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The creative industries in London

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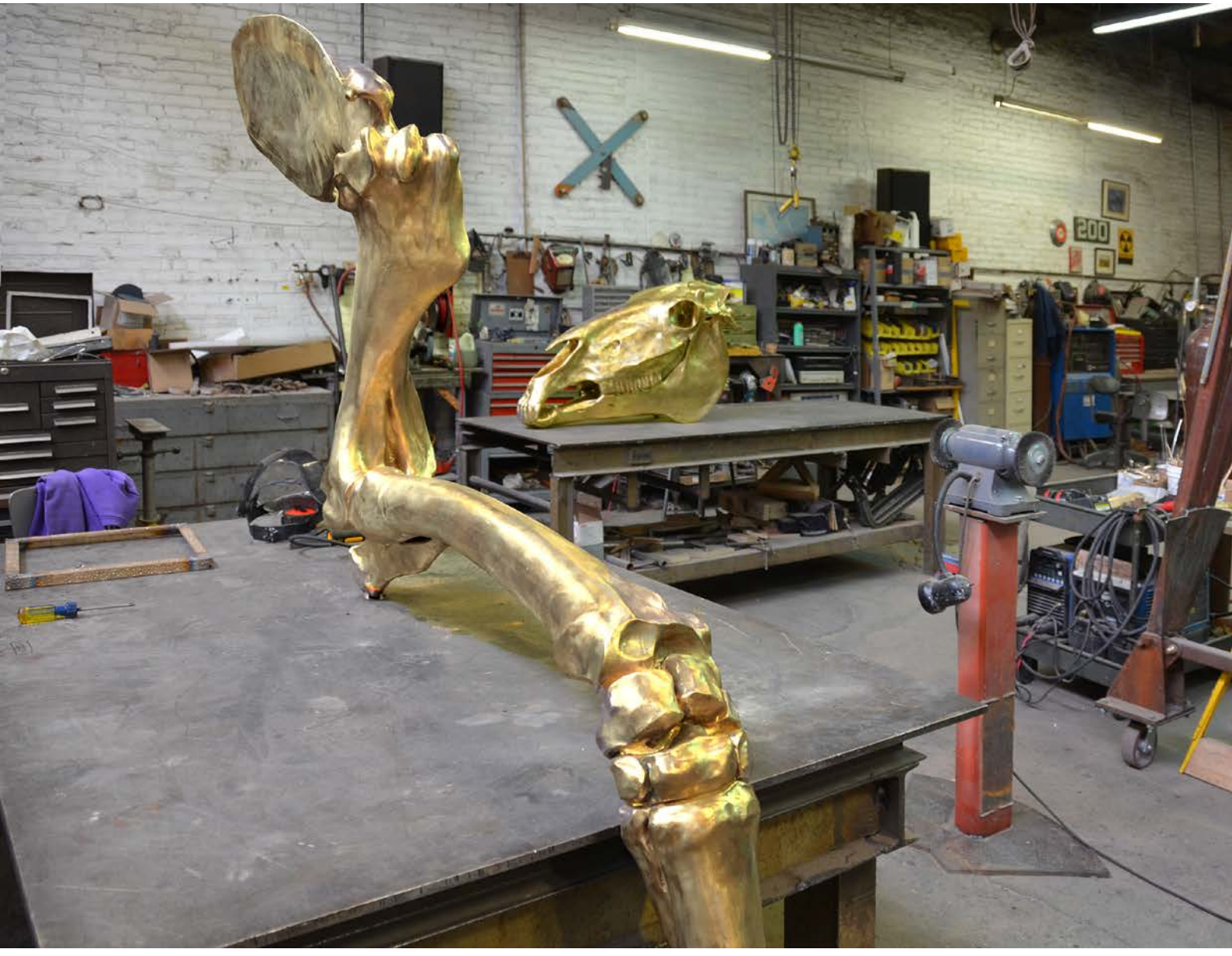

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Executive summary

'London is one of the great cultural capitals of the world. It is not just famous for its museums, galleries, heritage and monuments but also for the dynamism and diversity of its commercial creative industries: the artists, businesses, entrepreneurs, writers, venue owners, festival organisers and retailers who make the city such an economically successful and exciting place to live.'[1]. The aim of this report is to provide evidence of the value of the creative industries in London, and the impact that they have on London's economy. The report follows on from previous work[2] which highlighted the importance of the creative industries in terms of employment and output as well as looking at the spatial incidence of the creative industries across London. This report provides our latest understanding on all these issues.

The creative industries continue to represent a significant part of London's economy as well as the creative industries for the UK as a whole. In 2012, output (measured as Gross Value Added (GVA)) of the creative industries in London was estimated at £34.6 billion, accounting for just under half (47.6 per cent) of the UK total (£72.7 billion); the creative industries group contributed 10.7 per cent of total GVA in London. Over the post-recessionary period (2009-2012), the creative industries showed relatively higher growth than London's economy as a whole.

London's creative industries are more productive than the average for London's economy as a whole. The productivity of the creative industries in London (estimated at £71,100 on a GVA per workforce job basis), was 25 per cent higher than the average across all sectors of the London economy (estimated at £56,700 in 2012). London's creative industries are also more productive than the average for creative industries across the UK as a whole.

Organisations operating in the creative economy are important employers in London. In 2014, there were 795,800 jobs in the creative economy in London, equivalent to 16.3 per cent of total jobs in the capital (compared to 7.4 per cent of the total number of jobs in the Rest of the UK).

In line with its higher productivity, workers in London's creative economy tend to be paid more than the average across all sectors of London's economy. In London the median hourly pay in the creative economy in 2014 was £18.80, which compares to a median hourly pay of £15.26 in London's 'non-creative' economy.

These results provide evidence of the direct role that the creative economy plays in London's wider economy. Further, the concentration of creative industries workplaces around certain areas in London suggests that clustering and agglomeration is likely to be at play. This suggests that the creative industries could have beneficial effects on the wider economy and, more specifically, on other sectors of London's economy, through two main mechanisms. First, agglomeration effects can potentially boost productivity both within and across sectors. Second, spill-over effects can lead to a more tightly-linked supply chain, with potential effects on employment and wages, as well as positive knock-on effects to other industries (the tourism industry in particular).

[1] Cultural Metropolis 2014

[2] See: Current Issues Note 33: London's Creative Industries 2011 update, October 2011 (http://www.london.gov.uk/priorities/business-economy/publications/gla-economics/current-issues-note-33-londons-creative-industries-2011-update) and Working Paper 40: London's Creative Workforce (2010 update), February 2010 (http://www.london.gov.uk/priorities/business-economy/publications/working-paper-40-londons-creative-workforce-2010-update) for instance.

Introduction

The creative industries are an important sector of the London economy which contributes to and strengthens London's competitiveness in relation to other global cities.

This paper analyses the value of the creative industries in London, and briefly touches upon the impact they might have on the wider economy. The novelty of this work (as compared to others looking at the country as a whole[3]) lies in the focus on London, with estimates produced for the capital, and then compared to those for the Rest of the UK where possible. The paper assesses output and employment, as measures of productivity of the sector; as well as the sector's spatial distribution across London, to understand whether there is evidence of clustering and agglomeration effects.

This analysis adopts the definition of creative industries and creative economy developed by the Department for Culture, Media & Sport (DCMS), and uses various official statistics available from the Office for National Statistics.

The first chapter ("*Definitions*") clarifies the definitions of creative industries, creative economy, and creative occupations. It concludes with a brief description of the data sources which are used in the different chapters of this paper.

Chapter 2 provides an analysis of the output of the creative industries in London (given by GVA), derived by extending a methodology developed by GLA Economics in Working Paper 63 (2015)[4]; with estimates by creative industry sub-groups also provided.

Chapter 3 discusses the labour market characteristics of the workforce in the creative economy and in the creative industries in London. After providing the general context for London (e.g. trends in employment and pay in the industries), a comparison of trends in the capital versus those in the rest of the country for both the creative industries and the creative economy, and the socio-economic characteristics of the workforce (e.g. gender, ethnicity, age group) in these industries are explored.

Chapter 4 follows with an analysis of GVA per workforce job of the creative industries in London in 2012, as proxy of the productivity of the sector, based upon the data on GVA, employment, and wages provided in the first three sections of the report.

Chapter 5 presents the spatial distribution of the creative industries in London. By means of visual representation through maps, the distribution of creative industry employees across London are presented, together with the distribution of the workplaces of those employees. A breakdown by creative industries sub-group is also taken into account.

Finally, Chapter 6 concludes by discussing the main findings from the available literature around the effects that the creative industries might have on the wider economy, with reference, in particular, to the impact on the tourism industry. The section also includes a short account of the effects that the industry might have on other, less tangible or subjective aspects, such as Londoners' well-being and cultural diversity.

[3] See, among others, DCMS (2015) and Nesta (2014, 2015).
[4] GLA Economics (2015). *GVA per workforce job in London and the UK*, Working Paper n.63, February 2015.

1 Definitions

The analysis presented in this note adopts the definitions of the creative economy and creative industries developed by the Department for Culture, Media & Sport (DCMS). Their approach is followed in order to ensure consistency and comparability of estimates (with a few exceptions, such as in the estimation of the output of the sector – please refer to Chapter 2 and Appendix A for further information) of the number of jobs and the industry sectors people work in.

Full details regarding the methodology developed by DCMS are available at Annex A and B of the latest DCMS release (2015)[5].

As outlined in the Government's 2001 Creative Industries Mapping Document, the creative industries can be defined as follows:

"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" (DCMS, 2001)

Starting from this definition, DCMS developed a methodology with the final aim of selecting and isolating those sectors and occupations which, according to the official industry and occupation codes[6], could best capture the sectors and the professions operating in the industry[7]. This methodology was first adopted in their statistical release in 2014, and is based on the assumption that "having high levels of "creative intensity" – that is, the proportion of the workforce in creative occupations – separates Creative Industries from other industries" (Bakshi et al, 2013).

For more details about the methodology used to derive a commonly agreed definition of creative industries and an empirical estimate of their impact on the economy, it is worth referring to the original DCMS document and its annexes[8]; these are summarised in sections 1.1 and 1.2.

The main focus of this research is on the creative industries in London. Although DCMS do provide regional analysis, they do not go into the detail of breaking down employment by region, by socio-economic characteristics or economic status, to name a few. Moreover, spatial analysis down to small geographical boundaries is not provided, and estimates of the GVA of the creative industries by region are not analysed.

1.1 Creative economy

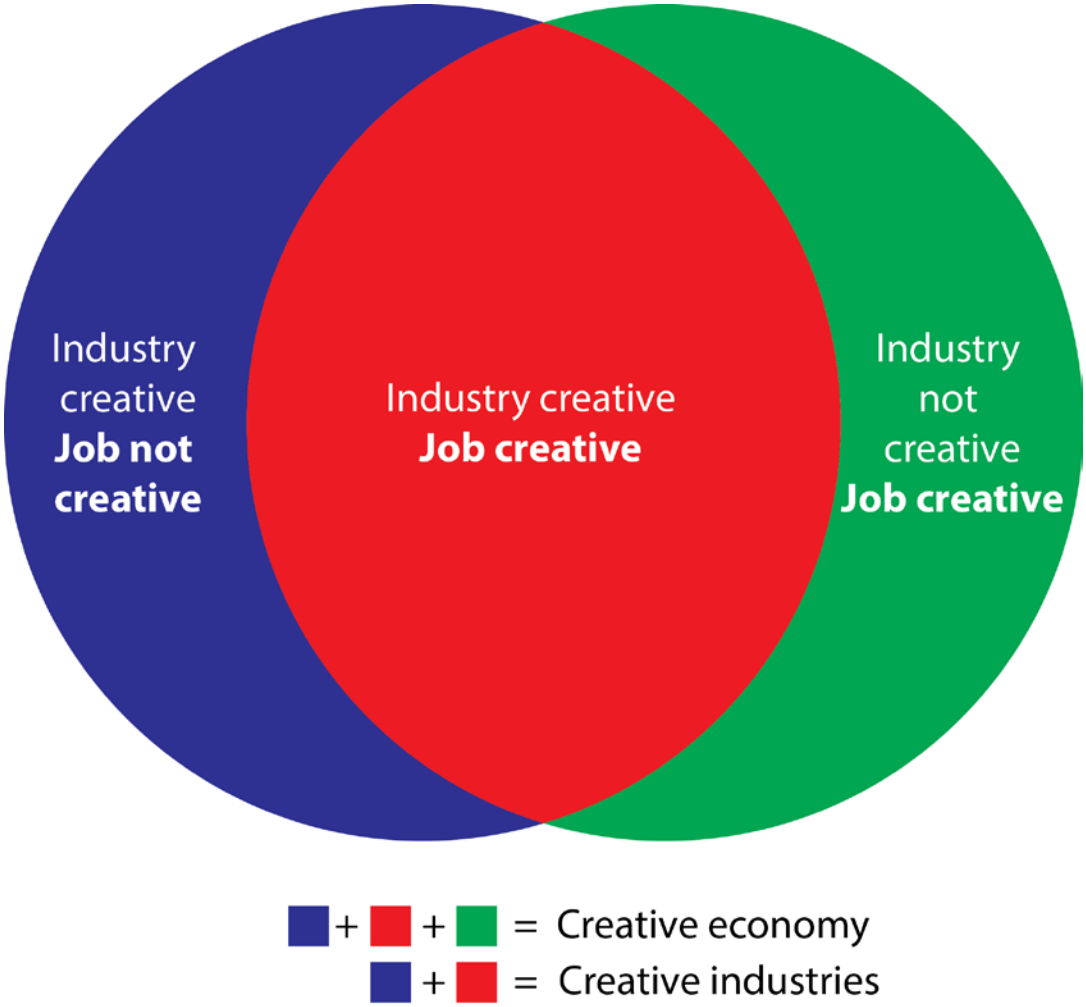
The Creative Economy (Figure 1) encompasses people with creative occupations working in the creative industries, as well as workers with creative occupations working in any other industry, and also people in a non-creative job working in a creative industry.

[5] This is available to download here.
[6] Throughout this analysis, the Office for National Statistics (ONS) Standard Industrial Classification 2007 (SIC07) and Standard Occupational Classification 2010 (SOC10) are adopted. For more information, see here.
[7] Please be aware that other institutions and research centres are currently suggesting a revision of these classifications to be "updated and placed on a more rigorous footing" (Nesta, 2014). For instance, see the work that NESTA have been doing on this, which is available to download here.
[8] It is suggested to look especially at Annexes A and B of DCMS "Creative Industries Economic Estimates" published in January 2015, and available to download here. The full list of occupations and industries the creative industries and creative economies are composed of is reported.

For example, the *creative economy* includes all of the following:

- *the contribution of an accountant working for a museum* – a non-creative job in a creative industries sub-group;
- *the contribution of a designer working for a food supplier* – a creative job in a non-creative industries sub-group;
- *the contribution of a radio presenter working for a local radio station* – a creative job in a creative industries sub-group.

Figure 1: Definition of Creative Economy and Creative Industries according to DCMS definition



1.2 Creative industries

The creative industries (Figure 1) represent a sub-set of the creative economy, and they encompass all people working in the industry, independently of whether they have a creative occupation or not.

Using the examples provided earlier, the *creative industries* include the following:

- *the contribution of an accountant working for a museum* – a non-creative job in a creative industries sub-group;

- *the contribution of a radio presenter working for a local radio station* – a creative job in a creative industries sub-group.

Data sources

The analysis presented in this paper is based on official statistics released by the Office for National Statistics (ONS). More details about data sources and methodologies are provided in each single chapter. However, a summary of data sources used for the different levels of analyses is reported below.

- *Gross Value Added (GVA) and GVA per workforce job*: ONS National and Regional Accounts; as well as labour market data (including Business Register and Employment Survey, and Annual Population Survey) were used to develop a methodology to derive GVA and GVA per workforce job for creative industry groups; based upon GLA Economics research in Working Paper 63.
- *Employment*: ONS Annual Population Survey (APS) re-weighted to the 2011 Census of the population and ONS Annual Survey of Hours and Earnings (ASHE) – 2009-2014;
- *Mapping*: ONS Inter-Departmental Business Register (IDBR) – 2009-2014.

2 GVA of the creative industries in London

The aim of this section is to present GLA Economics' estimates of Gross Value Added (GVA) of the creative industries in London for 2012, as well as its performance over time (2009-2012).

Generally speaking, GVA measures the contribution to the economy of each individual producer, industry or sector. It represents the value added generated from activity in the economy. Therefore, it is an essential measure to be looked at when assessing the impact and the value of any industry of the economy.

More details about the methodology developed by GLA Economics to estimate the contribution of the creative industries to the economy as a whole in terms of GVA are available in Appendix A, and further details are provided in Working Paper 63 (GLA Economics, 2015) . The methodology used to estimate the figures presented in this chapter is an extension of that initially developed by GLA Economics in Working Paper 63. The aim of this exercise was to assess the impact of the creative industries, according to the DCMS definition of creative industries groups (see, for instance, DCMS, 2015).

It is important to mention that data on GVA is drawn from the Regional Gross Value Added (Income Approach) publication by the ONS, whereas the methodology developed by GLA Economics to estimate GVA per workforce jobs (see later on in this document) uses data from National and Regional Accounts, as well as data specifically requested from the Office for National Statistics.

2.1 Main findings

As shown in Table 1, the total GVA of the creative industries in London was £34.6 billion in 2012, accounting for just under half (47.6 per cent) of the UK total (£72.7 billion). The creative industries group accounted for 10.7 per cent of total GVA in London, which, in 2012, was £325.6 billion.

Table 1: Total GVA for the creative industries groups in London and in the UK, 2012

Creative Industries Group	London Total GVA (£m)	UK Total GVA (£m)	London Proportion
Advertising and Marketing	3,631	6,628	54.8%
Architecture	1,349	3,302	40.9%
Crafts	159	325	48.9%
Design: product, graphic and fashion design	947	2,271	41.7%
Film, TV, video, radio and photography	8,633	13,011	66.4%
IT, software and computer services	10,777	30,195	35.7%
Publishing	5,341	10,616	50.3%
Museums, galleries and libraries	601	2,214	27.1%
Music, performing and visual arts	3,163	4,175	75.8%
TOTAL	**34,601**	**72,737**	**47.6%**

Source: GLA Economics calculations

Since 2009, GVA of creative industries in London has increased by 16.4 per cent, compared to an increase of 15.4 per cent for the London economy as a whole. The highest annual rate of growth was registered between 2010 and 2011 (a 7.8 per cent increase). More generally, the creative industries have shown relatively high growth in the last three years; when compared to London's economy as a whole, they have experienced slightly faster growth. In fact, the average annual rate of growth for GVA of the creative industries in London, over the 2009 to 2012 period, was 5.2 per cent; this compares to an average annual growth rate of GVA for the London economy as a whole of 4.9 per cent.

Figure 2 shows GVA indexed against the value of GVA in London as of 2009 in both the creative industries and in the economy as a whole.

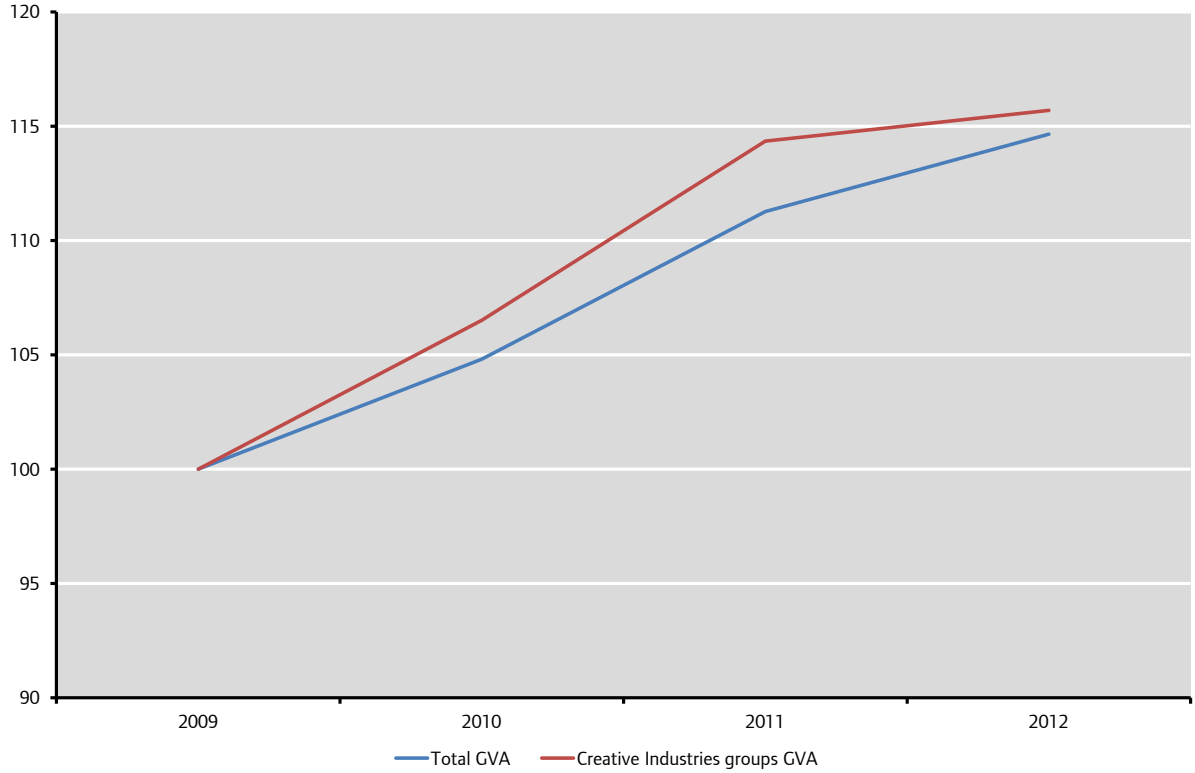
Table 2: Creative industries – annual growth rate and share of total GVA, London and the UK (2009-2012)

	London					UK				
	Total GVA (£m)	**annual growth rate**	**Creative Industries groups GVA (£m)**	**annual growth rate**	**Creative industries group as proportion of total GVA**	**Total GVA (£m)**	**annual growth rate**	**Creative Industries groups GVA**	**annual growth rate**	**Creative industries group as proportion of total GVA**
2009	*282,100*		**29,725**		**10.6%**	1,345,046		**63,325**		**4.7%**
2010	*295,658*	*4.8%*	**31,660**	**6.5%**	**10.7%**	1,400,684	*4.1%*	**65,914**	**4.1%**	**4.7%**
2011	*314,906*	*6.5%*	**34,140**	**7.8%**	**10.9%**	1,441,598	*2.9%*	**68,515**	**3.9%**	**4.8%**
2012	*325,613*	*3.4%*	**34,600**	**1.3%**	**10.7%**	1,475,948	*2.4%*	**72,737**	**6.2%**	**4.9%**

Source: GLA Economics calculations

However, as a proportion of London GVA, the creative industries contribution remained stable between 2009 and 2012 as shown in Table 2.

Figure 2: Changes in GVA for the London's economy as a whole and for the creative industries groups in London, indexed to 2009=100



Source: GLA Economics calculations

2.2 Estimates by creative industries group

Table 3 summarises the GVA of each of the creative industries groups in London over the 2009 to 2012 period.

The group which experienced the fastest growth between 2009 and 2012 was Advertising and Marketing (an increase of 53.3 per cent), followed by Crafts (a 39.5 per cent increase) and Architecture (a 36.3 per cent increase).

Table 3: Total GVA of the creative industries groups in London, 2009-2012

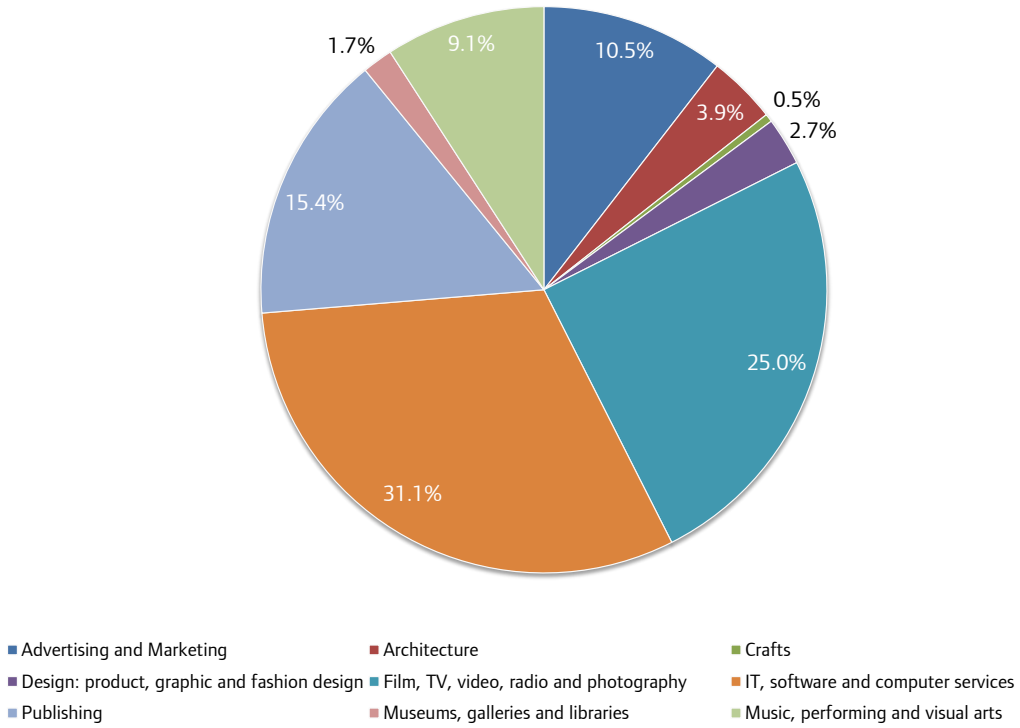
GVA per Workforce Job (£k)	2009	2010	2011	2012	2009-2012 growth
Advertising and Marketing	51.1	53.0	58.4	54.8	7.2%
Architecture	44.4	45.4	50.8	49.9	12.4%
Crafts	54.1	59.3	56.9	61.8	14.2%
Design: product, graphic and fashion design	42.8	37.5	39.8	42.4	-1.0%
Film, TV, video, radio and photography	78.9	82.4	86.1	84.4	6.9%
IT, software and computer services	90.6	95.9	89.1	93.9	3.6%
Publishing	75.1	84.1	90.2	89.7	19.4%
Museums, galleries and libraries	35.5	31.8	35.1	36.8	3.4%
Music, performing and visual arts	41.2	36.1	43.1	42.2	2.2%
TOTAL	**67.7**	**68.8**	**72.0**	**71.1**	**5.1%**

Source: GLA Economics calculations

The only two sectors which experienced negative growth in London were Museums, galleries and libraries (a fall of 8.2 per cent)[9] and Publishing (a 1.0 per cent fall).

