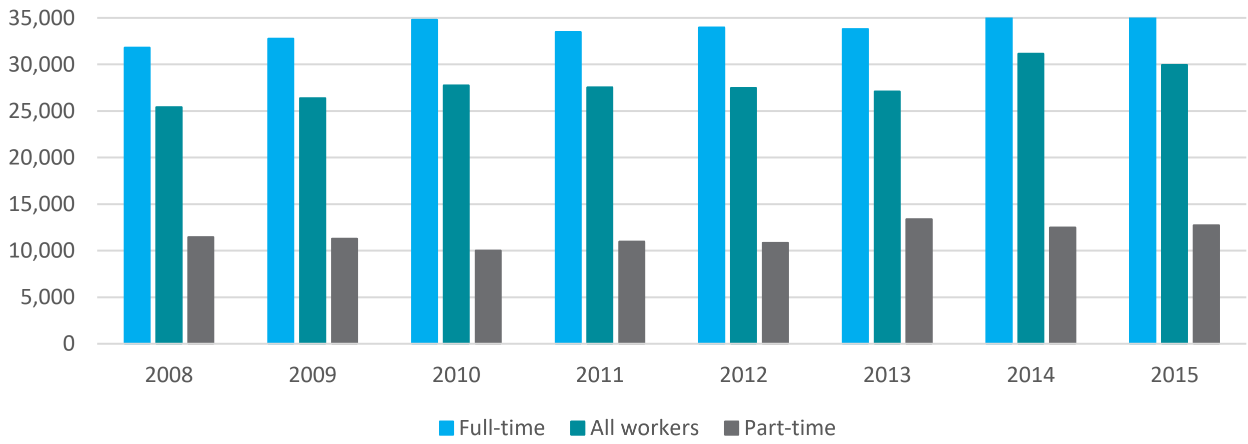
[20] Note that our definition includes the entirety of creative, arts and entertainment activities (SIC 90). For this element of the arts and culture industry, 94 per cent of businesses operating within this sector have one or no employees.

cent of businesses. Education is the only sector that has a comparably high proportion of firms of this size, at approximately 94 per cent.

7.2 Structure of incomes from employment in the arts and culture industry

Our analysis of the structure of income from employment in the sector is also based on the most recent data from the Annual Survey of Hours and Earnings (ASHE),[21] which we have used to examine earnings within the arts and culture industry. As illustrated in Figure 14, in creative, arts and entertainment activities (SIC R90), average full-time gross pay in 2015 was £39,474. Over the period 2008-15, full-time earnings increased by 24 per cent. Part-time earnings increased by 11 per cent.

Figure 14: Comparison between UK full-time and part-time earnings in SIC R90: creative, arts and entertainment activities, £



Source: ONS Annual Survey of Hours and Earnings, Cebr analysis

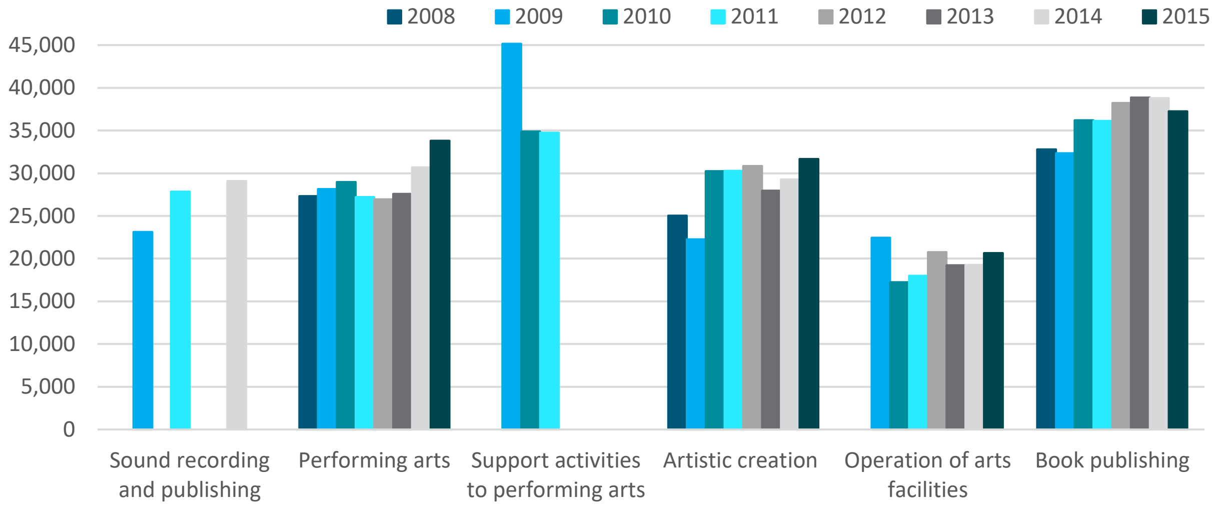
As illustrated in Figure 15, there is significant variation in earnings trends across the six SIC three- and four-digit activities that are included within our definition of the arts and culture industry. On average, over the period 2008–15, book publishing and artistic creation had the highest levels of gross average pay of any of the activities within our definition.

