FALMOUTH
UNIVERSITY

Creative Britain

The current and future contribution of the creative industries to the UK economy

Report for Falmouth University
November 2014

Cebr

Contents

Foreword

We are in the midst of a significant shift in the role of university education.

Students are now responsible for the full cost of the education that they receive, and take out substantial student loans to cover their fees and maintenance. They are correctly demanding that their courses are well taught, properly resourced and increase their prospects of getting a job that they want when they graduate.

UK businesses are increasingly demanding that graduates are better prepared. The dramatically changing and increasingly dynamic nature of work, and the need for businesses to remain competitive and productive, means that they cannot afford to spend time and money settling graduates into their organisations and re-shaping them for the tasks ahead. They tell us that they want employees who are able to deliver – who have the technical and soft skills to contribute to business success - from day one.

We believe that some students are being poorly served in the UK. In some courses there is dramatic over-supply of degree places across the country and the industries that those degrees serve cannot hope to provide employment for the graduates that leave from them.

It's absolutely critical for us to adapt to the changing dynamics of the market places that we serve on behalf of our students and businesses in the creative industries.

But that's not why we commissioned this report. We're in an active dialogue with hundreds of diverse businesses right across the creative industries around the world, nationally and in Cornwall. They are telling us, loud and clear, what they need and helping us to shape the courses and skills that we need to produce.

We need to provide guidance and reassurance for students and those that influence their choices too. When we host open days at Falmouth of course people want to look at our facilities, to see the environment in which they will study and place them in the broader context of Falmouth and Cornwall. Increasingly they want to know that the creative economy will be able to sustain them when they graduate.

This report paints a picture of a sector in rude health, which over the coming years will provide more employment opportunities and sustainable careers than ever before. The GVA of the creative industries has expanded strongly since dipping during the recession, and the report predicts this will grow at a compounded annual growth rate of 7% in the next four years.

Computer programming and consultancy are set to achieve rapid job creation in response to robust demand growth, as will advertising, media and market research activities. As house-building picks up in response to elevated property prices, demand for architectural activities will also lead to increases in headcounts in this area. The creative and arts sectors will maintain strong demand.

This report will help us to continue to shape the courses that we believe our graduates will need and will underline the importance of our mission – to provide a full pipeline of graduates with the skills to participate in this predicted growth.

Professor Anne Carlisle
Vice-Chancellor & Chief Executive, Falmouth University

Executive Summary

The Creative Economy

This is a report by the Centre for Economics and Business Research (Cebr) on behalf of Falmouth University, looking at the economic contribution of the creative industries to the national economy. In our 'business economy' review we assess the importance of the creative industries in terms of turnover, gross value added (GVA), employment and exports. We find that the creative industries is a growing sector in robust health, which will continue to increase its contribution to the UK economy.

'Business economy' highlights

- The creative industries had a turnover of £141 billion in 2012, 13% above the turnover level in 2009. Computer programming, consultancy and related activities was the largest contributor to the creative industries' turnover performance.
- This led the creative industries to contribute £70 billion of GVA to the UK economy in 2012. In line with turnover, the GVA contribution has increased since 2009.
- The creative industries employed 1.2 million people in 2013. This represents around 4% of total UK employment. Computer programming, consultancy and related activities were the largest contributors, accounting for 38% of employment in the creative industries in 2013.
- Exports of goods and services from the creative industries increased by 22% over the period 2008-11. Exports in 2011 amounted to £25.1 billion.
- On average, over the period 2008-12, the labour productivity of the creative industries has been significantly above that of the UK as a whole. Some industries which make up part of the creative industries have high productivity compared to the national average, such as Advertising and Market research.

Indirect impacts of the creative industries

Based on our analysis of the creative industries using the ONS supply-use tables and Cebr's input-output models, we conclude that:

- The creative industries account for approximately 4.8% of UK GVA. Once indirect and induced multiplier impacts of the creative industries are taken into account, the industry is expected to generate an aggregate GVA of £148 billion.
- Once direct, indirect and induced multiplier impacts of the creative industries are accounted for, the industry is expected to support an aggregate 2.6 million full time equivalent jobs.
- For every £1 of salary paid by the creative industries, an additional £2.05 is generated in the wider economy through direct, indirect and induced multiplier impacts.

Future prospects of the creative industries

- We have forecast the future performance of the creative industries in terms of GVA, employment and exports to 2018.
- We forecast a Compounded Annual Growth Rate (CAGR) of 7% for GVA over the period 2014-18 so that the GVA for the creative industries will surpass £100 billion in 2018.
- We expect that total employment in the creative industries will also increase, at a CAGR of 3% so that almost 1.4 million people will be employed in the creative industries in 2018.
- We forecast that exports of the creative industries will increase between 2014 and 2018, at a CAGR of 4%.

I. Overview

Scope of the study

The Creative Industries were defined in the Government's 2001 'Creative Industries Mapping Document' as "those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property".

The methodology used by the Department for Culture Media and Sports (DCMS) in 2014 for determining which occupations and industry codes are classed as creative, is based on research which suggests that high levels of 'creative intensity'[1] is what separates the creative industries from other industries[2].

The scope of this study then is a set of productive activities which we collectively call the 'creative industries' based on those which DCMS and innovation charity Nesta identified. This 'industry' consists of sets and subsets of the industry groups defined under the SIC system. We have provided a fully disaggregated list in Appendix I.

Scope and methodological overview

The analysis of the 'business economy' and macroeconomic impacts of the arts and culture industry uses official data provided by the ONS. This provides economic indicators, including revenues, costs of production and value-added for hundreds of disaggregated industries. These are broken down according to the Standard Industrial Classification (SIC) framework, which provides the underlying data collection framework for much of the economic data produced by the ONS.