Among the creative industries groups (as shown in Figure 3), the IT, software and computer service group contributed 31.1 per cent of total creative industries GVA; followed by Film, TV, video, radio and photography (25.0 per cent), and Publishing (15.4 per cent). The same ranking applies to the country as a whole; however, the IT, software and computer services group represented a larger proportion (41.5 per cent) as compared to London. At the other end of the scale, Crafts is the group which contributed the least, with 0.5 per cent of the creative industries total contribution to London's economy in 2012; followed by Museums, galleries and libraries (1.7 per cent), and Design (2.7 per cent).

Figure 3: Contribution of each creative industries group to the total GVA of the creative industries in London, 2012



Source: GLA Economics calculations

[9] Please note that the Museums, galleries and libraries group – and, to an extent, the Music, performing and visual arts group as well, is to be considered a peculiar group within the creative industries sector, given that most of these establishments do not charge for entry or for providing their services/products. Therefore, it is difficult to compare the contribution of this group with the others in the creative industry sector.

3. Employment in the creative industries in London

The aim of this chapter is to discuss the labour market characteristics of the workforce in the Creative Economy (and in the Creative Industries) in London. After providing the general context for London (e.g. trends in employment and pay in the industries), and a comparison of trends in the capital versus those in the Rest of the country for both the creative industries and the creative economy, the socio-economic characteristics of the workforce (e.g. gender, ethnicity, age group) in these industries will be explored, in order to understand whether there are any common patterns to be investigated further.

As already mentioned in Chapter 1 of this note, this analysis uses the approach developed by DCMS to define the boundaries of the creative economy, according to the jobs that people do; and the industry sectors they work in[10]. As stated, broadly speaking, the *creative economy* consists of three main groups, the first two of which make up the *creative industries*:

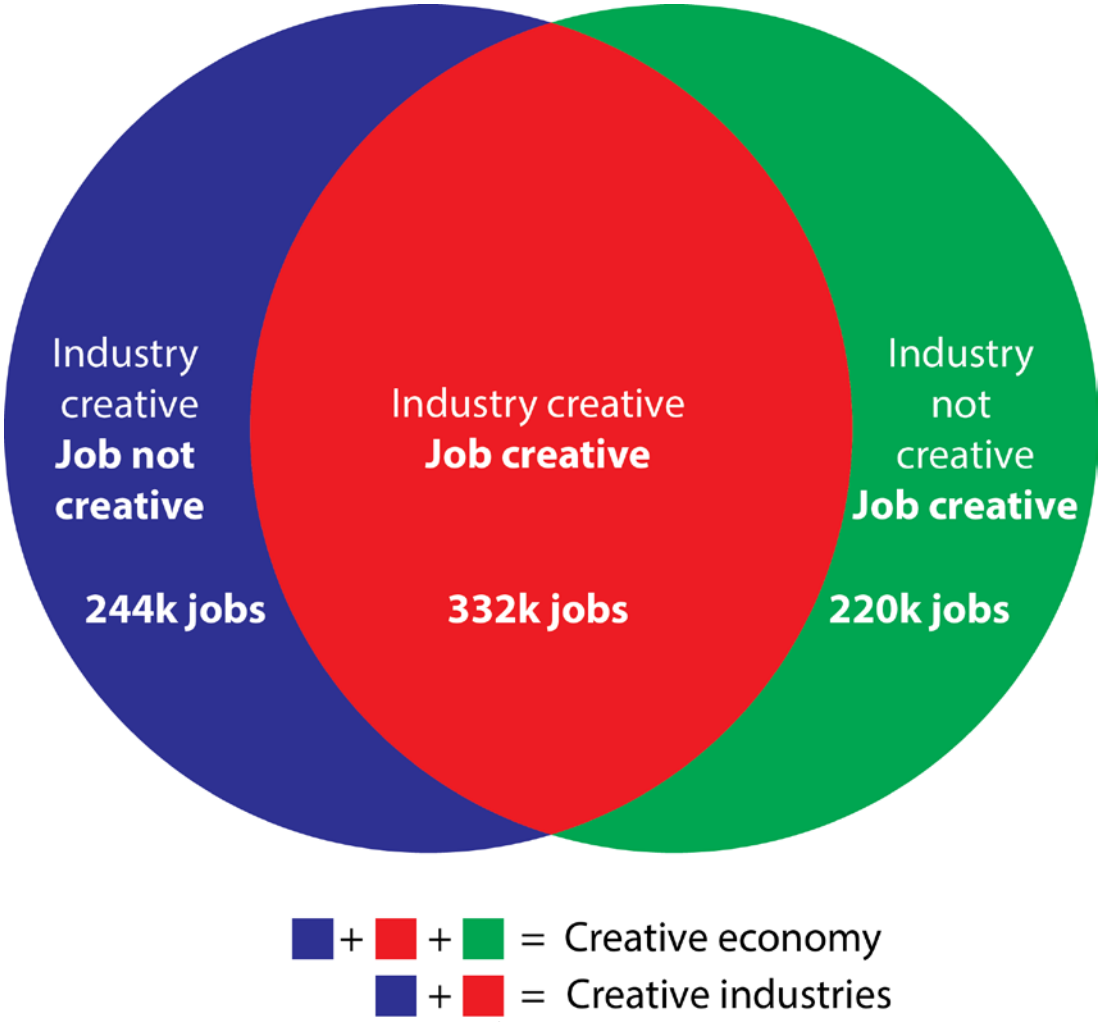
1) Job and industry are both creative;
2) Industry is creative but job is not creative (or unknown);
3) Job is creative but industry is not creative (or unknown).

The analysis presented in this chapter has been carried out using two main data sources, both of which are Office for National Statistics (ONS) official statistics, namely the Annual Population Survey (APS) for the years 2009 to 2014 (re-weighted to the 2011 Census of the population); and the Annual Survey of Hours and Earnings (ASHE), for the years 2011 to 2014 for the creative economy; and for the years 2008 to 2014 for the creative industries[11].

Following the DCMS definition, and according to the "Creative Trident" as defined by Nesta (2008), Figure 4 reports the headline estimates for employment in London in 2014.

[10] For more details, please see Annex A and Annex B of the DCMS publication, available here.
[11] Please note that the three main creative economy groups and their sub-groups are defined using the Standard Industrial Classification 2007 (SIC07), which is available in the Annual Population Survey (APS) from 2009; as well as the Standard Occupational Classification 2010 (SOC10), which is available from 2011. SIC07 is used to define whether the industry is creative, while SOC10 defines whether the job is creative or not. Therefore, the analysis of the creative industries can be provided from 2009 onwards, but the analysis of the creative economy can only be provided from 2011 onwards, because it is based on SOC10 as well as SIC07.

Figure 4: Employment in the creative economy in London (thousand jobs), 2014



Source: ONS Annual Population Survey, 2014; figures rounded to the nearest thousand.

In 2014, there were 795,800 jobs in the creative economy in London, or 16.3 per cent of total jobs in the capital. This compares to 1.96 million jobs in the creative economy in the rest of the UK, which is equivalent to 7.4 per cent of the total number of jobs in the rest of the UK.

With regard to the creative industries (which includes both creative and not creative jobs in the creative industries), there were 575,300 jobs in London in 2014 (or 11.8 per cent of total jobs in London). In the rest of the UK the number goes up to about 1.23 million jobs, but the share of total number of jobs was lower than in London, at 4.6 per cent in 2014.

Figure 4 provides a graphic representation of the detailed breakdown of the figures mentioned above. In particular:

- the sum of all the estimates reported above provides an estimate for jobs in the creative economy (= 332k + 244k + 220k = 796k);
- the sum of non-creative jobs in the creative industries to creative jobs in the creative industries provides an estimate of the total number of jobs in the creative industries (= 244k + 332k = 575k);
- the sum of creative jobs in the creative industries to the creative jobs in non-creative industries provides an estimate of the number of jobs relates to "creative occupations" (= 332k + 220k = 552k).

Table 4 summarises the estimates for the creative industries and the creative economy over the 2011-2014 time period in London and in the rest of the UK.

Table 4: Jobs in the creative industries and in the creative economy in London and in the Rest of the UK, 2011-2014

	2011	2012	2013	2014	2011	2012	2013	2014
London	(number of jobs)				(%)			
Job and industry are both creative	296,200	283,800	290,700	331,700	6.7	6.2	6.2	6.8
Industry creative but job not creative or unknown	201,200	229,600	238,900	243,700	4.5	5.0	5.1	5.0
Job creative but industry not creative or unknown	192,100	197,300	221,100	220,500	4.3	4.3	4.7	4.5
Industry and job not creative or unknown	3,758,600	3,856,800	3,930,000	4,076,700	84.5	84.4	84.0	83.7
Sub-total: jobs in creative industries	**497,400**	**513,400**	**529,600**	**575,300**	**11.2**	**11.2**	**11.3**	**11.8**
Sub-total: jobs in the creative economy	**689,500**	**710,700**	**750,600**	**795,800**	**15.5**	**15.6**	**16.0**	**16.3**
Total	4,448,100	4,567,500	4,680,700	4,872,500				
Rest of the UK	(number of jobs)				(%)			
Job and industry are both creative	527,900	606,200	599,300	637,600	2.1	2.4	2.3	2.4
Industry creative but job not creative or unknown	536,000	571,600	584,100	595,000	2.1	2.2	2.2	2.2
Job creative but industry not creative or unknown	668,200	669,300	688,400	725,200	2.6	2.6	2.6	2.7
Industry and job not creative or unknown	23,943,600	23,919,300	24,205,900	24,577,000	93.3	92.8	92.8	92.6
Sub-total: creative industries	**1,063,900**	**1,177,700**	**1,183,400**	**1,232,700**	**4.1**	**4.6**	**4.5**	**4.6**
Sub-total: creative economy	**1,732,100**	**1,847,000**	**1,871,800**	**1,957,900**	**6.7**	**7.2**	**7.2**	**7.4**
Total	25,675,600	25,766,300	26,077,700	26,534,900				

Sources: ONS Annual Population Survey, 2011 to 2014; figures rounded to the nearest hundred.

The following paragraphs analyse and break down these estimates in more detail.

3.1 Overview of employment in London

This section provides estimates of employment in the creative industries and the creative economy in London, as compared to the rest of the UK. It provides an overview of employment by sub-groups of the creative industries and sub-groups of the creative economy. Trends in pay in the industries will also be considered.

As shown in Table 4, the number of jobs in the creative economy in London increased by just over a hundred thousand (106,300) over the period 2011 to 2014 to 795,800, an increase of 15.4 per cent in the three years to 2014.

In terms of share of jobs in the economy as a whole, it is equivalent to 0.8 percentage points increase since 2011. Nonetheless, creative jobs represented 16.3 per cent of total jobs in London in 2014.

The creative economy encompasses all jobs, whether they are in the creative industries or not, and whether they are purely "creative" jobs or "not creative" jobs. Although later on in this chapter employment in the creative economy will be further analysed, it is worth breaking this down to have a look at employment in the creative industries only. By doing this, jobs in the creative industries groups, as defined by DCMS, will only be considered, allowing us to have a better look at employment trends in the industry (and ignoring any other "creative" jobs which might be in other, non-creative sectors of the economy).

As reported in Table 4, there were 575,300 jobs in the creative industries in London in 2014, or 11.8 per cent of the total number of jobs in London. In the rest of the UK, this share was 7.2 percentage points lower than in London at 4.6 per cent. Clearly, these figures suggest London plays a dominant role in the creative industries as compared to the rest of the UK.

Figure 5 reports the change in the number of jobs recorded in the creative industries over the period 2009 to 2014. Estimates of growth are indexed to 2009, which is used as a baseline to compare change with.

Figure 5: Change in the Creative industries employment, London and the Rest of the UK, 2009-2014 – Index 2009 = 100

Source: GLA Economics calculations based on ONS Annual Population Survey (APS), 2009-2014

As can be seen, after a period of negative, or weak, growth, from 2011 the number of jobs in the creative industries in London started to pick up.

Furthermore, as shown in Figure 6, out of all jobs in the creative economy in London, 28.5 per cent (226,500) were taken by self-employed workers in 2014, as compared to 15.5 per cent (630,300) of workers in the non-creative economy.

Figure 6: Jobs in the creative economy, self-employed and employee jobs, London, 2014

Source: ONS Annual Population Survey (APS), 2014

In order to have a better understanding of these trends, Table 5 summarises the total number of jobs in the creative industries for the years 2009 to 2014, for London and for the rest of the UK, broken down by creative industry group.

Table 5: Jobs in the creative industries by creative industry sub-group, London and the Rest of the UK, 2009 – 2014

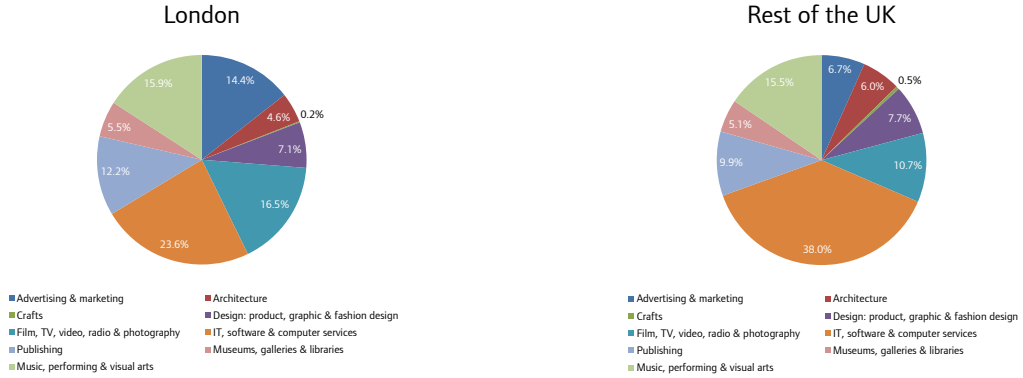
LONDON	2009	2010	2011	2012	2013	2014
Advertising & marketing	69,300	59,600	69,700	69,100	73,200	84,300
Architecture	24,100	34,100	29,300	25,400	26,500	26,800
Crafts	900	900	900	1,000	1,000	1,000
Design: product, graphic & fashion design	31,200	32,000	32,100	31,700	38,100	41,200
Film, TV, video, radio & photography	89,600	75,500	83,900	101,500	98,600	96,600
IT, software & computer services	101,700	95,900	111,900	126,200	139,200	138,100
Publishing	68,200	65,300	74,400	69,100	72,200	71,500
Museums, galleries & libraries	31,400	26,100	29,400	30,200	31,000	32,300
Music, performing & visual arts	65,900	77,100	68,300	69,700	62,400	92,800
TOTAL	482,200	466,600	469,600	492,700	510,100	551,400
REST OF THE UK	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Advertising & marketing	82,100	82,300	78,700	75,300	81,700	82,300
Architecture	71,400	63,500	64,600	63,800	67,300	74,100
Crafts	5,200	5,700	7,400	6,000	6,300	5,700
Design: product, graphic & fashion design	76,000	78,700	69,700	85,000	85,500	94,700
Film, TV, video, radio & photography	96,800	114,400	126,400	138,700	133,800	131,300
IT, software & computer services	363,500	353,000	371,300	431,500	434,700	468,800
Publishing	133,700	132,300	136,400	154,100	125,800	121,800
Museums, galleries & libraries	71,200	68,200	64,600	66,300	67,000	62,500
Music, performing & visual arts	151,400	156,700	144,900	157,100	181,300	191,500
TOTAL	1,051,200	1,054,900	1,063,900	1,177,700	1,183,400	1,232,700

Source: ONS Annual Population Survey (APS), 2009-2014; data is rounded to the nearest hundred.

As shown in Figure 7, in 2014, the biggest share of jobs within the creative industries was taken by the IT, Software and Computer services sub-group with 23.6 per cent of the total number of jobs in the creative industries in London. Film, TV, video, radio & photography (16.5 per cent); Music, performing and visual arts (15.9 per cent), and Advertising & Marketing (14.4 per cent) follow.

In the rest of the UK (Figure 7), the IT, software & computer services group accounted for a bigger share (38.0 per cent) as compared to London (14.4 percentage points higher); whereas Film, TV video, radio & photography (10.7 per cent); Music, performing & visual arts (15.5 per cent), and Advertising & Marketing (6.7 per cent) all had a smaller share than in London.

Figure 7: Number of jobs by creative industries sub-groups as share of total number of jobs in the creative industries, London and the Rest of the UK, 2014



Source: ONS Annual Population Survey (APS), 2014

In terms of changes in the shares in employment overtime, there hasn't been any significant shift among sub-groups in London or in the rest of the UK. Table 6 summarises this information for all the sub-groups of the creative industries.

Table 6: Number of jobs by creative industries sub-groups as share of total number of jobs in the creative industries, London and the Rest of the UK, 2009-2014

LONDON	2009	2010	2011	2012	2013	2014
Advertising & marketing	14.4%	12.8%	14.8%	14.0%	14.3%	15.3%
Architecture	5.0%	7.3%	6.2%	5.2%	5.2%	4.9%
Crafts	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Design: product, graphic & fashion design	6.5%	6.9%	6.8%	6.4%	7.5%	7.5%
Film, TV, video, radio & photography	18.6%	16.2%	17.9%	20.6%	19.3%	17.5%
IT, software & computer services	21.1%	20.5%	23.8%	25.6%	27.3%	25.0%
Publishing	14.1%	14.0%	15.8%	14.0%	14.1%	13.0%
Museums, galleries & libraries	6.5%	5.6%	6.3%	6.1%	6.1%	5.9%
Music, performing & visual arts	13.7%	16.5%	14.5%	14.2%	12.2%	16.8%
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
REST OF THE UK	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Advertising & marketing	7.8%	7.8%	7.4%	6.4%	6.9%	6.7%
Architecture	6.8%	6.0%	6.1%	5.4%	5.7%	6.0%
Crafts	0.5%	0.5%	0.7%	0.5%	0.5%	0.5%
Design: product, graphic & fashion design	7.2%	7.5%	6.5%	7.2%	7.2%	7.7%
Film, TV, video, radio & photography	9.2%	10.8%	11.9%	11.8%	11.3%	10.7%
IT, software & computer services	34.6%	33.5%	34.9%	36.6%	36.7%	38.0%
Publishing	12.7%	12.5%	12.8%	13.1%	10.6%	9.9%
Museums, galleries & libraries	6.8%	6.5%	6.1%	5.6%	5.7%	5.1%
Music, performing & visual arts	14.4%	14.9%	13.6%	13.3%	15.3%	15.5%
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: ONS Annual Population Survey (APS), 2009-2014

3.1.1 Pay in the Creative Economy

The Annual Survey of Hours and Earnings (ASHE) is the official source for information on pay by industry and by occupation. By adopting the same DCMS definition of creative industries, it is possible to look at pay in the creative industries and in the creative economy over time.

After a glance at the performance of pay over the years for both the creative industries and the creative economy, trends in (nominal) earnings by sub-group of the creative industries will be looked at; and trends in (nominal) earnings by occupation within the creative economy will also be presented[12].

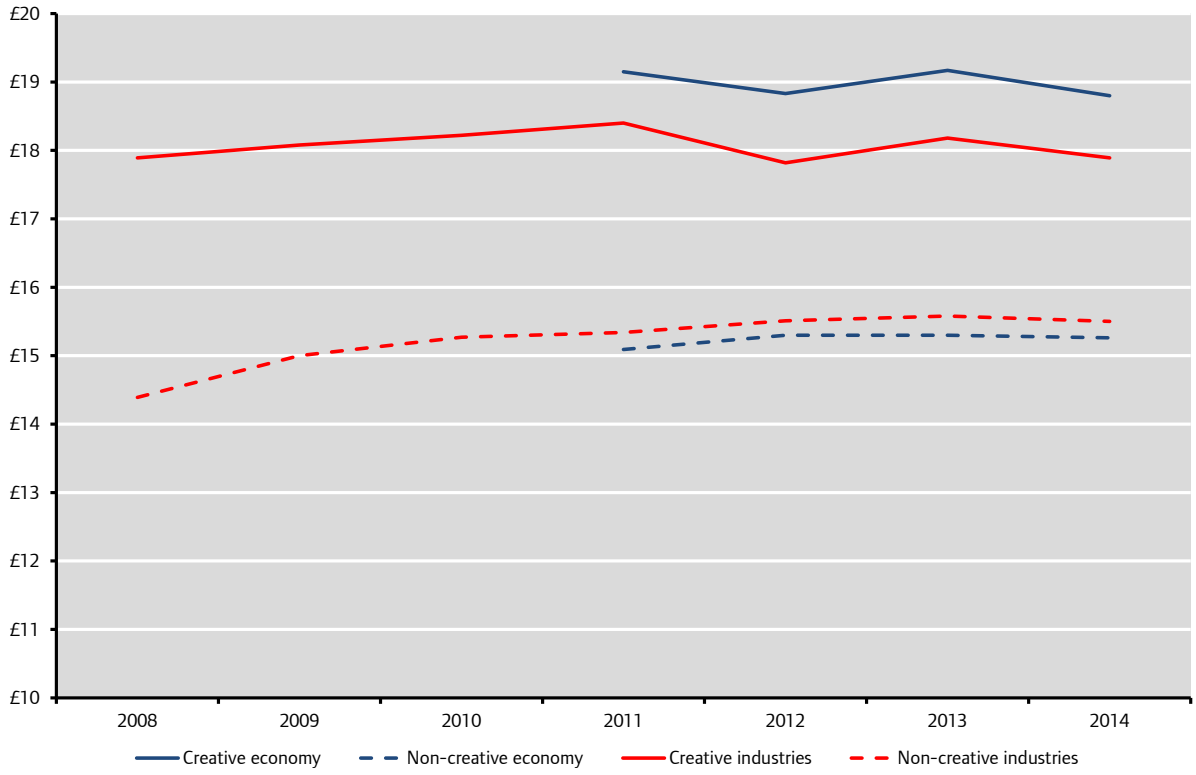
The reason why creative industries sub-groups are considered in the context of the creative industries is related to the definition of creative industries itself; since the whole creative industries sector is to be considered, whether they are "creative" jobs or not. By contrast, it is arguably more relevant to look at the creative economy in order to analyse occupational trends in the industries, since people in "creative" occupations might well be applying their skills in other sectors of the economy.

In London, median hourly pay[13] in the creative economy in 2014 was 18.80, which compares to a median hourly pay of £15.26 in the non-creative economy (as shown in Figure 8). According to these estimates, median pay per hour in the creative industries in 2014 was 18.8 per cent

[12] Throughout the section, *nominal* wages will be reported (rather than *real* wages).
[13] Pay is defined as gross pay per hour excluding overtime.

higher than in the other sectors of the economy taken altogether. Since 2011, median pay in the creative economy decreased by 1.8 per cent; however, this change was not statistically significant.

Figure 8: Median hourly (nominal) pay in the creative economy, and creative industries (2011-2014); non-creative economy, and non-creative industries (2008-2014), London



Source: ONS Annual Survey of Hours and Earnings (ASHE), 2008-2014
Note:
- Nominal wages
- From 2013, the ASHE has been re-weighted to the 2011 Census;
- the figures are for employees aged 16 and over on adult rates of pay, whose pay for the survey pay-period was not affected by absence;
- pay is defined as gross pay per hour excluding overtime.

Over the same period, median hourly pay in the creative industries was £17.89, or 15.4 per cent higher than median pay per hour in the non-creative industries. Median pay in the creative industries has decreased by the same 1.8 per cent registered for the creative economy since 2011, but remained unchanged compared to 2008[14], as shown in Table 7.

[14] Please note that the analysis based on the creative economy can only be provided from 2011 onwards because it relies on SOC10 as well as SIC07 (for more details, see footnote 2).

Table 7: Median hourly (nominal) pay in the creative economy (2011-2014) and in the creative industries (2008-2014), London

	2008	2009	2010	2011	2012	2013	2014
	Median pay per hour (£)						
Creative economy				19.15	18.83	19.17	18.80
Non-creative economy				15.09	15.30	15.30	15.26
Creative industries	17.89	18.08	18.22	18.40	17.82	18.18	17.89
Non-creative industries	14.39	15.00	15.27	15.34	15.51	15.58	15.50

Source: ONS Annual Survey of Hours and Earnings (ASHE), 2008-2014
Note:
- Nominal wages
- From 2013, the ASHE has been re-weighted to the 2011 Census;
- the figures are for employees aged 16 and over on adult rates of pay, whose pay for the survey pay-period was not affected by absence;
- pay is defined as gross pay per hour excluding overtime.

If the creative industries alone are to be considered, it is possible to break these down further to the creative industry groups, as shown in Table 8.

In 2014, the highest paid group in the creative industries was Film, TV, video, radio & photography (£19.17/hour), followed by IT, Software & Computer services (£19.03/hour), and Advertising & Marketing (£18.42/hour). However, if changes between 2008 and 2014 are considered, the only groups which saw an increase in median hourly pay were Museums, galleries & libraries together with Music, performing & visual arts (+23.1 per cent), and Crafts together with Design (+4.3 per cent)[15].

[15] Please note that the following sub-sectors have grouped up because the sample sizes were too small to allow a reliable analysis of the estimates: Craft with Design: product, graphic & fashion design; as well as Museums, galleries & libraries with Music, performing & visual arts.

Table 8: Median hourly (nominal) pay in the creative industries by creative industry group, London, 2008-2014

	2008	2009	2010	2011	2012	2013	2014	*Change 2008-2014*
	Median pay per hour (£)							
Advertising & marketing	19.15	18.81	19.16	17.95	19.06	17.59	18.42	*-3.8%*
Architecture	16.74	16.36	16.44	17.20	16.49	16.86	16.41	*-2.0%*
Crafts; Design: product, graphic & fashion design	14.52	16.76	14.89	14.37	14.82	14.13	15.15	*4.3%*
Film, TV, video, radio & photography	19.3	19.66	19.43	18.97	17.71	19.16	19.17	*-0.7%*
IT, software & computer services	20.01	21.56	20.49	21.50	20.03	20.97	19.03	*-4.9%*
Publishing	18.72	18.24	18.77	19.03	19.26	19.55	18.22	*-2.7%*
Museums, galleries & libraries; Music, performing & visual arts	12.47	12.66	13.54	13.56	13.82	13.56	15.35	*23.1%*

Source: ONS Annual Survey of Hours and Earnings (ASHE), 2008-2014
Note:
- Nominal wages
- From 2013, the ASHE has been re-weighted to the 2011 Census;
- the figures are for employees aged 16 and over on adult rates of pay, whose pay for the survey pay-period was not affected by absence;
- pay is defined as gross pay per hour excluding overtime.

