GLAECONOMICS

London's Creative Sector: 2004 Update

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The Mayor of London established GLA Economics in May 2002 to provide a firm statistical, factual and forecasting basis for policy decision-making by the GLA group. GLA Economics is funded by Transport for London (TfL), the London Development Agency (LDA) and the Greater London Authority (GLA).

Contents

Executive summary

In October 2002 GLA Economics published *Creativity: London's Core Business*,[1] a comprehensive survey of employment and wealth creation in London's creative sector. The report adapted the methodology developed by the Department of Culture, Media and Sport to arrive at an approach suitable for London.

This report updates and extends the data that was published in *Creativity: London's Core Business*. It also revises it to bring it in line with the latest official statistics. It contains a detailed statistical appendix and an explanation of how the data were arrived at. It confirms the October 2002 findings:

- London is the UK's creative capital, with 40 per cent of the jobs in the UK's creative industries, and 29 per cent of jobs in the UK creative sector as a whole.[2]
- London's success is tightly bound to that of the Greater South East, which now contains 62 per cent of jobs in the UK creative industries and 53 per cent of UK creative sector jobs
- London's creative sector is a major driver of its growth. It is growing faster than any major industry except Financial and Business Services, and accounts for between a fifth and a quarter of job growth in London between 1995 and 2001
- One in seven of London's jobs is in the creative sector.

It also finds that:

- London is the focus of a new trend in specialisation. Nearly half its creative industry employees are in creative occupations, in contrast to an average of 30 per cent in the rest of the UK.
- Women are underrepresented in the creative sector. Only 36 per cent of creative industry employees in London are women compared to 45 per cent in industry as a whole. Only 25 per cent of creatively occupied workers are women, falling to 20 per cent or lower for four out of eleven creative subsectors – Architecture, Leisure Software, Crafts, Design, and Film and Video.
- In London, black or ethnic minority workers are significantly less likely to be employed in the creative sector and this situation is worse than in the UK as a whole. Only 13 per cent of people in creative occupations are from black or ethnic minority origin, compared with 21 per cent for London's workforce as a whole.
- The recent slowdown particularly affected London's creative sector. In 2002, 47 per cent of all London's job losses were in the creative sector.

[1] GLA 2002

[2] Throughout this report, 'creative sector' refers to all sources of creative employment. This contains two main components: 'creative industry jobs' refers to workforce jobs in the creative industries; and 'creatively occupied workers' or 'creative occupations' means workers whose first or second job is creative, regardless of where they work. The term 'creative sector jobs' or simply 'creative jobs' will refer to the total of creative industry jobs, plus those creative occupations which are not themselves already in a creative industry. See section 2 for details.

Introduction

Creative activity defies measurement. Policy, however, demands it. In 1998 the Department of Culture, Media and Sport (DCMS) produced the first of two Mapping Documents,[3] the first attempt systematically to measure the economic contribution of the creative sector in the UK. This turned out to be the first step in a process leading to an evidence-based approach to the creative and cultural sectors. The Mapping Documents were developed into an annual statistical bulletin entitled *Creative Industries Economic Estimates*.[4]

In October 2002 GLA Economics published *Creativity: London's Core Business*, a comprehensive survey of employment in London's creative sector and its contribution to London's wealth. It used the methodology developed by the DCMS to arrive at an approach suitable for estimating the extent of creative activity in London.

The DCMS Evidence Toolkit

In April 2004 the DCMS launched its Evidence Toolkit – known during its planning stage as the Regional Cultural Data Framework (RCDF).[5] This is designed to provide a basis for fundamental improvements to the collection and use of data on the creative sector.

The Evidence Toolkit extends the original creative sector approach to Sport, Tourism and Heritage Management but incorporating the previous creative sector within a new classification. The Evidence Toolkit:

- defines seven DCMS sectors (Audio-Visual, Visual Arts, Books and Press, Performance, Sport, Tourism, and Heritage Management)
- brings all these sectors within a single, integrated system for preparing evidence related to analysis and policy
- restructures the initial Mapping Document list of 11 creative subsectors, condensing them into the first four DCMS sectors listed above (Audio-Visual, Visual Arts, Books and Press, and Performance)
- separates each of these four DCMS sectors into six stages of the creative production chain: Creation, Making, Dissemination, Exhibition/Reception, Archiving/Preservation and Education/Understanding.

Although the basic methodology is the same, the new classification is expected to increase the estimates of the size of the creative sector, due to the more complete coverage of the creative production chain. DCMS is currently reviewing the impact of the new system and plan to adopt it for its next publication.

Hopefully data will eventually be produced using the Evidence Toolkit system covering the same time period as the data now available for the creative sector under the old classification.

[3] DCMS 2001a
[4] DCMS 2001b
[5] DCMS 2002a

The data in this report are consistent with the definitions used by DCMS in its *Economic Estimates*. DCMS plan to adopt the Evidence Toolkit definition of the creative sector but to continue releasing data for the 11 creative sub-sectors identified in the *Economic Estimates*. For reasons explained at greater length in section 3, primarily the need for continuity in identifying long-term trends in the sector, our results are not presented using the DCMS Evidence Toolkit classification.

The Creative Industry Data and Intelligence Framework

In 2003 the London Development Agency (LDA) and GLA Economics commissioned a major research study on the creative sector entitled the Creative Industry Data and Intelligence Framework. The work was undertaken to gain a better understanding of the availability and limitations of creative industry data obtainable in London and work towards developing a credible evidence base for policy-making for the creative sector, using the RCDF as starting point.[6]

As background to the LDA's work, and as part of GLA Economics' continued programme of providing creative sector data in collaboration with the LDA and with DCMS, this report updates and extends the data that was published in 2002 and revises it to bring it in line with the latest available official statistics.

What's new in the report?

Since *Creativity: London's Core Business* was published, there have been several important changes. Two years' more data – including an economic slowdown – are available. The data itself has been revised and improved. The valued opinions of many other researchers and practitioners in the field have been collected. The GLA's own methodology has improved in response. The standard classification of occupations (SOC) was changed in 2000 and consequently, the data had to be revised retrospectively to make it comparable with new data so that trends over time can be estimated.

Employment

This report contains an updated dataset on employment which revises and replaces the data originally published in *Creativity: London's Core Business*, and extends it for a further two years. It has not been extended to the Evaluation Toolkit classification, although the methodology is completely consistent with it. A significant improvement compared with *Creativity: London's Core Business* is the inclusion of data on self-employment, which raises workforce employment (industry-based) estimates by between 10 and 20 per cent.

The data incorporate revisions to the Annual Business Inquiry published in February 2004. Data on London boroughs incorporate revisions to the Labour Force Survey which have been

[6] The work was conducted by a consortium made up of the University of Leeds, the Small Business Research Centre at Kingston University, the Northern Ireland Economic Research Centre and Dr Andy Pratt of the London School of Economics.

regrossed in line with the 2001 census. Other data was not revised because a long-term series dating back to 1994 was not available at the time of writing.

In line with recommended practice, data below the threshold of statistical reliability for London (8,000 jobs) have been suppressed.

Output

The Office for National Statistics (ONS) has not published new output data on the creative sector since the last report and therefore revised estimates of output are not published. Since the GLA's employment estimates have changed slightly, the corresponding estimates of productivity would be slightly different if published. However, the measurement of service sector and creative sector output is a source of considerable controversy and research, and for this reason further data on output is not being published at this point.

It should, however, be noted that since *Creativity: London's Core Business,* all ONS estimates of real output have transferred to a new methodology termed chain-linking, and rebased to the year 2000. Since the unit of measure is different and higher, in general these measures have risen. As a result, the estimates of real output are not compatible with chain-linked or otherwise rebased estimates of real output in the rest of the economy.

Continuity with the DCMS Evidence Toolkit

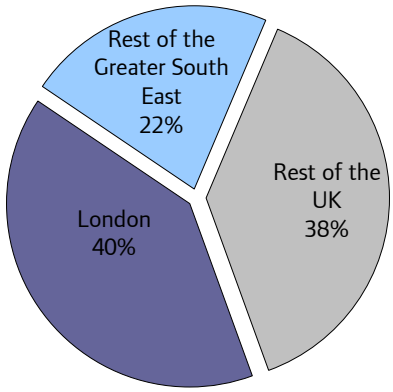
As already mentioned in the introduction, the DCMS Evidence Toolkit restructures the CI classification system which was the basis of *Creativity: London's Core Business*. GLA Economics believes that continuity is important in data dissemination. Data under the original mapping has been available to practitioners for several years and is in widespread use. Therefore, during the transition period it is important that data be provided under the old system. The data in this report have been produced on the same basis as the original data, which was in turn based on the DCMS *Economic Estimates* (DCMS 2001b) approach. Data within the DCMS Evidence Toolkit framework will be produced as soon as this framework has been disseminated and has stabilised.

Finally, this report contains a more detailed description of the methods used to create the dataset, including a full listing of the SIC and SOC codes used (Appendix 2).

1. At a glance – key findings

1.1 London – the UK's creative capital

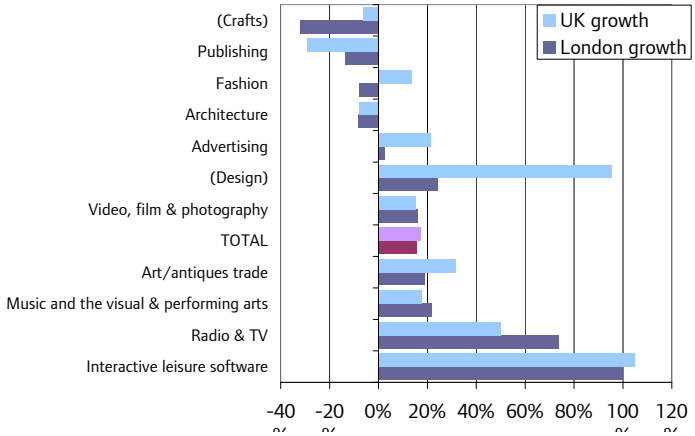
Chart 1.1a: Regional shares in creative jobs – 2002



The majority of Britain's creative jobs – 62 per cent – were inside the Greater South East (London, the South East, and the East).

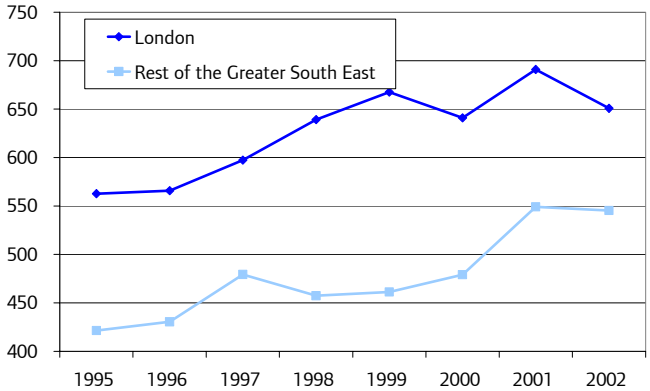
Chart 1.1b: Creative employment growth rates – 1995-2002

Creative job growth is distributed unevenly between subsectors. Crafts, Publishing, Fashion and Architecture actually declined in London between 1995 and 2001.



London's growth was stronger than the UK in performance-related sectors: Radio and TV, Video, Film and Photography, and Music and the Visual and Performing Arts. Elsewhere the UK on average grew more (or declined less) than London.

Chart 1.1c: Creative jobs in London and the SE 1995-2002 – thousands of creative sector jobs



Over this period, job growth in London and in the rest of the Greater South East (South East and Eastern regions combined) have marched in step

During this time, the Greater South East gained 212,000 creative jobs, while the rest of the country gained 122,000

1.2 Occupation and industry

Chart 1.2a: Components of creative employment in London – thousands of jobs

Creative employment comes from two sources: those who work in creative industries such as advertising, and those who have creative occupations outside the creative industries, such as music teachers.[7] London's creative industries show a distinctive pattern. Creative industry jobs were 72 per cent of total creative jobs in 2002. The remaining 28 per cent were creatively occupied outside the creative industries.