From 2009–14, average gross pay in sound recording and publishing increased by 26 per cent, from approximately £23,000 to just over £29,000. Book publishing also experienced a large increase in average gross pay over the same period, from £32,400 to £38,800, an increase of 20 per cent, but appears to have dropped slightly in 2015. Meanwhile, the average gross pay in operation of arts facilities fell by 14 per cent, to approximately £19,300 over the same period, but grew again in 2015 to reach approximately £20,600.[22]

[21] http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/index.html

[22] These are nominal growth rates and those that appear high suggest that wages paid by the businesses in the particular four-digit SIC category have kept pace with inflation. Wages in those categories that have grown by only small amounts in nominal terms will have fallen quite significantly in real terms.

Figure 15: Gross annual pay in the six three- and four-digit subsets of productive activities included in the definition of the arts and culture industry 2008-15, £[23]



Source: ONS Annual Survey of Hours and Earnings, Cebr analysis
Note: Missing columns represent data not disclosed in ASHE survey which was not possible to estimate

The geographical distribution of earnings in the arts and culture reveals divergences in the levels of pay across the different regions of England and nations of the UK. Figure 16 provides regional average earnings data at the two-digit level for the creative, arts and entertainment activity (SIC code 90). Data is not available for all regions in all years so direct comparisons across the regions is not appropriate. Nevertheless, the chart does at least provide an indication of relative levels of gross annual pay.

Employees in the creative, arts and entertainment sector in London achieved the highest levels of gross annual pay, receiving approximately £39,000 on average in 2015. This is the only region that has a notably higher level of annual pay than the UK average, apart from the West Midlands which was slightly higher than the UK average in 2015.

[23] Note that the data presented here reflects average earnings across full-time and part-time workers and is comparable with the data for all workers presented in Figure 14.

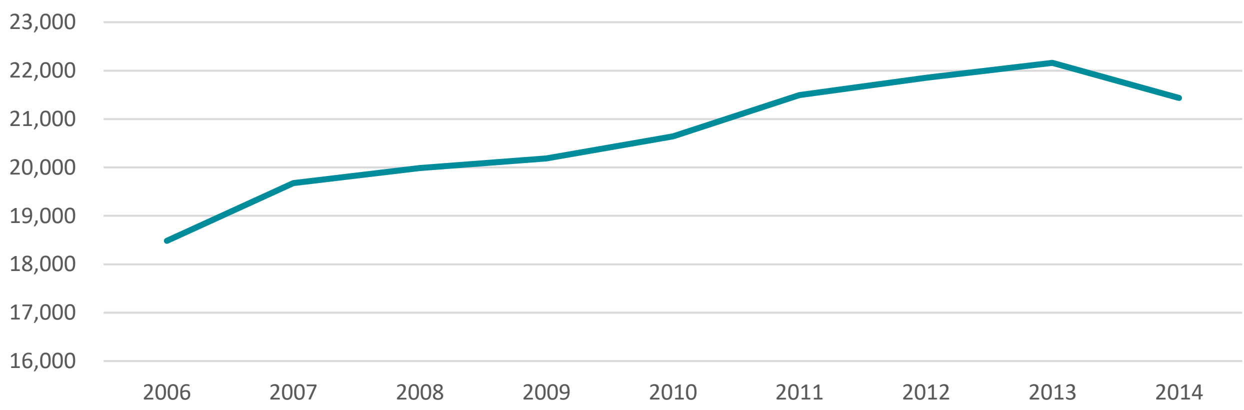
Figure 16: Regional breakdown of gross annual pay in R90: creative, arts and entertainment, 2015 (unless otherwise stated), £