To measure the economic characteristics of the creative industries and its direct macroeconomic impacts upon the economy, we identified the activities within the SIC framework which are classified by DCMS as creative industries and used the corresponding figures for these activities from the datasets.

The multiplier impacts of the creative industries were estimated using Cebr's input-output models, which draw on the ONS' national accounting framework. The input-output models are used to determine from which sectors the creative industries purchases its inputs, tracing the industry's economic footprint through its supply chain relationships with other sectors, generating output and employment in those sectors and increasing earnings and employee spending in the wider economy.

1 Creative intensity refers to the proportion of the workforce in creative occupations
2 Bakhshi, H., Freeman, A., and Higgs, P., A Dynamic Mapping of the UK's Creative Industries', 2013, Nesta

2.

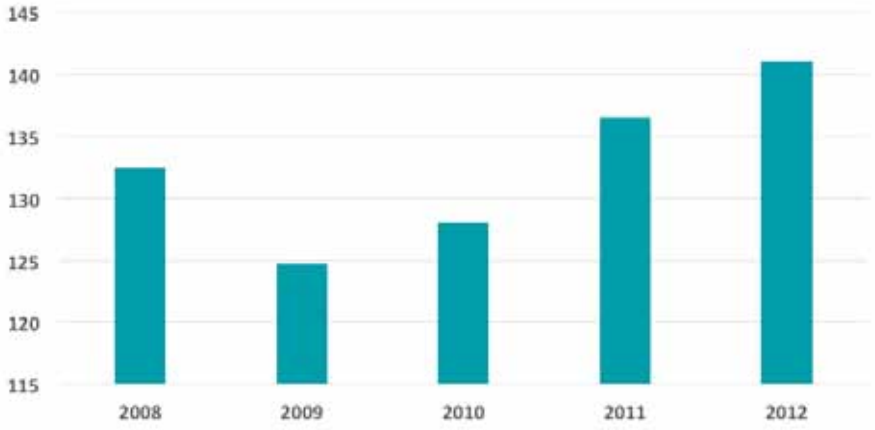
Contribution of the creative industries to the ‘business economy’

This section provides an assessment of the importance of the creative industries to the UK economy in terms of turnover, gross value added (GVA), employment and exports. This section is called a 'business economy' review as the data used in this section is entirely based on those provided by enterprises.

2.1 Turnover

In this section we examine the contribution of the creative industries to the UK economy in terms of the turnover generated by the creative industries[3]. As illustrated in Figure 1, the creative industries generated £132 billion in turnover in 2008. This fell by around 5.8% in the recession year of 2009, but had recovered by 2011, reaching £137 billion. Turnover in 2012 amounted to £141 billion, which is 6.5% above the 2008 level, and 13% above the level during the 2009 recession.

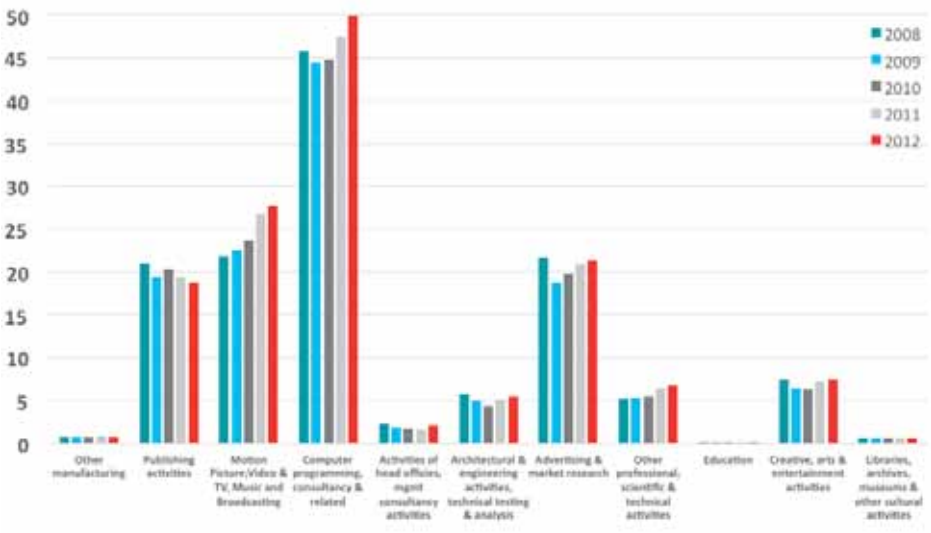
Figure 1: Turnover generated by the UK creative industries, 2008-12, £billion current prices



Source: ONS Annual Business Survey 2008-12, Cebr analysis

Figure 2 shows estimates for the creative industries broken down into their two-digit SIC divisions, in which we have only included the relevant four-digit activities within each. The ICT sector (referred to in the SIC framework as "computer programming, consultancy and related activities"[4]) had the largest share of turnover, accounting for an average of 35% of the creative industries' turnover over the period 2008-12. The greatest growth in turnover over the period was within the specialised design activities, photography and translation/interpretation sector. The turnover of these activities increased by over 30% during the period 2008-12.