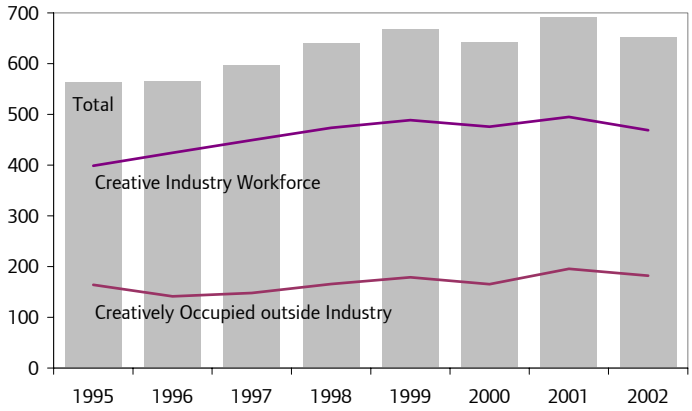
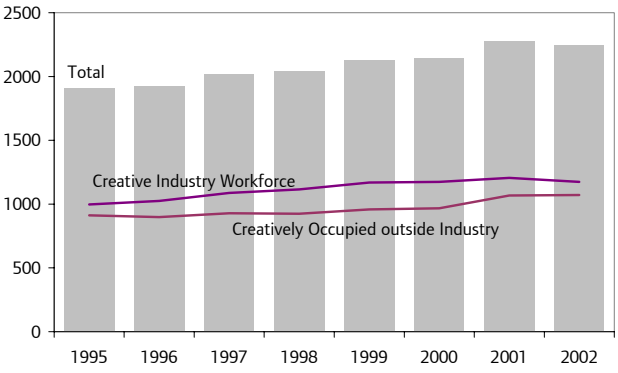


Chart 1.2b: Components of creative employment in the UK – thousands of jobs



Outside London, this is reversed. On average in the UK, creative industry jobs accounted for 52 per cent of total creative jobs in 2002. Nearly half the UK's creative sector employees do not work in creative industries. This suggests that London is a focus for specialisation; enterprises that produce only or mainly creative products are more prevalent and account for more employment. Outside London, the number of creatively occupied people is growing but they are not being absorbed to the same extent by specialised companies

Chart 1.2c: Occupational and industrial employment

This shows up in the distinctive growth pattern of London, compared with the rest of the country. In the rest of the UK outside London, creative occupations grew twice as fast as in London between 1995 and 2002.

Creative industry jobs grew at the same speed, on average, inside and

[7] A third small source of creative employment is people who have a second, creative job, though their main job is not in the creative sector – like many artists, musicians and writers.

outside London.

1.3 Creative intensity

Chart 1.3a: Creative intensity – proportion of creative industry workers in creative occupations

London's creative industries employ a higher proportion of creative specialists than anywhere else in the country.

48 per cent of Londoners working in the creative industries are also in creative occupations.

Chart 1.3b: Creative intensity in London's subregions – proportion of creative industry workers in creative occupations

There is some evidence of a trend for Outer London to become a focus of growth for creatively-intensive industries.

Creative intensity has fallen since 1999 in Inner London. Central London's creative intensity fell below the London average in 2000.

Outer London's creative intensity overtook that of Inner London, including Central London, in 2002.

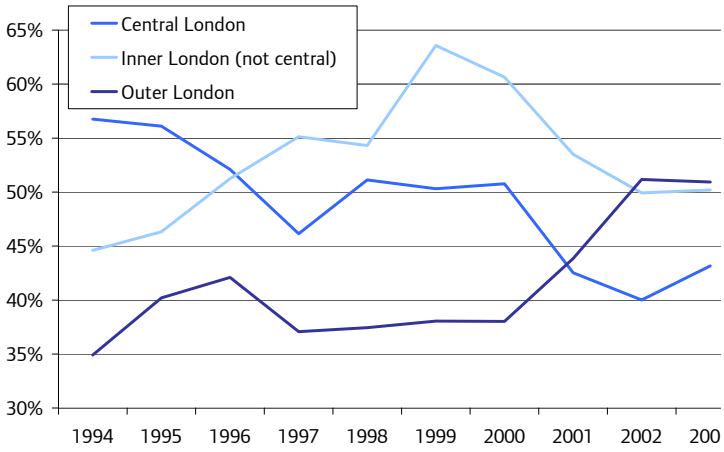
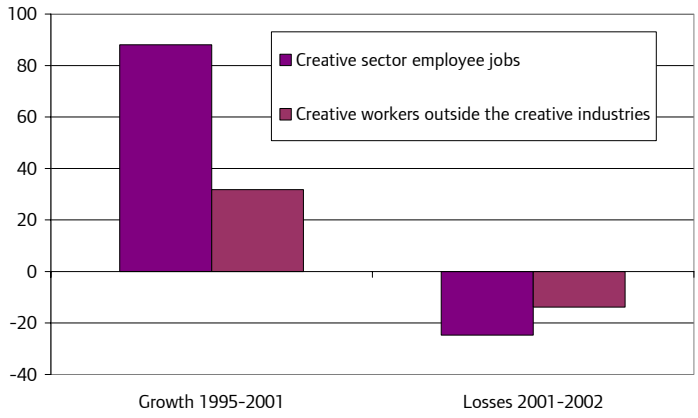


Chart 1.3c: Job gains and losses in the creative sector – thousands of jobs

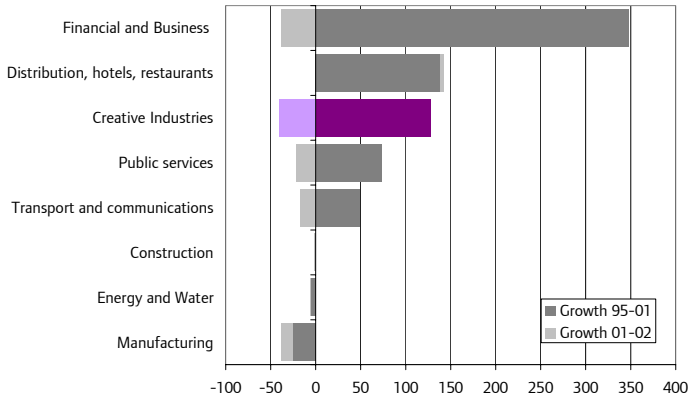


Creative occupations outside the creative industries proved the most vulnerable to the recent slowdown. Creative industry employee jobs grew by 88,000 during 1995-2001, of which 25,000 were lost in 2002.

14,000 creative occupations outside the industry were lost in 2002 – nearly half the gains of the previous six years.

1.4 A driver of London's growth

Chart 1.4a: Job growth before the slowdown – thousands of jobs



The creative industries continue to lead London's job growth. In the growth years 1995 to 2001, creative sector employment added more jobs in London than all major industries except Distribution, and Financial and Business Services.8

Between 1995 and 2001, the creative sector was responsible for one new job in every 4.5 in London.

(Creative sector: workforce jobs+ occupational employment; All other sectors: workforce jobs)

Chart 1.4b: Shares in London jobs, 2002 – Ratio of workforce employment to London total, per cent

One in every seven Londoners worked in London's creative sector in 2002

The sector accounted in 2002 for 650,000 jobs, more than Manufacturing and Construction combined.

The sector is also greater than health and education combined, which accounted for 632,000 jobs in 2002.

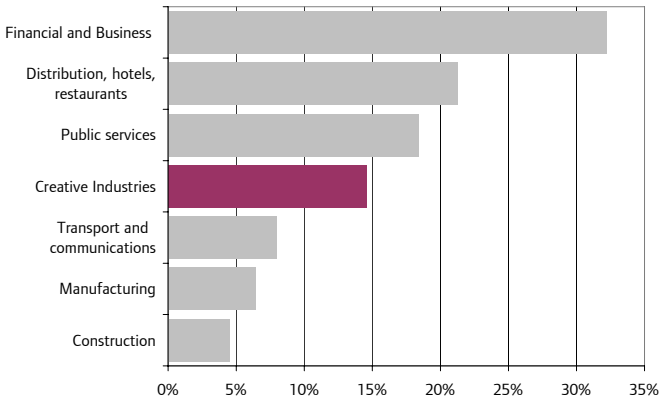
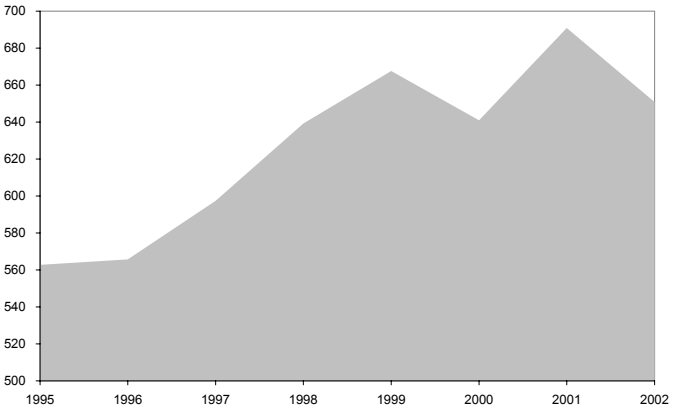


Chart 1.4c: Total creative employment in London – thousands of jobs



The slowdown hit the creative sector. During 2002, 40,100 creative jobs were lost – nearly half of London's job loss over this period.

Despite these losses, during the whole period from 1995 to 2002, London gained 88,000 creative jobs overall.

So, despite its losses in 2002, London's creative sector grew by 15 per cent over these seven years.

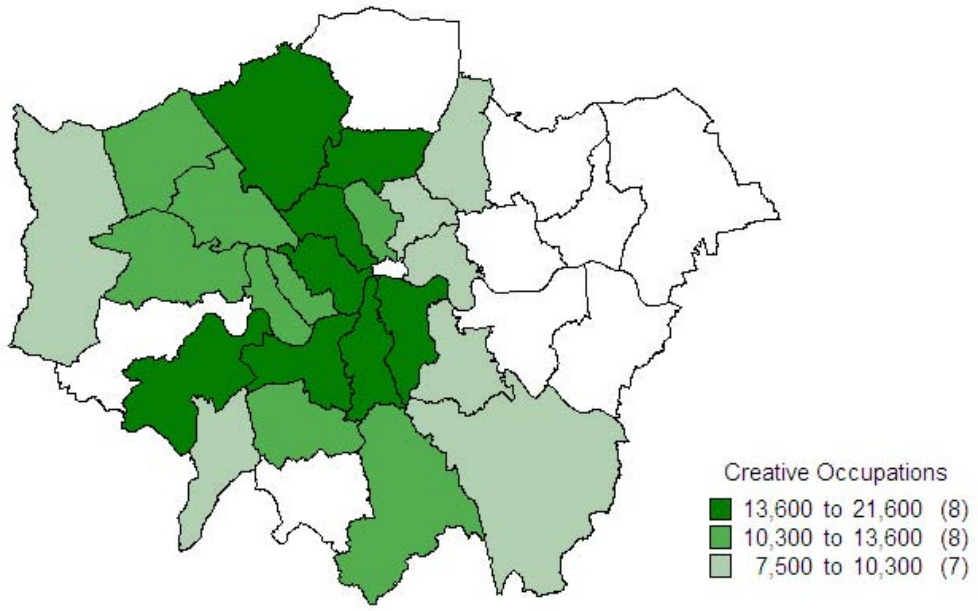
[8] The growth which took place up to 2001 is separated from the job losses which occurred mainly during 2001/02. The data does not go far enough back to measure total growth between two equivalent points on the cycle.

1.5 Where it's at in London

Statistical reliability decreases because of small sample sizes when studying borough totals, but some indications of the general pattern can be obtained. Data from two years are used to reduce this sample size problem.