Table 9 provides a breakdown of median hourly pay in the creative economy by occupation. This provides an indication of where the same types of occupations are positioned in the creative economy in comparison with the non-creative economy[16].

Not surprisingly, Managers, Directors and Senior Officials had the highest median weekly pay in 2014 (at £32.89/hour). This compares to the lowest paid occupation being Process, Plant and Machine Operatives and Elementary occupations[17] (at £8.77/hour). The ratio of the highest to the lowest paid occupations was therefore equal to about 4:1; however, this is not far from the ratio registered in the non-creative economy, in which the ratio was around 3:1.

While pay for people in the lowest paid occupations in London is not significantly different in the creative economy and in the non-creative economy; Managers, Directors and Senior Officials are paid more in the creative economy than in the non-creative economy (£32.89/hour versus £26.94/hour respectively).

[16] The ONS SOC10 classification of occupations is used here. For more information please see here.
[17] Please note that the two occupations group had to be grouped up because of issues related to the sample size being too small to be able to produce accurate estimates of pay in those occupations group taken alone.

Table 9: Median hourly (nominal) pay in the creative economy and in the non-creative economy by SOC occupation code, London, 2011-2014

	2011	2012	2013	2014	*Change 2011-2014*
Creative economy	*Median pay per hour (£)*				
1 'Managers, Directors And Senior Officials'	33.42	33.73	33.97	32.89	*-1.6%*
2 'Professional Occupations'	20.36	20.25	20.64	20.37	*0.0%*
3 'Associate Professional And Technical Occupations'	15.88	15.50	15.84	15.86	*-0.1%*
4 'Administrative And Secretarial Occupations'	12.48	12.55	12.64	12.95	*3.8%*
5 'Skilled Trades Occupations'	13.12	11.71	13.02	12.93	*-1.4%*
6 'Caring, Leisure And Other Service Occupations'; 7 'Sales And Customer Service Occupations'	10.94	10.19	11.21	10.64	*-2.7%*
8 'Process, Plant And Machine Operatives'; 9 'Elementary Occupations'	8.34	8.38	8.11	8.77	*5.2%*
	2011	**2012**	**2013**	**2014**	*Change 2011-2014*
Non-creative economy	*Median pay per hour (£)*				
1 'Managers, Directors And Senior Officials'	26.49	27.08	26.39	26.94	*1.7%*
2 'Professional Occupations'	21.99	22.13	22.32	22.24	*1.1%*
3 'Associate Professional And Technical Occupations'	17.85	17.57	17.80	17.80	*-0.3%*
4 'Administrative And Secretarial Occupations'	12.85	12.88	12.85	12.85	*0.0%*
5 'Skilled Trades Occupations'	12.20	12.03	11.97	11.47	*-6.0%*
6 'Caring, Leisure And Other Service Occupations'; 7 'Sales And Customer Service Occupations'	8.68	8.61	8.95	8.72	*0.4%*
8 'Process, Plant And Machine Operatives'; 9 'Elementary Occupations'	8.13	8.20	8.27	8.36	*2.8%*

Source: ONS Annual Survey of Hours and Earnings (ASHE), 2011-2014

Note:
- Nominal wages
- From 2013, the ASHE has been re-weighted to the 2011 Census;
- the figures are for employees aged 16 and over on adult rates of pay, whose pay for the survey pay-period was not affected by absence;
- pay is defined as gross pay per hour excluding overtime.

At the same time, the occupation which reported the fastest growth (a 5.2 per cent increase in median pay since 2011) was also the lowest paid occupation in the creative economy, namely the Process, Plant and Machine Operatives and Elementary Occupations. These occupations showed growth in the non-creative economy as well, but at a relatively slower pace (a 2.8 per cent increase). Interestingly, over the same period median hourly pay for Managers, Directors and Senior Officials working in the creative economy decreased by 1.6 per cent, whereas it increased by 1.7 per cent in the non-creative economy in London.

3.2 Employment and socio-economic characteristics

This section reports the estimates of employment in the creative industries and the creative economy by looking at a few socio-economic characteristics.

3.2.1 Employment by gender and employment pattern

In December 2014[18] men accounted for 52.8 per cent of total jobs in London (relatively unchanged since 2011; at 52.7 per cent). Looking further back at the change between 2008 and 2014, the share of jobs taken by men decreased by 1.3 percentage points (from 54.1 per cent of the workforce in London).

3.2.1.1 Jobs by gender in the creative economy

The creative economy in London employed a higher proportion of male workers (61.7 per cent) than the non-creative economy in 2014 (54.9 per cent). In fact, the gender gap in the creative economy was equal to 23.3 percentage points in 2014. This is true for every single year covered by this analysis (2011-2014).

Table 10 breaks these estimates down by looking at the gender split by occupation in London's economy.

[18] ONS Workforce Jobs series.

Table 10: Jobs in the creative economy by gender and by occupational group, London, 2011-2014[19]

	2011	2012	2013	2014	*% of occupational group, 2014*
MALE					
1 'Managers, Directors And Senior Officials'	72,100	76,800	90,700	81,400	*68.1%*
2 'Professional Occupations'	169,800	186,000	184,300	200,900	*69.9%*
3 'Associate Professional And Technical Occupations'	140,900	149,000	153,500	159,700	*54.8%*
4 'Administrative And Secretarial Occupations'	10,800	10,300	5,900	12,200	*31.3%*
5 'Skilled Trades Occupations'	16,400	14,000	17,900	20,800	*85.2%*
6 'Caring, Leisure And Other Service Occupations'; 7 'Sales And Customer Service Occupations'	2,900	3,600	6,100	8,400	*44.9%*
8 'Process, Plant And Machine Operatives'; 9 'Elementary Occupations'	9,300	11,300	5,000	6,500	*46.4%*
Total - male	**422,200**	**451,000**	**463,500**	**489,700**	
FEMALE					
1 'Managers, Directors And Senior Officials'	33,500	35,200	37,500	38,200	*31.9%*
2 'Professional Occupations'	74,200	68,100	83,600	86,700	*30.1%*
3 'Associate Professional And Technical Occupations'	123,100	118,000	118,200	131,500	*45.2%*
4 'Administrative And Secretarial Occupations'	21,400	24,300	25,900	26,800	*68.7%*
5 'Skilled Trades Occupations'	6,100	3,400	5,100	3,600	*14.8%*
6 'Caring, Leisure And Other Service Occupations'; 7 'Sales And Customer Service Occupations'	7,200	7,200	10,400	10,300	*55.1%*
8 'Process, Plant And Machine Operatives'; 9 'Elementary Occupations'	1,800	2,800	5,600	7,500	*53.6%*
Total - female	**267,300**	**259,100**	**286,300**	**304,600**	
TOTAL - WORKFORCE	**689,500**	**710,100**	**749,800**	**794,200**	

Source: ONS Annual Population Survey (APS), 2011-2014; data is rounded to the nearest thousand.

In 2014, Associate Professional and Technical Occupations were the most common occupation in the creative economy in London, with 291,200 jobs (or 36.7 per cent of the total number of jobs in the creative economy); followed by Professional Occupations (287,600 jobs, or 36.2 per cent), and then Managers, Directors and Senior Officials (119,600, or 15.1 per cent). After Administrative and Secretarial occupations, where women represented 68.7 per cent of the workforce, women were relatively well represented in the bottom two occupations (as share of total number of jobs in the creative economy), namely Caring, Leisure and Other Services occupations together with Sales and Customer Service Occupations (55.1 per cent); and Process, Plant and Machine Operatives occupations together with Elementary Occupations (53.6 per cent)[20]. However, they were also well represented in the occupational category with the highest share of jobs in the creative economy (i.e. Associate Professional and Technical Occupations) with 45.2 per cent.

[19] Please be reminded that the analysis based on the creative economy can only be provided from 2011 onwards because it relies on SOC10 as well as SIC07 (for more details, see footnote 2).

[20] As in other cases mentioned above, these occupations were grouped together due to issues related to the sample size being too small to be able to produce accurate estimates of pay in those occupations group taken alone.

3.2.1.2 Jobs by gender in the creative industries

The gender split with regard to jobs in the creative industries followed a similar pattern to jobs in the creative economy, as shown in Table 11.

Table 11: Jobs in the creative economy and in the creative industries by gender, London, 2011-2014

Creative industries	2011 (number)	2011 (%)	2012 (number)	2012 (%)	2013 (number)	2013 (%)	2014 (number)	2014 (%)
MALE	297,300	59.8%	324,200	63.2%	325,500	61.5%	350,900	61.0%
FEMALE	200,100	40.2%	189,100	36.8%	204,000	38.5%	224,400	39.0%
Creative economy	**2011 (number)**	**2011 (%)**	**2012 (number)**	**2012 (%)**	**2013 (number)**	**2013 (%)**	**2014 (number)**	**2014 (%)**
MALE	422,200	61.2%	451,400	63.5%	463,800	61.8%	490,700	61.7%
FEMALE	267,300	38.8%	259,400	36.5%	286,800	38.2%	305,000	38.3%

Source: ONS Annual Population Survey (APS), 2011-2014; data is rounded to the nearest thousand.

As with the creative economy, the creative industries in London in 2014 (and in every year since 2011) employed a higher proportion (61.0 per cent) of men than London's economy as a whole. This proportion was slightly lower than the proportion of men represented in the wider creative economy.

3.2.1.3 Pay by gender and employment pattern

According to the ONS Annual Population Survey (APS), 83.0 per cent of jobs in the creative economy in London were full-time jobs. This compares to 77.1 per cent of jobs in the non-creative economy in London; as shown in Table 12.

Table 12: Jobs in the creative economy and in the non-creative economy by economic pattern, London, 2014

	Jobs in the creative economy in London	Other jobs in London (not in the creative economy)	Jobs in the creative economy in London	Other jobs in London (not in the creative economy)
	(number of jobs)		*%*	
full time	660,000	3,140,100	83.0	77.1
part time	134,800	931,000	17.0	22.9

Source: ONS Annual Population Survey (APS), 2011-2014; data is rounded to the nearest thousand.

Furthermore, the Annual Survey of Hours and Earnings (ASHE) contains information on pay broken down by gender and employment pattern (i.e. part-time and full-time). Table 13 summarises this information for workers in the creative economy over the 2011-2014 period.

Table 13: Median hourly pay in the creative economy by gender and by employment patterns, London, 2011-2014

Median pay per hour (£)	2011	2012	2013	2014
Male	**21.16**	**20.58**	**20.79**	**20.44**
Part-time	13.58	12.82	13.86	15.77
Full-time	21.35	21.20	21.08	20.68
Female	**16.77**	**16.62**	**17.03**	**16.87**
Part-time	15.45	15.58	15.57	14.31
Full-time	17.06	16.77	17.29	17.38
Part-time (all)	14.95	15.05	15.52	14.88
Full-time (all)	19.42	19.19	19.65	19.19
All	**19.15**	**18.83**	**19.17**	**18.80**

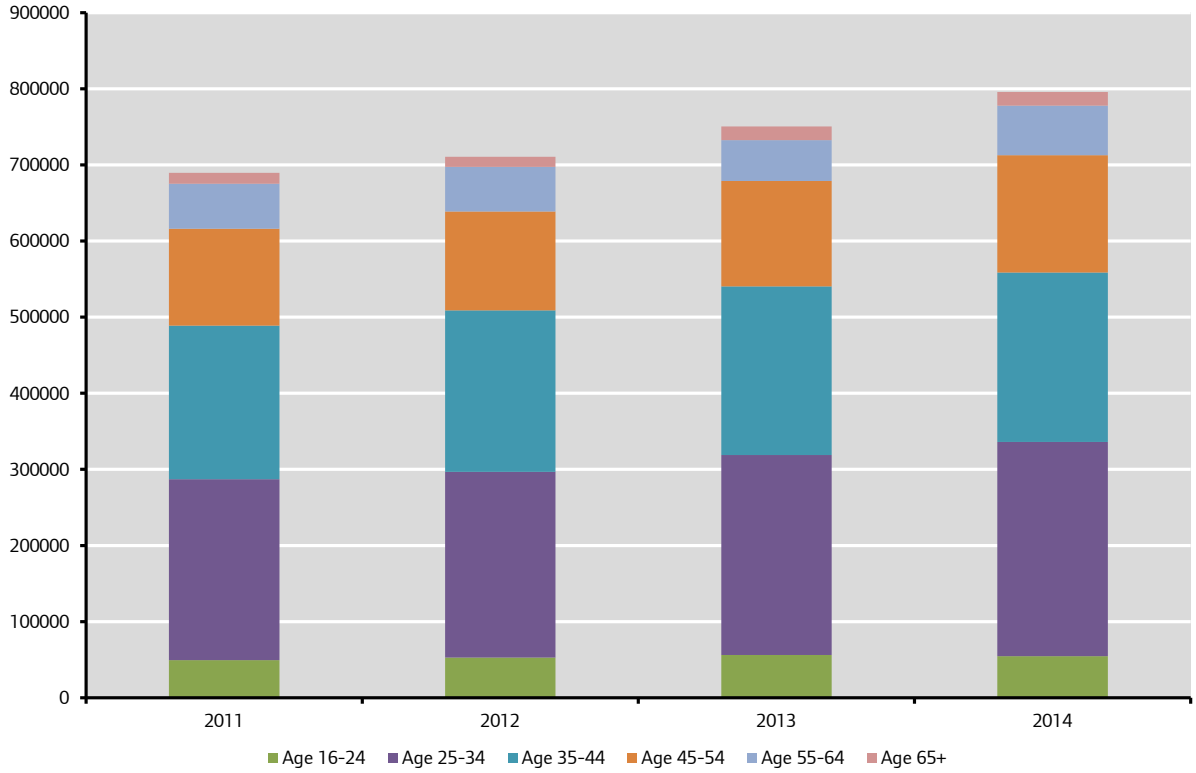
Source: ONS Annual Survey of Hours and Earnings (ASHE), 2011-2014
Note:
- From 2013, the ASHE has been re-weighted to the 2011 Census;
- the figures are for employees aged 16 and over on adult rates of pay, whose pay for the survey pay-period was not affected by absence;
- pay is defined as gross pay per hour excluding overtime.

In 2014, median hourly pay for men (at £20.44) in the creative economy was 8.7 per cent higher than for all workers in the creative economy (£18.80); and 21.2 per cent higher than the median pay per hour for women employed in the creative economy (£16.87).

3.2.2 Employment by age group

As shown in Figure 9, jobs in the creative industries tend to be taken by relatively young people, in the 25 to 44 age group in particular.

Figure 9: Creative economy jobs by age group, London, 2011-2014



Source: ONS Annual Population Survey (APS), 2011-2014

35.4 per cent of jobs in the creative economy were taken by workers in the 25 to 34 age group, 28.0 per cent by those in the 35 to 44 age group, and 19.4 per cent by those in the 45-54 age group. These proportions are similar to those recorded in the non-creative economy (as shown in Table 14). Trends over time do not suggest any peculiarities are characterising the creative economy as compared to the non-creative economy.

Table 14: Jobs in the creative economy and in the non-creative economy by age group, London, 2011-2014

Creative economy	2011	2012	2013	2014	2011	2012	2013	2014
	(number of jobs)				%			
Age 16-24	49,400	52,800	56,100	54,600	7.2	7.4	7.5	6.9
Age 25-34	237,700	243,800	262,800	281,600	34.5	34.3	35.0	35.4
Age 35-44	201,800	212,300	221,700	222,500	29.3	29.9	29.5	28.0
Age 45-54	127,200	130,000	138,300	154,100	18.4	18.3	18.4	19.4
Age 55-64	59,300	58,400	53,800	65,200	8.6	8.2	7.2	8.2
Age 65+	14,100	13,400	17,900	17,800	2.0	1.9	2.4	2.2
Non-creative economy	**2011**	**2012**	**2013**	**2014**	**2011**	**2012**	**2013**	**2014**
	(number of jobs)				%			
Age 16-24	361,500	359,500	365,400	389,900	9.6	9.3	9.3	9.6
Age 25-34	1,091,000	1,136,200	1,153,600	1,208,600	29.0	29.5	29.4	29.6
Age 35-44	967,600	973,800	985,100	995,600	25.7	25.2	25.1	24.4
Age 45-54	826,700	837,700	857,300	895,600	22.0	21.7	21.8	22.0
Age 55-64	425,100	447,000	468,700	475,700	11.3	11.6	11.9	11.7
Age 65+	86,600	102,700	100,000	111,300	2.3	2.7	2.5	2.7

Source: ONS Annual Population Survey (APS), 2011-2014, data is rounded to the nearest hundred.

3.2.3 Employment by ethnicity

In 2014, the creative economy had a total of 637,400 jobs filled by those from the White ethnicity group, equivalent to 80.2 per cent of the total number of jobs in the creative economy. The number of jobs in the creative economy taken by people from the Black, Asian and Minority Ethnicity (BAME) groups, totalled 157,200 jobs, or 19.8 per cent of the total number of jobs in the creative economy.

Looking at the creative industries, BAME groups were slightly less represented compared to the creative economy, with a difference between the two of 1.4 percentage points (Table 15).

Table 15: Jobs in the creative economy and in the creative industry by ethnicity, 2011-2014

Creative economy	2011	2012	2013	2014	2011	2012	2013	2014
	(number of jobs)				%			
WHITE	547,800	557,700	606,800	637,400	79.7%	78.6%	80.9%	80.2%
BAME	139,700	152,100	143,300	157,200	20.3%	21.4%	19.1%	19.8%
Creative industries	**2011**	**2012**	**2013**	**2014**	**2011**	**2012**	**2013**	**2014**
	(number of jobs)				%			
WHITE	399,700	406,000	431,400	468,800	80.6%	79.2%	81.5%	81.6%
BAME	96,300	106,800	98,000	105,500	19.4%	20.8%	18.5%	18.4%

	2011	2012	2013	2014
Proportion of total white jobs that are in creative economy:	17.3%	17.2%	18.3%	18.5%
Proportion of total BAME jobs that are in creative economy:	10.9%	11.5%	10.5%	11.0%

Source: ONS Annual Population Survey (APS), 2011-2014; data is rounded to the nearest hundred.
Note:
- BAME = Black, Asian and Minority Ethnicities;
- Totals exclude a small number of jobs with non-response to the ethnicity question; this is the reasons why they may be different from totals reported in tables earlier on in this chapter.

Since 2011, the number of jobs filled by people from White ethnicity groups increased by 16.3 per cent in the creative economy compared to an increase of 12.5 per cent for the BAME groups. In the creative industries, jobs filled by people from White ethnicity groups increased slightly faster (17.3 per cent) than in the creative economy over the 2011-2014 period.

Finally, according to the ONS Annual Population Survey (APS), 31.2 per cent of jobs in the *non-creative economy* in London were taken by people from BAME groups in 2014; this compares to 19.8 per cent of jobs in *London's creative economy*.

3.2.4 Employment by highest level of qualification

This section looks at the distribution of jobs in the creative economy and in the creative industries by highest level of qualification of the workers filling those jobs in London. Given that historically London's economy has a high concentration of workers with at least a degree qualification or higher (see, for example, GLA Economics employment projections, 2013), it would be expected for this to be the case for the creative economy as well. The estimates of jobs by occupation presented earlier in this chapter seem to confirm these expectations, given by the share of jobs taken by those in Associate Professional and Technical, Professional, and managerial occupations.

Table 16: Jobs in the creative economy, non-creative economy and creative industries by GLA highest qualification groups, London, 2011-2014

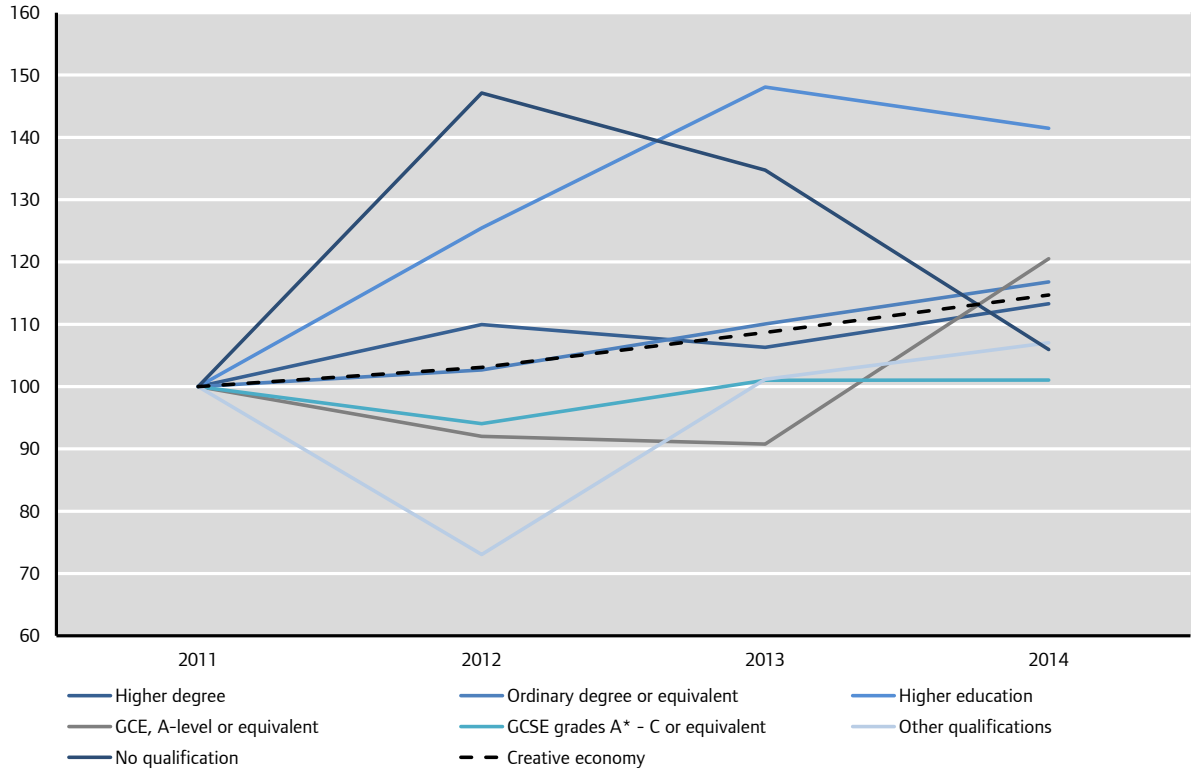
Creative economy	2011	2012	2013	2014	2011	2012	2013	2014
	(number of jobs)				%			
Higher degree	130,900	144,000	138,700	148,400	19.4	20.9	19.0	18.9
Ordinary degree or equivalent	356,000	365,600	392,500	419,000	52.9	53.0	53.8	53.5
Higher education	38,200	47,900	58,800	54,900	5.7	6.9	8.1	7.0
GCE, A-level or equivalent	75,100	69,100	68,300	88,600	11.2	10.0	9.4	11.3
GCSE grades A* - C or equivalent	49,000	46,100	49,300	49,300	7.3	6.7	6.8	6.3
Other qualifications	23,900	17,400	22,300	23,600	3.5	2.5	3.1	3.0
No qualification	9,600	14,100	12,400	8,800	1.4	2.0	1.7	1.1
Non-creative economy	**2011**	**2012**	**2013**	**2014**	**2011**	**2012**	**2013**	**2014**
	(number of jobs)				%			
Higher degree	497,600	519,200	556,400	568,900	14.2	14.3	15.0	14.8
Ordinary degree or equivalent	1,112,900	1,196,100	1,237,100	1,290,400	31.8	33.0	33.4	33.6
Higher education	282,700	297,200	323,100	323,500	8.1	8.2	8.7	8.4
GCE, A-level or equivalent	623,500	686,700	654,800	711,500	17.8	19.0	17.7	18.5
GCSE grades A* - C or equivalent	562,100	551,000	538,500	554,000	16.1	15.2	14.5	14.4
Other qualifications	421,300	372,800	393,000	397,700	12.0	10.3	10.6	10.3
No qualification	209,400	192,000	188,100	191,300	6.0	5.3	5.1	5.0
Creative industries	**2011**	**2012**	**2013**	**2014**	**2011**	**2012**	**2013**	**2014**
	(number of jobs)				%			
Higher degree	93,400	99,500	91,100	105,200	19.0	19.6	17.4	18.4
Ordinary degree or equivalent	259,600	267,200	276,600	306,300	52.8	52.5	52.9	53.5
Higher education	27,000	32,800	40,500	39,700	5.5	6.5	7.8	6.9
GCE, A-level or equivalent	53,800	53,600	54,300	65,200	10.9	10.5	10.4	11.4
GCSE grades A* - C or equivalent	31,300	35,100	34,900	30,700	6.4	6.9	6.7	5.4
Other qualifications	19,500	12,100	16,300	19,300	4.0	2.4	3.1	3.4
No qualification	7,000	8,600	9,000	6,500	1.4	1.7	1.7	1.1

Source: ONS Annual Population Survey (APS), 2011-2014; data is rounded to the nearest hundred.

As expected, the creative economy in London had a higher proportion of workers with either an ordinary degree or equivalent (53.5 per cent) or a higher degree (18.9 per cent) than the non-creative economy (33.6 per cent and 14.8 per cent respectively). In comparison with the creative industries, the shares of those with at least an ordinary degree are similar; which is shown in Table 16.

If the relative changes in the creative economy jobs are compared to 2011 (i.e. the number of jobs at each level of qualification is indexed to 100 in 2011), the move towards a more skilled workforce is confirmed, as shown in Figure 10.

Figure 10: Changes in the number of jobs in the creative economy by highest qualification type, London, 2011-2014 – Index 2011 = 100



Source: ONS Annual Population Survey (APS), 2011-2014

Indeed, as shown in Figure 10, the number of jobs in the Creative economy, in the short term, is experiencing faster than average growth in the number of jobs for those with higher education; whereas those jobs requiring an ordinary degree or equivalent, or a higher degree follow a similar pattern as that of the creative economy as a whole. In 2014, jobs filled by workers with either an ordinary degree or a higher degree represented 71.6 per cent of the total number of jobs in the creative economy.