Source: ONS Annual Survey of Hours and Earnings, Cebr analysis

7.3 Consumer expenditure on the arts and culture

ONS produces annual data on household final consumption expenditure (HHFCe) as part of the supply-use tables, themselves derived from the national accounts. We combined this dataset with our definition of arts and culture to derive the HHFCe on arts and culture across time. The scope of these estimates is unavoidably wider than our definition of the arts and culture industry from the supply-side. For example, they go beyond expenditure on published books to cover expenditure on all publications including, for instance, newspapers, magazines and stationery. Likewise, the estimates go beyond spend on music, to take in motion picture, video and TV. These examples are outside the scope of our supply-side definition of the arts and culture industry, as detailed in the appendix. Figure 17 illustrates our results.

Figure 17: HHFCe on arts and culture, 2006-2014, £ millions



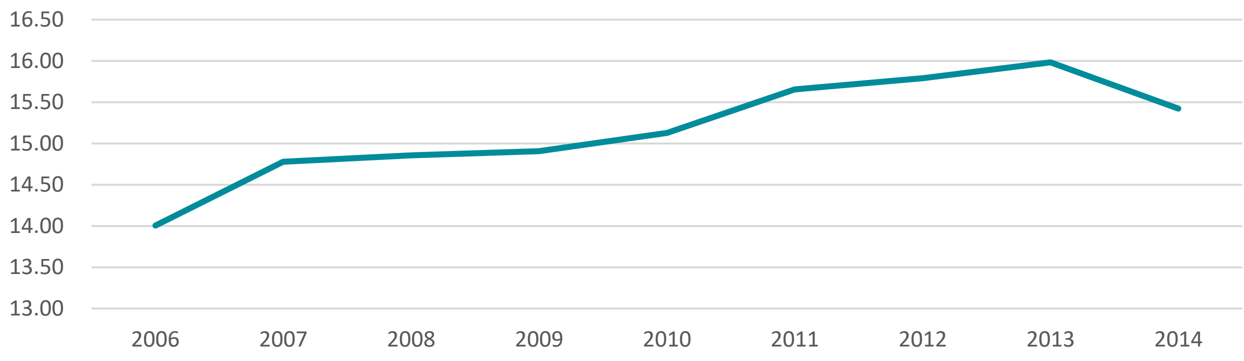
Source: ONS Supply and Use tables 2006-2014, Cebr analysis

On this basis, HHFCe on this wider definition of arts and culture stood at £21.4 billion in 2014, a 3 per cent decrease on the 2013 value of £22.2 billion. HHFCe on arts and culture increased steadily from

2006-13 from £18.5 billion to £22.2 billion. Despite the 2014 drop, which may household expenditure on arts and culture stood well above 2006 levels, observing a 16 per cent increase between 2006 and 2014. The figure below presents the same data but in terms of average weekly expenditure per household on arts and culture.

The trend is pretty much the same but perhaps less smooth when household expenditure is expressed on this basis, as in Figure 18 below. This relates to the inclusion of an additional variable – the number of households. When the latter grows strongly and there is not a proportionate increase in aggregate spend (which might be caused by, for instance, the number of people not increasing as much as the number of households, as might happen when a new household is formed from the splitting up of an existing household), the average can be pulled down more dramatically.