Figure 2: Turnover generated by the creative industries split by SIC two-digit activity, 2008-12, £billion current prices



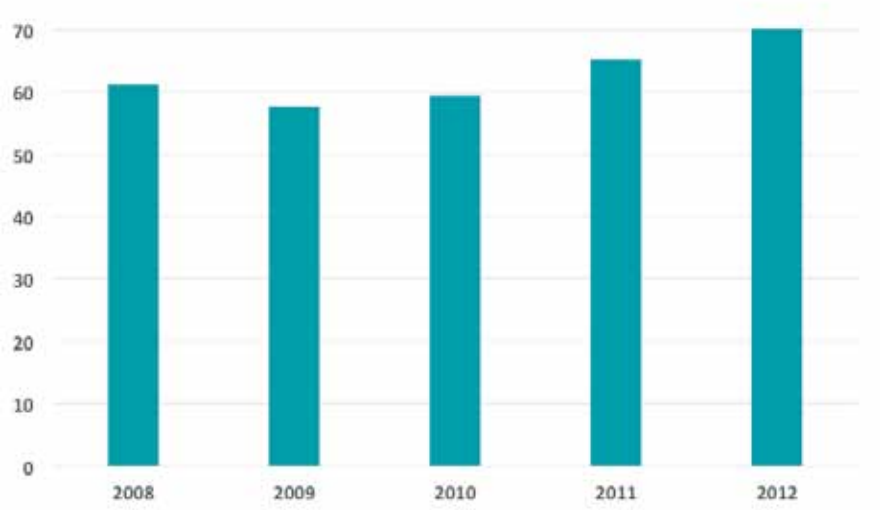
Source: ONS Annual Business Survey, 2008-12, Cebr analysis

3 Turnover is defined as revenues generated by businesses as a result of undertaking productive value-adding activities.
4 For the purposes of our definition of the creative industries, we have only included computer programming activities and computer consultancy activities within the two-digit division of 'computer programming, consultancy and related activities'.

2.2 Gross value added

This section examines the GVA contributions of the creative industries[5]. In 2008, the GVA of the creative industries amounted to £61.1 billion. Following a dip in the 2009 recession, and subdued growth in subsequent years, the GVA of the creative industries reached £70.0 billion in 2012. This reflects an increase of nearly 15% relative to 2008, and is equivalent to 4.8% of total economy-wide GVA.

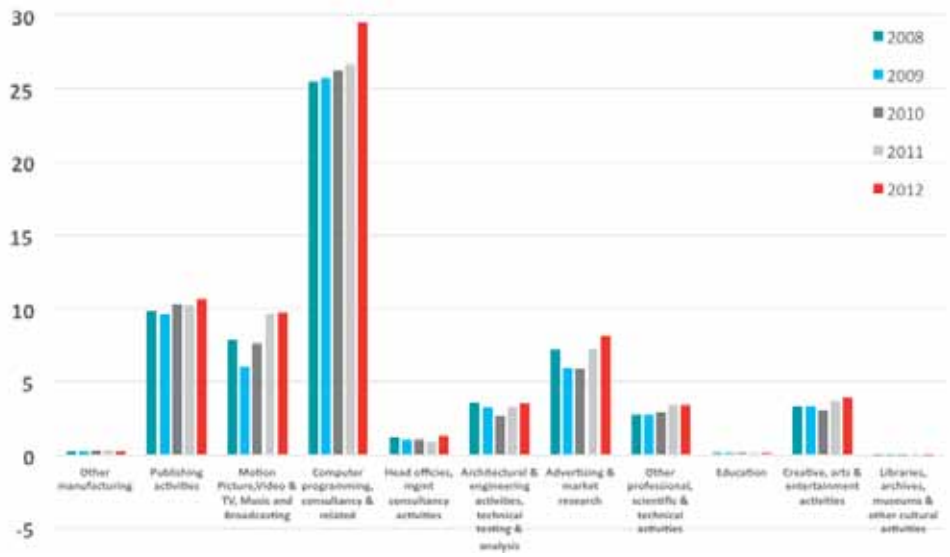
Figure 3: Approximate gross value added at basic prices of the creative industries, 2008-12, £billion current prices



Source: ONS Annual Business Survey 2008-12, Cebr analysis

Figure 4 illustrates the GVA contributions, from 2008-12, made by the relevant elements of each two-digit activity which constitute the creative industries. Over the period 2008-12, the largest GVA contributions were provided by creative ICT activities, which accounted for around 42.6% of the creative industries' GVA. The next largest contributor to GVA was publishing activities, with 16.1%.

Figure 4: Approximate gross value added at basic prices of the creative industries by SIC two-digit activity, 2008-12, £billion current prices



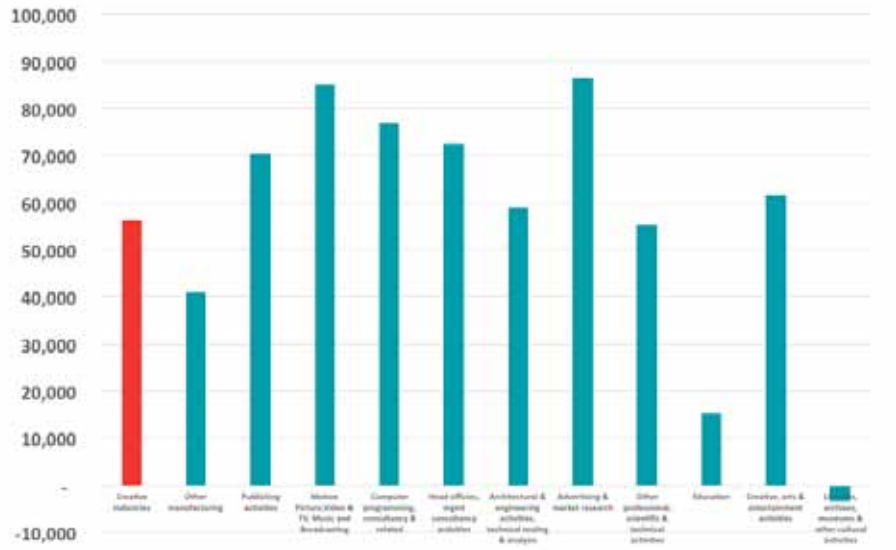
Source: ONS Annual Business Survey 2008-12, Cebr analysis

5 GVA, or gross value added, is a measure of the value from production in the national accounts and can be thought of as the value of 'industrial' output, less the value of the inputs used to produce that output. This is explained further in Appendix II.