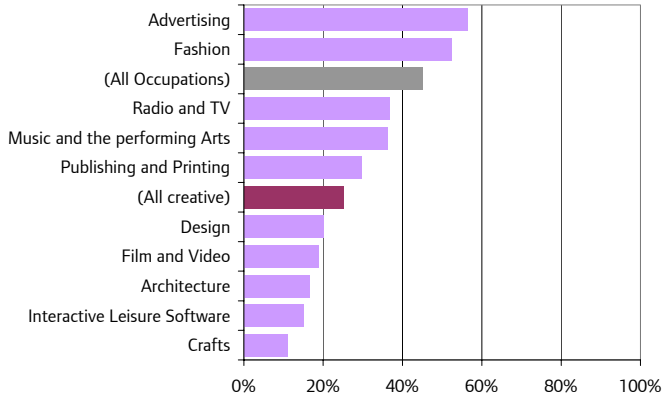
Creative occupations are strongly concentrated in the north and west of London, with some indications (see Map 1.5a) of a trend away from Central London.

Map 1.5a: Creative occupations – average of 2001 and 2002



1.6 Gender

Chart 1.6a: Proportion of creatively occupied female employees in the UK



In the UK as a whole, 46 per cent of jobs are held by women. In creative occupations this proportion is 25 per cent.

In only two creative occupations is the employment of women higher than the general average: advertising and fashion.

Chart 1.6b: Proportion of creatively occupied female employees in London

The situation is better in London, mainly because the proportion of women in creative occupations in London is higher than in the UK overall.

Women's share of employment in Radio and TV, and Music and the Performing Arts, is above the average for the creative industries but below that for all industries in London.

The proportion of women in occupations in the Film and Video sector is so low as to be statistically insignificant.

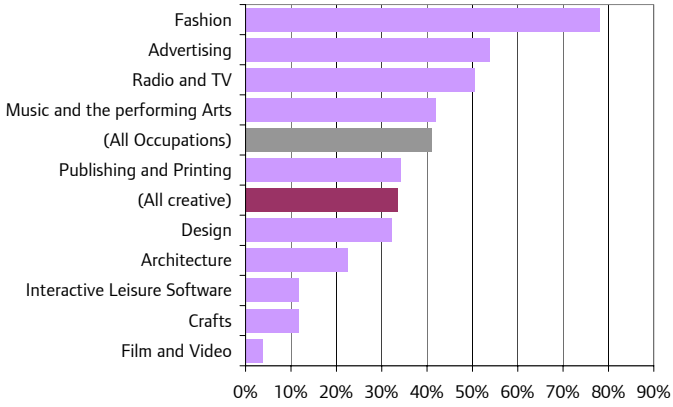
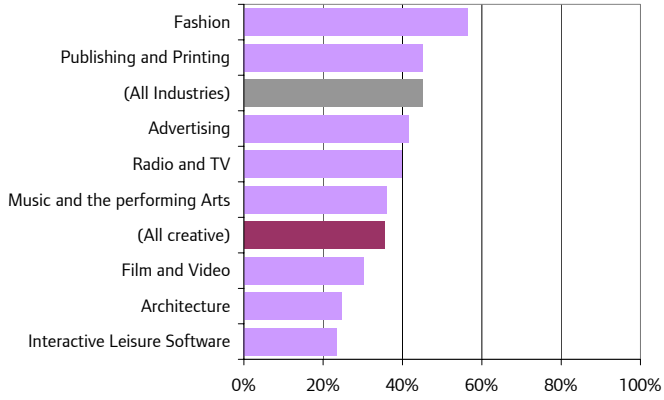


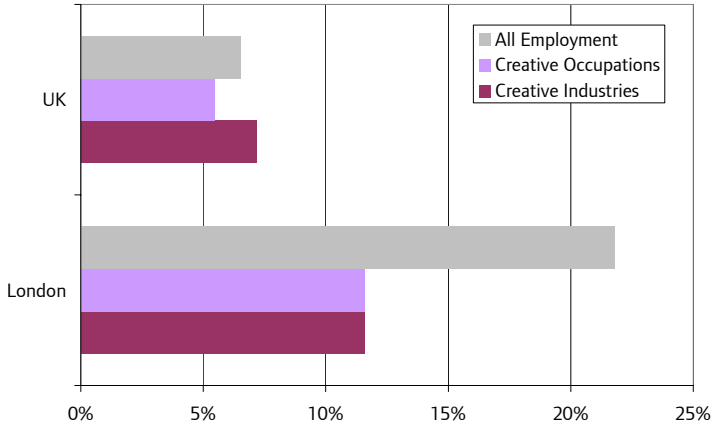
Chart 1.6c: Proportion of women working in creative industries in London



Fashion is the only sector where women's share of employment is above average for both creative industry employment and in the creative occupations.

1.7 Ethnicity

Chart 1.7a: BME employees in London's creative industries



The proportion of workers of black or ethnic minority (BME) origin in London's creative industries is 11.6 per cent, only around half the proportion in London's workforce as a whole, which is 22.8 per cent. The same is true for creative occupations.

In the UK there is less under-employment of BME workers within the creative occupations although at 5.5 per cent the proportion is still below the national average of 6.5 per cent. In the creative industries in the UK, the proportion of BME workforce jobs, at 7.2 per cent, is above the national average of 6.5 per cent. These are quite marked differences for London relative to the UK, which we cannot yet fully explain.

2. How the figures are produced

2.1 An evidence-based approach to creativity

The DCMS Evidence Toolkit and mapping documents do not pretend to decide the intrinsic merit of a painting or performance. They set out to identify the resources which society puts into bringing them to their audience. This begins with a judgement about which activities are really involved in this process, and what money is really paid for their activities. The DCMS's 2001 mapping document defined the creative sector as:

> those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property (DCMS, 1998)

Working with stakeholders and experts in the field and in the Regional Cultural Consortia, DCMS drew up a procedure that has become the standard for identifying:

- industries whose main business is creative (the creative *industries*)
- people whose work is by its nature creative (creatively *occupied* workers)

On this basis it produced an initial list of 13 creative industries: Advertising, Architecture, Arts and Antiques, Crafts, Design, Designer Fashion, Software and Computer Services, Music, The Visual and Performing Arts, Publishing, Radio and TV, and Video, Film and Photography. It selected codes from the ONS's Standard Industrial Classification (SIC) to identify the creative industries, and from the Standard Occupational Classification (SOC) to identify the creative occupations.

In 2002 GLA Economics set out to measure London's creative employment, output and productivity using these classifications and published its results in *Creativity: London's Core Business*. Using definitions supplied by DCMS, it calculated how many people were working in London in each of the subsectors (industries) identified by the DCMS mapping document. These were reduced to 11 subsectors to render them compatible with ONS output data. Music and the Performing Arts were grouped together and the software sections were combined into one Interactive Leisure Software subsector. Using data from the ONS, GLA Economics estimated the output (value added) in these industries and, in this way, made a first estimate of productivity (output per employee).

2.2 Previous findings

The results of *Creativity: London's Core Business* provided strong support for the GLA group's view that the creative sector is an important part of London's economy and quality of life. *Creativity: London's Core Business's* view was that:

> The creative industries add £21 billion annually to London's output, more than all the production industries combined and second only to Business Services at £32 billion.

Where there is money, jobs are never far behind. The report found that:

> The creative industries as a whole represent London's third largest sector of employment, with 525,000 people working either directly in the creative industries or in creative occupations in other industries … [T]he creative industries are London's second biggest source of job growth, contributing roughly one in every five jobs.

The report also found that London's creative output per job was growing at rates that appeared to outstrip most of London's other industries:

> London's creative industries are at the centre of a productivity revolution, expanding both jobs and wealth, with employment up by five per cent per year, output by 8.5 per cent and productivity by four per cent between 1995 and 2000.

London was the focus of this growth, with a job growth rate higher than any other region, except the South East, and accounting for over a quarter of the UK's creative jobs. It was important for policy to know why such a high-cost area was the location of choice for creative industry investment and growth. GLA Economics noted that:

> The success of the creative industries proves that London offers what is needed for a new high-growth, value-added sector. London's costs are high; its winners are those who provide what the customer wants. The keys to achieving this are the supply side advantages that London offers. London's prime asset is its social capital: a highly skilled, diverse and multicultural workforce. It does business in the world's language – and speaks another 300. Only New York has comparable advantages. To utilise human capital efficiently, proximity is decisive.

The report concluded that:

> London is a creative factory; it gives access to the entire range of services required to deliver customised products on a large scale to tight deadlines.

London's creative sector was evidently a major part of its future. Continued monitoring of its performance and needs was vital to its economic health.

2.3 Rethinking creativity

In the course of studying creativity, we had to think more carefully about what it really is. As is normal in the social sciences, research begins with an initial hypothesis – in this case, that the core element of creativity is individual talent and intellectual property. It then establishes the facts on the basis of this, and returns to its original assumptions to revise them.

Creativity is a significant factor in London's economic revival and is not confined to the consumer leisure industries. For example, *Creativity: London's Core Business* noted the decision of Ford and Nissan to locate major automotive design centres in Soho.

Design, and design capacity, is in demand across the board in London's high-value added industries. Therefore, although this report is confined to the creative sector as originally defined, it has implications for a wider range of activities. The working definition of creativity in *Creativity: London's Core Business*'s was, therefore, an outcome of its results:

> The capacity to produce customised products on a large scale to tight deadlines.

Two changes are perhaps needed. First, there is a case for adding 'on the basis of an incomplete specification'. What distinguishes creative workers from mass producers is that they do not begin with a complete knowledge of the final result – only with an indication of the effect it is intended to have. The creativity consists not just in originating the product and bringing it to its audience, but in matching its performance to a vision of how the audience is intended to react.

Second, the words 'on a large scale' need to be qualified. It is true that new creative industries realise economies of scale, often by applying sophisticated and costly technology. However, what they often make is not large amounts of one thing, but small amounts of a large variety of things.

An emerging characteristic of the new sector is that, typically, it produces short runs with high value added. The architect is an archetype: each product – often each individual building – is a one-off project and, with modern computer techniques, are often fabricated from parts that are the very opposite of mass-produced. The same is true of the film-maker for whom a single film is the outcome. Or even more so for the performer or singer, for whom a single show is the outcome.

The clothing industry is segmenting in a way that illustrates this. The mass production, large-volume sector is almost entirely offshored and this lies behind the decline, for example, of the textile industry in the East Midlands. London is actually the region in which the clothing industry has declined the least. This is a lot to do with the growth of the designer fashion sector, which – as Italy's success testifies – requires a very different type of manufacturer; one that can produce a very precise kind of cloth for a very small range of outputs but with great flexibility and precision, to produce the precise effect that the designer requires for one particular item.

Of course, this has been facilitated by what can be termed the 'technology of mass dissemination' – the CD, the television, the multiscreen cinema, the internet, the high-street boutique, and not least, tourism itself. Indeed these technical innovations were decisive in transforming the market for creative products from a local to a global one.

But what distinguishes this kind of mass market is that its products stand or fall on their content, not their form. What matters is not the fact of making a television broadcast, but

what the programme contains, and whether people watch it. In singling out the creative industries, the aim is to identify the precise segment of the industry which originates and delivers this content.

If the origination of creative content is at the heart of the creative sector, the role of intellectual property can also be put in perspective. Intellectual property is central to the way in which many activities in this sector are financed; in effect, it gathers the income streams arising from mass dissemination and channels them to the organisers of the process. However, it has a very different significance in different sectors, particularly when very short runs of product are involved so that duplication is not an issue.

Thus a pirate copy of an architect's plans would be an unprofitable eccentricity. In the visual arts, copyright mainly serves not as a means of preventing intellectual theft but as a guarantee of authenticity; as a means that the consumer can be assured that the product really originates where it claims to. In designer fashion it serves more as a means of branding than a source of royalty income. It is only where origination feeds into a mass market in dissemination – particularly film, video, publication and software – that intellectual property as such is central to the actual definition of creative products.