Figure 18: Average weekly HHFCe on arts and culture, 2006-14



Source: ONS Supply and Use tables 2006-2014, Cebr analysis

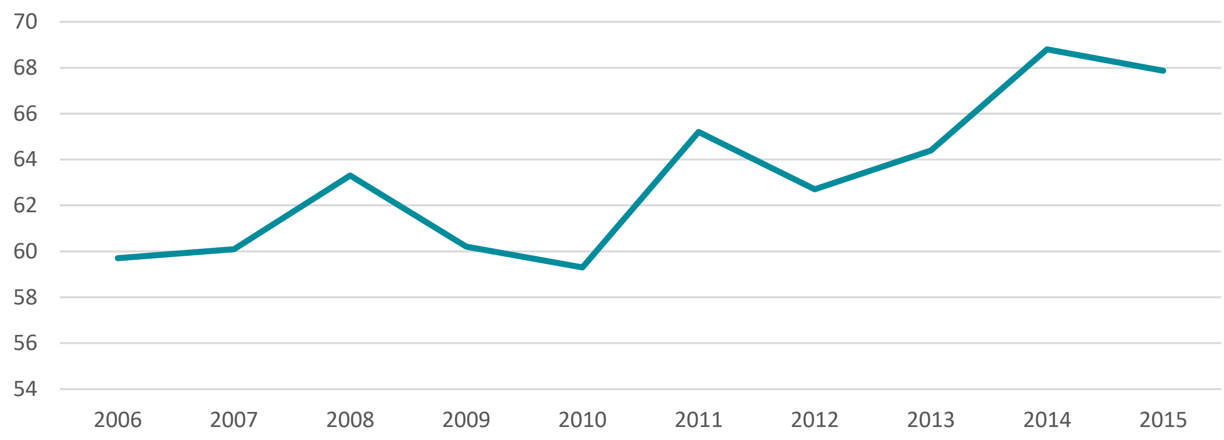
We have also used the ONS Family Spending data[24] to gain some understanding of both how spending on the arts and culture has changed over time, and the characteristics of consumers of the arts and culture. The data set provides the spending patterns of UK households of different ages and income brackets on different expenditure categories.

One such category is recreation and culture. But the definition that applies here is broader again than the definition underlying the HHfce estimates above and, therefore, significantly wider than our supply-side definition of the arts and culture industry. It includes, for instance, expenditure on audio-visual, photographic and information processing equipment, other recreational equipment and package holidays.

Figure 19 illustrates how spending on recreation and culture in the UK has changed from 2006-15. In 2015, average weekly household spending on recreation and culture stood at £67.90, a 1 per cent decrease on the 2014 value of £68.80. Spending on recreation and culture increased steadily from 2006-08 from £59.70 per week to £63.30 but fell in the recession year of 2009 to £60.20 per week. Weekly spending on recreation and culture recovered in 2011, reaching £65.20 per week – higher than the pre-recession level. It then fell slightly in 2012 before recovering again in 2013 to £64.40 per week. This is higher than both the 2008 and 2011 peak level of weekly spending on recreation and culture.

[24]https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/compendium/familyspending/2015

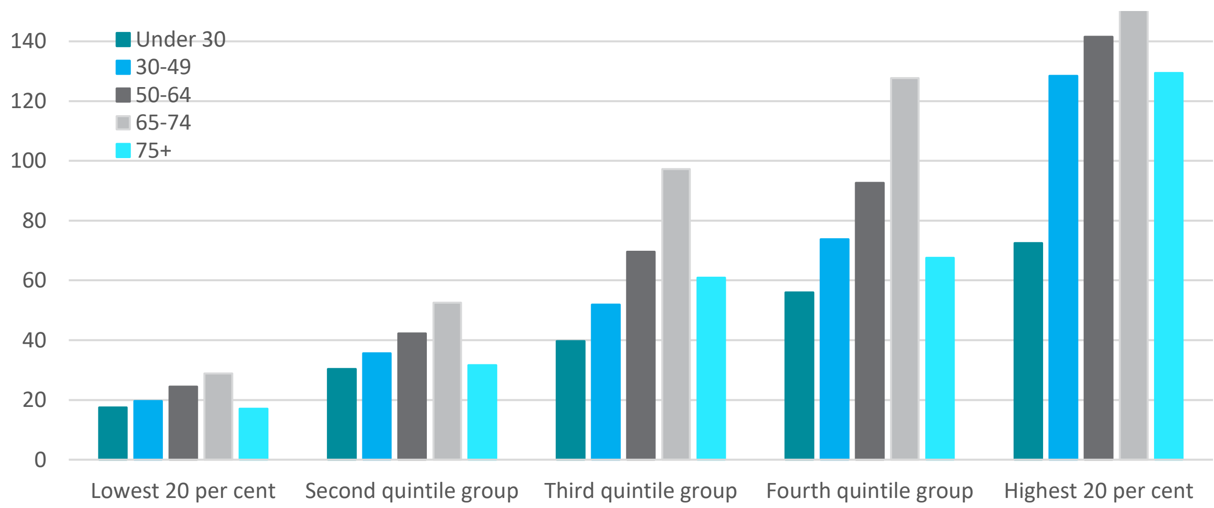
Figure 19: Weekly expenditure on recreation and culture, 2006-15, 2014 prices, £



Source: ONS Family Spending Survey

A breakdown of spend on recreation and culture by household income level and age profile is presented in Figure 20. This data suggests that, as household income increases, as does spending on recreation and cultural activities. Across all age groups, average weekly household spending on recreation and culture is highest among 65-74 year-olds.