2.3 Labour Productivity

We used these GVA contributions, alongside ABS employment data, to produce estimates of the labour productivity of the creative industries as a whole, as well as of the sub-sectors within our definition. GVA per FTE in the creative industries was £76,300 in 2012, which is higher than the equivalent figure for the UK economy as a whole (£55,000 in 2012). On average over the period 2008-12, the GVA per FTE in the creative industries was £71,400.

Figure 5: Labour productivity in the creative industries measured in terms of GVA per FTE, average 2008-12, £ current prices

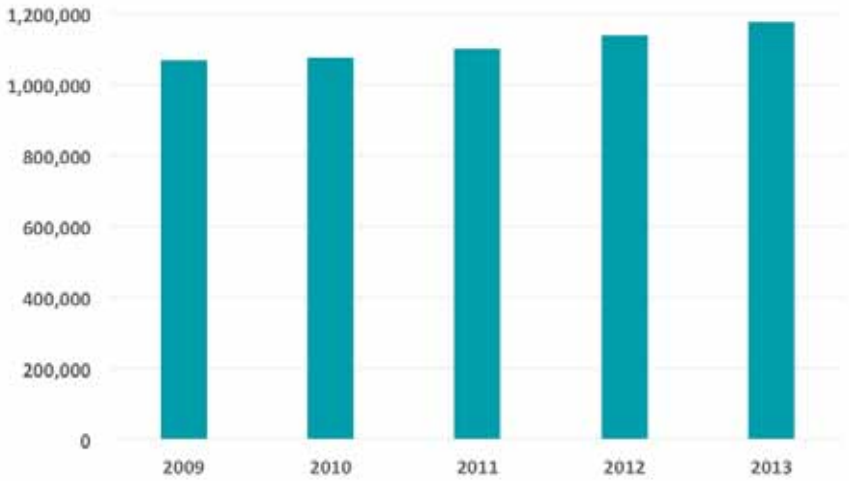


Source: ONS Annual Business Survey 2008-12, Cebr analysis

2.4 Employment

The creative industries accounted for the employment of almost 1.2 million people in 2013. This was an increase of 3.6% on the previous year, and equivalent to around 4% of total UK employment in 2013.[6]

Figure 6: Total employment in the creative industries,

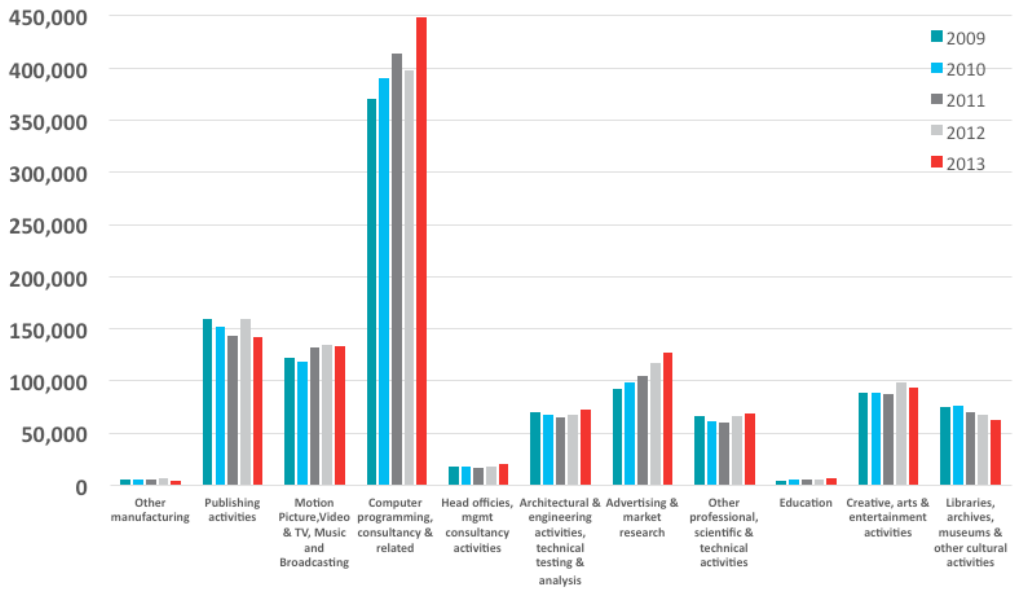


Source: ONS Business Register and Employment Survey 2009-13, Cebr analysis

6 We note that our estimates differ from DCMS's estimate of employment within the creative industries. DCMS use the ONS Annual Population Survey, which is an annual extract of the Labour Force Survey. However, our analysis draws on the Business Register Employment Survey (BRES), as this dataset is more appropriate for analysing employment at a fine degree of industrial detail (up to and including 5-digit SIC). However, BRES also has limitations. As it is an enterprise/workplace-based survey, it draws upon the Inter-Departmental Business Register (IBDR) – a database of registered businesses – for its sample. This means that its coverage does not include self-employed sole traders operating unregistered businesses. To the extent that the sectors examined here feature such unregistered self-employed persons, the figures discussed in this report could be considered 'lower bound' estimates for the creative industries' employment.

Figure 7 illustrates the sectoral dynamics behind these changes in the creative industries' total employment. Over the period 2009-13, computer programming, consultancy and related activities was by far the largest contributor to employment in the creative industries. In 2013, these activities accounted for 449,000 workers, or 38% of total employment in the creative industries.