4. Productivity of the creative industries in London: GVA per job

The aim of this section is to report GLA Economics estimates of GVA per job of the creative industries in London in 2012, using a methodology developed by GLA Economics which incorporates data from the ONS National and Regional Accounts, as well as various labour market data sets. Further details of the methodology are available in GLA Economics Working Paper 63, and summarised in Appendix A of this paper.

GVA per job can be used as the best available proxy of the relative productivity of a sector (the creative industries in this instance) and the economy as a whole. Therefore, this section draws from the results reported in the GVA section as well as the employment section earlier on in this paper.

4.1 Main findings

Table 17 shows that in the creative industries London GVA per workforce job was estimated at £71,100 in 2012. This compares to an equivalent figure in the country as a whole of £49,800; therefore, the creative industries contributed more to the economy, per job, in London than in the UK by 42.9 per cent.

Table 17: GVA per workforce job for the creative industries groups in London and in the UK, 2012

Creative Industries Group	London (£k)	UK (£k)	Percentage Difference
Advertising and Marketing	54.8	43.0	27.5%
Architecture	49.9	46.7	6.9%
Crafts	61.8	41.3	49.7%
Design: product, graphic and fashion design	42.4	29.8	42.4%
Film, TV, video, radio and photography	84.4	67.0	26.0%
IT, software and computer services	93.9	62.0	51.4%
Publishing	89.7	57.9	54.8%
Museums, galleries and libraries	36.8	30.1	21.9%
Music, performing and visual arts	42.2	19.5	115.9%
TOTAL	**71.1**	**49.8**	**42.9%**

Source: GLA Economics calculations

Moreover, according to GLAE estimates, GVA per workforce job in 2012 in the creative industries was 25 per cent higher than the average across all sectors of the London economy (£71,100 versus £56,700).

However, if the annual growth rate of GVA per job in the creative industries groups is considered (as shown in Table 18)[21], after experiencing 4.6 per cent growth between 2010 and 2011, in the following year GVA per job in London saw a decrease of 1.2 per cent, as compared to a growth rate of 5.9 per cent in the country as a whole. Overall, between 2009 and 2012, GVA per job in the industry increased by 5.1 per cent in London, and in the UK by 14.7 per cent, although starting from a lower base.

[21] Please note that the GVA per workforce job calculations are in nominal prices.

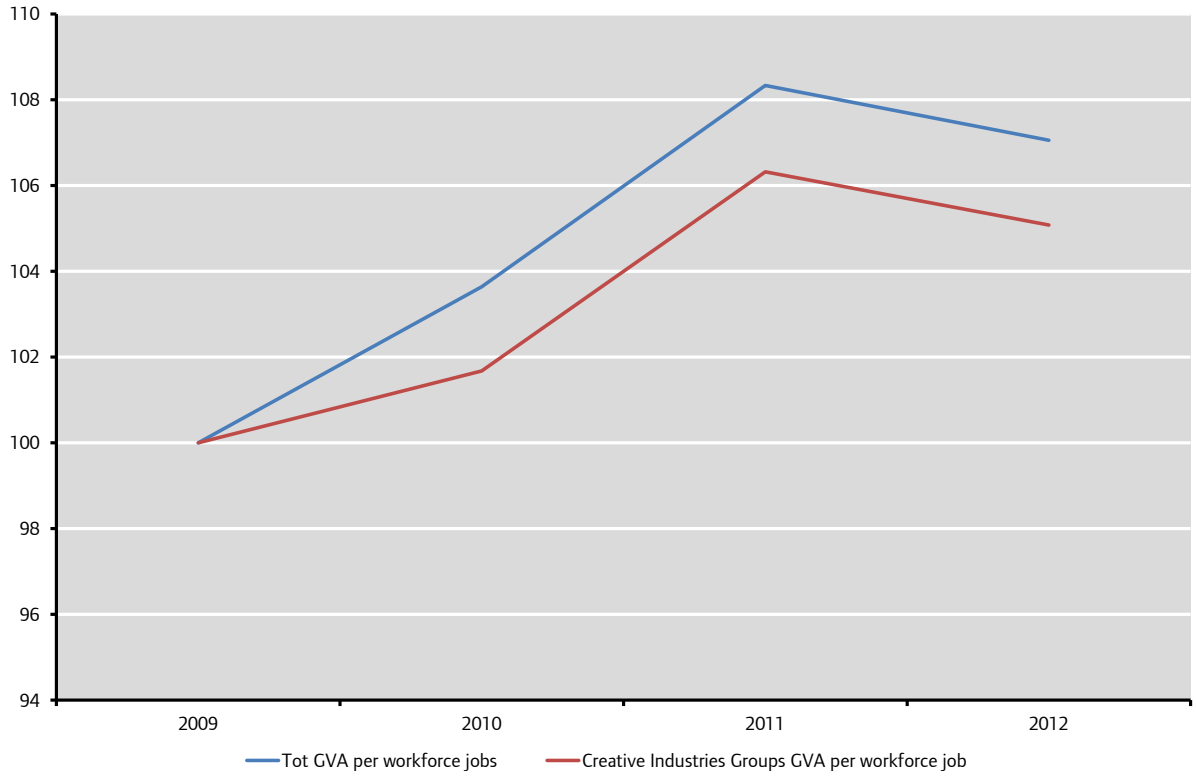
Table 18: GVA per workforce job for the creative industries groups in London and in the UK and annual growth rate, 2009-2012

	London		UK	
	GVA per job (£k)	annual growth rate	GVA per job (£k)	annual growth rate
2009	£67,688		£43,417	
2010	£68,824	1.7%	£45,229	4.2%
2011	£72,018	4.6%	£46,998	3.9%
2012	£71,126	-1.2%	£49,778	5.9%

Source: GLA Economics calculations

It is also interesting to look at the comparison of growth in GVA per workforce job in London for the economy as a whole and for the creative industries only, as shown in Figure 11, where the values have been indexed to 2009 (as previously done in Figure 2).

Figure 11: Changes in GVA per workforce job for the London economy as a whole and for the creative industries groups in London, indexed to 2009=100



Source: GLA economics calculations

It is evident that the trend in growth (as reported in Section 2) is reversed when GVA per workforce job is considered. As opposed to trends in growth in GVA, the creative industries groups have been growing slower than London's economy as a whole in terms of GVA per job. If GVA per job is interpreted as the best available proxy of the relative productivity of a sector (the creative industries in this instance) and the economy as a whole, it can be said that the creative industries groups, over the 2009-2012 period, have been relatively less productive than London's economy as a whole. This, in spite of growing relatively faster than the UK economy as a whole when total GVA is taken as index for comparison.

4.2 Estimates by creative industries group

With regard to GVA per job (as shown in Table 19), the creative industries group which experienced fastest growth over the 2009-2012 period was Publishing (an increase of 19.4 per cent), followed by Crafts (14.2 per cent growth), and Architecture (12.4 per cent growth).

Table 19: GVA per workforce job of the creative industries group in London, 2009-2012

GVA per Workforce Job (£k)	2009	2010	2011	2012	2009-2012 growth
Advertising and Marketing	51.1	53.0	58.4	54.8	7.2%
Architecture	44.4	45.4	50.8	49.9	12.4%
Crafts	54.1	59.3	56.9	61.8	14.2%
Design: product, graphic and fashion design	42.8	37.5	39.8	42.4	-1.0%
Film, TV, video, radio and photography	78.9	82.4	86.1	84.4	6.9%
IT, software and computer services	90.6	95.9	89.1	93.9	3.6%
Publishing	75.1	84.1	90.2	89.7	19.4%
Museums, galleries and libraries	35.5	31.8	35.1	36.8	3.4%
Music, performing and visual arts	41.2	36.1	43.1	42.2	2.2%
TOTAL	**67.7**	**68.8**	**72.0**	**71.1**	**5.1%**

Source: GLA economics calculations

The only group showing negative growth in GVA per workforce job was Design (-1.0 per cent), while Music, performing and visual arts (+2.2 per cent); Museum, galleries and libraries (+3.4 per cent), and IT, Software and Computer services (+3.6 per cent) experienced the slowest growth among the creative industries groups in London.

5. The geography of the creative industries in London

The aim of this section is to present the spatial distribution of the creative industries[22] in London[23]. By means of visual representation through maps, the distribution of creative industries employees across London will be presented, together with the distribution of workplaces[24] of those employees. A breakdown by creative industries sub-group[25] will also be reported.

First, maps for employees working in the creative industries as a whole are presented for the years from 2009 to 2014. Then, maps for the share of employees working in the creative industries as compared to the share of employees working in any other industry are reported at Local Authority (LA) level. These are followed by maps looking at the distribution of employees over LAs in London by creative industries sub-group. Finally, the same maps are also created for workplaces.

The scope of this exercise is to put emphasis on the geographical concentration of the creative industries in London, and potentially around some workplaces in London. By doing so, the extent of the clustering and agglomeration effects which will be discussed in the final chapter of this report are highlighted. More details about the drivers of these agglomerations will be provided in the next chapter; however, concentration of employees in certain areas of London where certain establishments are operating (e.g. museums, TV production) should be self-explanatory.

The underlying data used to produce these maps comes from the Office for National Statistics Inter-Departmental Business Register (IDBR), which contains a comprehensive list of UK businesses and is used by government for statistical purposes.

5.1 Employees

This section presents maps of the distribution of employees in the creative industries in London. Maps 1 to 6 show the number of employees per square kilometre by MSOA in London over the years 2009 to 2014. As can be easily seen, although the numbers of employees have grown over time, in terms of clustering areas there have not been any significant changes[26].

It illustrates a concentration of employees in Inner London, which will be further explored in the maps that follow.

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[22] As in the other sections of this note, the DCMS definition of "creative industries" was adopted in this chapter. For more detail, please refer to Chapter 1 of this document.

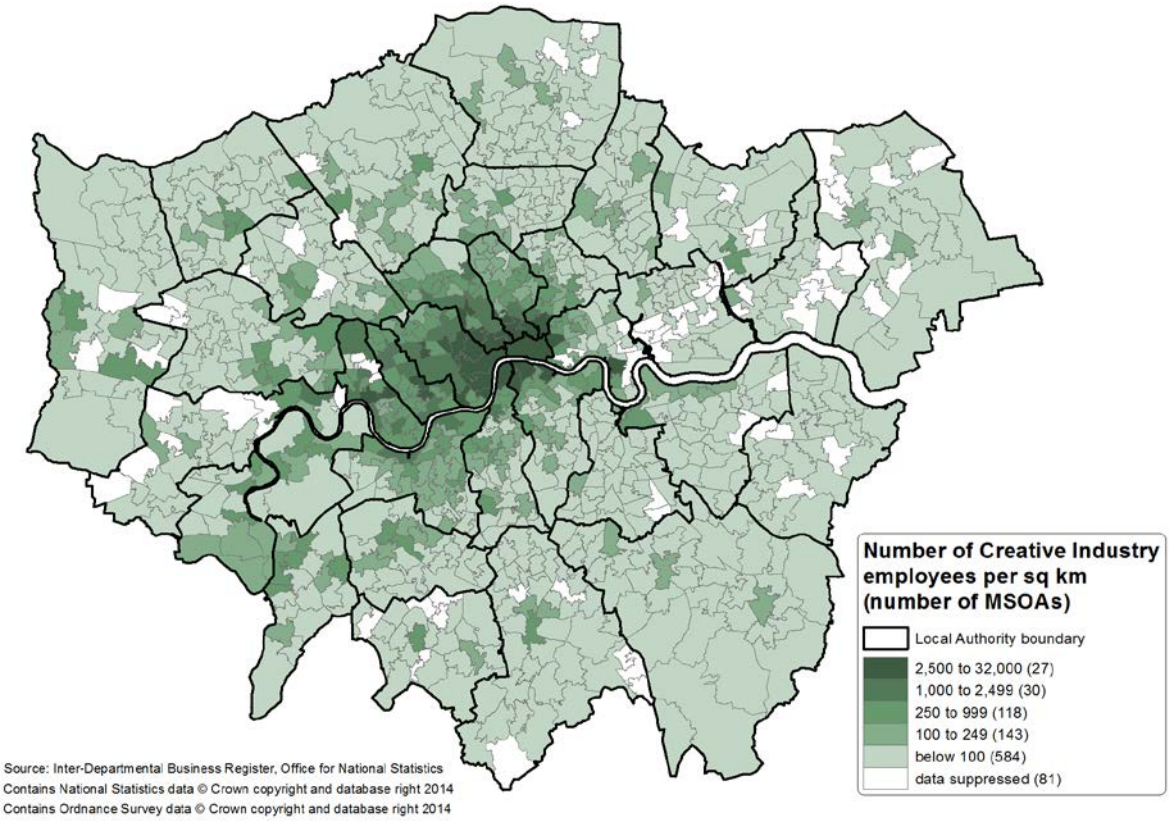
[23] Note that these maps are based either on the MSOA (Middle layer Super Output Areas) or LA (Local Authority) geography. The choice between the two is dependent upon ensuring data is presented using the best granularity, such that data are not disclosive. In more detail, in all cases in which maps provide a breakdown by creative industries sub-group, the LA geography was used; in all other cases, maps were produced at MSOA level. For more details on the Office for National Statistics geography, please see here.

[24] Please note the distinction between "Enterprises" and "Workplaces". The Inter-Departmental Business Register (IDBR) organises information on two different levels: a) enterprise-level, and b) local unit or "workplace" level. The latter are the physical locations (which could be more than one), which make up the enterprise. In the case of small businesses, enterprise and workplace might be the same; by contrast, for larger businesses, this might not necessarily be the case. For instance, the reader might think about the example of a large supermarket chain with many different branches in different locations.

[25] Please note that the creative industries sub-groups "Crafts" and "Design: product, graphic & fashion design" were grouped into "Crafts; Design", and the categories "Museums, galleries & libraries" and "Music, performing & visual arts" were grouped into "Museums, galleries, libraries; music, performing & visual arts". These categories were grouped together in order to ensure data confidentiality.

[26] In Maps 1 to 6, the darker the shade, the higher the number of employees in that particular area.

Map 1: Number of employees in the Creative industries in London, MSOAs (per sq. km), 2009



Source: Inter-Departmental Business Register, Office for National Statistics
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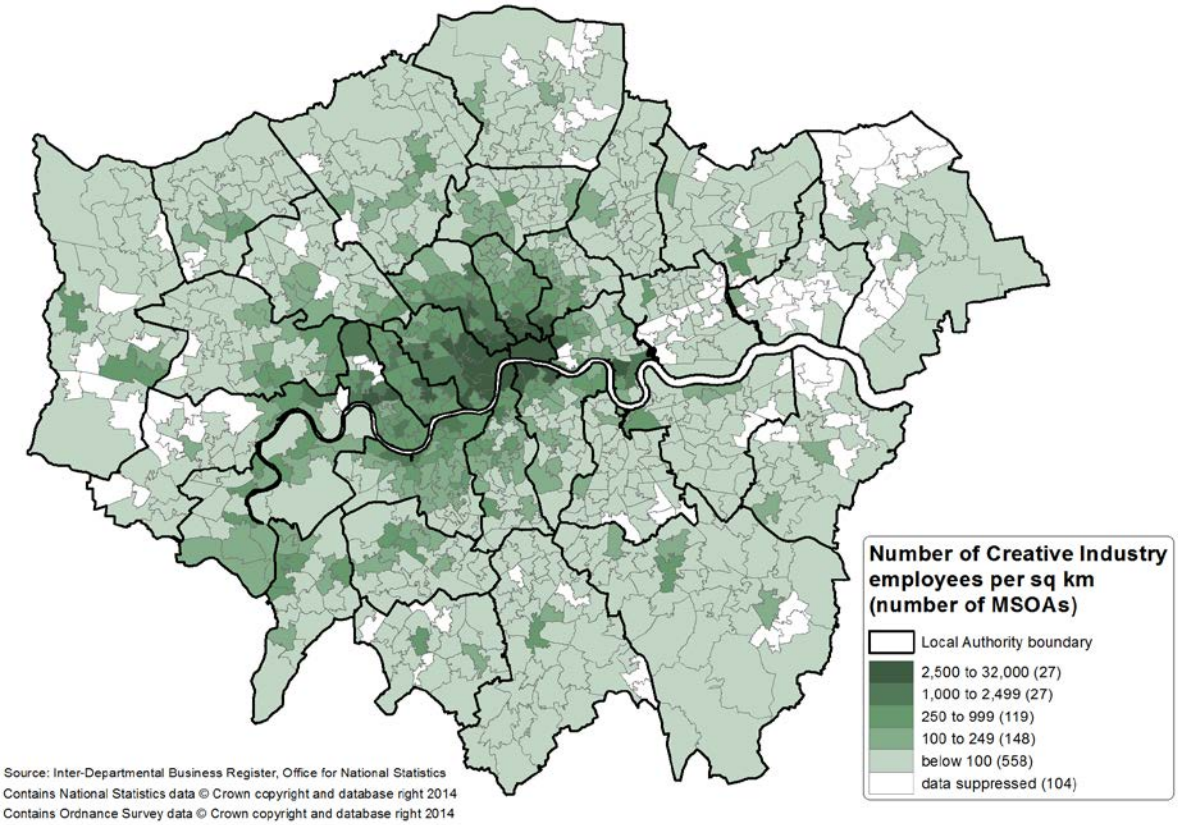
Map 2: Number of employees in the Creative industries in London, MSOAs (per sq. km), 2010



Source: Inter-Departmental Business Register, Office for National Statistics
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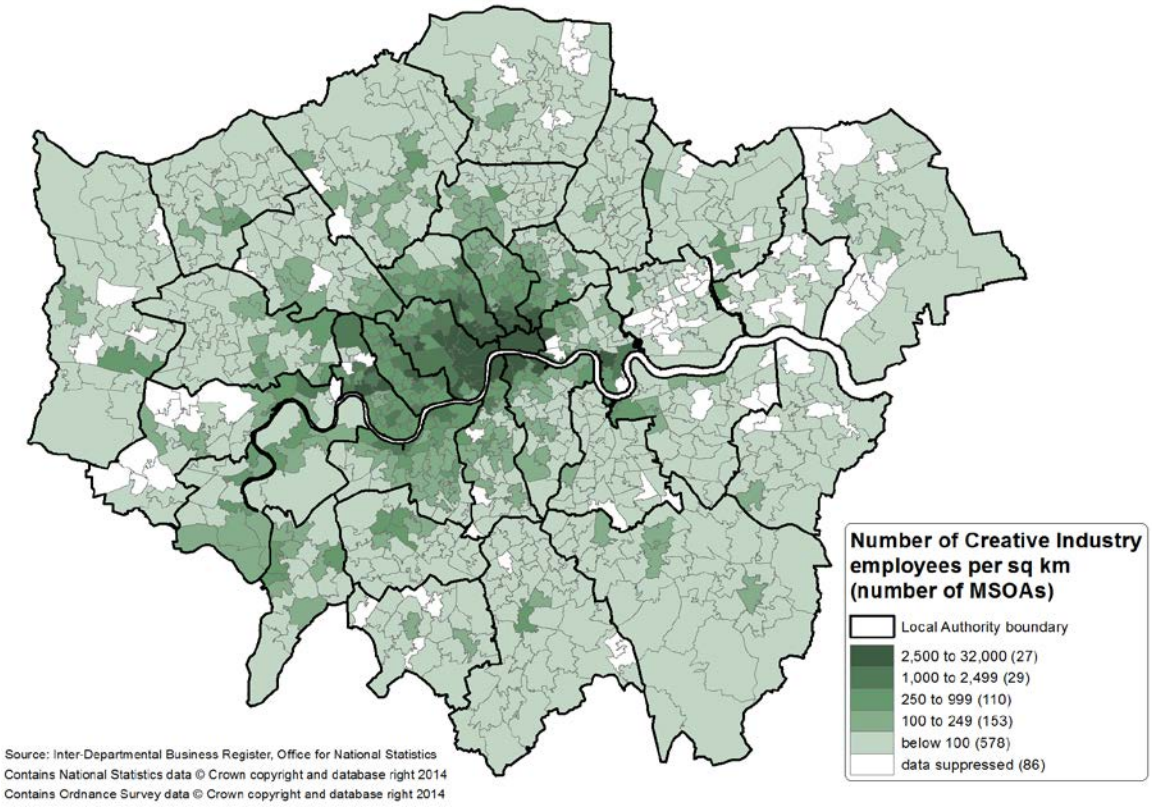
Map 3: Number of employees in the Creative industries in London, MSOAs (per sq. km), 2011



Source: Inter-Departmental Business Register, Office for National Statistics
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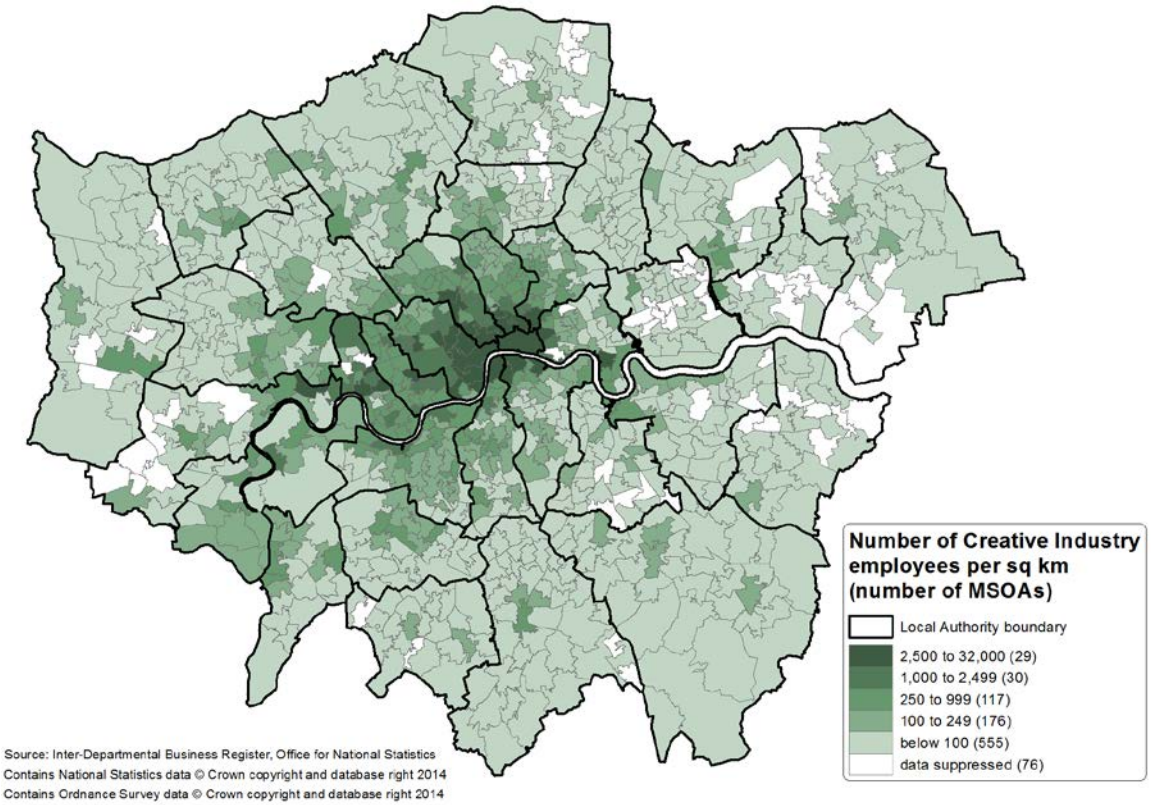
Map 4: Number of employees in the Creative industries in London, MSOAs (per sq. km), 2012



Source: Inter-Departmental Business Register, Office for National Statistics
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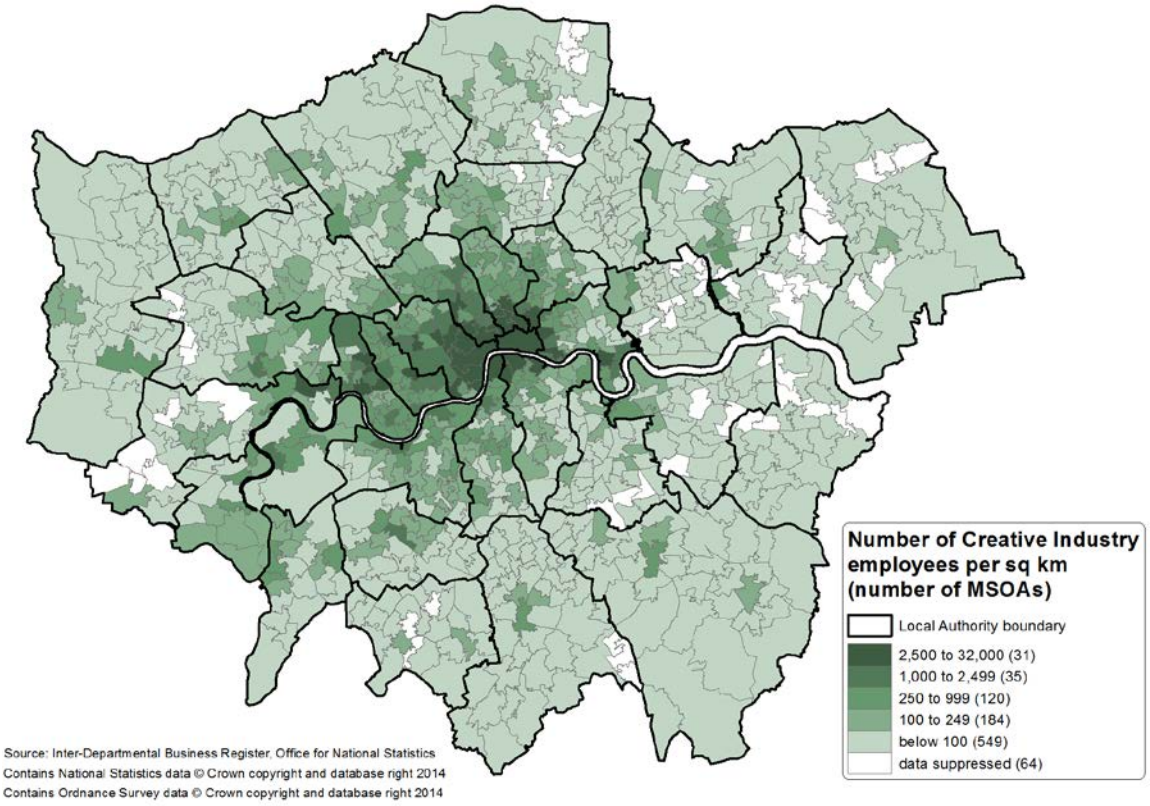
Map 5: Number of employees in the Creative industries in London, MSOAs (per sq. km), 2013