Figure 20: Average weekly household spend on recreation and culture, by income quintile and age of household reference person, 2014-16, £



Source: ONS Family Spending Survey, 2016

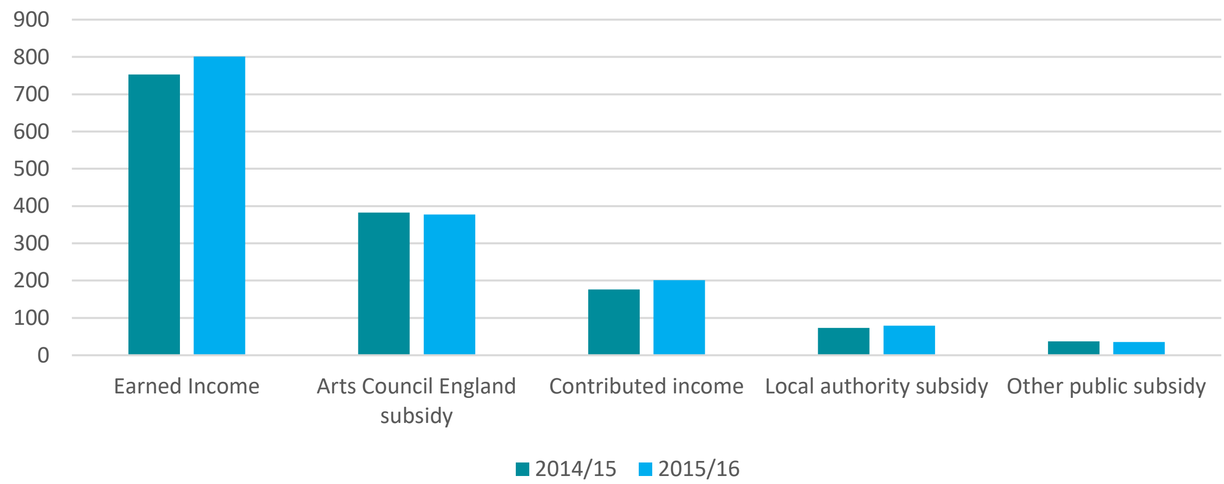
7.4 Funding of Arts Council England's national portfolio organisations

In this section we consider funding arrangements specific to the arts and culture industry. This analysis is based on the 2014/15 and 2015/16 data provided by National Portfolio Organisations (NPOs) supported by the Arts Council, which the Arts Council made available for Cebr's analysis. While these organisations may not represent the funding structure that is typical for all the arts and culture organisations in the industry, they are nevertheless representative of a significant proportion of the aggregate economic activities of that industry. However, they are unlikely to be representative of organisations operating within the book publishing or sound recording and publishing industries, which are likely to contain a much higher proportion of organisations that are less reliant on direct public funding.

Funding of the arts and culture sector is derived from three main channels: earned income, such as from ticket sales and merchandise; public funding, for example from Arts Council England, local authorities and other public bodies; and contributed income, which includes sponsorship, trusts and donations. Between March 2012 and April 2016, the Arts Council invested £1.6 billion of public money from government and between March 2012 and April 2015 the Arts Council invested £1 billion from the National Lottery to help more people experience arts and culture.

Figure 21 illustrates the importance of each of the income streams using data supplied by the arts and culture organisations that receive regular funding from the Arts Council, relating to the financial years 2014/15 and 2015/16. This data covers all regions, all disciplines (excluding museums) and all organisations.

Figure 21: Arts Council England's National Portfolio Organisations (excluding museums) income by source, 2014-16, £ million



Source: Arts Council England, Cebr analysis

In total, the NPOs received £1.49 billion in 2015/16, an increase of 5 per cent on 2014/15. The largest contributor to this was earned income, responsible for 54 per cent of the total in 2015/16. Funding from earned income increased by 6 per cent between 2014/15 and 2015/16, from £753 million to £801 million.