The discussion above suggests a revised working definition of *the creative factor* in production as follows:

> The capacity to deliver customised products to tight deadlines from incomplete or abstract specifications.

The purpose of this definition is not to change the definition of the creative sector as such, which refers to a specific set of mainly consumer-oriented products. It is to provide a way of thinking about creativity that goes beyond the creative sector – particularly in the process of devising further refinements to the SOC – which will provide researchers with quantitative tools for studying, and measuring, the more general impact of design, creativity, and innovative activity in modern production as a whole, so that we can study, on the basis of evidence, questions such as 'what determines Nissan's decision to locate its design headquarters in Soho?'.

2.4 Creativity as a factor of production

The creative industries reverse traditional thinking about industrial paradigms. The classic work of Joan Woodward on the relation between technology and structure characterises three main types of production: unit production based on small volumes and wide variation; mass production (typically the car industry) with large volumes of similar or identical units; and process production (typically the chemical industry) with a wide range of products which are, however, produced continuously. To understand the significance of the changes, consider Table 2.4a adapted from Woodward (1968):

Table 2.4a: Joan Woodward's classification of technology

	Unit production	Mass production	Process production
Management	Low	High	Highest
Skill	High	Low	High
Complexity	Low	High	Low

Woodward's underlying conception, for many decades received opinion, is that small scale production is at the low-tech end of production requiring high skill but not much else, while the locus for large-scale capital investment in new technology is in large-scale production. Revising this in the light of what is now happening in the creative industries, the first column would have 'high' in every entry.

The creative industries now probably involve greater complexity, and greater management input, than any traditional sector. They are the antithesis of 'Fordism' – traditional mass production for a uniform consumer market – and, increasingly, the focus of large-scale capital investment. This suggests that important as are creative industries outputs – creative products – what may in the long-term be most notable are the creative industries processes involving innovation and customisation. Creative industries inputs – notably creative labour itself – may be the key factor.

This is why it is important to categorise, identify and quantify creative labour – a problem that preoccupies many researchers.[9] A more careful study of the occupational element of the DCMS shows that it can provide additional information, which we study in this report in addition to the ground covered in *Creativity: London's Core Business*.

What emerges is a clear difference between the pattern in London and the pattern outside London, which shows that London uses its creative workers in a distinctive way. Outside London, creatively occupied people outnumber creative industry jobs, by as much as eight to one in some regions. In London this is reversed, and creative industries account for 20 per cent more jobs than creative occupations in total. This difference shows up also in what is called *creative intensity* – the proportion of workers in the industry that are also creatively occupied. At one end of the scale, in the North-East, only 28 per cent of the workforce in the creative industries is actually engaged in creative occupations. This proportion, broadly, becomes higher and higher the closer to London, where it reaches 48 per cent. This ratio also distinguishes London from the rest of the Greater South East where creative sector employment is large and growing, but creative intensity is only 37 per cent.

This reverses the Fordist model, in which the factory is often associated with deskilling. The skills requirements of the traditional factory may be highly specialised but not highly qualified. In the creative sector, the premium is flexibility and diversity, since creative companies live or die on their ability to produce variety. London's creative industries appear

[9] See, for example, Florida (2004) and Landry (2002).

to be turning into *specialist employers of creative labour* – a trend which this report has attempted to quantify.

2.5 Industries and occupations

Creative sector employment has two components: *industrial* and *occupational*.

Industrial employment comprises people that work for enterprises in creative subsectors, such as advertising agencies, film companies, architectural partnerships, and so on. Occupational employment comprises people that have creative jobs, such as musicians, artists, games programmers, camera operatives, and so on.

The same job should not be counted twice. If, for example, a musician works in a music company then simply adding up the total industrial jobs and the total occupational jobs will count the job as part of both groups, once as a musician and again as a music employee.[10]

Creative sector employment in the DCMS and GLA framework is made up of two main parts:

1. Workforce jobs in the creative industries
2. Creatively occupied people who do not work for any creative industry.

Workforce employment is made up of two components

1. Employee (waged or salaried) jobs
2. Self-employed workers.

Creative occupations also include second jobs – for example, artists, writers or musicians that do not earn enough money from their creative activities to support themselves.

2.6 Where the data comes from

The data comes from three primary sources. Jobs and output data are available from the Annual Business Inquiry (ABI).[11] Job data also come from the Labour Force Survey (LFS). Output data for the Creative Sector is provided by the ONS as an annual supplement to the input-output (I-O) tables.

The ABI is an employer survey. It contains no information about occupations. The LFS is a household survey. It reports both occupation and industry; unfortunately, its estimates of workplace employment are inconsistent with those from the ABI, particularly for London (see *The GLA's Workforce Employment Series*, GLA 2003). If, therefore, the LFS is used to estimate London's workforce jobs, the results could not be compared with figures on workforce employment that use the ABI. For this reason the ABI is used as the sole source of

[10] A subtle point is that if the musician has a second job (for example, gigs by night) then this is included in the final count. Employment in the creative sector refers to the numbers of *jobs* rather than numbers of people. On average, about three per cent of London's workers have two jobs

[11] Until 1998, this information came from the ABI's precursor, the Annual Employment Survey (AES).

information on the employee component of industrial employment. The LFS is used to calculate self-employment, and the occupational component of overall creative sector employment.[12]

The GLA's estimates of workplace employment in the creative industries therefore differ from those of DCMS, which are derived entirely from the LFS. The GLA's estimates further differ from the DCMS estimates because they are workforce-based, not residential. They measure the number of people that work in the creative sector in London, not the number of Londoners that work in the creative sector.

Output data presents particular problems. The input-output data is preferable in principle, because it is prepared according to the rigorous standards of the System of National Accounts (SNA), which reconciles and cross-checks data from a variety of sources. However, its definition of the creative industries is less precise than those of the DCMS and does not include exactly the same companies (in general it tends to include more).

ABI data matches the DCMS categories precisely, but the data is less reliable as it merely reports what employers say and is not reconciled with information from any other source. Furthermore ABI data on output is available only for a few years, whereas the ONS's creative industry I-O series dates back to 1992. Since the GLA is particularly interested in long-term trends in productivity, it has chosen to use the ONS estimates of output.

It should be noted that DCMS and the GLA have published different estimates of creative industry output in the past. DCMS, the GLA and the ONS are working to resolve this and DCMS publishes comparisons from the two sources of information. As noted in the introduction, the GLA has not included any revised estimates of output or productivity in this report.

Of SICs and SOCs

The starting point of the whole analysis is a classification of industries and occupations which is used to decide which industries, and which activities, will be treated as creative. This is specified in detail by DCMS. For industries, the codes used are from the Standard Industrial Classification (SIC); for occupations, from the Standard Occupational Classification (SOC). They are listed in appendix 3.

During the period covered by the GLA figures, SIC classifications have not changed. The last change was in 1992; the next will be in 2007. The main reasons that creative industries data cannot be published for any earlier years is that SIC codes before 1992 did not disaggregate service sector industries sufficiently to be able to identify creative industries with adequate precision.

[12] An important exception is the calculation of creative intensity. The LFS is the source for both our estimates of creative industry employment, and for our estimates of creative occupations in this case, since otherwise major errors would be introduced given the divergence of ABI and LFS estimates of workplace employment in London.

Occupational classifications changed in 2000 and became operative in the 2001 LFS. Unfortunately there was no overlap period in which both classifications were available simultaneously; therefore the GLA and DCMS have taken special measures to ensure that estimates prepared from the two different classifications are compatible. This is explained in Appendix 2.

2.7 Estimating industrial employment

Table 2.7a: Employment estimates from the ABI and the LFS – employee jobs,2002

	Thousands of jobs	
	ABI	**LFS**
Advertising	33,100	41,800
Architecture	59,800	65,400
Art/antiques trade (Missing from LFS data because of coding inadequacies)	2,800	-
(Crafts)	-	-
(Design)	-	-
Fashion	52,100	40,100
Interactive leisure software	61,100	75,000
Video, film and photography	20,900	14,800
Radio and TV	64,000	69,200
Music and the visual and performing arts	40,500	54,700
Publishing	39,900	83,400
TOTAL	374,500	444,400

Table 2.7a shows the primary estimates of industrial employment from the ABI and the LFS respectively.

The results are sometimes quite different, for example for Publishing where the LFS estimate for London is nearly twice as large.[13] Since all other workforce data for London is compiled from the ABI, using the LFS estimates of industrial employment would be inconsistent and lead to estimates of employment that could not be compared with other sectors.

The LFS data is therefore not directly used as such, but is printed here for information. For two sectors (crafts and design) there is no industrial component at all; these sectors are defined only by their occupational components.

The starting point for the GLA calculation is the leftmost column of Table 2.7a – the ABI estimate of creative industry employment. These are the figures published in the tables and charts as 'employee jobs' in the creative industries.

[13] Confirming the discrepancies between the two primary sources which was referred to earlier. However, their aggregate estimates of employee jobs over the whole creative sector is fairly close. This is stable over time.

A further adjustment is made to include the self-employed, which are added from the LFS. This is because the ABI, as an employer survey, contains no information about self-employment and this must be obtained from the LFS. Table 2.7b shows the self-employed component of workforce employment in the creative sector for 2002.

Table 2.7b: Workforce employment in the creative industries

	Thousands of jobs		
	Employees (ABI)	Self-employed (LFS)	Total
Advertising	33,100	-	39,400
Architecture	59,800	11,100	70,900
Art/antiques trade	-	-	-
(Crafts)	-	-	-
(Design)	-	-	-
Fashion	52,100	-	57,300
Interactive leisure software	61,100	9,600	70,800
Video, film and photography	20,900	-	27,900
Radio and TV	64,000	13,800	77,900
Music and the visual and performing arts	40,500	29,000	69,500
Publishing	39,900	12,000	51,900
TOTAL	374,500	94,200	468,700

Counts and coefficients: restricting the subsectors

The existing SIC codes are insufficiently precise to identify creative subsectors without including, in at least some of them, activities that are not creative. A typical example is the Designer Fashion subsector, which includes the SIC codes shown in Table 2.7c.[14]

Table 2.7c: some SIC codes entering the definition of 'Fashion'

18.1	Manufacture of leather clothes
18.21	Manufacture of workwear
18.22	Manufacture of other outerwear
18.23	Manufacture of underwear

These are clearly not all part of the designer fashion industry. If the SIC codes discriminated enough between different parts of the clothing industry, they could be used to single out only those enterprises belonging to designer fashion. Instead, DCMS assumes that only 0.5 per cent of these workers are actually employed in the designer fashion sector as such. It

[14] Both the GLA and the DCMS definition of Designer Fashion is derived from a substantially larger list of SICs of which Table 2.7c contains only a subset, to illustrate the nature of the differences. Appendix 4 contains a full list of all SIC and SOC codes used in this report.

multiplies each of the ABI estimates of employment shown above by 0.5 per cent, and then adds them up to arrive at 'designer fashion' employment.

GLA Economics does not apply the same coefficients as DCMS in every case, because of London's specificities. The bulk of the clothing trade in London is judged as part of the production chain for creative fashion as costs in London are so high.

This judgement is obviously subject to refinement and is one of the reasons that GLA Economics worked with the LDA to produce the extensive report on the creative sector referred to in the introduction. However, it remains the case that GLA estimates of industrial employment differ from those of the DCMS. This approach is taken to reflect, as accurately as possible, the specific conditions of London.

In order to compare London with other regions, and to estimate UK creative employment, the coefficients provided by DCMS are applied outside London, since the specific conditions of London are unlikely to hold in the other regions.

This means that estimates of London's creative employment are likely to be higher than would be the case, if the DCMS coefficients were applied. This is the most significant in the Fashion and Music sub-sectors. However, the qualitative relations between London and the regions identified in this report hold good whichever set of coefficients are applied.

Creative occupations

Table 2.7d shows the number of people that were creatively occupied in London in 2002, according to the LFS.