Source: Inter-Departmental Business Register, Office for National Statistics
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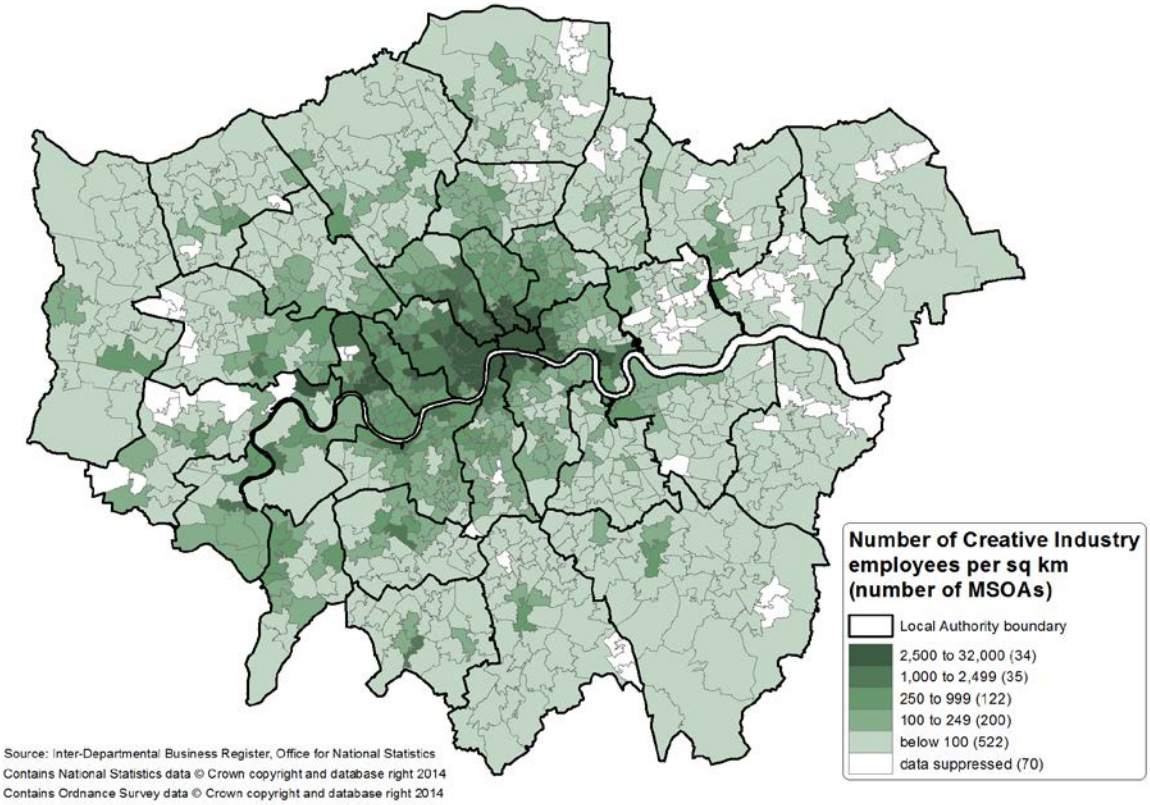
Map 6: Number of employees in the Creative industries in London, MSOAs (per sq. km), 2014



Source: Inter-Departmental Business Register, Office for National Statistics
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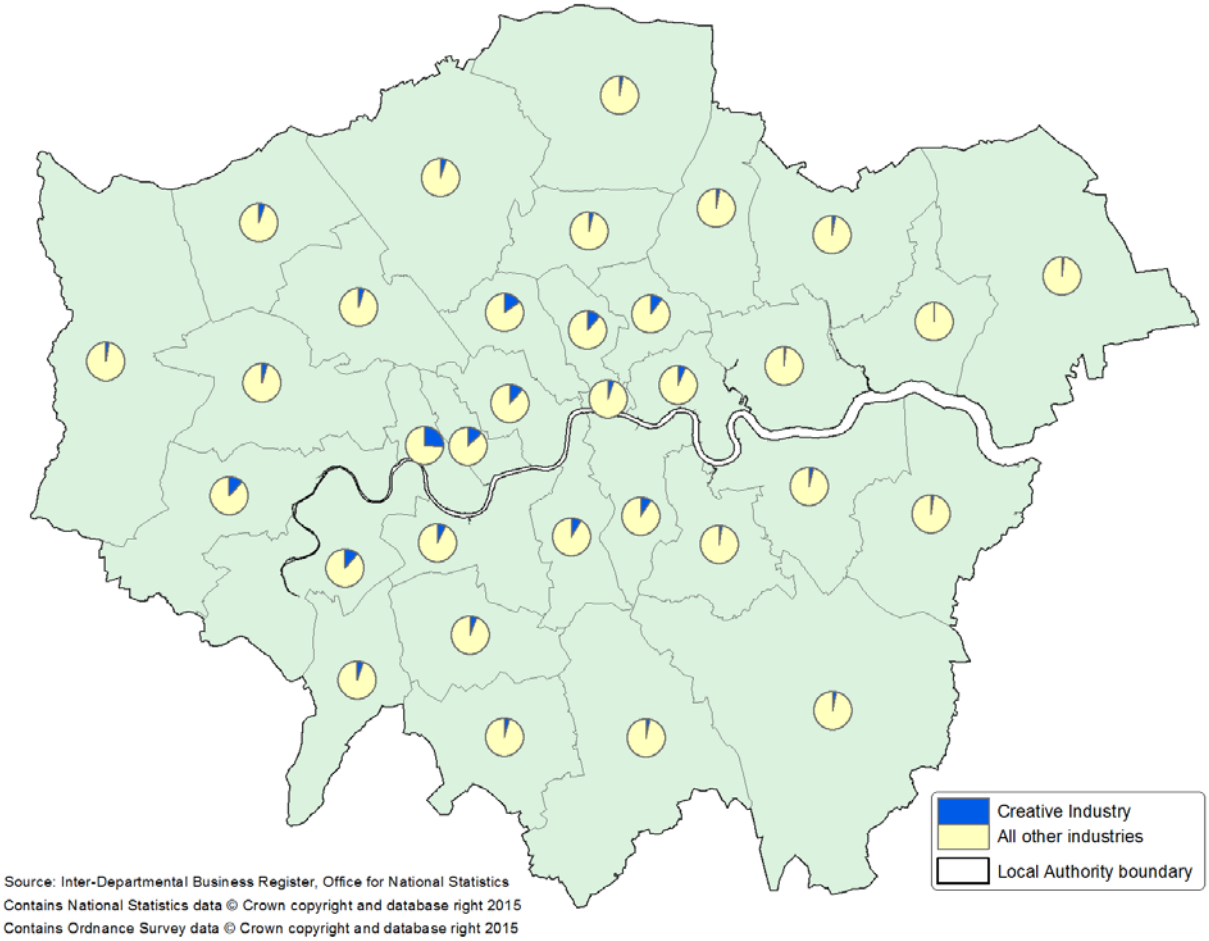
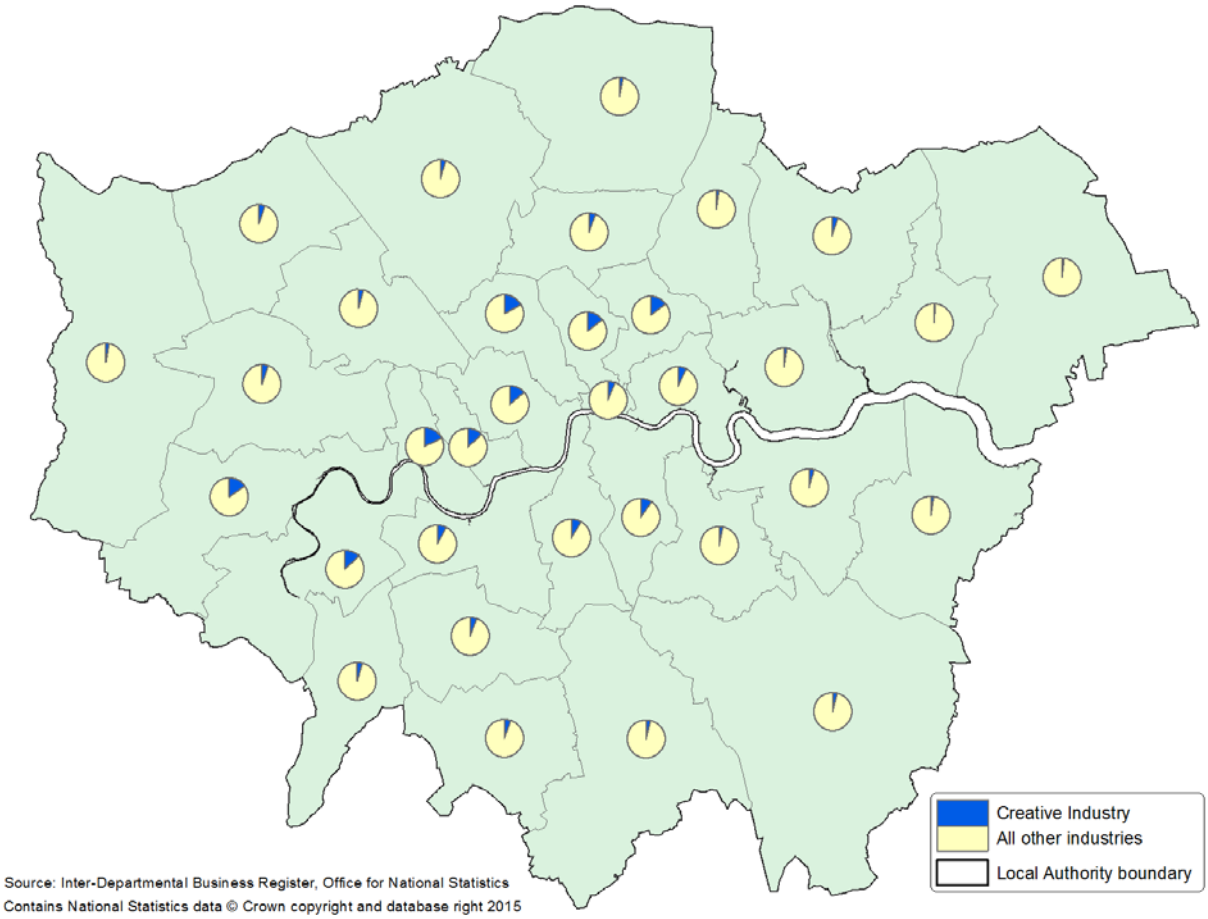
Map 7: Proportion of creative industries employees in London, LA level, 2009[27]



[27] Maps 7 and 8, as well as 9 to 12, provide a good example of the impact that a single establishment can have on the distribution of the creative industries across London. By comparing the proportion of creative industries employees in 2009 and in 2014 in the Borough of Hammersmith and Fulham, it can be easily seen that there has been a reduction in the number of employees over the period. This is likely to be down to the fact that in 2013 the BBC closed Television Centre in White City (which is in the borough of Hammersmith and Fulham). Maps 11 and 12 later on in this section also show changes in the share of the relevant creative industries sub-group within the borough.

Map 8: Proportion of creative industries employees in London, LA level, 2014



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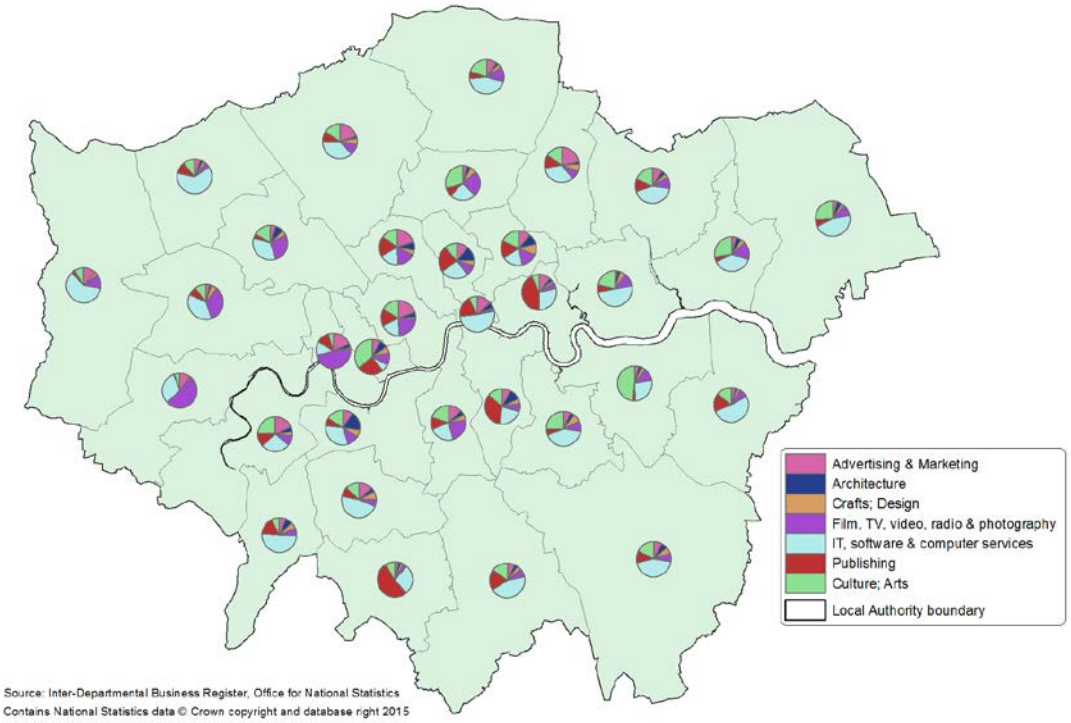
In the previous chapters of this document, it emerged that the biggest share of jobs within the creative industries was taken by the IT, Software and Computer services group, followed by Film, TV, video, radio & photography; the Music, performing and visual arts; and Advertising & Marketing groups. The maps that follow, perhaps not surprisingly, show a concentration of employees in these sub-groups throughout London, with a few, clear cases of dominance in certain LAs. However, be aware that these are proportions of employees in the different sub-groups in small areas of London. The reader must not be misled by this when interpreting the results: a small number of employees working in a small unit in a certain area of London might give the impression of the dominance of a particular creative industries sub-group; however, it is straightforward to see that this might not necessarily be the case.

By contrast, maps 11 and 12, focusing on Inner London only, allow to cross-check the number of creative industries employees in different areas of London with the proportion of employees working in the different sub-groups of the creative industries. In other words, in those maps the number of employees is accounted for.

Map 9: Breakdown of creative industries employees by sub-group in London, LA level, 2009[28]



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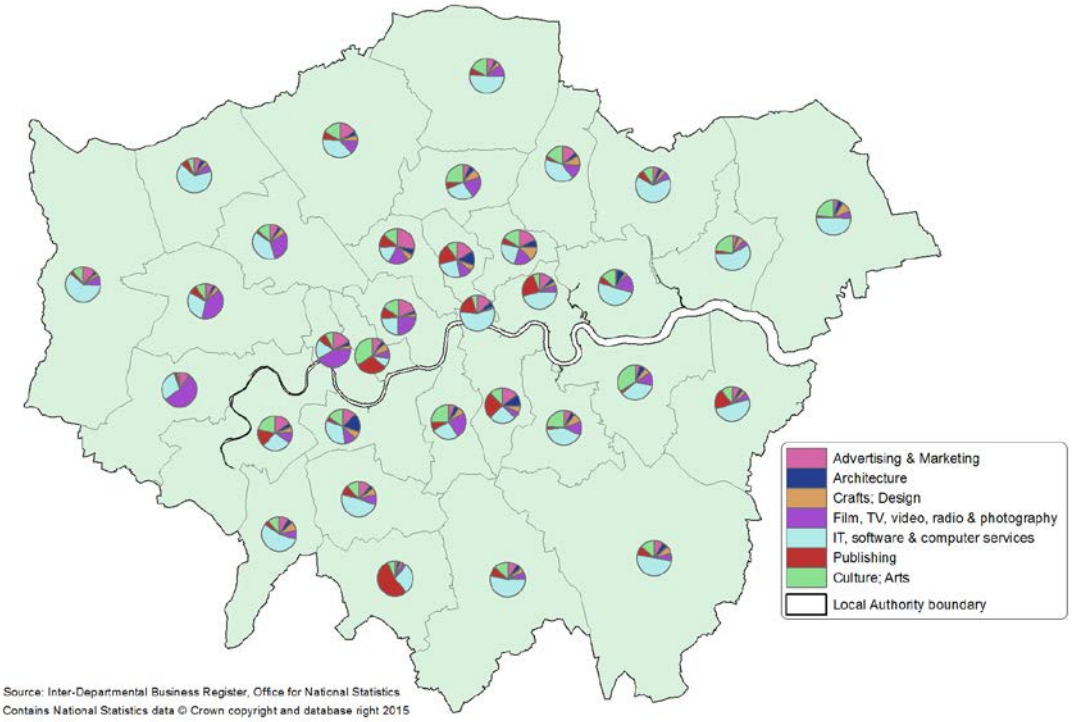
Map 10: Breakdown of creative industries employees by sub-group in London, LA level, 2014



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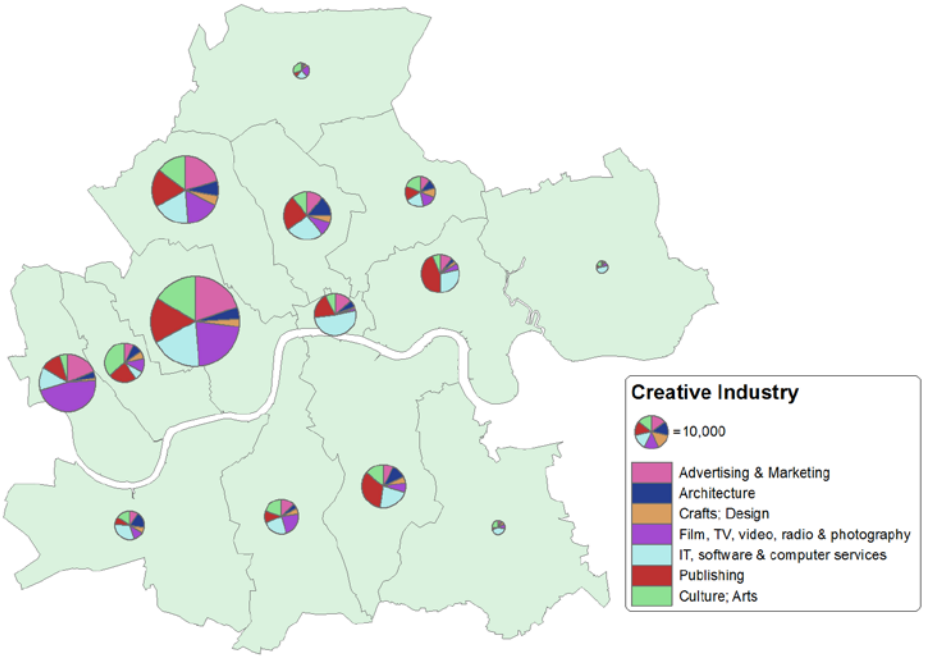
[28] The category "Culture; Arts" (in green) includes the following: "Museums, galleries, libraries; music, performing and visual arts".

Map 11: Breakdown of creative industries employees by sub-group in inner London, LA level, 2009[29]



Note: the size of each pie indicates the total number of employees
Source: Inter-Departmental Business Register, Office for National Statistics
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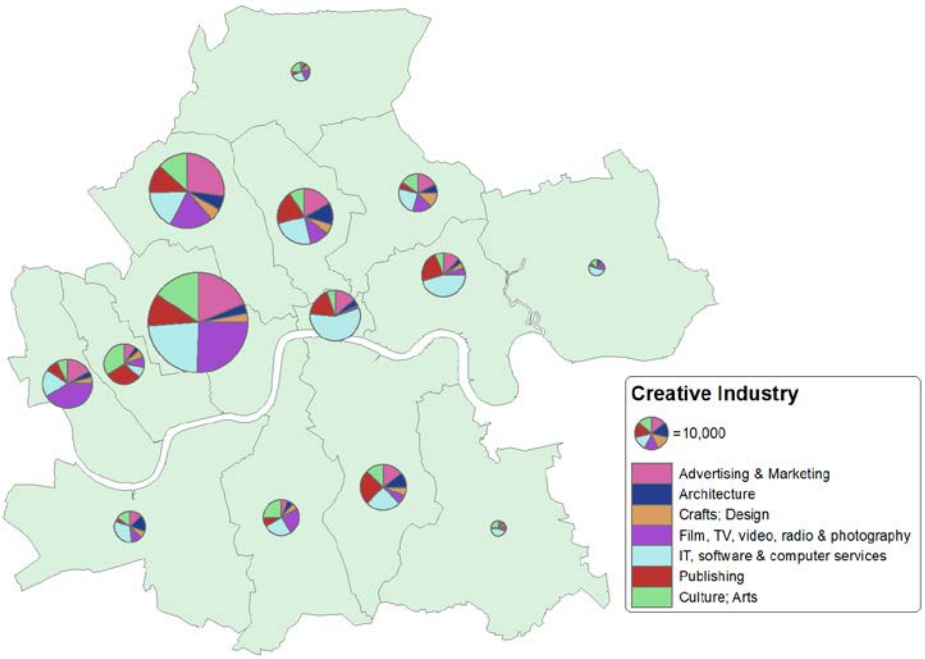
Map 12: Breakdown of creative industries employees by sub-group in inner London, LA level, 2014



Note: the size of each pie indicates the total number of employees
Source: Inter-Departmental Business Register, Office for National Statistics
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[29] The category "Culture; Arts" (in green) includes the following: "Museums, galleries, libraries; music, performing and visual arts".

5.2 Workplaces[30]

In 2014, London had 80,530 creative industries workplaces, which is equivalent to 17.7 per cent of all workplaces in London. Since 2009, this proportion increased by 2.1 percentage points from 15.6 per cent (or 61,730 workplaces).

Table 20 provides a detailed breakdown of these figures by size of enterprise, and compares the creative industries with all other industries in London.

Table 20: Creative industries by size of enterprise, London, 2014

	Creative industries		All other industries	
Size of enterprise	Number of workplaces	Number of employees	Number of workplaces	Number of employees
SMEs (fewer than 250 employees)	79,520	260,300	331,990	1,691,100
Large (250 employees or more)	1,010	148,700	43,085	2,423,300

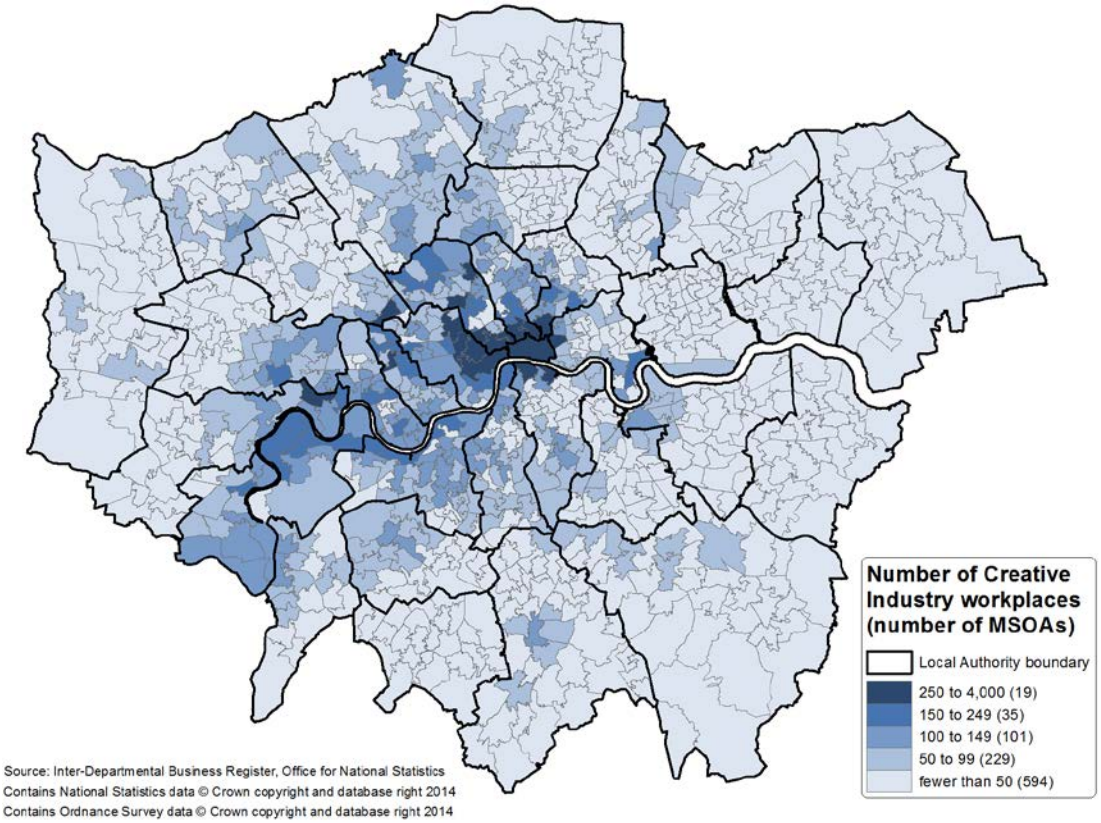
Source: ONS Source: Inter-Departmental Business Register; numbers of workplaces rounded to the nearest 5, and employees rounded to the nearest 100.

Interestingly, 97.8 per cent of workplaces in London were Small Medium Enterprises (SMEs) in 2014; this proportion is higher when compared to all other industries in London, with 88.5 per cent of all workplaces being SMEs in 2014.

The same maps presented earlier for the distribution of employees in the creative industries in London were reproduced using creative industries workplaces as unit of analysis. As it can be easily seen, although the numbers of workplaces have grown over time, in terms of clustering areas there have not been any significant changes[31].

[30] Workplaces with zero employment and enterprises with zero employment were excluded from this analysis.
[31] In Maps 13 to 18, the darker the shade, the higher the number of workplaces in that particular area.