Taken together, Arts Council, local authority and other public subsidies make the next largest contribution, amounting to £492 million, 33 per cent of total income. Between 2014/15 and 2015/16 Arts Council subsidy decreased by 1 per cent to £377 million. Similarly, there was a 5 per cent decrease in other public subsidy income. However, there was an increase of 8 per cent in local authority subsidy.

Contributed income was the third most significant individual component of total income in 2015/16, accounting for 13 per cent (£201 million), an increase of 14 per cent from 2014/15 figures.

Appendix: SIC-based definition of the arts and culture industry

Sector	Division	4-digit SIC	5-digit SIC
J Information and communication	**58** Publishing activities	**58.11** Book publishing	58110 Architectural drawing publishing 58110 Atlas publishing 58110 Audio book publishing 58110 Book publishing 58110 Brochure publishing 58110 Chart publishing 58110 Dictionary publishing 58110 Electronic publishing of books 58110 Encyclopaedia publishing 58110 Engineering drawing publishing 58110 Geographical publishing 58110 Leaflet publishing 58110 Map and plan publishing 58110 On-line book publishing 58110 Pamphlet publishing 58110 Publishing on CD- ROM 58110 Religious Tract publishing 58110 The Stationery Office
	59 Motion picture, video and television, sound recording and music publishing activities	**59.2** Sound recording and music publishing	59200 Compact disc sound recording publishing 59200 Copyright acquisition and registration for musical compositions 59200 Gramophone record publishing 59200 Matrice for record production 59200 Music (printed) publishing 59200 Music downloads (on-line publishing with provision of downloaded content) 59200 Music tape publishing 59200 Printing of sound tracks 59200 Publishing of music and sheet books 59200 Recording studio (radio) 59200 Sound recording publishing 59200 Sound recording studios 59200 Taped radio programming production
R Arts, entertainment and recreation	**90** Creative, arts and entertainment activities	**90.01** Performing arts	90010 Actors 90010 Aerobatic display 90010 Animal training for circuses, etc. 90010 Ballet company 90010 Band (musical) 90010 Circus 90010 Concerts production 90010 Conjuror 90010 Dance band 90010 Dance productions 90010 Impresario 90010 Lecturers 90010 Musicians 90010 Opera production 90010 Orchestras 90010 Organist (own account) 90010 Pop group 90010 Public speaker 90010 Repertory company 90010 Revue company

			90010 Singer (own account) 90010 Speakers (after dinner etc) 90010 Stage productions 90010 Street musician or singer 90010 Theatrical presentations (live production) 90010 Theatrical touring company 90010 Travelling show 90010 Variety artiste (own account) 90010 Ventriloquist
Sector	**Division**	**4-digit SIC**	**5-digit SIC**
R Arts, entertainment and recreation	**90** Creative, arts and entertainment activities	**90.02** Support activities to performing arts	90020 Direction, production and support activities to circus performances 90020 Directors (theatre) 90020 Performing arts support activities 90020 Scene shifters and lighting engineers 90020 Stage set designers and builders 90020 Support activities to performing arts e.g. stage set-up, costume and lighting design etc.
		90.03 Artistic creation	90030 Art expert 90030 Artist 90030 Author 90030 Cartoonists 90030 Copper plate engraver (artistic) 90030 Designing (artistic) 90030 Engravers 90030 Etchers 90030 Fine art expert 90030 Freelance journalist 90030 Heraldic painting 90030 Illuminating (illustrating) 90030 Journalists 90030 Librettist 90030 Lithographic artist (own account) 90030 Lyric author 90030 Music composer 90030 Music copyist and transcriber (own account) 90030 Painters (artistic) 90030 Picture restoring 90030 Playwright 90030 Poet 90030 Repair and restoration of works of art 90030 Scenario writer 90030 Scenic artist 90030 Sculptors 90030 Song writer 90030 Technical and training manual authors 90030 Wood engraver (artistic)
		90.04 Operation of arts facilities	90040 Arts facilities operation 90040 Concert halls operation 90040 Local authority concert halls and theatres 90040 Music hall 90040 Opera house 90040 Theatre halls operation