Table 2.7d: Number of creatively occupied persons in London in 2002

London	Thousands of jobs
Advertising	69,900
Architecture	19,800
(Arts)	-
Crafts	24,900
Design	28,800
Fashion	11,700
Interactive Leisure Software	87,600
Film and Video	14,700
Radio and TV	26,900
Music and the performing Arts	48,200
Publishing and Printing	37,500
TOTAL	370,300

However, many of these people have already been accounted for in the industry employment figures, since they may actually work in a creative industry. Therefore, the LFS is queried

separately to find out those people that are creatively occupied but do not work in any creative industry. Table 2.7e provides estimates, taken from the LFS, of:

1. Creatively-occupied people *inside* the creative industries (O∩~I, in logical notation)
2. Creatively-occupied people *outside* the creative industries (O∩I, in logical notation).

Table 2.7e: Creative industry occupational component, 2002

Occupations		**(O∩I)**	**(O∩~I)**
Main job	**Total in creative occupations**	**SOC within CI (by occupation)**	**SOC outside CI (by occupation)**
Advertising	69,900	26,100	43,800
Architecture	19,800	16,800	-
(Arts)	-	-	-
Crafts	24,900	-	24,800
Design	28,800	18,200	10,600
Fashion	11,700	9,100	-
Interactive Leisure Software	87,600	29,900	57,700
Film and Video	14,700	13,900	-
Radio and TV	26,900	24,600	-
Music and the performing Arts	48,200	30,500	17,700
Publishing and Printing	37,500	20,800	16,700
(Creative Occupations Total)	370,300	188,300	182,000

The first of these (the third column in table 2.7e) is already included in the industrial component of employment and is therefore not included in final employment figure. It is however used to estimate what we have termed 'creative intensity' – the proportion of workers in the creative industries that are themselves creatively occupied. The second part (the last column in table 3.4) shows everyone that has not been so far included, since they work outside the industry. This is the occupational component, and is added to the industrial component to estimate the employment total.

One small further addition is made: people whose second job is creative, but whose main job is not in a creative industry.

The total number of creative sector jobs, in 2002, is therefore as follows

Workforce jobs: 374,535 employees + 94,265 self-employed	=	468,799
In creative occupation outside creative industry in main job:		163,233
In creative occupation outside creative industry in second job:		10.676
Total		**642,708**

Several of the estimates fall below the threshold of statistical reliability for LFS data, which for this dataset is 8,000, and have been suppressed. Sectoral estimates of the occupational

component cannot be relied on. Where this occupational element is small in relation to the industrial component, estimates of sectoral employment (industrial plus occupational) may remain within the limits of statistical validity. Most importantly, when the results are aggregated to a total, this total is itself well above the reliability threshold, so that we consider this final result (the total occupational component of creative sector employment) to be statistically admissible.

A warning on double counting

The method used above ensures that no *creative* job is counted twice. However, in the national statistics, creative industries are not (yet) separated out from all other sectors in the way that, for example, manufacturing or finance and business services are. Every creative job is therefore included somewhere or other in one of the main SIC classifications such as manufacturing, finance and business and public services.

Therefore, some prudence is needed in making comparisons. For example, chart 1.4b compares creative employment with the size of other sectors such as finance and business. This is a legitimate comparison; however, these sectoral numbers could not be added up to provide total London employment, since it would count all the creative jobs twice. This will be important in the transition to the new DCMS Evidence Toolkit framework. Some of the creative jobs will also appear in tourism or sport, and it will be important to avoid counting them twice once attempts are made to estimate total cultural employment. The DCMS Evidence Toolkit allows for this, but has to be used properly to provide valid results for the reasons just given.

3. Results

In the tables below, figures below the threshold of statistical reliability have been suppressed. #N/A signifies that the data is not available.

Summary UK

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
LFS workplace employees	1,313,600	1,371,700	1,415,900	1,470,700	1,549,600	1,584,100	1,581,100	1,604,700	1,574,800	1,590,500
ABI workplace employees	#N/A	681,500	700,400	735,900	744,000	790,300	822,300	854,300	823,100	#N/A
Self-Employed	304,500	315,900	324,900	351,800	371,800	379,700	351,500	351,500	350,500	379,900
Industry (I): ABI workplace employees + self-employed	#N/A	997,500	1,025,300	1,087,800	1,115,800	1,170,000	1,173,900	1,205,800	1,173,600	379,900
Creative occupations (O)	1,295,400	1,337,300	1,337,800	1,390,400	1,414,900	1,498,200	1,519,700	1,570,800	1,555,300	1,618,800
Occupations outside industry (O∩~I)	889,300	912,700	898,900	929,000	924,500	958,300	968,200	1,067,800	1,071,000	1,104,500
Sector (I+O∩~I): Industry plus occupations outside industry)	#N/A	1,910,300	1,924,200	2,016,800	2,040,400	2,128,300	2,142,200	2,273,700	2,244,600	#N/A
Creatively occupied within industry (O∩I)	471,200	493,200	507,900	527,500	556,700	605,900	607,700	589,200	581,200	612,100
Intensity (O∩I/I)	36%	36%	36%	36%	36%	38%	38%	37%	37%	38%

Summary London

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
LFS workplace employees	336,400	359,400	388,500	411,000	443,100	437,900	418,500	461,900	444,400	432,600
ABI workplace employees	#N/A	311,200	324,400	346,900	352,400	367,000	380,000	399,200	374,500	#N/A
Self-Employed	86,700	87,500	99,800	102,200	120,900	121,500	95,500	95,700	94,200	103,700
Industry (I): ABI workplace employees + self-employed	#N/A	398,700	424,300	449,100	473,400	488,500	475,600	495,000	468,700	103,700
Creative occupations (O)	#N/A	562,700	565,700	597,300	639,100	667,600	640,900	690,800	650,800	#N/A
Occupations outside industry (O∩~I)	304,100	336,200	327,400	331,000	368,200	393,300	364,800	394,900	370,300	378,300
Sector (I+O∩~I): Industry plus occupations outside industry)	143,900	164,000	141,300	148,100	165,700	179,000	165,200	195,800	182,000	188,500
Creatively occupied within industry (O∩I)	169,500	183,300	196,900	194,100	214,500	225,800	210,700	214,200	207,100	206,500
Intensity (O∩I/I)	50%	51%	51%	47%	48%	52%	50%	46%	47%	48%

Employee jobs (ABI): UK

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	#N/A	67,400	75,900	77,600	83,700	84,500	94,500	90,800	84,300
Architecture	#N/A	131,100	125,200	121,300	115,000	116,500	120,000	122,100	119,800
Art/antiques trade	#N/A	14,700	16,600	15,500	16,000	16,300	17,500	18,800	19,300
(Crafts)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
(Design)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fashion	#N/A	86,300	80,600	110,800	104,200	108,000	111,900	109,500	106,100
Interactive leisure software	#N/A	69,400	77,200	78,700	90,700	102,400	115,300	123,700	116,400
Video, film and photography	#N/A	36,700	43,100	44,400	44,600	45,100	46,300	49,300	49,300
Radio and TV	#N/A	54,000	55,900	147,300	150,000	153,200	151,200	157,100	153,100
Music and the visual and performing arts	#N/A	87,100	82,700	85,200	85,000	95,600	97,100	104,600	104,800
Publishing	#N/A	134,500	142,900	54,800	54,300	68,200	68,100	77,900	69,700
TOTAL	#N/A	681,500	700,400	735,900	744,000	790,300	822,300	854,300	823,100

Employee jobs (ABI): London

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	#N/A	26,400	32,000	35,700	35,700	34,400	38,200	38,000	33,100
Architecture	#N/A	58,600	57,900	59,600	56,100	55,200	59,000	60,100	59,800
Art/antiques trade	#N/A	-	-	-	-	-	-	-	-
(Crafts)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
(Design)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fashion	#N/A	49,100	47,400	63,000	60,700	59,900	59,700	57,500	52,100
Interactive leisure software	#N/A	36,700	41,100	40,200	47,100	51,700	62,500	67,000	61,100
Video, film and photography	#N/A	16,000	17,700	20,100	21,500	23,600	20,500	22,200	20,900
Radio and TV	#N/A	30,600	31,500	60,300	62,700	64,300	63,100	66,000	64,000
Music and the visual and performing arts	#N/A	35,600	34,400	33,900	34,300	40,100	39,000	43,500	40,500
Publishing	#N/A	55,500	59,400	31,300	31,700	34,800	35,100	41,500	39,900
TOTAL	#N/A	311,200	324,400	346,900	352,400	367,000	380,000	399,200	374,500

Source: Annual Business Enquiry

Self-employment UK

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	13,400	15,400	19,100	16,100	13,500	16,700	13,400	12,900	15,700
Architecture	77,500	86,100	87,700	87,800	92,000	90,400	86,800	84,000	78,500
Art/antiques trade	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
(Crafts)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
(Design)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fashion	37,600	37,700	29,200	32,000	33,500	37,000	33,000	33,600	28,700
Interactive Leisure Software	23,200	22,900	29,900	38,300	46,400	50,400	45,500	43,600	45,700
Film and Video	9,400	10,600	-	11,400	12,500	9,300	10,000	10,500	13,300
Radio and TV	34,700	28,700	26,300	29,100	35,500	34,800	31,500	33,600	35,700
Music and the performing Arts	74,200	82,300	90,900	102,700	100,300	105,600	100,100	105,100	100,700
Publishing and Printing	34,000	32,000	34,200	34,100	37,700	35,300	30,900	27,900	31,900
Creative Industries	304,500	315,900	324,900	351,800	371,800	379,700	351,500	351,500	350,500

Self-employment London

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	-	-	-	-	-	-	-	-	-
Architecture	16,300	20,100	20,900	13,000	16,500	17,100	14,200	12,000	11,100
Art/antiques trade	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
(Crafts)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
(Design)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fashion	8,700	10,700	-	8,700	13,700	11,900	-	-	-
Interactive Leisure Software	-	-	9,100	10,200	11,300	14,600	9,900	10,200	9,600
Film and Video	-	-	-	-	9,500	-	-	-	-
Radio and TV	10,100	10,000	10,900	9,900	16,000	16,900	13,300	12,600	13,800
Music and the performing Arts	26,900	24,900	32,600	36,400	35,000	36,100	31,300	36,200	29,000
Publishing and Printing	12,500	9,300	11,300	12,200	15,300	13,500	11,200	8,700	12,000
Creative Industries	86,700	87,500	99,800	102,200	120,900	121,500	95,500	95,700	94,200

Source: Labour Force Survey

Workforce UK

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	#N/A	82,800	95,000	93,700	97,200	101,200	108,000	103,800	100,000
Architecture	#N/A	217,200	213,000	209,100	207,100	206,900	206,900	206,200	198,300
Art/antiques trade	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
(Crafts)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
(Design)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fashion	#N/A	124,100	109,900	142,800	137,700	145,100	144,900	143,100	134,800
Interactive Leisure Software	#N/A	92,300	107,100	117,100	137,100	152,800	160,900	167,300	162,100
Film and Video	#N/A	47,300	50,300	55,800	57,200	54,400	56,300	59,800	62,600
Radio and TV	#N/A	82,700	82,200	176,500	185,600	188,100	182,700	190,700	188,800
Music and the performing Arts	#N/A	169,500	173,600	188,000	185,300	201,200	197,300	209,800	205,500
Publishing and Printing	#N/A	166,500	177,200	88,900	92,100	103,500	99,000	105,900	101,700
Creative Industries	#N/A	997,500	1,025,300	1,087,800	1,115,800	1,170,000	1,173,900	1,205,800	1,173,600