Map 13: Number of workplaces in the Creative industries in London, MSOAs (per sq. km), 2009



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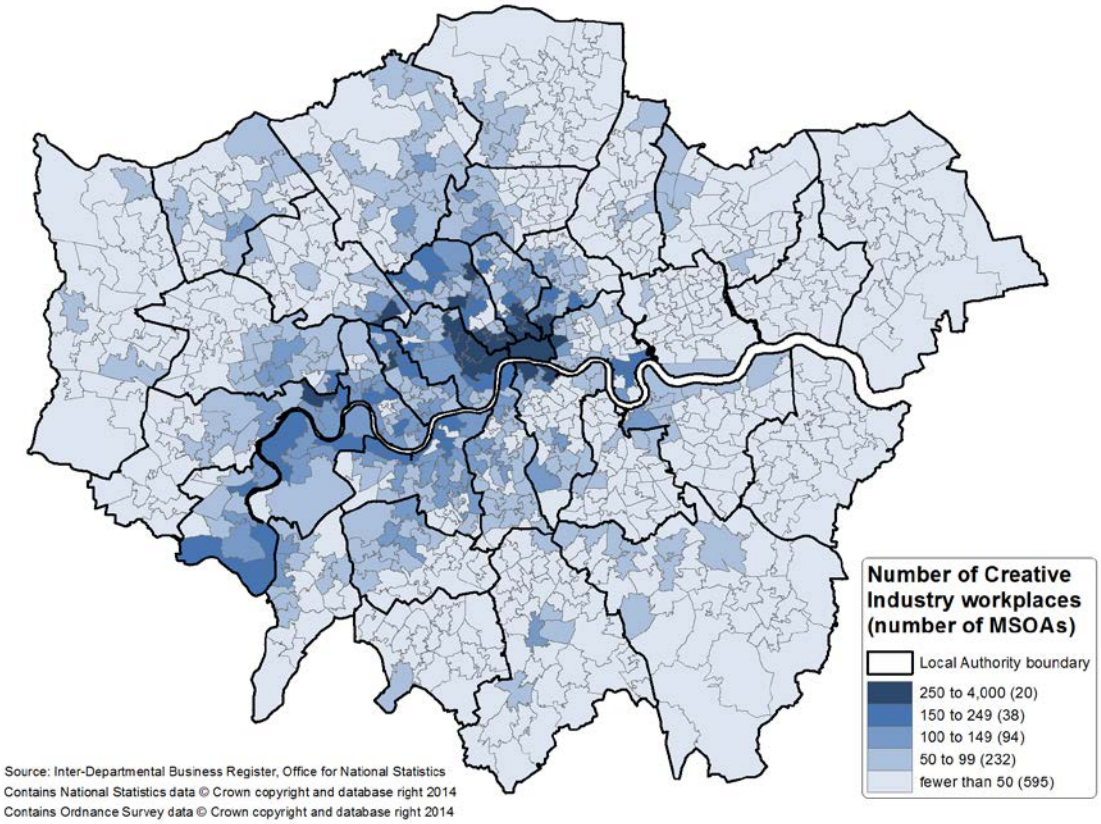
Map 14: Number of workplaces in the Creative industries in London, MSOAs (per sq. km), 2010



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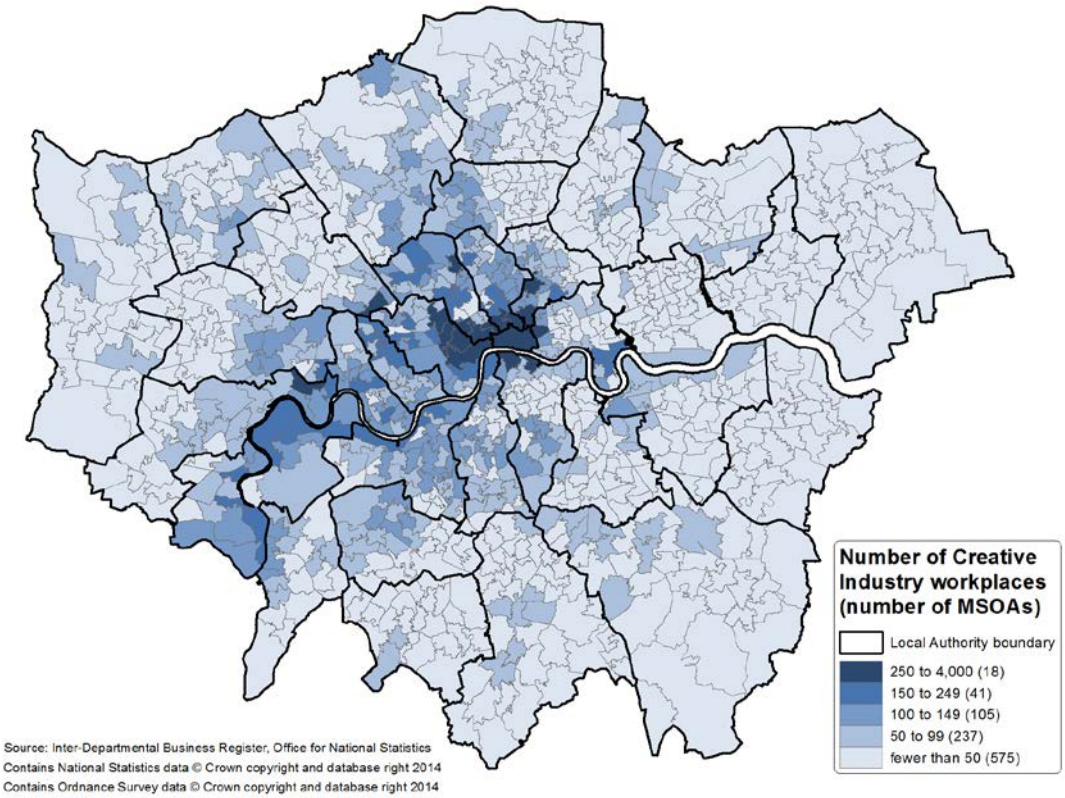
Map 15: Number of workplaces in the Creative industries in London, MSOAs (per sq. km), 2011



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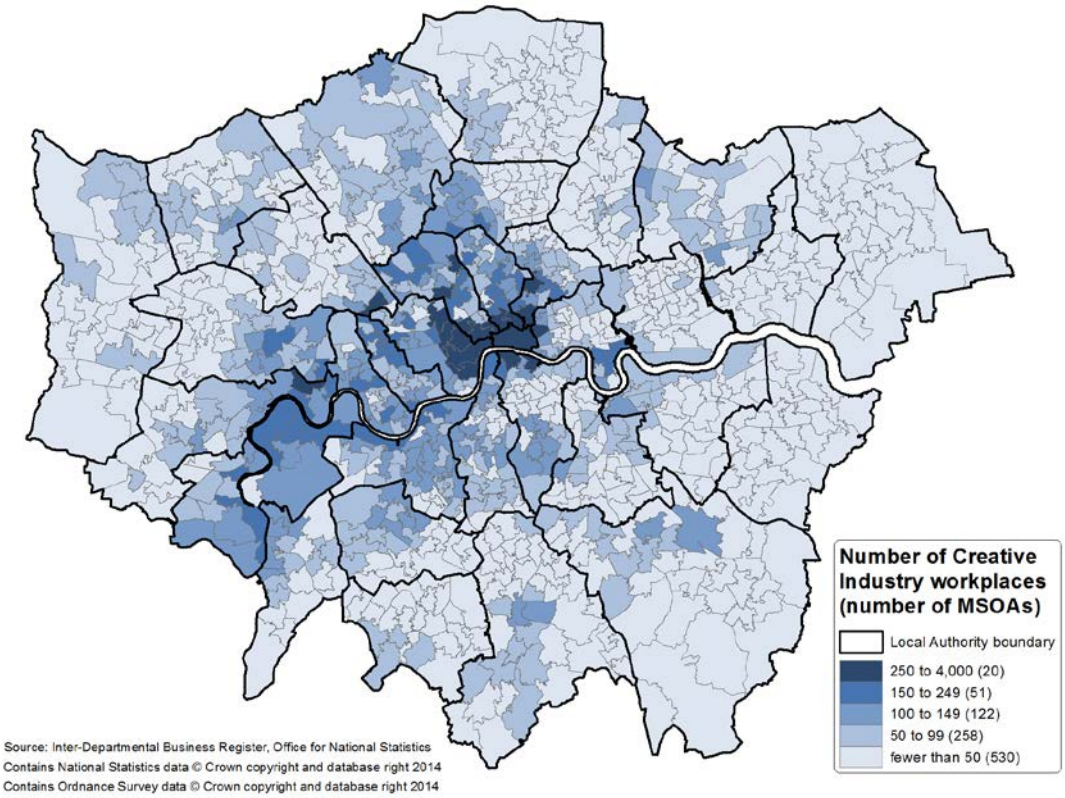
Map 16: Number of workplaces in the Creative industries in London, MSOAs (per sq. km), 2012



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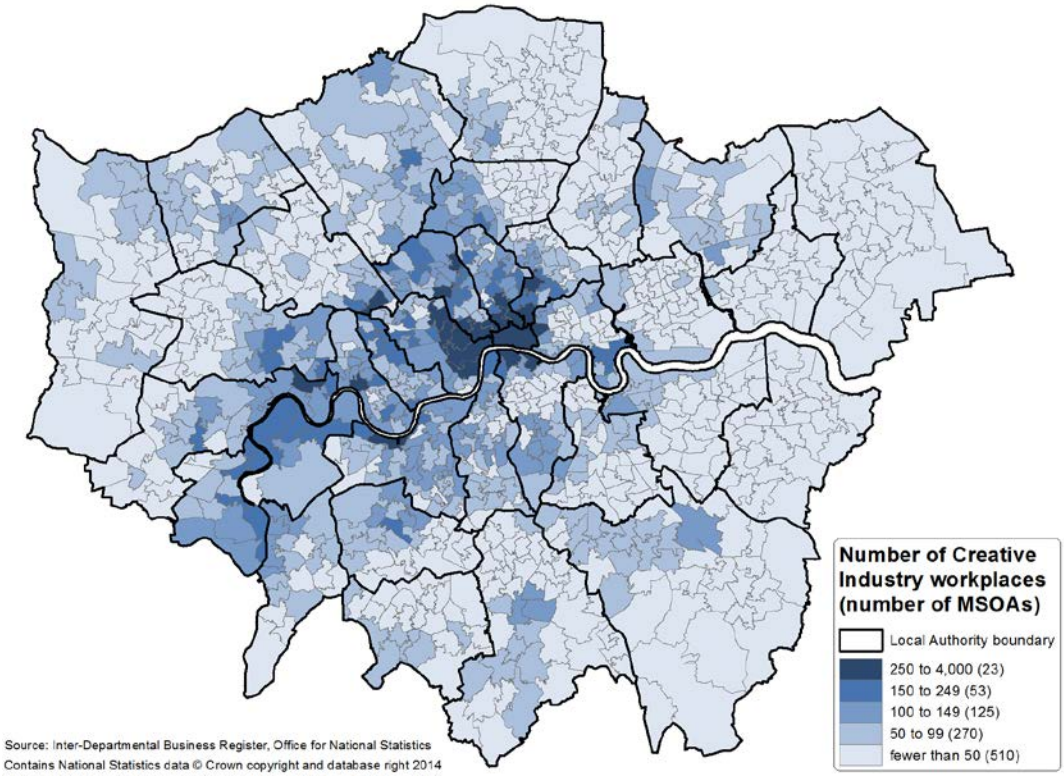
Map 17: Number of workplaces in the Creative industries in London, MSOAs (per sq. km), 2013



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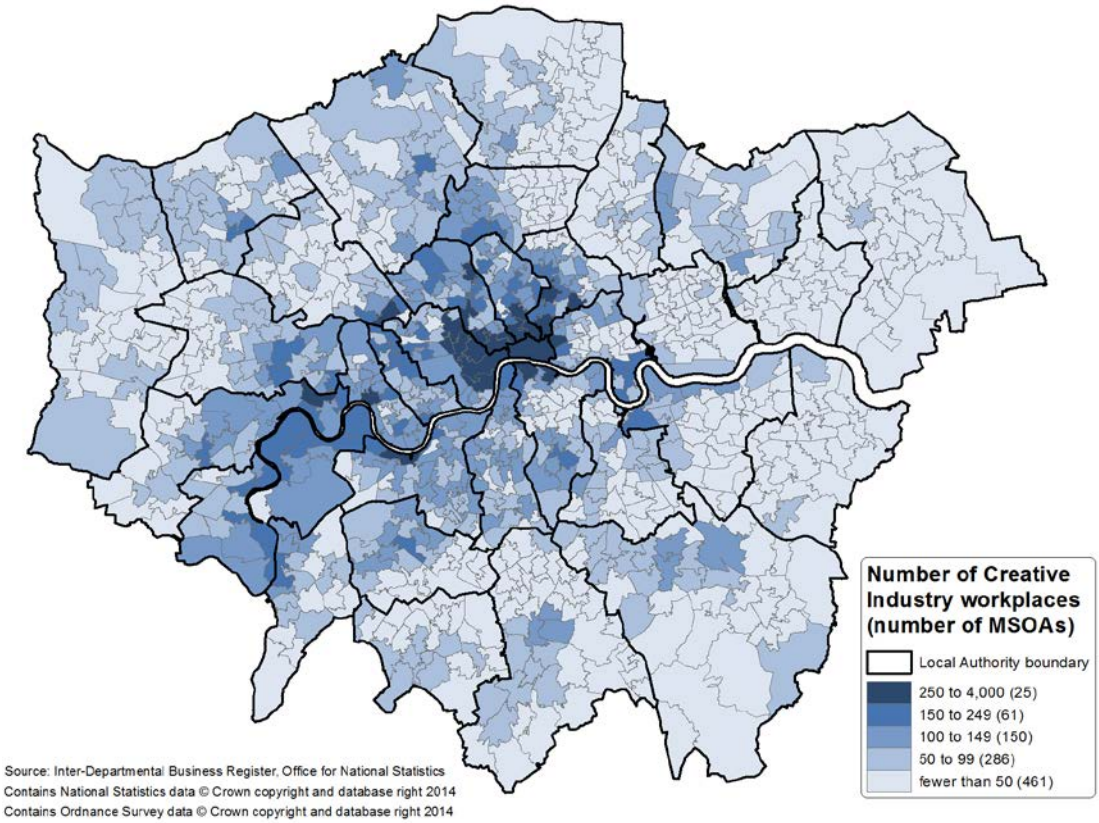
Map 18: Number of workplaces in the Creative industries in London, MSOAs (per sq. km), 2014



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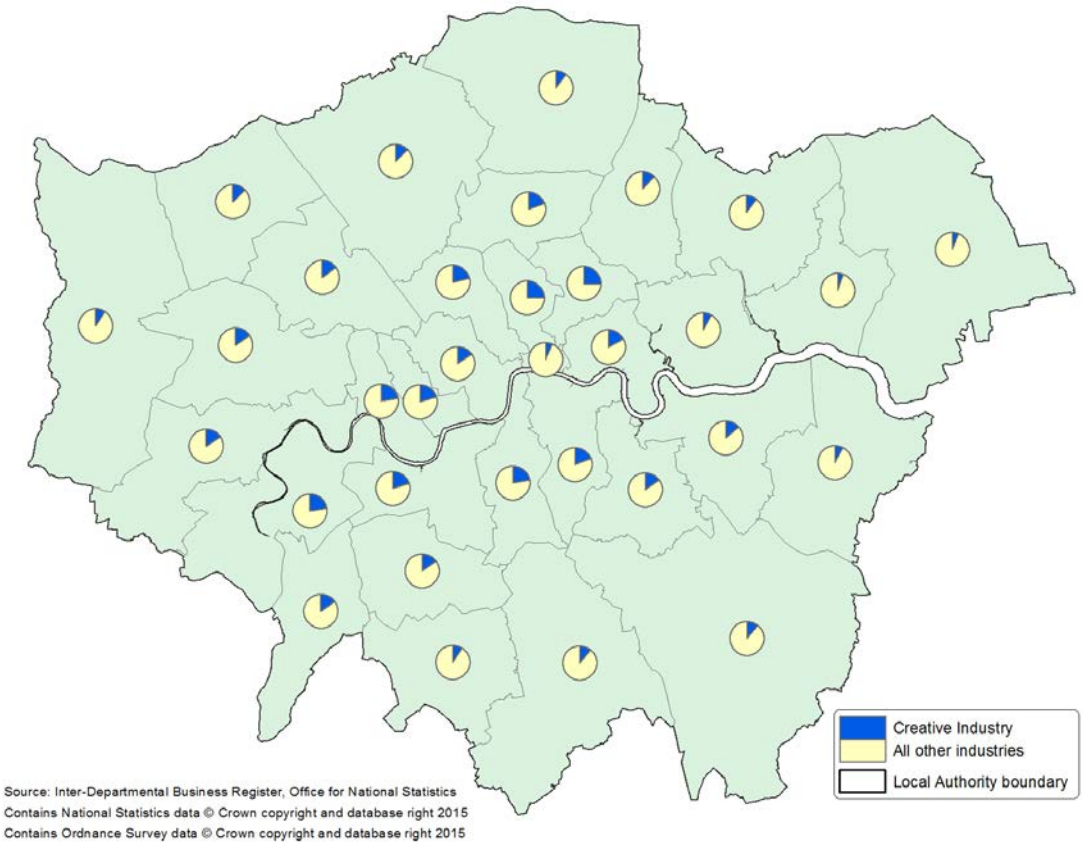
Map 19: Proportion of creative industries workplaces in London, LA level, 2009



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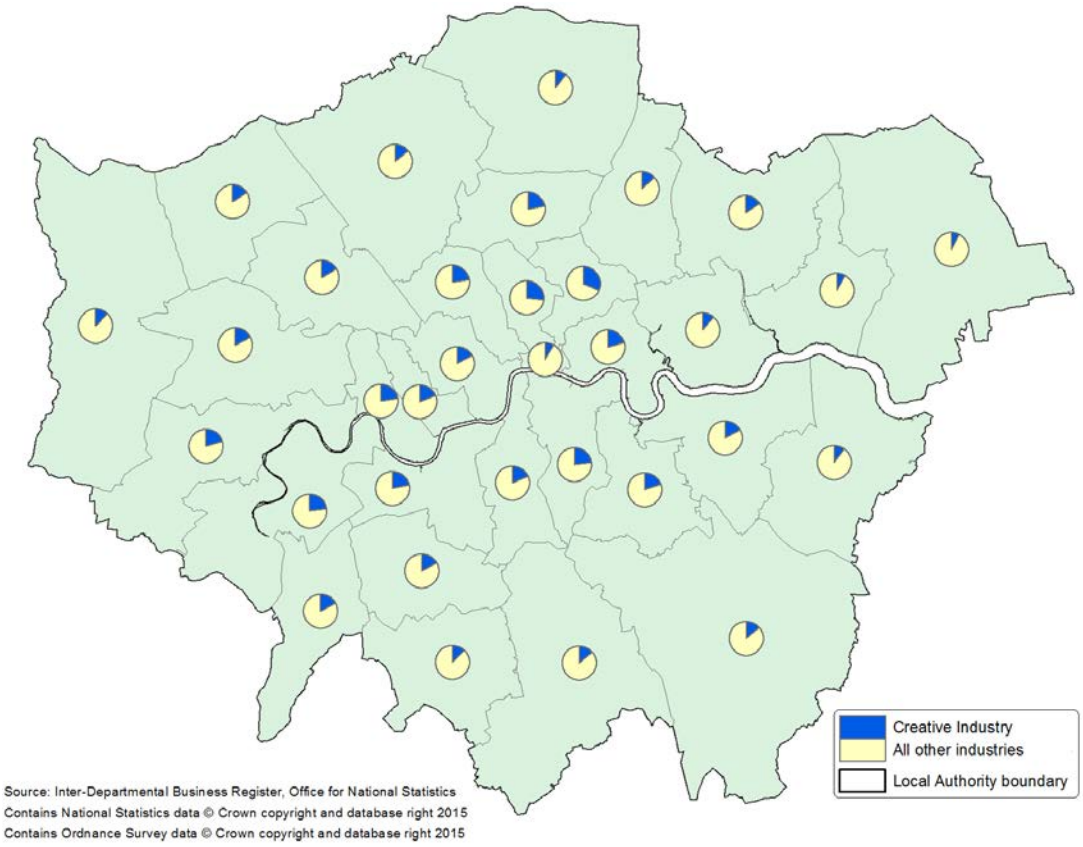
Map 20: Proportion of creative industries workplaces in London, LA level, 2014



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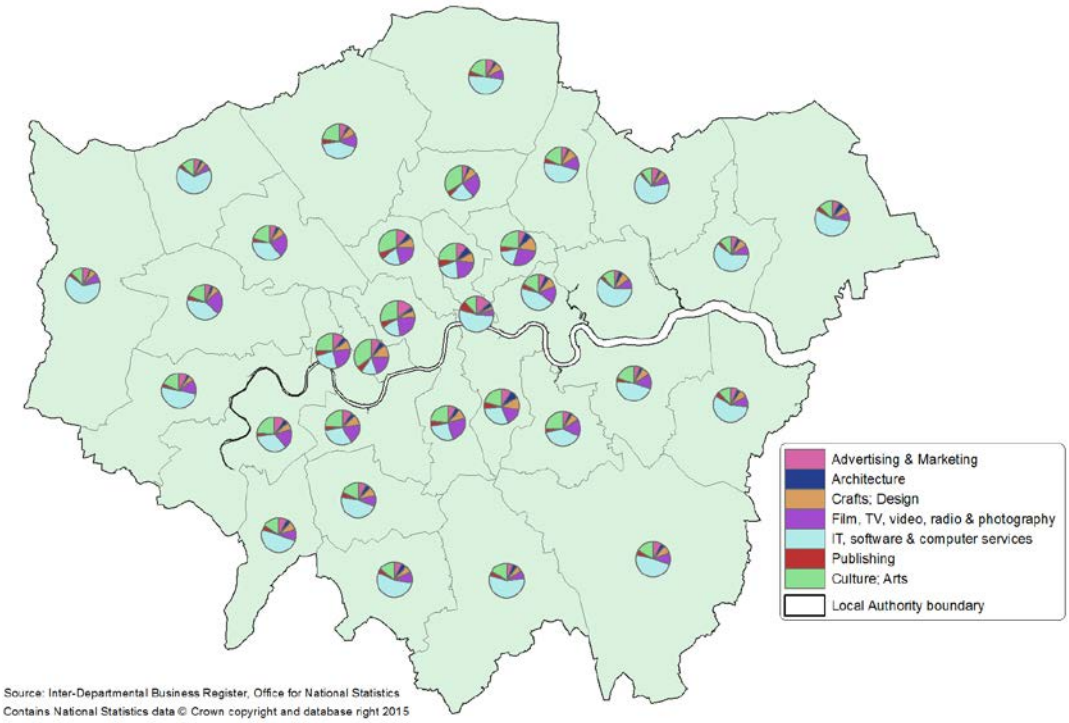
Map 21: Breakdown of creative industries workplaces by sub-group in London, LA level, 2009[32]



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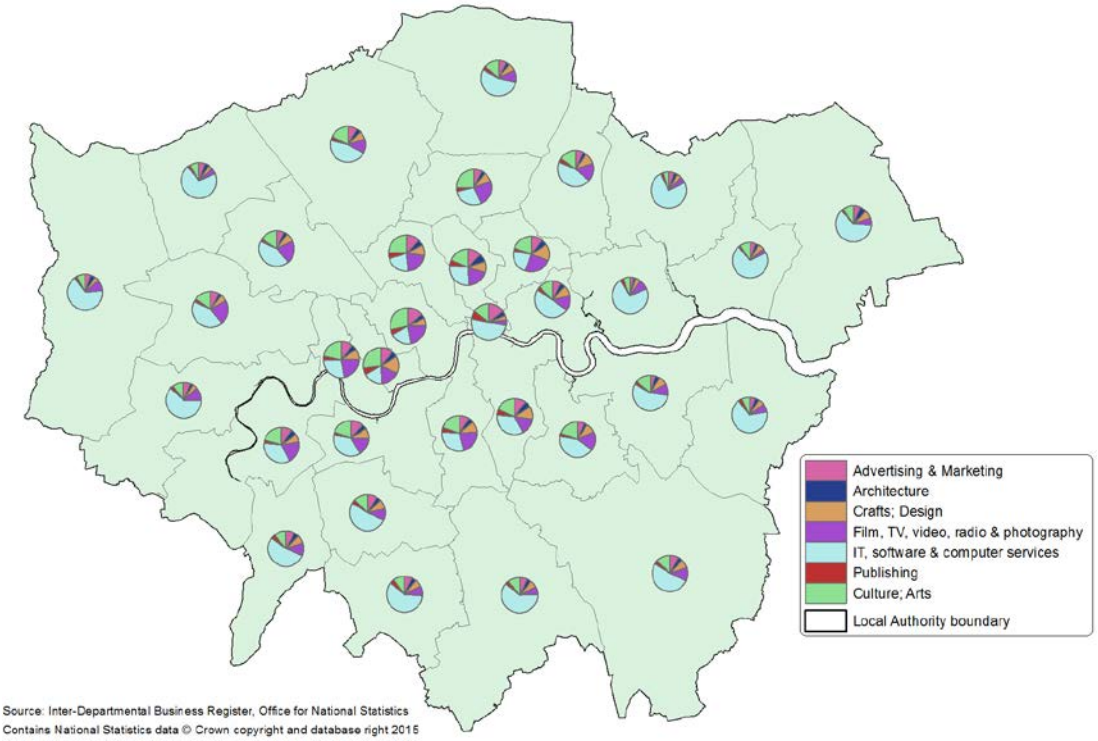
Map 22: Breakdown of creative industries workplaces by sub-group in London, LA level, 2014



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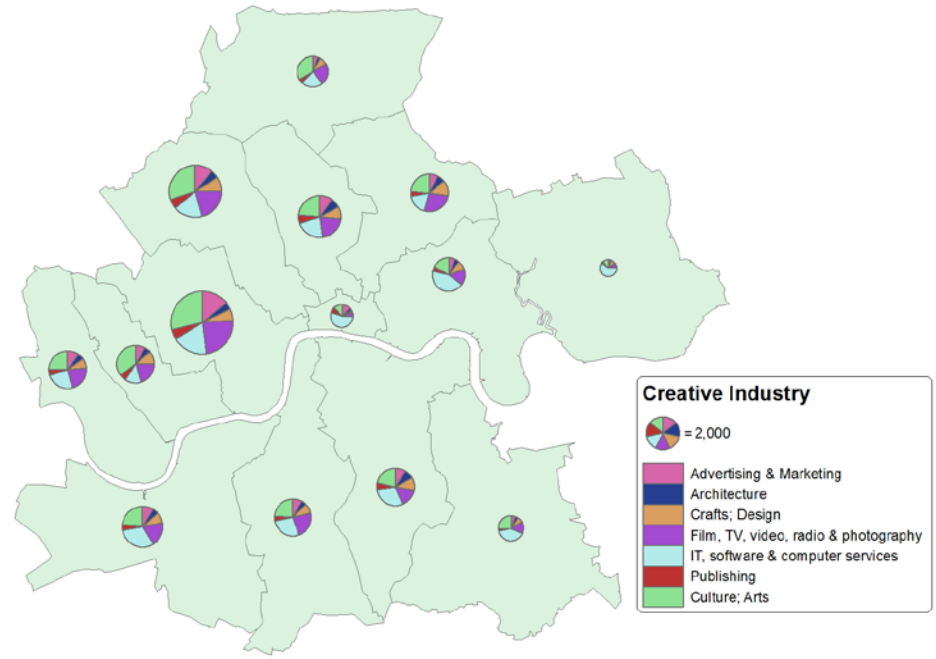
[32] The category "Culture; Arts" (in green) includes the following: "Museums, galleries, libraries; music, performing and visual arts".