Figure 7: Total employment in the creative industries by SIC two-digit activity



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

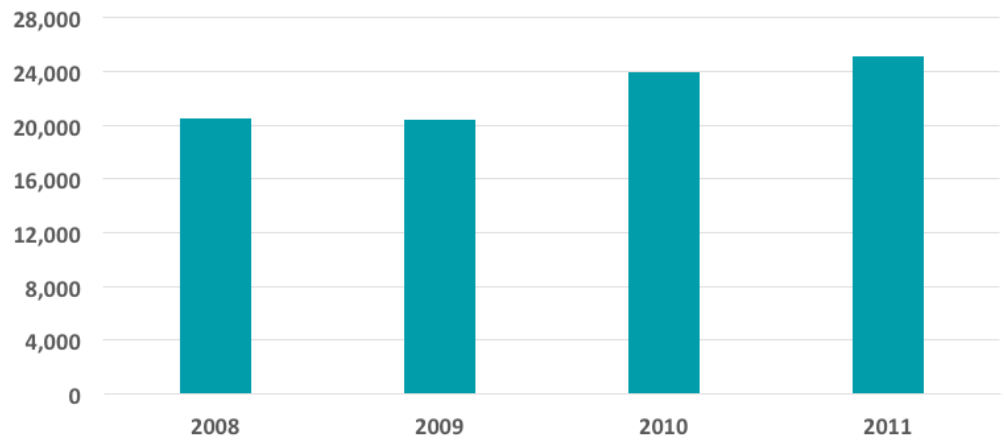
2.5 Exports

We have also calculated the value of exports from the creative industries for the period 2008-11.[7] As illustrated in Figure 8, the average value of exports (including both goods and services) was £22.5 billion[8]. However, this average masks a sharp acceleration in recent years: over the three years to 2011, exports of the creative industries increased by a rapid 22%.

7 According to UK Government, within the creative industries, music, television, film, games, fashion, design and architecture have been notably strong at developing content, products, services and talent for overseas markets.
8 Exports are calculated through the supply-use tables, which detail exports of goods and services across 106 product categories up to and including calendar year 2011. We adopt the assumption that the creative industries' share of these exports is equivalent to their share of turnover in the 2-3 digit SIC industries of which they are a part.

Whilst exports fell slightly from 2008-09, they recovered in 2010, increasing by 17% to £23.4 million. Exports of creative industry goods and services increased again from in 2011, by 5%. This took the value of exports of goods and services from the creative industries to £25 billion. Comparing the exports of goods and services of the creative industries to that of the UK as a whole, exports of the creative industries accounted for 5% of total UK exports in 2011.

Figure 8: Exports of goods and services from the creative industries, 2008-11, £million



Source: ONS and Cebr analysis

3.

Indirect economic impact of creative industries

This section goes beyond the direct economic contributions made by the creative industries (as outlined in section 2), and sets out our findings on their indirect and induced economic impacts.

Figure 9: Summary of multiplier impacts, 2012 (or most recent year)

	Direct impact	Multiplier	Aggregate (incl. direct, indirect and induced) impact
GVA	£70 billion	2.11	£148 billion
Turnover	£141 billion	2.16	£304 billion
Employment (FTEs)[9]	£1.1 million	2.50	£2.6 million
Household Incomes	£32 billion	2.05	£66 billion

Source: Cebr analysis. The availability of more timely employment data means these figures pertain to 2013.

Figure 9 summaries our findings on the aggregate impacts - which include the direct, indirect and induced impacts - of the creative industries. These multipliers are explained in detail in Appendix II. The direct impact relates to our estimates in section 2. We use input-output modelling to calculate the creative industries' multiplier for GVA, output, employment and household incomes. These multipliers mean that;

- For every £1 increase in creative industries' GVA, the economy-wide increase (due to multiplier impacts) amounts to £2.11. Therefore, based on the creative industries' direct impact of £70 billion, we estimate that its aggregate GVA contribution was £148 billion in 2012.
- For every £1 of additional turnover for the creative industries, the economy-wide increase reaches £2.16. Hence, in 2012 we estimate that its aggregate turnover contribution reached £304 billion.
- Each FTE job supported by the creative industries supports an additional 1.50 FTEs in other industries, implying an economy-wide increase of 2.50 FTEs. Taking into account the multiplier impacts, the creative industries' direct employment of 1.1 million FTEs is consistent with a total employment impact of 2.6 million FTEs in 2013.
- The creative industries' income multiplier stands at 2.05[10]. Taking into account multiplier impacts, we estimate that the creative industries supported an aggregate £66 billion in employee incomes during 2012.

9 For consistency, it is necessary to model employment multipliers using full-time equivalents (FTEs), rather than numbers of employees. We calculated these employment multipliers based on our input-output modelling of the creative industries.
10 This describes the employee incomes supported along the supply chain of the creative industries; as well as in the wider economy, through the consumption spending of both creative industries' employees and those of its suppliers.

4.

Future prospects for the creative industries

This section sets out Cebr's forecasts for the economic contribution of the creative industries to the UK economy. These estimates cover the main variables discussed in the previous section, namely: GVA, employment, and exports. The forecasts draw upon Cebr's proprietary model of the UK economy, taking into account domestic economic outlook and the global macro backdrop, as well as recent trends within the creative industries and industry-specific growth expectations.

Economic activity in the UK has accelerated rapidly during 2014, supported by a surge in both business and consumer confidence which began in mid-2013. Cebr expects GDP growth to amount to 2.9% over 2014 as a whole, which is the strongest annual growth since 2007. However the external backdrop has become more challenging in recent quarters, as the euro area in particular teeters on the brink of recession. Europe remains the UK's predominant export market, despite on-going efforts to connect to faster-growing emerging regions.