Workforce London

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	#N/A	28,400	36,100	39,600	39,000	39,600	41,500	42,100	39,400
Architecture	#N/A	78,800	78,800	72,600	72,700	72,400	73,200	72,200	70,900
Art/antiques trade	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
(Crafts)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
(Design)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Fashion	#N/A	59,900	54,500	71,700	74,500	71,900	67,700	63,600	57,300
Interactive leisure software	#N/A	41,000	50,200	50,500	58,400	66,300	72,400	77,300	70,800
Video, film and photography	#N/A	22,000	21,400	27,800	31,000	29,600	24,800	27,900	27,900
Radio and TV	#N/A	40,700	42,500	70,200	78,700	81,200	76,400	78,700	77,900
Music and the performing arts	#N/A	60,500	67,100	70,400	69,300	76,200	70,300	79,800	69,500
Publishing	#N/A	64,800	70,700	43,600	47,000	48,400	46,300	50,300	51,900
Creative Industries	#N/A	398,700	424,300	449,100	473,400	488,500	475,600	495,000	468,700

Source: Sum of ABI employees and LFS self-employed

Creative Occupations in the UK (Total)

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	185,900	197,900	190,900	188,700	192,000	228,800	208,900	211,200	195,700
Architecture	68,000	73,500	68,500	67,100	71,700	62,700	76,200	76,700	73,500
(arts)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Crafts	373,200	358,400	346,300	338,300	339,800	341,500	321,100	314,200	314,300
Design	134,100	134,300	126,900	141,100	147,000	160,400	174,300	183,600	183,300
Fashion	28,700	40,900	42,200	43,100	39,800	32,100	38,900	38,500	42,400
Interactive Leisure Software	156,800	171,000	190,700	226,100	259,200	296,000	316,400	357,900	379,300
Film and Video	53,000	47,100	45,500	47,600	45,400	42,600	52,700	54,000	45,300
Radio and TV	55,400	55,500	62,100	56,300	38,000	48,900	54,800	54,700	54,500
Music and the performing Arts	91,700	108,200	111,800	124,100	127,300	134,600	126,700	130,800	127,100
Publishing and Printing	148,100	150,100	152,600	157,600	154,400	150,100	149,100	148,900	139,500
All creative occupations	1,295,400	1,337,300	1,337,800	1,390,400	1,414,900	1,498,200	1,519,700	1,570,800	1,555,300

Creative Occupations in London (Total)

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	85,200	100,100	80,000	79,100	81,800	100,600	79,400	74,900	69,900
Architecture	11,700	15,000	19,700	11,200	17,500	14,500	17,800	17,100	19,800
(arts)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Crafts	29,300	35,000	22,100	18,900	29,900	31,900	24,800	27,200	24,900
Design	43,000	37,200	35,600	40,600	50,300	48,600	48,200	37,500	28,800
Fashion	9,600	20,700	23,400	16,500	17,300	16,100	17,100	10,600	11,700
Interactive Leisure Software	32,100	36,800	44,300	53,600	60,600	70,000	67,100	92,100	87,600
Film and Video	17,300	13,600	14,700	16,400	16,700	14,200	14,500	18,300	14,700
Radio and TV	11,000	-	8,800	-	-	-	-	24,200	26,900
Music and the performing Arts	28,600	35,400	38,800	42,800	46,000	50,200	44,200	57,100	48,200
Publishing and Printing	35,700	35,900	39,500	45,900	43,300	41,600	45,400	35,400	37,500
All creative occupations	304,100	336,200	327,400	331,000	368,200	393,300	364,800	394,900	370,300

Source: Labour Force Survey

Creative occupations in the UK outside the creative industries

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	108,700	123,900	109,200	125,300	120,400	134,900	129,500	164,300	150,900
Architecture	28,400	26,600	27,600	26,000	25,800	22,600	26,500	23,800	25,900
(Arts)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Crafts	347,600	339,300	331,300	322,500	330,200	333,600	314,200	317,700	318,300
Design	54,600	54,300	47,500	52,800	57,200	58,200	67,600	97,500	106,000
Fashion	14,600	11,700	11,900	-	-	-	11,900	18,700	19,600
Interactive Leisure Software	108,000	111,100	120,300	147,500	163,400	176,200	194,400	241,600	254,800
Film and Video	12,600	17,400	18,700	16,900	12,100	11,700	17,700	17,200	11,800
Radio and TV	52,700	52,800	58,200	54,800	38,900	45,100	46,500	21,300	14,400
Music and the performing Arts	63,800	73,100	70,600	69,600	71,300	74,700	67,900	68,700	80,200
Publishing and Printing	97,800	102,200	103,200	105,400	96,800	94,200	91,400	96,600	88,600
All creative occupations	889,300	912,700	898,900	929,000	924,500	958,300	968,200	1,067,800	1,071,000

Creative occupations in London outside the creative industries

	1,994	1,995	1,996	1,997	1,998	1,999	2,000	2,001	2,002
Advertising	36,700	52,700	39,600	48,100	44,500	50,100	38,300	50,500	43,800
Architecture	-	-	-	-	-	-	-	-	-
(Arts)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Crafts	30,500	36,500	23,000	18,400	31,000	33,800	25,100	26,600	24,800
Design	9,500	8,500	8,400	8,800	12,000	12,700	13,300	8,600	10,600
Fashion	-	-	-	-	-	-	-	-	-
Interactive Leisure Software	23,900	23,300	26,600	31,300	35,800	40,100	42,000	63,800	57,700
Film and Video	-	-	-	-	-	-	-	-	-
Radio and TV	8,700	-	-	-	-	-	-	-	-
Music and the performing Arts	8,000	11,100	9,600	10,100	12,800	14,400	13,700	19,200	17,700
Publishing and Printing	14,600	14,700	16,600	19,800	16,700	17,100	17,200	11,700	16,700
All creative occupations	143,900	164,000	141,300	148,100	165,700	179,000	165,200	195,800	182,000

Creative Sector Employment Total UK

	1,994	1,995	1,996	1,997	1,998	1,999	2,000	2,001	2,002
Advertising	#N/A	206,700	204,300	219,100	217,700	236,100	237,600	268,100	250,900
Architecture	#N/A	243,800	240,600	235,100	232,900	229,500	233,500	230,000	224,200
(Arts)	#N/A	14,700	16,600	15,500	16,000	16,300	17,500	18,800	19,300
Crafts	#N/A	339,300	331,300	322,500	330,200	333,600	314,200	317,700	318,300
Design	#N/A	54,300	47,500	52,800	57,200	58,200	67,600	97,500	106,000
Fashion	#N/A	135,900	121,800	150,500	145,700	151,600	156,900	161,900	154,400
Interactive Leisure Software	#N/A	203,500	227,500	264,700	300,600	329,100	355,300	408,900	417,000
Film and Video	#N/A	64,700	69,100	72,800	69,300	66,200	74,100	77,100	74,500
Radio and TV	#N/A	135,600	140,500	231,300	224,500	233,200	229,200	212,000	203,300
Music and the performing Arts	#N/A	242,700	244,200	257,700	256,700	276,000	265,300	278,500	285,700
Publishing and Printing	#N/A	268,700	280,400	194,400	189,000	197,800	190,500	202,500	190,300
All creative sector	#N/A	1,910,300	1,924,200	2,016,800	2,040,400	2,128,300	2,142,200	2,273,700	2,244,600

Creative Employment Total London

	1,994	1,995	1,996	1,997	1,998	1,999	2,000	2,001	2,002
Advertising	#N/A	81,100	75,800	87,800	83,500	89,800	79,800	92,600	83,300
Architecture	#N/A	81,000	82,300	75,200	75,900	74,900	77,600	74,900	74,200
(Arts)	#N/A	-	-	-	-	-	-	-	-
Crafts	#N/A	36,500	23,000	18,400	31,000	33,800	25,100	26,600	24,800
Design	#N/A	8,500	8,400	8,800	12,000	12,700	13,300	8,600	10,600
Fashion	#N/A	65,600	58,900	71,700	78,300	74,000	73,300	67,000	60,400
Interactive Leisure Software	#N/A	64,300	76,800	81,800	94,300	106,400	114,400	141,200	128,500
Film and Video	#N/A	25,500	24,500	31,300	32,300	31,500	27,800	32,500	29,600
Radio and TV	#N/A	46,100	48,800	75,500	83,200	85,200	78,800	83,100	80,200
Music and the performing Arts	#N/A	71,600	76,700	80,600	82,200	90,700	84,000	99,000	87,200
Publishing and Printing	#N/A	79,600	87,300	63,400	63,800	65,500	63,500	62,000	68,700
All creative sector	#N/A	562,700	565,700	597,300	639,100	667,600	640,900	690,800	650,800

Appendix 1: Transition to SOC2000

Introduction

In 2000 the ONS revised its standard classification of occupations (Standard Occupational Codes – SOC2000), superseding the previous (SOC1990) classification.

The re-classification affects the measurement of employment in the creative sector. A robust indicator of sector employment should not reflect changes which arise only because jobs have been reclassified. This appendix assesses some of the problems arising from the adoption of SOC2000 and examines possible solutions.

Where discrepancies arise

The GLA estimates creative sector employment using the standard introduced by the DCMS in its year 2001 mapping document, documented in its July 2002 Fact File and in *Economic Estimates*. This has two components:

1. Jobs in the creative industries
2. People with creative occupations who work outside the creative industries.

The first component is measured using DCMS-defined SIC (Standard Industrial Classification) codes. The second is measured using DCMS-defined SOC codes. The primary source for the first component is the ABI; for the second, it is the LFS.

From the first quarter of 2001 onwards, the LFS started using SOC2000 and stopped using SOC1990. DCMS supplies a list of codes that map both SOC1990 and SOC2000 classifications into its creative sub-sectors, as shown in Table A1.1

Table A1.1: Creative Occupational Employment [COE] ('000s).

						SOC 1990		SOC 2000
	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	62	62	60	61	68	68	213	204
Architecture	74	65	67	71	66	77	79	74
Crafts	131	128	127	127	126	122	319	312
Design	119	119	128	132	146	162	188	190
Leisure Software	280	316	364	415	454	512	363	377
Fashion	10	11	11	10	9	11	40	41
Music	133	142	153	157	159	164	142	139
Publishing/ Printing	236	242	244	239	237	235	152	138
Radio and TV	23	27	23	16	17	23	56	56
Film and Video	46	46	48	46	43	55	57	46
(Creative Total)	1,113	1,157	1,225	1,274	1,325	1,429	1,610	1,577

It is clear the codes do not precisely map onto each other. The shaded cells show significant jumps up or down. Table A1.2 shows the growth rates in these same years and also the annualised growth over the years before the transition. Again, anomalous growth rates are shaded grey. A classification change which to be corrected in order to construct consistent time series data.

Table A1.2: COE annual growth rates (anomalous growth shaded grey)

	1996 %	1997 %	1998 %	1999 %	2000 %	*Annualised growth 1995 to 2000 %*	2001 %	2002 %
Advertising	-1	-2	2	10	0	*1.7*	215	-4
Architecture	-12	3	7	-8	18	*0.8*	2	-6
Crafts	-2	-1	1	-1	-3	*-1.3*	161	-2
Design	0	7	3	11	10	*6.3*	17	1
Leisure Software	13	15	14	9	13	*12.8*	-29	4
Fashion	6	2	-8	-13	30	*2.5*	256	2
Music etc	7	8	3	1	4	*4.3*	-14	-2
Publishing etc	3	1	-2	-1	-1	*-0.1*	-35	-10
Radio and TV	19	-15	-32	10	32	*0.2*	146	0
Film and Video	1	4	-5	-5	27	*3.8*	4	-19
(Creative Total)	4	6	4	4	8	*5.1*	13	-2

The ONS cross-mapping exercise

At the time of the changeover, no arrangements were made for transitional reporting. There are no LFS quarters in which both SOC1990 codes and the SOC2000 codes were directly recorded. However, an ONS study (ONS 2000b) sought to measure the relation between the two codes by retrospectively recoding the original responses in primary data. The study estimates the proportion of each SOC1990 category which, had it been code using SOC2000 criteria, would have been allocated to each SOC2000 category. It provides this information for three sets of primary data: the 1991 census, to a single LFS quarter in 1996, and to a single LFS quarter in 2000.[15]

In principle the classification error arising from the transition could be corrected using the ONS study. However, as Table A1.3 shows, this results in estimates of COE whose growth rates, in the transition year, diverge even more from the past average than untransformed estimates based on the DCMS's SOC1990 codes.