Map 23: Breakdown of creative industries workplaces by sub-group in inner London, LA level, 2009[33]



Note: the size of each pie indicates the total number of workplaces
Source: Inter-Departmental Business Register, Office for National Statistics
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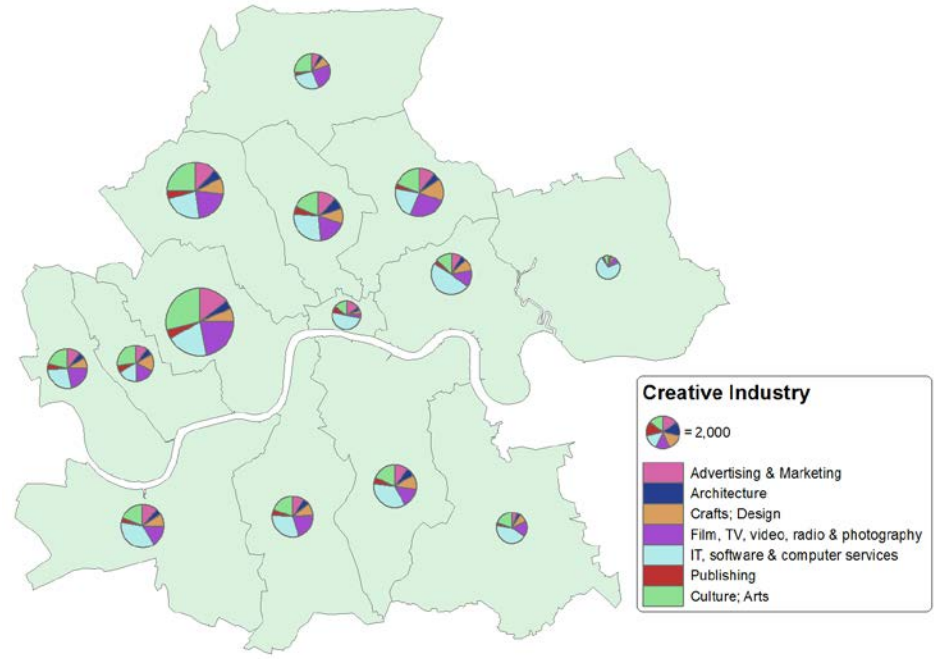
Map 24: Breakdown of creative industries workplaces by sub-group in inner London, LA level, 2014



Note: the size of each pie indicates the total number of workplaces
Source: Inter-Departmental Business Register, Office for National Statistics
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[33] The category "Culture; Arts" (in green) includes the following: "Museums, galleries, libraries; music, performing and visual arts".

6. The impact of the creative industries on the wider economy

In the previous chapters of this report, we presented the latest evidence on the contribution of the creative industries to London's economy. We did so by looking at output and employment figures for the industry, and compared these with the rest of the UK where possible. We also looked at the spatial distribution of these businesses, in order to gain insight into whether there is evidence of clustering and agglomeration effects.

The extent to which the spatial distribution of the businesses can influence the way in which the industry operates and innovates (e.g. clustering effects) will be considered in this section. Similarly, the impact the industry may have on *other* sectors of the economy (e.g. spill-over and supply-chain effects) will also be assessed.

Finally, consideration will be given to the extent that the creative industries can have an effect on other, less "tangible" aspects, such as Londoners' wellbeing (e.g. community cohesion and safety, cultural diversity, empowerment).

To do so, in this section a review of the available literature on the aspects mentioned above is presented. Evidence specific to London will be discussed whenever possible; however, it will also be drawn from contributions available at UK level or globally.

6.1 Economic growth

According to The United Nations Conference on Trade and Development (UNCTAD), globally, the average growth rate for the creative industries sector between 2002 and 2011 was 8.8 per cent, compared to an overall global economic growth rate of 4.4 per cent. Further, world trade in creative industries and services has more than doubled between 2002 and 2011, according to UNCTAD.

In recent years, both London and the UK proved to be resilient to the global financial crisis, experiencing strong growth as compared to other cities and countries respectively. This resilience has led academics and policy makers to look at sectors which are not typically associated as being the engine to growth, compared to others, such as the creative industries.

However, to our knowledge, there is not much evidence available on the specific role that the creative industries have played in stimulating growth when compared to others. In this respect, the analysis presented in Chapter 2 of this document can add to the debate, by reporting estimates of the contribution of the creative industries to London's economy.

Nonetheless, strong evidence is available on some effects which might be generated by all industries in an economy. These effects are more related to the ability of businesses in certain sectors to take advantage from being located close to other similar businesses and generate innovation, rather than being directly related to the characteristics of the industry itself. Since the maps reported in Chapter 4 showed some degree of clustering of the creative industries and their sub-groups, it might be reasonable to assume that the creative industries in London might be generating some of the effects discussed below.

This evidence comes from a vast academic literature on the links between creativity, cities and growth (see, among others, Hall (2000); Florida (2002, 2003); Scott (2004); Currid & Connolly (2008)). This research suggests three different channels through which the creative industries, as many other industries, can lead to economic growth.

First, the creative industries might be generating so-called "multiplier effects" because of their links to other sectors of the economy, and in the way in which growth within the sector stimulates local demand for products and services.

Second, the creative industries may increase productivity in other sectors, in a mutual exchange of creative ideas and knowledge which becomes part of the wider production process (Nesta, 2009 and 2014).

Third, the creative industries may have an amenity value and attract tourists. Evidence of the economic value of tourism in part generated by the availability of cultural attractions and amenities is explored by GLA Economics in another publication (2015)[34].

To discuss these different aspects, and the extent to which the creative industries in London could potentially benefit from these effects, the following paragraphs focus on the evidence available around: i) clustering and agglomeration effects; ii) spill-over effects on other relevant industries, such as tourism.

6.1.1 Cluster and agglomeration effects

Broadly speaking, when firms decide where to locate, they take into consideration the vicinity of other firms that produce similar products and services, as well as the proximity of firms whose products are complementary to what they do. This is known as clustering.

According to Porter (1998), a cluster is "a geographic concentration of interconnected companies, specialized suppliers, service providers, associated institutions and firms in related industries". The idea is that firms may benefit from proximity to firms in other sectors by trading with them and from recruiting talent from them, as it is the case for individuals in creative occupations outside the Creative Industries. Clearly, physical location is not anymore a requirement for a cluster to be defined as such, as firms can be co-located in the virtual space of, for example, an online platform. In addition, vicinity may also facilitate knowledge sharing among firms (i.e. spill-over effects – see below for more details), consisting of serendipitous transfers of information or ideas from one person or firm to another.

This aspect is particularly relevant for firms in the Creative Industries, generally described as a knowledge-based industry; in other words, an industry where knowledge, interpersonal communication and flexible skills have a prominent role over routine and automated tasks. For instance, it has been shown that the rise of London as a major technology hub was enabled by the opportunity for technology firms (some of which operating within the creative industries) in London to benefit from proximity to industry clusters as sources of talent and funding (Mandel & Liebenau, 2014).

Box 1- Creative clusters in London

London is home to one of the UK's fastest growing computer game developer clusters, representing around 19 per cent of the UK's games development workforce and, in 2012, accounting for an estimated investment of £96.6 million on games development (Games Investor Consulting, 2013).

A geographical analysis from Nesta shows that, although Tech City boroughs like Hackney experienced a boost in the number of video game companies created in recent years, the

highest rates of company formation were in Islington, Westminster and Camden (Nesta, 2014a).

A further area of particular interest for Creative Industries in London is Soho, in the City of Westminster, as it is one of the world's most influential media clusters, specifically of film, advertising, TV and radio firms.

In 2010, Soho[1] was home to one in five jobs in the film distribution industry as well as one in four jobs in film production in the UK, with the UK film industry experiencing strong growth (of 250 per cent) in the 15 years to 2011 (Oxford Economics, 2011).

Moreover, between 2004 and 2013, creative workers based in Soho have won nearly two hundred major awards, including 22 Oscars and 100 awards from the Cannes International Film Festival (BOP Consulting, 2014).

[1] *Data refers to the smallest statistical region that overlaps London, the West End Ward, approximately the W1 postcode in Central London.*

Spill-over effects generated by agglomeration entail both benefits (such as increased co-operation and innovation) and costs (such as increased competition) to firms that locate in proximity to other firms in the same or in a different industry (Nesta, 2010).

Furthermore, some argue that urban regeneration is a tangible example of the wider impact that the Creative Industries might have on the economy. Although it might be fair to state that there exists a long tradition of using culture as a catalyst for regeneration based on 'hard infrastructure', such as museums and other iconic cultural locations; and 'soft infrastructure', such as events and creative spaces, which can also be the motor of a regenerative process for an area, there is not enough evidence to prove the causality or a possible direct link between the creative industries and urban regeneration[35].

Additionally, economic clusters serve as the driving force in many regional economies, and help cities direct their economic development. In London, historical and market forces have led to the formation of a world-leading arts, culture and creative industries cluster[36]. This cluster makes the industry more productive and allows the UK to compete on the global cultural stage. Therefore, the impact that the development (and investment) in the creative economy in London can potentially have on the economy of the rest of the country cannot be ignored[37].

[35] An example which is often used by those advocating the beneficial effects of creative industries on regeneration comes from the 2012 Olympic Games. An example of how both 'hard' and 'soft' infrastructure, namely the investment in 11,000 homes in East London alone and the Olympic events, have fostered urban regeneration in East London, with an overall economic impact of the Games estimated between £28 billion and £41 billion in Gross Value Added by 2020 (UK Government & Mayor of London, 2013).

[36] London's cultural sector has been centuries in the making. It has been one of the world's leading centres for theatre for more than 400 years, while the establishment of the national museums and collections in London stretches back to 1759. London's long history as a centre of cultural production and consumption means that it has built up global institutions, knowhow, financiers and distributors, and education facilities – it is home to 90 per cent of the specialist cultural higher education institutions in Britain. As such, London 'specialises' in culture and the creative industries.

[37] There are many different ways in which London and the other UK regions can collaborate to deliver creative industries products and services, which can range from co-commissions, collaborations, tours and digital distribution to name a few.

Indeed, the benefits deriving from creative businesses locating close to one another (agglomeration benefits) could translate in firms in creative clusters being more productive than they would otherwise be. Broadly speaking, this is equivalent to saying that £1 of funding to organisations in the cluster generates more output or activity than £1 of funding to an organisation that does not benefit from such clustering advantages. These benefits, however, are not confined to London's geographical boundaries; and can spread to the rest of the country.

The benefits of clustering could include the following:

Ability to attract more customers – part of this is due to the attraction generated by the wider arts and culture offering inherent in a cluster but also is the result of spillovers from London's wider offerings that encourage people to visit the capital (facilitated by the capital's transport accessibility both nationally and globally);

Access to specialist goods/services and labour inputs – although creative, arts & entertainment and libraries, archives, museums & other cultural activities sectors purchase goods which other regions specialise in (e.g. manufacturing and construction) they rely heavily on services in which London specialises: the creative, arts & entertainment sector purchased about £1.6 billion (or 34.2 per cent of its total purchases) worth of services from the information & communication, the professional, scientific & technical and the financial & services sectors in 2012[38]. In the first two of these sectors, London and the South East are the only regions where there is specialisation of these sectors and London is the only region that specialises in the latter sector. Similarly, the libraries, archives, museums & other cultural activities sector purchased £0.42 billion (or 25.0 per cent of its total purchases) from the arts, entertainment and recreation sector alone in 2012, with a further £203 million (11.9 per cent) from the information & communication, the professional, scientific & technical and the financial & services sectors[39].

If the arts and culture industry were to be spread over a wider geographic area it is unlikely that such clustering benefits could be realised. This would reduce the industry's productivity as a whole so that for each £1 invested, the output would be lower than if firms remained close to one another and in proximity to firms supplying specialist inputs.

6.1.2 Spill-over effects

As already mentioned, creative industries help other sectors to grow; and this role is emphasised when businesses operating in the creative sector agglomerate in clusters, hence generating spill-overs within the industry and across industries (Neil, 2014).

Indeed, as highlighted by Nesta (2010), clusters of creative businesses play a crucial role as an enabler of local economic growth, both in terms of competitive, connected agglomerations of high-growth firms; and as sources of spill-overs into other industries, such as high-tech manufacturing and knowledge-intensive business services.

[38] GLA Economics calculations based on ONS Input Output Tables available here.

[39] GLA Economics based on ONS UK Input-Output tables. Please note that while Input-Output tables relative to activity in the UK economy as a whole, sectors specialisation refers to an index of specialisation for the London's economy, and based on employee numbers. It is estimated using data from the ONS Business Register and Employment Survey (BRES), as (REGION EMPLOYMENT IN SECTOR/REGION TOTAL EMPLOYMENT)/(REST OF ENGLAND EMPLOYMENT IN SECTOR/REST OF ENGLAND TOTAL EMPLOYMENT). For further detail on indices of specialisation by industry sectors, see "London's sectors – more detailed jobs data", GLA Economics Working Paper 65.

Robust evidence is available on the positive impact of the creative industries clusters on locations' attractiveness. In fact, the findings of a 2014 study of English cities by Nesta suggested that creative clusters act as local amenities.

The role of creative clusters as catalysts to increase local attractiveness and their contribution to other sectors of the economy, as well as the rest of the UK is further evident when their impact on the tourism sector is considered. In fact, tourism represents an example of the spill-overs that the creative industry can potentially generate on other sectors.

In 2013, GLA Economics estimated that cultural tourism supported 80,000 jobs and contributed £3.2 billion of GVA to London, just under a third of the overall contribution from the tourism sector as a whole (GLA Economics, 2015). Furthermore, more recent analysis showed that 'creative tourism', a component of cultural tourism that "focuses on the process and the contexts more than on the final product", is reported to be on the rise (Richard & Marques, 2012).

The relationship between the tourism industry and creative industries in London is a mutually beneficial one. The tourism industry provides business opportunities to creative firms: the tourist experience can benefit greatly from firms developing accessible and engaging technology, and the creative sector can exploit new ways of doing business that ensue from such innovations (OECD, 2014).

In 2014, London ranked at the top of MasterCard's Top 20 Global Destination Cities Index both in terms of number of international visitors and overnight visitor spend (Mastercard, 2015). Creative Industries and creative clusters contribute to attract tourists to the capital and increase London's attractiveness as a destination. It is not surprising that, according to VisitEngland (2015), the UK's most visited visitor attractions are all located in London (i.e. British Museum, National Gallery and Southbank Centre).

An additional component of the creative industries that contributes to improve London's attractiveness as a destination is the music industry.

According to UK Music, between 2011 and 2014 the majority of attendees to live music events in the UK were tourists, both domestic and foreign. Further, in 2014, there were 3.3 million music tourists to London, accounting for 34.7 per cent of all music tourists to the UK (UK Music, 2013 and 2015), and accounted for 29.0 per cent (or about £551 million) of direct spend by music tourists in the whole of the country. According to the same research, 4,800 full-time jobs were sustained by music tourism in London in 2014. In addition research from the Audience Agency in 2014 suggested that over 40 per cent of audiences for London's cultural organisations come from other English regions (The Audience Agency, 2014).

Box 2 - Airbnb and the rise of cultural tourism

Airbnb is a website for people to let and rent accommodation. It was founded in San Francisco in 2008 and currently has over one million listings worldwide across more than 34,000 places. Airbnb supplements the offer of traditional tourism facilities thanks to a well-functioning online community. With two thirds of Airbnb's UK hosts based in London, the firm has clearly benefited from tourism flows to the Capital, but in return it has helped enhancing the tourists' experience by providing the opportunity of living the city in an authentic way (Mayor of London, 2015).

A tightly-linked supply chain

One of the main benefits accrued by firms when co-locating in clusters is the opportunity of taking advantage of a shorter, more tightly linked supply chain. Indeed, it is widely agreed that identifying other sectors of the economy which have strong supply and demand relationships with creative firms is crucial to understand the indirect impacts the creative industries may have on the wider economy (see among others, The Work Foundation, 2009; Chouguley, Naylor & Rosemberg Monte, 2011; Unesco, 2013; and City of London, 2014).

Commonly, these effects are known as "multiplier effects", which can manifest themselves in two different ways. Either as impacts on the suppliers (i.e. an increase in goods and services purchased by creative firms will inevitably benefit the local suppliers of those goods and services); or, indirectly, on incomes (i.e. the suppliers effect is likely to generate an increase in employment, or, more likely, an increase in incomes of those already employed in those sectors, hence resulting in an increase in household incomes, leading to higher consumer spending within the local economy).

For instance, a report by the City of London Corporation prepared by BOP Consulting (2014) estimated that the organisations within the City arts and culture cluster generated an indirect economic impact, measured in GVA terms, of £20.4 million in the City of London alone and £20.9 million in London as a whole in the 2013/2014 financial year.

Additionally, they also estimated the induced economic impact as generated by the expenditures of people working in the organisations located in the arts and culture cluster in the City and in firms in their direct supply chain. In GVA terms, in the 2013/2014 financial year, the income effect generated by the cluster was £53 million for the City, and £75 million to London as a whole (measured in GVA terms, using their central scenario).

However, the most evident case of the positive effects that creative industries can have on other sectors is the link with the tourism industry in London (and in the UK as a whole).

Tourism is one of the UK's most important industries amounting to 9 per cent of the UK's GDP. Expenditure in the UK tourism industry amounted to an estimated £126.9 billion in 2013 (Visit Britain, 2013). It is especially important to London as the capital's culture and heritage draw in international tourists, responsible for attracting 80 per cent of the almost 17 million international visitors who came to the capital in 2013 (GLA Economics, 2015).

Moreover, Europe is the most competitive tourism market in the world, accounting for five of the top ten most visited countries. The UK falls well behind its European peers - France is the most visited country, with 83 million visits, with the UK in 8th place, behind Spain, Italy and Germany. Inner London is the only UK region within the top 20 most visited EU regions. Additionally, with the increasing wealth of the BRIC and other emerging economies, international tourists will become ever more important to the UK's tourism industry and whilst London is a significant draw, the city can also be a gateway to the rest of the country. Already a large proportion of visitors from 'long-haul' destinations come on multi-destination trips that feature other parts of the UK besides London.

Improvement of the wider labour market

The figures presented earlier in this document show the success story of the creative economy in London, which, in 2014, had 552,200 jobs in creative occupations, usually in occupations requiring high skills and high qualifications.

Interestingly, a recent piece of research by Nesta (2015b) shows that "creative jobs will (..) be more resistant to automation. Creativity is inversely related to computerisability: 87 per cent of highly creative workers are at low or no risk of automation, compared with 40 per cent of jobs in the UK workforce as a whole. At the regional level, we see that places with a higher proportion of the workforce in creative jobs, most obviously London, are also more immune to automation".

Other streams of work have provided evidence on the role played by the creative industries on driving both higher wages and employment in other sectors (see among others, Lee, 2014). However, evidence in this field is controversial and partially inconclusive. For instance, the effect of the industry on productivity has recently been explored by Nesta (2014). They have developed an econometric model that explores the impact of cultural clusters on the productivity of English cities using employment, occupational and institutional indicators. Evidence showed that, when considering interactions between cultural clustering and salaries in creative industries and occupations, creative workers in cities with high levels of cultural clustering enjoy a wage premium. At the same time, however, Nesta found evidence of a negative correlation between clustering of creative industries and wages, which suggests that skilled workers may be willing to sacrifice relatively higher salaries elsewhere to be located in places with a "vibrant cultural scene" (*ibidem*), like London.

Finally, Higher Education Institutions (HEIs) in London supply specialist labour to the arts and culture sector in the capital: 25.3 per cent of all students in the UK studying creative arts and design studied at HEIs in London in 2013/14 (HESA, 2015; Statistical First Release 210); it is therefore likely that after their studies they will pursue a career in London (although it should be noted that the direction of causality here is not clear; e.g. whether they come to London because of the relatively large arts and culture sector or vice versa).

6.2 Well-being

Together with more tangible benefits generated by the creative industries, there might be others which could be more difficult to monetise. The following section presents such aspects in a systematic way.

Generally, the concepts of health and personal well-being are prone to subjective interpretations[40]: it is difficult to assign a monetary value to these concepts, but it is commonly accepted that their value is significant.

In this regard, the Work Foundation highlighted some of the benefits that local authorities can observe investing in creative industries, such as empowering communities and contributing to cultural diversity by encouraging the creation of networks and the sharing of information; or, alternatively, by providing an alternative use for existing/empty spaces (The Work Foundation, 2009).

[40] The World Health Organization defines health as a "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". International Health Conference, World Health Organization, April 1948.

Specifically, the impact of the creative industries on individual well-being can be seen as a consequence of the product or service that firms provide, such as arts exhibitions or performances, which are central to the well-being of Londoners. Around 84 per cent of the respondents to the Mayor's survey of June 2013 reported that culture is important in ensuring a high quality of life, with 51 per cent describing it as 'very important' (ICM, 2013). For example, Showtime, London's biggest pan-London outdoor arts festival, attracted 1.5 million people, of whom over 50 per cent had never experienced outdoor performance and 94 per cent of the audience said it made their neighbourhoods feel more vibrant (The Audience Agency, 2012).

Furthermore, by offering volunteering opportunities, firms in creative industries help individuals to develop new skills and enhance their engagement with the community they live in.

On another front, looking at the effect that creative jobs can have on the well-being of those in these occupations, Nesta (2015a) found that the results are mixed: "creative occupations tend to be characterised by higher than average levels of life satisfaction, worthwhileness and happiness – but also higher levels of anxiety. Once other factors that affect subjective wellbeing are controlled for – including wages, which are higher than average for creative occupations like computer programmers and advertising professionals but lower for artists, musicians and actors – jobs in arts, crafts and design occupations are generally associated with higher levels of wellbeing, whereas jobs in advertising, film, TV and radio, publishing and IT are associated with lower wellbeing levels".

Conclusion

The aim of this report was to provide evidence of the impact and the value of the creative industries in London, and, to an extent, of the impact that the creative industries have on the wider economy.

By focusing on producing estimates of GVA, employment and spatial distribution of the creative industries and the creative economy specifically for London, this report represents an attempt to get a better understanding of how the performance of the creative industries in London compares to that in the rest of the UK; and to what extent the industry can contribute to strengthen London's competitiveness with other global cities.

The analysis finds that in 2012, the GVA of the creative industries in London was £34.6 billion, accounting for just under half (47.6 per cent) of the UK total. As a share of total GVA in London, the creative industries group contributed 10.7 per cent, which, in 2012, was equal to £325.6 billion. GVA per workforce job in the Creative Industries (as the proxy measure of productivity of the sector) was £71,100 in 2012, which was 25 per cent higher than the average across all sectors of London's economy.

The labour market characteristics of the workforce in the creative industries and in the creative economy in London was looked at. In 2014, there were 795,800 jobs in the creative economy in London, or 16.3 per cent of total jobs in the capital. This compares to 7.4 per cent of the total number of jobs in the rest of the UK being taken by people employed in the creative economy. Moreover, it was reported that median pay per hour in the creative industries in 2014 was 18.8 per cent higher than in other sectors of the economy taken altogether. The gap between the highest paid occupations and the lowest ones was equal to £24.12 per hour, which is in line with the gap registered in the non-creative economy.

A mapping exercise looking at the distribution of employees and workplaces across London was undertaken looking at understanding the extent of clustering and agglomeration effects which were then discussed further in the concluding chapter of this report.

The report concluded with a literature review of the impact of the creative industries on the wider economy, providing evidence around the role that the creative industries can play to sustain economic growth of the capital, through two main mechanisms: agglomeration effects, and spill-over effects. It also provided a short discussion of the impact that the creative industries can have on individual well-being of Londoners.

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Appendix A: Calculations for GVA and GVA per workforce job in the creative industries in London

This note provides an overview of the methodology and calculation steps made in order to produce estimates of the total Gross Value Added (GVA), and the GVA per workforce job of the creative industries in London.

This analysis is drawn from a methodology developed by GLA Economics in Working Paper 63 and extending this to a bespoke industry using a mixture of SIC07 industry codes.[41] This is an extension of the methodology outlined in that paper, since the definition of the creative industries uses SIC07 codes at a lower level than that at 2 digit SIC07 divisions. Additional modelling steps have been made to derive the estimates of GVA and workforce jobs at the 4 digit SIC07 group level, based on the use of BRES data, and the use of "creative intensity" allocations as outlined by DCMS. The model here however is largely based on the division level model for regions, outlined within Chapter 3 of Working Paper 63.

Background

Gross Value Added measures the contribution to the economy of each individual producer, industry or sector. More simply put, it is the value added generated from activity in the economy. Within GVA, there are a number of component elements, which are as follows:

- Compensation of Employees (CoE)
- Gross operating surplus/mixed income (GOS/MI), which includes profits, non-market capital consumption and holding gains, self-employment and rental income
- Taxes less subsidies on production

For the estimates provided within this paper, data on GVA is drawn from the Regional Gross Value Added (Income Approach) publication by the ONS.[42] However the calculations for estimation of GVA per workforce job differ, and as opposed to previous measures and estimates of GVA per job, the methodology put forward by GLA Economics looks to isolate the economic output attributable to the workforce; the core assumption made is that some components of GVA (therefore a proportion of published GVA) would not be as a direct result of economic activity, most notably that of rental incomes (through market rents and imputed rental incomes) and a proportion of taxes less subsidies that would be assumed to relate to rental incomes. Using data from National and Regional Accounts, and data specifically requested from the Office for National Statistics, a model of attribution was developed which isolated the proportion of published GVA attributable to the workforce. For most industry sectors, this proportion was around 99 per cent, with the notable exceptions being real estate, construction, and financial and insurance.