Despite the recent emergence of more headwinds, we expect the creative industries to continue to grow their contribution to the UK economy. This outlook reflects both robust domestic demand for creative goods and services, as well as the nation's international comparative advantage in creative activities. As such, the export success of the creative industries is also set to continue, underlining their potential contribution to the UK's achievement of sustainable future growth. The CBI agrees with this view, stating that 'if the UK is to become a balanced, high growth economy, it is essential that the key strengths of businesses in the creative industries are nurtured'.[11]

4.1 GVA outlook

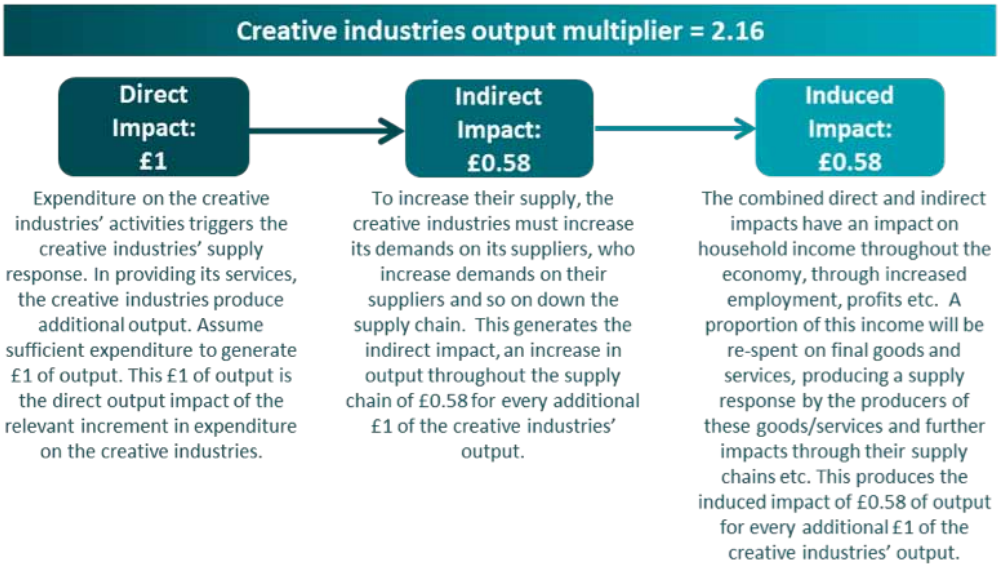
The GVA of the creative industries has expanded strongly since dipping during the recession, and we expect this strong growth to continue apace in the medium-term. Over the period 2014-18, we expect the nominal GVA of the creative industries to grow at a compounded annual growth rate (CAGR) of 7%. This reflects the continued digitalisation of the UK economy, with both consumers and businesses becoming increasingly connected, a trend which the creative industries are well-placed to capitalise on. As firms and households continue to engage new and varied forms of media, there will be further opportunities for the creative industries to distribute and market content, as well as develop the software underlying the fast-moving technology sector.

In addition, business services are expected to be one of the UK economy's best-performing sectors over the medium-term. Rising confidence has led firms to become increasingly willing to invest and pursue growth, and the creative elements of business services are well-placed to capitalise. Marketing, advertising, PR and communications activities will provide key services to ambitious enterprises of all sectors; as they seek to differentiate themselves, take advantage of increasing business and consumer spending, or access new markets.

While the economic recovery has seen many unemployed people rapidly-absorbed back into the workforce, there has been little positive news for disposable incomes in recent years, as wage growth remains well below the rate of consumer price inflation. However, as labour market slack dwindles we expect earnings growth to pick up, rising quicker than inflation from 2015 onwards. This will lead to higher disposable incomes for households, stimulating demand for creative leisure activities such as arts, recreation and cultural activities. The result of these trends is that we expect the GVA of the creative industries to continue growing strongly, surpassing £100 billion by 2018 (measured in current prices). This is illustrated in Figure 10 overleaf.

11 CBI website, http://www.cbi.org.uk/business-issues/creative-industries/

Figure 10: Forecast of gross value added for the creative industries, 2012-18, £million current prices

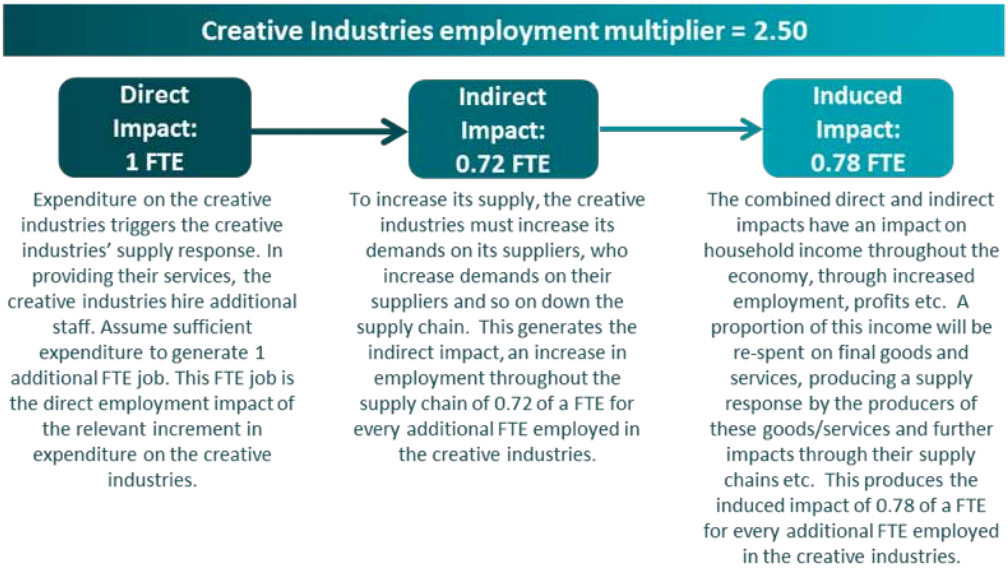


Source: Cebr analysis.