[15] For brevity this is called the *ONS crossmapping exercise*, though ONS does not use this term.

Table A1.3: summary of growth estimates in Creative Occupational Employment (COE)

	Average annual growth1995-2000 %	Annual growth in transition year 2000/01 %
SOC1990 actual	4.44	12.67
91 census mapping	3.52	27.69
96 LFS mapping	3.35	46.17
00 LFS mapping	2.67	40.80

This paper employs an alternative approach, which is to use the time-series properties of the data.

Statistical framework

Revise or constrain?

In theory, the SOC1990 estimates could be used as the best fit, so that the SOC2000 estimates introduce a discrepancy not previously present. In that case, estimates made prior to 2001 would not need to be transformed but anything estimated after that would have to be constrained to match previous results.

It makes more sense to proceed on the basis that the SOC2000 estimates are the best fit. This means previous estimates of creative sector employment have been *revised*, in most cases upwards. This is what GLA Economics has done in its Creative Industry Employment estimates for 2003. These estimates therefore supersede previous estimates, notably those published in *Creativity: London's Core Business*.

These revisions to the SOC have no effect on estimates of output, or GLA estimates of productivity, which use ABI data alone. They affect only the occupational component of the employment generated by creative activity, as defined by the DCMS.

The outcome of this splicing exercise is a historical revision to previous estimates constructed using SOC1990 codes, known as backcasting.

Possible statistical models

We are trying to measure the 'true' creative occupational employment, which is defined as that which would have been obtained from primary data if the SOC2000 codes were available throughout. From 2001 onwards this can be obtained directly; prior to 2001 it must be estimated.

This true measure, referred to as O, has two components:

1. The measure that obtained from primary data, called O_P
2. A re-classification effect $u(O)$.

A multiplicative model is assumed so that this is best written as:

$$O = u(O) \times O_P$$

From 2001 onwards $\underline{u}(O) = 1$, and before 2001 it is unknown. The problem is to estimate it. Two possible approaches are used:

- Model 1 based on the rate of growth of occupational employment
- Model 2 based on the growth of *creative intensity*; occupational employment divided by industrial employment.

Model 1: occupational growth

u can be estimated from the time-series properties of O alone. The simplest such model is to suppose a constant growth rate, and find out what it is:

$$\frac{\Delta O}{O} = \alpha = \text{constant}$$

This is unlikely over any period including 2002, in which year employment turned downwards almost across the board. However, it may be a workable assumption over the period 1995-2001, which were years of more or less uniform expansion in the creative sector.

Some relation between occupation and employment in the creative sector can be estimated (using SIC 1992 codes in conjunction with the ABI). Referring to the latter as I, the simplest such model is:

$$\frac{O}{I} = \beta = \text{a constant}$$

However, the structure of the creative sector is changing and, over time, O/I is changing. Moreover, O/I varies markedly from one region to another and this procedure will accentuate regional bias. This method is also not available for the two sectors (Design, Crafts) for which no industry classifications are available.

Model 2: creative intensity

A more appropriate model is to suppose that β is changing, but at a constant rate:

$$\Delta\left(\frac{O}{I}\right) = \Delta\beta = \text{constant}$$

This assumption is still subject to potential problems arising from regional bias, and from the two missing sectors. However, it shows whether the results obtained from model 1 are robust. If Model 2 produces estimates that are broadly similar to those produced by Model 1, Model 1 can be applied with reasonable confidence as the best relatively simple method available.

This appendix examines both models and finds that they yield almost identical results (for the UK as a whole). The one exception is leisure software, although they considerably reduce the discrepancy arising from raw data alone. In conclusion, Model 1 provides the best available relatively simple method for revising or backcasting SOC2000 data.

It should be noted that, as with many creative industries estimates, some regional and some sectoral differences persist, although they are considerably smaller than if no transformation at all is made.

Results

Model 1: Growth rates of O_P

Table A1.4 gives the *growth-corrected* estimate of Creative Occupational Employment. It supposes that the growth rate between 2000 and 2001 (the transition year) is equal, in each sector, to the annualised average growth rate while SOC1990 was being used, that is between 1995 and 2000:

$$\frac{\Delta O}{O}_{2000-2001} = \text{Average}\left(\frac{\Delta O_P}{O_P}\right)_{1995-2000}$$

Note that if the sectors are summed this leads to a larger figure than if creative sub-sectors as a whole are corrected after summing. The figure we report is the sum of parts.

Table A1.4: Growth-corrected estimates of Creative Occupational Employment, thousands of jobs

	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	193	192	187	190	210	209	213	204
Architecture	75	66	68	72	66	78	79	74
Crafts	345	338	335	337	334	324	319	312
Design	131	131	140	145	161	177	188	190
Fashion	35	37	38	35	30	40	40	41
Software	176	198	229	261	285	321	363	377
Film and Video	46	46	48	45	43	55	57	46
Radio and TV	55	66	56	38	42	56	56	56
Music	110	117	127	130	131	136	142	139
Publishing	153	157	159	155	154	153	152	138
CI sum of parts	1,319	1,348	1,386	1,409	1,457	1,549	1,610	1,577

Model 2: creative intensity

Table A1.6: ratio of O_t to I_t

	1995 %	1996 %	1997 %	1998 %	1999 %	2000 %	2001 %	2002 %
Advertising	100	100	92	95	88	88	247	236
Architecture	26	21	22	23	20	24	23	22
Fashion	3	3	4	3	3	5	17	19
Software	160	158	157	149	141	143	99	109
Film	199	209	176	180	200	198	169	149
Radio and TV	18	22	17	11	13	16	39	36
Music	74	78	78	77	76	76	67	64

Publishing	105	109	111	107	106	107	68	63
(Creative Total)	80	81	82	82	83	88	98	98

Table A1.6 presents the ratio O/I in each sector.[16] Table A1.7 shows the growth rates of this ratio. The pattern of the anomaly is shown in the shaded cells of Table A1.7, and is very similar to Model 1, except that Film and Video now shows up as anomalous for this sector.

Table A1.7: Growth rates of O/I

	1995	1996	1997	1998	1999	Annualised growth 1995-2000	2000	2001
	%	%	%	%	%	%	%	%
Advertising	0.1	-7.9	2.7	-6.4	-0.1	-2.4	179.1	-4.3
Architecture	-18.2	5.0	2.3	-11.9	18.6	-1.7	-1.9	-4.7
Leisure Software	-1.1	-0.3	-5.4	-5.3	1.2	-2.2	-31.0	11.0
Fashion	8.2	2.7	-6.8	-7.5	47.4	7.2	279.4	8.5
Music etc	4.7	1.0	-1.8	-1.9	1.1	0.6	-12.3	-4.7
Publishing etc	3.7	2.3	-3.6	-1.2	1.2	0.4	-36.1	-8.5
Radio and TV	20.2	-22.3	-35.5	20.6	21.6	-2.4	142.3	-6.4
Film and Video	5.1	-15.5	1.9	11.3	-1.1	-0.1	-14.5	-12.2
(Creative Total)	1.2	2.1	-0.9	1.4	6.6	2.0	11.0	0.0

As with Model 1, adjusted estimates can be produced by supposing that growth in O is constant and equal to the 1995-2000 average. For this model, growth in O/I is considered constant and equal to its 1995-2000 average.

This results in Table A1.8. In order to calculate a comparable creative sector total, the Crafts and Design estimates from Model 1 are used.

Table A1.8: adjusted SOC levels arising from model 2

	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	178	177	173	176	194	193	213	204
Architecture	74	65	67	71	65	77	79	74
Crafts	345	338	335	337	334	324	319	312
Design	131	131	140	145	161	177	188	190
Fashion	36	38	39	36	31	40	40	41
Leisure software	197	223	257	293	320	361	363	377
Music etc	116	123	133	137	138	143	142	139
Film and Video	39	40	41	39	37	47	57	46
Radio and TV	56	67	57	39	43	57	56	56
Publishing etc	150	154	156	152	151	149	152	138
(Creative Occupations Total)	1,322	1,355	1,397	1,423	1,474	1,569	1,610	1,577

[16] This is an indicator of the intensity of specialisation. Education, for example, makes intensive use of teachers and this is reflected in an extremely close correspondence between the number of teachers and the number of people working in schools. The GLA's 2003 estimates measure creative intensity more precisely as the share of each sector's employees who are themselves creatively occupied.

Comparison of methods

Chart A1.1 shows estimates of total COE up to 2000 from all possible methods including the ONS crossmapping, with actual COE over the years 2001 and 2002 for comparison. The fit for models 1 and 2 is substantially better than for any other estimate, and the two models themselves produce closely aligned results.

Table A1.9 compares the results of the two models by giving the differences in adjustments arising from the two methods, leading to the same conclusion.

Chart A1.1: Comparison of total CI estimates from various methods

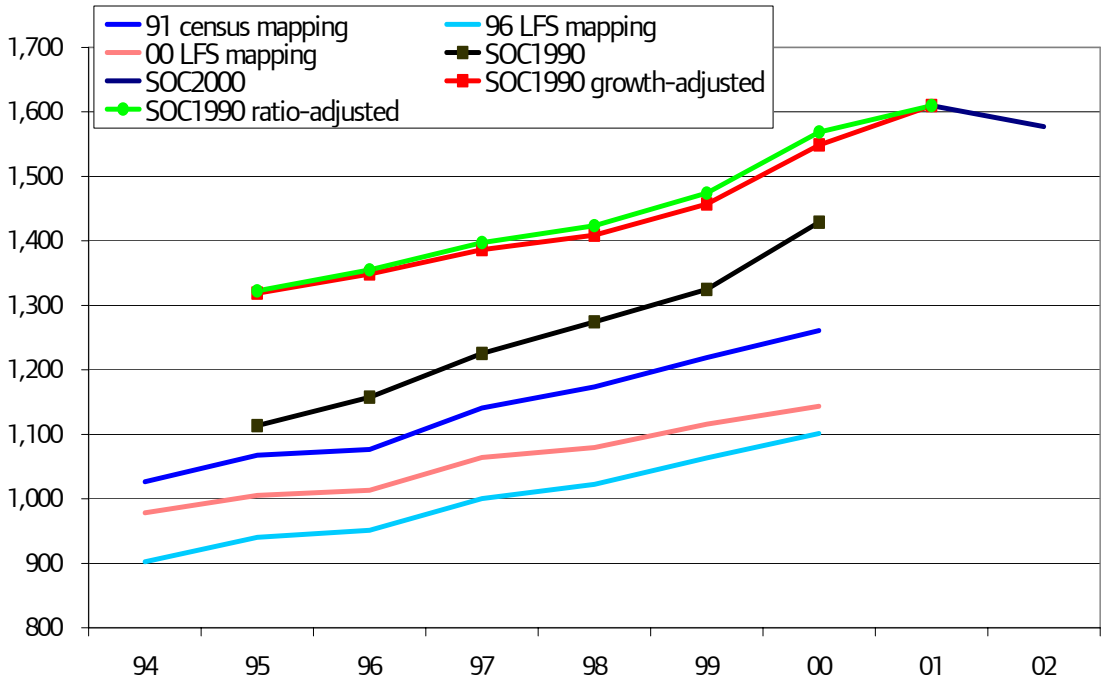


Table A1.9: Differences between creative occupational employment estimates from Models 1 and 2, thousands of workers

	1995	1996	1997	1998	1999	2000	2001	2002
Advertising	15	15	15	15	16	16	-	-
Architecture	1	1	1	1	1	1	-	-
Fashion	-1	- 1	- 1	- 1	- 1	- 1	-	-
Leisure software	- 22	- 25	- 28	- 32	- 35	- 40	-	-
Film and Video	7	7	7	7	6	8	-	-
Radio and TV	-1	- 1	- 1	- 0	- 0	- 1	-	-
Music	-6	- 6	- 7	- 7	- 7	- 7	-	-
Publishing	3	3	3	3	3	3	-	-
All creative	-3	-7	-11	-15	-17	-20	-	-

These differences remain significant, particularly for Film and Video where they represent 15 per cent of SOC2000 occupation, for Advertising where they represent 7 per cent and for Interactive Leisure Software where they represent 6 per cent. They also get larger for the

total of all creative subsectors, principally because of the growth in the difference between estimates of leisure software COE. However, this should be compared with the anomalous growth for these same sectors if no attempt is made to correct the SOC1990 estimates, which is greater than 50 per cent of SOC2000 occupation for all but four of the sectors.