Division level methodology for calculation of GVA per workforce job

The methodology developed to attribute published GVA to that of the workforce applied to industry sections (1 digit SIC07 sections); the model at the division level (2 digit SIC07 level) use these attributions for each component division within a section, however other ONS employment and household survey data are also used to develop estimates of the attributable

[41] "Gross Value Added per Workforce Job in London and the UK", GLA Economics Working Paper 63.
[42] "Regional Gross Value Added (Income Approach), December 2014", Office for National Statistics.

GVA and modelled workforce jobs at the division level, and henceforth, the estimate of GVA per workforce job.

The reason for this is that neither division level estimates of GVA, nor workforce jobs are available for London; the methodology derives these estimates and ensures that they constrain to that of the total section level estimates. The methodology at the division level makes one key assumption as regards GVA: that within sections, divisions have different levels of labour productivity, and these are reflected in wage differentials between divisions. In a more productive division within a sector, it is assumed that higher wages are paid to those employed within it.

Further details of the methodology used and full calculation steps are provided within Appendix A of GLA Economics Working Paper 63. However the steps provided below give a brief overview of the calculation of GVA per workforce job.

Step 1: Setting a constraint to section level GVA

The methodology used at the section level to determine the proportion of published GVA attributable to the workforce is also used in the division level analysis. At this first stage the assumption is made that the proportions of GVA attributable to the workforce are identical for all divisions within sections.

Step 2: Creation of attributable GVA estimates at the division level

This step assigns proportions of section level GVA to individual divisions within them, based solely on the employment make-up of the divisions within the section. As workforce jobs data are not available at the division level, data from BRES on employees, and APS for the self-employed are used to apportion out section level GVA to each of the divisions contained within it.

Step 3: Using ASHE data to account for relative productivity within sections

Data on mean earnings for all jobs within each division are collected using ASHE. With these data, this stage of the methodology looks to adjust the estimated attributable GVA for each of the divisions based on the relative wage level of the division compared to the section as a whole. Therefore a division where employees are earning higher wages will have a greater proportion of the section's GVA assigned to it. The calculation ensures at the same time that the sum of the "productivity adjusted GVA" estimates for each division within the section constrains to the section level total.

Step 4: Calculation of estimated workforce jobs for each division

Using data from BRES and APS on employees and self-employed jobs within each division, the proportion of the published workforce jobs for the section allocated to each division within the section is then estimated.

Step 5: Calculation of estimated division level GVA per workforce job

With these data, the productivity adjusted GVA for a division (in Step 3) is divided by the estimated workforce jobs for each division (Step 4), leading to an estimate of GVA per workforce job.

Specific Calculation of total GVA in the Creative Industries in London

The analysis in this appendix is drawn upon analysis undertaken by DCMS, specifically using the definition of the creative industries based upon the selection of 4 digit SIC07 industry groups. Table A1 outlines the specific 4 digit SIC07 groups contained within the creative industries, alongside the broader creative industries group in which each individual SIC industry resides in.

Table A1: Specific industries contained within the Creative Industries

Creative Industries Group	SIC Code	Industry Description
Advertising and marketing	70.21	Public relations and communication activities
	73.11	Advertising agencies
	73.12	Media representation
Architecture	71.11	Architectural activities
Crafts	32.12	Manufacture of jewellery and related articles
Design: product, graphic and fashion design	74.10	Specialised design activities
Film, TV, video, radio and photography	59.11	Motion picture, video and television programme production activities
	59.12	Motion picture, video and television programme post-production
	59.13	Motion picture, video and television programme distribution
	59.14	Motion picture projection activities
	60.10	Radio broadcasting
	60.20	Television programming and broadcasting activities
	74.20	Photographic activities
IT, software and computer services	58.21	Publishing of computer games
	58.29	Other software publishing
	62.01	Computer programming activities
	62.02	Computer consultancy activities
Publishing	58.11	Book publishing
	58.12	Publishing of directories and mailing lists
	58.13	Publishing of newspapers
	58.14	Publishing of journals and periodicals
	58.19	Other publishing activities
	74.30	Translation and interpretation activities
Museums, galleries and libraries	91.01	Library and archive activities
	91.02	Museum activities
Music, performing and visual arts	59.20	Sound recording and music publishing activities
	85.52	Cultural education
	90.01	Performing arts
	90.02	Support activities to performing arts
	90.03	Artistic creation
	90.04	Operation of arts facilities

Source: Department for Culture, Media and Sport.

The methodology to derive the specific industry output and workforce jobs is based upon the methodology set out within GLA Economics Working Paper 63; however the following section outlines in more detail the specific calculation steps required to generate the final estimates of GVA, employment and GVA per workforce job for the creative industries.

Step 1: Calculation of GVA estimates at the division level

At the regional level, data on GVA is only available at 1 digit SIC07 sections, therefore data from BRES on employees and APS on self-employed jobs are used to apportion out section level GVA to each of its component divisions, based on the proportion of employees and self-employed within each division.

The second stage of the methodology is to make a further adjustment based on the relative wage levels of those employed within divisions of a section. Using these data, the estimates of the "productivity adjusted" GVA has been calculated for all 2 digit SIC07 divisions for London, and are are used for the subsequent calculations.

Step 2: Calculation of workforce job estimates at the division level

Data on workforce jobs at the regional level are not available, therefore data on employees from BRES, and self-employed jobs from APS are used to derive an estimate of workforce jobs based upon the proportions of total employees and self-employed in each of the divisions within the section. Although data on workforce job by section is available, the sum of employees and self-employed may not necessarily add to the workforce job total, since data are drawn from two different sources. However the proportions of employee and self-employee jobs by division are constrained to the section level workforce job estimate, therefore the modelled workforce jobs by division will sum to the section level estimate.

For the purpose of calculating the GVA, modelled workforce jobs and GVA per workforce job of the creative industries, the following table outlines the productivity adjusted GVA and workforce jobs for the 2 digit SIC07 divisions which are related to the creative industries.

Table A2: Modelled GVA and workforce jobs for divisions relating to creative industries, London

Division	Modelled GVA (£m)	Modelled workforce jobs
32: Other manufacturing	608	9,800
58: Publishing activities	5,644	61,600
59: Motion picture, video and television programme production, sound recording and music publishing activities	5,777	66,800
60: Programming and broadcasting activities	3,039	32,600
62: Computer programming, consultancy and related activities	13,550	142,700
70: Activities of head offices; management consultancy activities	11,492	185,500
71: Architectural and engineering activities; technical testing and analysis	4,345	86,600
73: Advertising and market research	4,342	80,600
74: Other professional, scientific and technical activities	2,782	65,300
85: Education	17,195	374,800
90: Creative, arts and entertainment activities	2,548	66,500
91: Libraries, archives, museums and other cultural activities	709	19,200

Source: GLA Economics calculations. Modelled workforce jobs are rounded to the nearest hundred (however unrounded data are used for subsequent calculations).

After undertaking these two steps, the estimates of division level GVA and workforce jobs have been set, and the subsequent modelling takes account of the relative shares of employee jobs within each of the individual 4 digit SIC07 groups within the 2 digit SIC07 divisions.

Step 3: Using BRES data to apportion out division level GVA and workforce jobs

Within each of the industries outlined in Table A1, BRES data has been used to determine the proportion of total division level employees that are comprised by the specific 4 digit SIC07 groups.

Division 32: Other manufacturing

Modelled division level GVA	£608 million
Modelled division level WFJ	9,800

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
32.12: Manufacture of jewellery and related articles	2,400	26.1%	159	2,560

Division 58: Publishing activities

Modelled division level GVA	£5,644 million
Modelled division level WFJ	61,600

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
58.11: Book publishing	54,100	20.0%	1,128	12,300
58.12: Publishing of directories and mailing lists	10,800	0.4%	21	200
58.13: Publishing of newspapers	200	26.2%	1,477	16,100
58.14: Publishing of journals and periodicals	14,200	36.0%	2,032	22,200
58.19: Other publishing activities	19,500	11.1%	327	6,800
58.21: Publishing of computer games	6,000	1.2%	67	700
58.29 Other software publishing	600	5.1%	291	3,200

Division 59: Motion picture, video and television programme production, sound recording and music publishing activities

Modelled division level GVA	£5,777 million
Modelled division level WFJ	66,800

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
59.11: Motion picture, video and television programme production activities	27,300	60.1%	3,470	40,100
59.12: Motion picture, video and television programme post-production	8,000	17.6%	1,015	11,700
59.13: Motion picture, video and television programme distribution	2,600	5.7%	328	3,800
59.14: Motion picture projection activities	3,500	7.6%	439	5,100
59.20: Sound recording and music publishing activities	4,100	9.1%	525	6,100

Division 60: Programming and broadcasting activities

Modelled division level GVA	£3,039 million
Modelled division level WFJ	32,600

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
60.10: Radio broadcasting	6,000	22.1%	673	7,200
60.20: Television programming and broadcasting activities	21,000	77.9%	2,366	25,400

Division 62: Computer programming, consultancy and related activities

Modelled division level GVA	£13,550 million
Modelled division level WFJ	142,700

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
62.01: Computer programming activities	28,100	22.0%	2,986	31,500
62.02: Computer consultancy activities	70,000	54.9%	7,433	78,300

Division 70: Activities of head offices; management consultancy activities

Modelled division level GVA	£11,492 million
Modelled division level WFJ	185,500

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
70.21: Public relations and communication activities	8,900	5.2%	600	9,700

Division 71: Architectural and engineering activities; technical testing and analysis

Modelled division level GVA	£4,345 million
Modelled division level WFJ	86,600

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
71.11: Architectural activities	23,500	31.1%	1,349	26,900

Division 73: Advertising and market research

Modelled division level GVA	£4,342 million
Modelled division level WFJ	80,600

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
73.11: Advertising agencies	42,600	58.1%	2,522	46,800
73.12: Media representation	8,600	11.7%	509	9,500

Division 74: Other professional, scientific and technical activities

Modelled division level GVA	£2,782 million
Modelled division level WFJ	65,300

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
74.10: Specialised design activities	12,900	34.0%	947	22,200
74.20: Photographic activities	4,700	12.3%	342	8,000
74.30: Translation and interpretation activities	800	2.0%	55	1,300

Division 85: Education

Modelled division level GVA	£17,195 million
Modelled division level WFJ	374,800

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
85.52: Cultural education	1,900	0.5%	90	2,000

Division 90: Creative, arts and entertainment activities

Modelled division level GVA	£2,548 million
Modelled division level WFJ	66,500

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
90.01: Performing arts	14,600	49.6%	1,263	32,900
90.02: Support activities to performing arts	2,000	6.8%	174	4,500
90.03: Artistic creation	8,500	29.0%	738	19,300
90.04: Operation of arts facilities	4,300	14.7%	374	9,800

Division 91: Libraries, archives, museums and other cultural activities

Modelled division level GVA	£709 million
Modelled division level WFJ	19,200

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
91.01: Library and archive activities	6,600	35.9%	254	6,900
91.02: Museum activities	9,000	48.9%	347	9,400

Step 4: Calculation of the total GVA through the creative industries

Using the specific 4 digit SIC07 groups contained within the Creative Industry Groups outlined in Table A1, the total GVA of the creative industries for London can be calculated, and is shown in the table below:

Creative Industries Group	GVA (£ million)
Advertising and marketing	3,631
Architecture	1,349
Crafts	159
Design: product, graphic and fashion design	947
Film, TV, video, radio and photography	8,633
IT, software and computer services	10,777
Publishing	5,341
Museums, galleries and libraries	601
Music, performing and visual arts	3,163
TOTAL	**34,601**

It is therefore estimated that the creative industries in London were worth £34.6 billion in GVA in 2012.

Derivation of the GVA per workforce job in the creative industries in London

One additional modelling step has to be undertaken in order to derive the estimate of GVA per workforce job for the creative industries (and its component groups). GLA Economics Working Paper 63 stated the expressed aim that only the proportion of published GVA directly attributable to the workforce should be used towards the calculations of GVA per workforce job. Within each of the individual components of published GVA, some will be relevant activities of the workforce and, arguably, some will not. The latter primarily relates to rental incomes. For the analysis that follows, the modelled creative GVA for each 4 digit SIC07 group is multiplied by the proportion of published GVA attributable to the workforce, for the 1 digit SIC07 section in which the group resides in. The following table outlines the proportions of published GVA attributable to the workforce for London, and states the 4 digit SIC07 groups which relate to each section.

Section	Creative industry 4 digit SIC07 groups	Proportion of GVA attributable to the workforce
C: Manufacturing	32.12	99.5%
J: Information and Communication	58.11-58.29; 59.11-59.20; 60.10-60.20; 62.01-62.02	99.0%
M: Professional, scientific and technical activities	70.21, 71.11; 73.11-73.12; 74.10-74.30	99.5%
P: Education	85.52	99.9%
R: Arts, entertainment and recreation	90.01-90.04; 91.01-91.02	99.4%

Source: GLA Economics calculations

With these proportions, data on attributable GVA by 4 digit SIC07 group can be calculated; and combined with data on modelled WFJ, the estimates of GVA per workforce job by creative industry group are shown in the table below:

Creative Industry Group	Attributable GVA (£m)	Modelled WFJ	GVA per workforce job
Advertising and marketing	3,614	66,000	£54,773
Architecture	1,343	26,900	£49,924
Crafts	158	2,600	£61,799
Design: product, graphic and fashion design	943	22,200	£42,375
Film, TV, video, radio and photography	8,552	101,300	£84,392
IT, software and computer services	10,674	113,700	£93,914
Publishing	5,290	59,000	£89,669
Museums, galleries and libraries	597	16,200	£36,754
Music, performing and visual arts	3,142	74,500	£42,171
TOTAL	**34,313**	**482,400**	**£71,126**

Source: GLA Economics calculations; unrounded data have been used towards the derivation of GVA, workforce jobs; and hence GVA per workforce job. Other data presented in this appendix are presented as rounded values.

It is therefore estimated that the GVA per workforce job in the creative industries stood at £71,100 in 2012; which compares to an average GVA per workforce job across all sectors in London of £56,700, therefore approximately 25 per cent higher than the all sector average.

Calculation of GVA and GVA per workforce job in the creative industries for the UK

A similar method can be used to calculate the total GVA and GVA per workforce job for the UK as a whole, however fewer modelling steps are required since more data are publicly available, specifically on GVA by division (drawn from the ONS National Accounts). Since workforce jobs data are not available at the 2 digit SIC07 division level for the UK, published data from BRES and APS on employee and self-employed jobs by division have been combined to derive an estimate of workforce jobs for each division[43]. Table A3 provides the data on 2 digit SIC07 division GVA for each component division contained within the creative industries and the estimate of workforce jobs.

Table A3: GVA and workforce jobs for divisions relating to creative industries, UK

Division	GVA (£m)	Estimated workforce jobs
32: Other manufacturing	4,449	108,000
58: Publishing activities	11,361	192,000
59: Motion picture, video and television programme production, sound recording and music publishing activities	8,507	130,000
60: Programming and broadcasting activities	4,284	43,000
62: Computer programming, consultancy and related activities	38,064	607,000
70: Activities of head offices; management consultancy activities	16,633	644,000
71: Architectural and engineering activities; technical testing and analysis	23,238	495,000
73: Advertising and market research	8,863	195,000
74: Other professional, scientific and technical activities	8,202	274,000
85: Education	98,738	2,767,000
90: Creative, arts and entertainment activities	3,306	197,000
91: Libraries, archives, museums and other cultural activities	3,283	108,000

Source: Quarterly National Accounts, Business Register and Employment Survey, Annual Population Survey, all Office for National Statistics; GLA Economics calculations. Estimated workforce jobs are rounded to the nearest thousand.

[43] On top of employee and self-employed jobs, workforce jobs also include government supported trainees and HM forces. However, employee jobs plus self-employed jobs account for over 99 per cent of total workforce jobs; therefore for simplicity, workforce jobs has been assumed to equal employee jobs plus self-employed jobs.

Step 2: Using BRES data to apportion out division level GVA and workforce jobs

Within each of the industries defined as creative, BRES data has been used to determine the proportion of total division level employees that are comprised by the specific 4 digit SIC07 groups.

Division 32: Other manufacturing

Division level GVA	£4,449 million
Estimated division level WFJ	108,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
32.12: Manufacture of jewellery and related articles	6,500	7.3%	325	7,900

Division 58: Publishing activities

Division level GVA	£11,361 million
Estimated division level WFJ	192,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
58.11: Book publishing	27,500	17.8%	2,019	34,000
58.12: Publishing of directories and mailing lists	900	0.6%	66	1,100
58.13: Publishing of newspapers	50,600	32.7%	3,715	62,600
58.14: Publishing of journals and periodicals	44,100	28.5%	3,238	54,600
58.19: Other publishing activities	19,300	12.5%	1,420	23,900
58.21: Publishing of computer games	1,400	0.9%	105	1,800
58.29 Other software publishing	10,900	7.0%	797	13,400

Division 59: Motion picture, video and television programme production, sound recording and music publishing activities

Division level GVA	£8,507 million
Estimated division level WFJ	130,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
59.11: Motion picture, video and television programme production activities	47,600	54.3%	4,617	70,400
59.12: Motion picture, video and television programme post-production	11,100	12.6%	1,074	16,400
59.13: Motion picture, video and television programme distribution	3,700	4.2%	358	5,500
59.14: Motion picture projection activities	18,500	21.1%	1,794	27,400
59.20: Sound recording and music publishing activities	6,900	7.8%	664	10,100

Division 60: Programming and broadcasting activities

Division level GVA	£4,284 million
Estimated division level WFJ	43,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
60.10: Radio broadcasting	10,700	29.3%	1,255	12,700
60.20: Television programming and broadcasting activities	25,800	70.7%	3,029	30,600

Division 62: Computer programming, consultancy and related activities

Division level GVA	£38,064 million
Estimated division level WFJ	607,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
62.01: Computer programming activities	117,700	23.5%	8,929	142,300
62.02: Computer consultancy activities	268,500	53.5%	20,364	324,600

Division 70: Activities of head offices; management consultancy activities

Division level GVA	£16,633 million
Estimated division level WFJ	644,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
70.21: Public relations and communication activities	15,900	2.8%	471	18,300

Division 71: Architectural and engineering activities; technical testing and analysis

Division level GVA	£23,238 million
Estimated division level WFJ	495,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
71.11: Architectural activities	58,200	14.2%	3,302	70,300

Division 73: Advertising and market research

Division level GVA	£8,863 million
Estimated division level WFJ	195,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
73.11: Advertising agencies	94,400	58.5%	5,184	113,900
73.12: Media representation	17,700	11.0%	973	21,400

Division 74: Other professional, scientific and technical activities

Division level GVA	£8,202 million
Estimated division level WFJ	274,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
74.10: Specialised design activities	41,700	27.7%	2,271	75,900
74.20: Photographic activities	16,200	10.8%	884	29,600
74.30: Translation and interpretation activities	2,900	1.9%	157	5,300

Division 85: Education

Division level GVA	£98,738 million
Estimated division level WFJ	2,767,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
85.52: Cultural education	5,300	0.2%	204	5,700

Division 90: Creative, arts and entertainment activities

Division level GVA	£3,306 million
Estimated division level WFJ	197,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
90.01: Performing arts	36,900	48.0%	1,588	94,400
90.02: Support activities to performing arts	5,200	6.8%	225	13,400
90.03: Artistic creation	23,000	30.0%	991	58,900
90.04: Operation of arts facilities	11,700	15.2%	503	29,900

Division 91: Libraries, archives, museums and other cultural activities

Division level GVA	£3,283 million
Estimated division level WFJ	108,000

Group	Employees	Share of Total Division	Modelled Creative GVA (£m)	Modelled Creative WFJ
91.01: Library and archive activities	38,400	39.4%	1,293	42,600
91.02: Museum activities	27,300	28.0%	921	30,400

Step 3: Calculation of the total GVA through the creative industries

Using the specific 4 digit SIC07 groups contained within the Creative Industry Groups outlined in Table A1, the total GVA of the creative industries for the UK can be calculated, and is shown in the table below:

Creative Industries Group	GVA (£ million)
Advertising and marketing	6,628
Architecture	3,302
Crafts	325
Design: product, graphic and fashion design	2,271
Film, TV, video, radio and photography	13,011
IT, software and computer services	30,195
Publishing	10,616
Museums, galleries and libraries	2,214
Music, performing and visual arts	4,175
TOTAL	**72,737**

It is therefore estimated that the creative industries in UK are worth £72.8 billion in GVA in 2012.

Derivation of the GVA per workforce job in the creative industries in the UK

Similar as for the calculation of GVA per workforce job for London, the following table outlines the proportions of published GVA attributable to the workforce, for the UK as a whole, and states the 4 digit SIC07 groups which relate to each section.

Section	Creative industry 4 digit SIC07 groups	Proportion of GVA attributable to the workforce
C: Manufacturing	32.12	99.6%
J: Information and Communication	58.11-58.29; 59.11-59.20; 60.10-60.20; 62.01-62.02	99.1%
M: Professional, scientific and technical activities	70.21, 71.11; 73.11-73.12; 74.10-74.30	99.5%
P: Education	85.52	99.9%
R: Arts, entertainment and recreation	90.01-90.04; 91.01-91.02	99.4%

Source: GLA Economics calculations

With these proportions, data on attributable GVA by 4 digit SIC07 group can be calculated; and combined with data on modelled WFJ, the estimates of GVA per workforce job by creative industry group are shown in the table below:

Creative Industry Group	Attributable GVA (£m)	Modelled WFJ	GVA per workforce job
Advertising and marketing	6,595	153,500	£42,953
Architecture	3,285	70,300	£46,710
Crafts	325	7,900	£41,290
Design: product, graphic and fashion design	2,260	75,900	£29,757
Film, TV, video, radio and photography	12,893	192,400	£66,998
IT, software and computer services	29,912	482,100	£62,040
Publishing	10,517	181,600	£57,930
Museums, galleries and libraries	2,201	73,000	£30,148
Music, performing and visual arts	4,149	212,400	£19,536
TOTAL	**72,137**	**1,449,200**	**£49,778**

Source: GLA Economics calculations; unrounded data have been used towards the derivation of GVA, workforce jobs; and hence GVA per workforce job. Other data presented in this appendix are presented as rounded values.

It is therefore estimated that the GVA per workforce job in the creative industries in the UK stood at £49,800 in 2012; which compares to an average GVA per workforce job across all sectors for the UK as a whole of £41,100, approximately 21 per cent higher than the all sector average.

Comparisons between London and the UK

The modelling undertaken suggests that London comprised almost half of the total output of the creative industries in the UK in 2012 (however varies between individual creative industry groups); and is outlined in further detail in the following table:

Creative Industry Group	Total GVA, London (£m)	Total GVA, UK, (£m)	Proportion of total UK; London (%)
Advertising and marketing	3,631	6,628	54.8
Architecture	1,349	3,302	40.9
Crafts	159	325	48.9
Design: product, graphic and fashion design	947	2,271	41.7
Film, TV, video, radio and photography	8,633	13,011	66.4
IT, software and computer services	10,777	30,195	35.7
Publishing	5,341	10,616	50.3
Museums, galleries and libraries	601	2,214	27.1
Music, performing and visual arts	3,163	4,175	75.8
TOTAL	**34,601**	**72,737**	**47.6**

In addition, data on GVA per workforce job shows significant differences between London and the UK for the creative industries (and each of the component industry groups).

Creative Industry Group	GVA per workforce job, London	GVA per workforce job, UK	Percentage difference, London compared to UK (%)
Advertising and marketing	£54,773	£42,953	+28
Architecture	£49,924	£46,710	+7
Crafts	£61,799	£41,290	+50
Design: product, graphic and fashion design	£42,375	£29,757	+42
Film, TV, video, radio and photography	£84,392	£66,998	+26
IT, software and computer services	£93,914	£62,040	+51
Publishing	£89,669	£57,930	+55
Museums, galleries and libraries	£36,754	£30,148	+22
Music, performing and visual arts	£42,171	£19,536	+116
TOTAL	**£71,126**	**£49,778**	**+42.9**

The analysis shows that the difference in the GVA per workforce job in the Creative Industries between London and the UK stands at 43 per cent; which compares to 38 per cent for the average across all sectors in 2012.

Comparison of methods used to calculate the economic impact of the creative industries

In order to provide context to the London estimate of the economic impact of the creative industries, a similar method, based on a top-down approach using the National and Regional Accounts was used to derive the estimates of the GVA for both London and the UK as a whole. However, the method used by DCMS in calculating the economic impact of the creative industries for the UK as a whole is based upon the use of the Annual Business Survey from the ONS. At the regional level, data from the ABS is less robust and are not available at levels lower than 2 digit SIC07 divisions, so a different method had to be used.

The following table outlines the differences in estimates of GVA for the creative industries as a whole, and for each individual creative industries group; between the method used in this paper, and that using the Annual Business Survey.

Creative Industry Group	GLA Economics method (£m)	DCMS method, (£m)
Advertising and marketing	6,628	9,339
Architecture	3,302	3,497
Crafts	325	248
Design: product, graphic and fashion design	2,271	2,500
Film, TV, video, radio and photography	13,011	9,821
IT, software and computer services	30,195	30,552
Publishing	10,616	9,624
Museums, galleries and libraries	2,214	-150
Music, performing and visual arts	4,175	4,581
TOTAL	**72,737**	**70,012**

Source: GLA Economics calculations; based upon National Accounts and Annual Business Survey, Office for National Statistics.

The table shows that although the difference between the two methods is less than 4 per cent for the creative industries as a whole, there are quite significant differences within individual groups of the creative industries; most notably seen in that of museums, galleries and libraries; where the method based on the use of the Annual Business Survey are likely to underestimate the value of the sector (a point recognised by DCMS in their publication as an area for potential future development). There are also other groups where there are differences of greater than 25 per cent; such as in advertising and marketing; crafts; and film, TV, video, radio and photography.

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