4.2 Employment outlook

Employment growth in the creative industries has been on an upward trajectory since 2010, a trend which we expect to continue over the medium term. During the period 2014-18, employment is anticipated to grow at a CAGR of 3.1%.

Figure 11:Forecast total employment in the creative industries, 2013-18



Source: Cebr analysis

This growth in employment is driven by increased demand, from both domestic and external sources, for goods and services produced by the creative industries. However, employment growth is anticipated to remain below that of GVA, reflecting productivity increases within the creative sector.

Within the creative industries, sectors such as computer programming and consultancy are set to achieve rapid job creation in response to robust demand growth. Similar developments are anticipated within advertising, media and market research activities; areas of the economy which are expected to perform particularly well in the coming years.

These sectors are likely to be the main contributors to employment growth within the creative industries during the coming years. In addition, as house-building picks up in response to elevated property prices, demand for architectural activities will also lead to increases in headcounts in this area. The creative and arts

sectors, meanwhile, are likely to experience more muted employment growth, despite strong demand – this reflects a continuation of productivity increases seen over recent years.

In aggregate, we forecast that the creative industries will employ almost 1.39 million people by 2018, a rise of over 150,000 relative to 2014, as shown in Figure 11.

4.3 Exports outlook

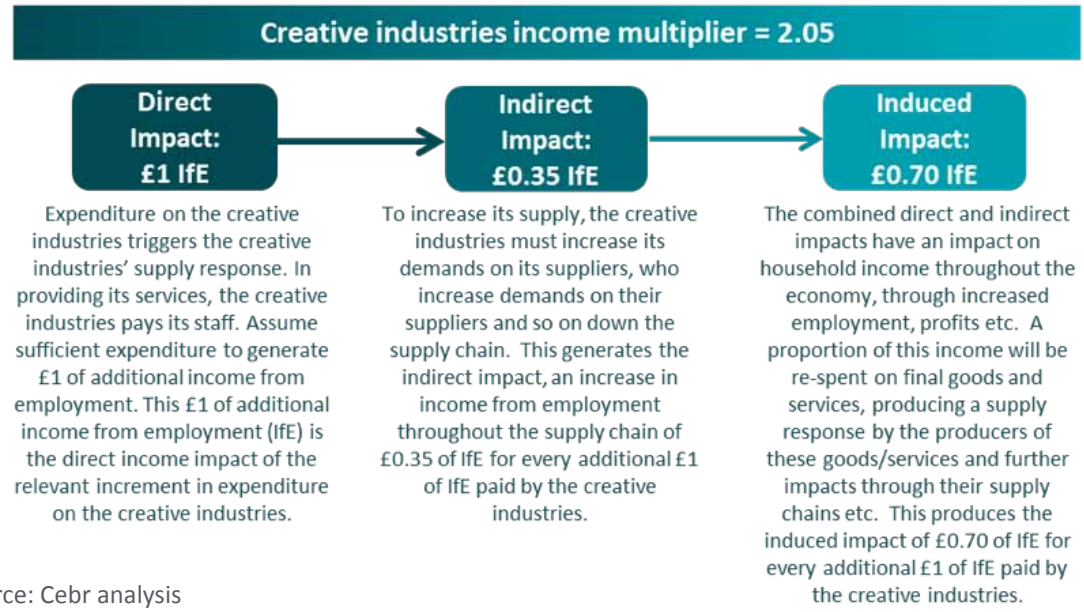
The creative industries' exports are estimated to have grown relatively weakly in the years since 2011-14, increasing by a total of 8% in nominal terms[12]. This reflects recent financial and economic turbulence which have afflicted the global economy, weighing on world GDP growth over this period. However, we do expect external demand for creative industries' output to grow more strongly in future years, driven principally by an easing in these global conditions. While lacklustre growth will persist in Europe, the creative industries have more diversified sources of demand – particularly in services – than is the case for UK exports as a whole.

The expectation for a strong export performance among the creative industries is related to the UK's well-established international position as an investor in creative talent and leader in creative content. Measures such as UK Trade & Investment's (UKTI) recently-announced Creative Industries International Strategy demonstrate that this position is not unnoticed by policy makers. Due to be implemented in 2015, the strategy seeks to double the industries' exports by 2020[13].

Given this positive outlook, we expect that exports of goods and services from the creative industries will grow at a CAGR of 4% over the period 2014–18, representing an increase of over £7 billion, to stand at £34.5 billion by the end of our forecast period, as illustrated in Figure 12.

This forecast reflects rising international consumers' demand for recreational and artistic output from the UK, such as films, television, music and video games. The creative elements of the UK's thriving business services sector are also anticipated to increase their success in accessing international markets; while the ICT and computer consultancy sectors are set to see continuing robust demand from businesses abroad.

Figure 12: Forecasts of exports of goods and services from the creative industries, 2011-18, £million



Source: Cebr analysis

12 As noted in Section 2, the latest available export data on a detailed industrial level pertains to calendar year 2011. Hence, the chart in Figure 12 below sets out our estimates for exports until 2013, as well as forecasts for the five years to 2018.
13 We note that our forecast is driven by an analysis of the economic characteristics of the creative industries themselves; rather than a prediction of the efficacy or otherwise of specific policy interventions. We reference this policy to draw attention to policymakers' acknowledgment of the inherent export potential in the UK's creative industries.