Backcasting coefficients summary

The procedure for backcasting is as follows:

1. Calculate COE estimates for 2001 using SOC2000 codes, for each creative sector
2. Calculate COE estimates for 2000 and for any previously-required years using SOC1990 codes, again for each creative sector.
3. Set the 2000-2001 growth rates equal to the following, by rebasing the 2000 estimates, as given in Table A1.1, using the second column of table A1.10 (below)
4. Backcast from years prior to 2000 using the own growth rates obtained using SOC1990 codes as given in Table A1.2.

This reduces to applying the conversion factors given in the last column of Table A1.10 uniformly to SOC1990 estimates prior to 2001

Table A1.10: Standard backcasting growth rates

	Growth rate 2000/01 %	Multiply SOC1990 estimates by
Advertising	1.7	3.10
Architecture	0.8	1.01
Crafts	-1.3	2.64
Design	6.3	1.10
Fashion	2.5	3.47
Leisure Software	12.8	0.63
Film and Video	3.8	1.00
Radio and TV	0.2	2.45
Music	4.3	0.83
Publishing	-0.1	0.65

How much does it matter?

In some sectors, the revision is larger than in others since the anomalous growth of the unrevised figures is correspondingly greater. If the prime interest is to obtain accurate estimates of *total* creative industries employment, this is the relevant consideration.

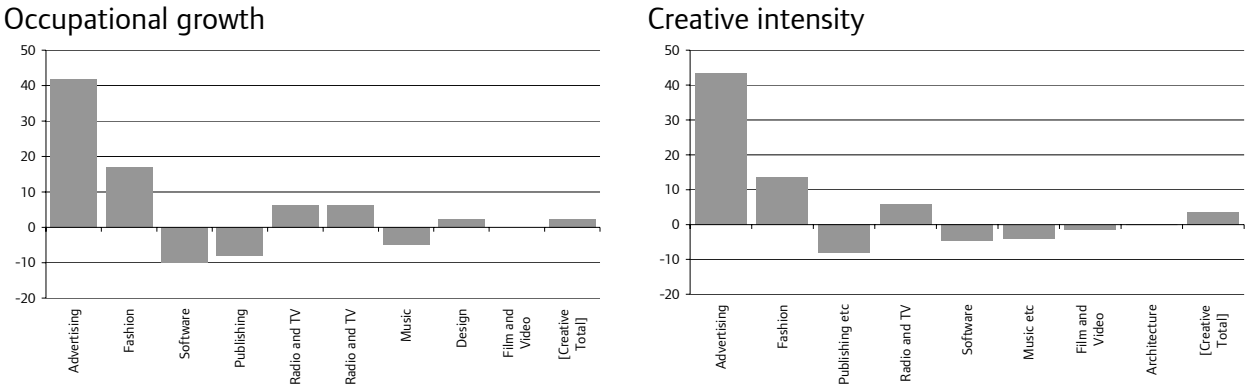
However, researchers may wish to concentrate on particular sectors. In that case it is useful to have an idea how statistically significant the anomaly is, and this can be estimated by comparing it with the standard deviation of growth rates in the SOC1990 years, although this is a rather small sample.[17]

[17] No correction for small sample size has been applied and no claim is made to statistical exactitude. This final section is only intended as an indicative guide.

Table A1.11: Standardised residuals (2000-2001 growth rate, less average growth rate 1995-2000, divided by standard deviation 1995-2000)

	Growth of O	Growth of O/I
Advertising	43	42
Fashion	14	17
Radio and TV	6	6
Architecture	0	0
Film etc	-1	0
Music etc	-4	-5
Leisure Software	-5	-10
Publishing	-8	-8
(Creative Total)	3	2

Chart A1.2: Standardised anomaly (from Table A1.12)



The size of the anomalies, when organised in this way, is almost identical for the two models and provides further confirmation of the robustness of the method.

Appendix 2: SIC and SOC codes used

SIC codes

DCMS 2001 name	DCMS/SIC Codes
Advertising	74.4
Architecture	74.2 (+)
Art and antiques	52.48/9 (+), 52.5 (+)
Crafts	(N/A)
Design	(N/A)
Designer fashion	18.1,18.21,18.22,18.23,18.24,18.3, 19.3,74.84, 17.71, 17.72 (all +)
Software and computer services	22.33 (+), 72.2
Interactive leisure software	
Film and video	22.32 (+), 92.11, 92.12, 92.13, 74.81 (+)
Radio and tv	92.2
The performing arts	22.14, 22.31 (+), 92.31, 92.32, 92.34 (+), 92.72 (+)
Music	
Publishing – print	22.11, 22.13, 22.15 (+), 92.4
Advertising	Same
Architecture	Same
Distribution	Same
Clothing	DCMS without 17.71 and without 17.72
Software	72.2
Film	22.32, 92.11, 92.12, 92.13
Radio and tv	92.2
The arts	22.14, 22.31, 74.81, 92.31, 92.32, 92.34, 92.72
Publishing	22.11, 22.13, 22.15, 92.4
Libraries, museums, etc	92.51,92.52

(+) denotes that a proportion of this industry group is included to estimate the creative element

Industry proportions used by GLA and DCMS

	DCMS %	GLA %
1771: Manufacture of knitted/crocheted hosiery	0.5	100
1772: Manufacture: knitted/crocheted pullovers	0.5	100
1810: Manufacture of leather clothes	0.5	100
1821: Manufacture of workwear	0.5	100
1822: Manufacture of other outerwear	0.5	100
1823: Manufacture of underwear	0.5	100
1824: Manufacture of other wearing apparel nec	0.5	100
1830: Dressing and dyeing of fur	0.5	100
1930: Manufacture of footwear	0.5	100
2211: Publishing of books	100	100
2212: Publishing of newspapers	100	100
2213: Publishing of journals and periodicals	100	100
2214: Publishing of sound recordings	100	100
2215: Other publishing	50	100
2231: Reproduction of sound recording	25	100
2232: Reproduction of video recording	25	100
2233: Reproduction of computer media	25	100
5248: Other retail sale: specialised stores	5	5
5250: Retail sale: second-hand goods in stores	5	5
7220: Software consultancy and supply	25	100
7420: Architectural/engineering activities	25	100
7440: Advertising	100	100
7481: Photographic activities	25	100
7484: Other business activities nec	25	50
9211: Motion picture and video production	100	100
9212: Motion picture and video distribution	100	100
9213: Motion picture projection	100	100
9220: Radio and television activities	100	100
9231: Artistic and literary creation etc	100	100
9232: Operation of arts facilities	100	100
9234: Other entertainment activities nec	50	100
9240: News agency activities	100	100
9272: Other recreational activities nec	25	100

SOC2000	SOC2000 description	SOC1992	SOC1992 description
Advertising			
1134	Account director (advertising)	123	Advertising and public relations managers
3433	Public relations executive		
3543	Market research executive		
Architecture			
2431	Architect	260	Architects
2432	County planning advisor	261	Town planner
3121	Architectural technologists and town planning technicians	303	Architectural and town planning technicians
Art/antiques trade (no soc code)			
Crafts			
5411	Weavers and knitters	550	Weavers
5491	Glass and ceramics makers, decorators and finishers	551	Knitters
5492	Furniture makers, other craft woodworkers	518	Goldsmiths, silversmiths, precious stone workers
5493	Pattern makers (moulds)	571	Cabinet makers
5494	Musical instrument makers, tuners	593	Musical instrument makers, piano tuners
5495	Goldsmiths, silversmiths, precious stone workers	591	Glass product and ceramics makers, finishers and decorators
5496	Floral arrangers, florists	791	Window dressers, floral arrangers
5499	Hand craft occupations not elsewhere classified		
8112	Glass and ceramics process operatives	590	Glass product and ceramics makers
9121	Mates to woodworking craftsmen/women	920	Mates to woodworking trades workers
Design and designer fashion (grouped together for occupations)			
2126	Design and development engineers	381	Artists, commercial artists, graphic designers
3411	Artists	382	Industrial designers
3421	Graphic designers		
3422	Product, clothing and related designers	383	Clothing designers
Interactive leisure software			
1136	It/comms managers	214	Software engineers
2131	It professionals	320	Computer analysts/programmers
film and video			
3434	Photographers and audio-visual equipment operators	386	Photographers, camera, sound and video operators
Radio and tv			
3432	Broadcasting associate professionals	525	Radio, tv and video engineers
5244	Tv, video and audio engineers		
Music and the visual and performing arts			
3412	Authors, writers, journalists	176	Entertainment and sports managers

SOC2000	SOC2000 description	SOC1992	SOC1992 description
3413	Actors, entertainers	384	Actors, entertainers, stage managers, producers and directors
3414	Dancers and choreographers		
3415	Musicians	385	Musicians
3416	Arts officers, producers and directors		
Publishing			
3431	Journalists, newspaper and periodical editors	380	Artists, writers, journalists
5421	Originators, compositors and print preparers	560	Originators, compositors and print preparers
5422	Printers	561	Printers
5423	Bookbinders and print finishers	562	Bookbinders and print finishers
5424	Screen printers	563	Screen printers
		569	Other printing and related trades nes

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Hindi
यदि आप इस दस्तावेज़ की प्रति अपनी भाषा में चाहते हैं, तो कृपया निम्नलिखित नम्बर पर फोन करें अथवा दिये गये पता पर सम्पर्क करें।

Vietnamese
Tiếng Việt
Nếu bạn muốn bản sao của tài liệu này bằng ngôn ngữ của bạn, hãy gọi điện theo số hoặc liên lạc với địa chỉ dưới đây.

Bengali
আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলিপি (কপি) চান, তা হলে নীচের ফোন্ নম্বরে বা ঠিকানায় অনুগ্রহ করে যোগাযোগ করুন।

Greek
Αν θα θέλατε ένα αντίγραφο του παρόντος εγγράφου στη γλώσσα σας, παρακαλώ να τηλεφωνήσετε στον αριθμό ή να επικοινωνήσετε στην παρακάτω διεύθυνση.

Urdu
اگر آپ اِس دستاویز کی نقل اپنی زبان میں چاہتے ہیں، تو براہِ کرم نیچے دیئے گئے نمبر پر فون کریں یا دیئے گئے پتہ پر رابطہ قائم کریں۔

Turkish
Bize telefon ederek ya da yukarıdaki adrese başvurarak bu belgenin Türkçe'sini isteyebilirsiniz.

Arabic
إذا أردت نسخة من هذه الوثيقة بلغتك، الرجاء الاتصال برقم الهاتف او الكتابة الى العنوان

Punjabi
ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦੀ ਕਾਪੀ ਤੁਹਾਡੀ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੈ, ਤਾਂ ਹੇਠ ਲਿਖੇ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਹੇਠ ਲਿਖੇ ਪਤੇ 'ਤੇ ਰਾਬਤਾ ਕਰੋ:

Gujarati
જો તમને આ દસ્તાવેજની નકલ તમારી ભાષામાં જોઈતી હોય તો, કૃપા કરી આપેલ નંબર ઉપર ફોન કરો અથવા નીચેના સરનામે સંપર્ક સાધો.

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