Appendix I

SIC-based definition of the creative industries

Sector	Division	4-Digit SIC	Description
C Manufacturing	32 Other Manufacturing	32.12	Manufacturing of jewellery and related articles
J Information and communication	58 Publishing activities	58.11 58.12 58.13 58.14 58.19 58.21 58.29	Book publishing Publishing of directories and mailing lists Publishing of newspapers Publishing of journals and periodicals Other publishing activities Publishing of computer games Other software publishing
	59&60 Motion Picture, Video & TV Programme Production, Sound Recording & Music Publishing Activities & Programming And Broadcasting Activities	59.11 59.12 59.13 59.14 59.20 60.10	Motion picture, video, TV production Motion picture, video, TV post production Motion picture, video, TV distribution Motion picture projection activities Sound recording and music publishing activities Radio broadcasting
		60.20	Television programming and broadcasting
	62 Computer programming, consultancy and related activities	62.01	Computer programming activities
		62.02	Computer consultancy activities
M Professional, scientific and technical activities	70 Activities of head offices, management consultancy activities	70.21	Public relations and communication activities
	71 Architectural and engineering activities; technical testing and analysis	71.11	Architectural activities

Cont.

Sector	Division	4-Digit SIC	Description
M Professional, scientific and technical activities	73 Advertising and Market research	73.11	Advertising agencies
		73.12	Media representation
	74 Other professional, scientific and technical activities	74.20	Photographic activities
		74.30	Translation and interpretation activities
P Education (Excludes Local Authority and Central Government Bodies)	85 Education	85.52	Cultural education
R Arts, Entertainment and Recreation	90 Creative, arts and entertainment activities	90.01 90.02 90.03 90.04	Performing arts Support activities to performing arts Artistic creation Operation of arts facilities
	91 Libraries, archives, museums and other cultural activities	91.01	Library and archive activities

Appendix II: Methodological detail

Official data provided by the ONS was used to provide the 'business economy' review and the macroeconomic impact assessment of the creative industries which are discussed in sections 2 and 3. The Annual Business Survey (ABS) discloses economic indicators, including revenues, costs of production, and value-added, across hundreds of disaggregated industries. These are broken down according to the Standard Industrial Classification (SIC) framework, which provides the underlying data collection framework for much of the economic data produced by the ONS, including the ABS and the national accounting framework. By identifying those activities which can be defined as part of the creative industries within the SIC framework, and using the corresponding figures for these activities from the datasets, we are able to measure, at a national level, the economic characteristics of the creative industries and their direct macroeconomic impacts upon the economy.

Enterprises are classified in the SIC framework according to their principal activity, meaning that the turnover and value added that they generate, the persons they employ, and the values of all other variables is also classified under the same principal activity or industry.

The ABS provides this raw 'business economy' data on turnover and value added at the SIC three- and four-digit level. This enables isolation of these data for the set of productive industries which fall within our definition of the creative industries.

GVA

GVA 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 a measure 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 creative industries. 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 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.

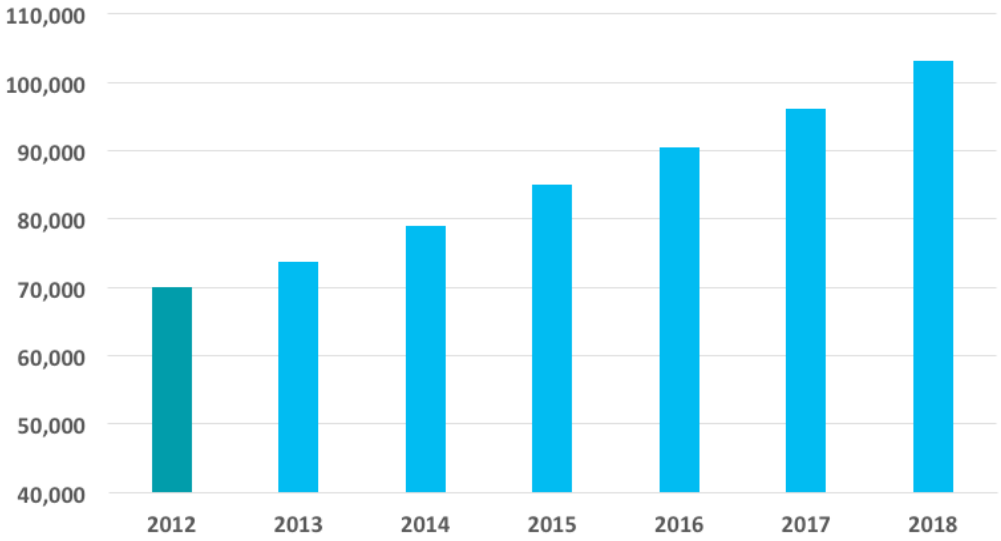
Multiplier Impacts

To estimate the multiplier impacts of the arts and culture industry, we used Cebr's input-output models. These draw on the ONS national accounting framework, as reflected in the supply-use dataset. This provides the most comprehensive official account of the existing structure of the UK economy. It details the economic relationships between UK businesses, households, government and the rest of the world. We use these input-output models to determine the sectors from which the creative industries purchases its inputs, tracing 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.

To adapt these models to measure the aggregate economic contribution of the creative industries, we firstly assign an explicit role to the creative industries within the ONS' supply-use framework. The supply-use tables, part of the UK's national accounts, are the most comprehensive official account of the economy. They detail how industries interact with each other, with government, households and the external sector in generating the UK's output and national income.

We use the multipliers in association with the direct impacts data to produce estimates of the total impact of the creative industries through the supply chain response (indirect impacts); and through the spending of the creative industries' employees – and those of its suppliers – in the wider economy (induced impacts). These impacts are explained in diagrammatic form below, which sets out the three elements of the creative industries' GVA multiplier.

Figure 13: Forecast of gross value added for the creative industries, 2012-18, £million current prices



Source: Cebr analysis

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