Economic Contribution Study:

An Approach to the Economic Assessment of the Arts & Creative Industries in Scotland

Final Report
June 2012

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Acknowledgements:

The study team - DC Research Ltd, cogentsi, and Pirnie Ltd - would like to acknowledge the contributions of various organizations and individuals to this study. This includes the organisations represented on the Steering Group (Creative Scotland, Scottish Enterprise, Scottish Government, Visit Scotland, VOCAL), those within the Arts & Creative Industries that gave their time to attend the sector consultation events (listed in Annex 4) as well as other organisations that contributed to the study through discussions with the study team and provision of data – Scottish Government, DCMS, Scottish Funding Council, amongst others.

EXECUTIVE SUMMARY

Introduction

This study has been commissioned by Creative Scotland in partnership with Scottish Enterprise. The aim of the research was to obtain a comprehensive and robust picture of the contribution of the Arts and Creative Industries (A&CI) to the wider Scottish economy.

The study builds on publically available, official statistics, with an aspiration for the research to be transparent and replicable in future years. In doing so, it exploits the improved measurement that derives from new statistical classification systems[1]. These changes have enabled a more refined assessment and categorisation of the A&CI in Scotland, reflecting both the character of artistic, cultural and creative endeavour in Scotland, and its industrial structure within the country's various geographic areas.

In the final scope adopted for this study, a list of **sixteen industries** has been established. The development of this Scottish scope draws on analysis of industry and occupation data for Scotland and the UK, Scottish Government Growth Sectors definitions, international comparisons and academic and policy commentary. It also reflects on issues identified locally and in the sector consultation events carried out as part of the study methodology.

The sixteen industries contrast with the thirteen historically utilised by the Department for Culture, Media and Sport (DCMS). The main adjustments made in order to develop this Scottish scope include: splitting out and rearranging some industries into more appropriate categories; adding in industries (or parts of industries) outside the DCMS definition that are regarded as core parts of the A&CI in Scotland; retaining some categories recently removed by DCMS; and amending the DCMS weightings (i.e. the proportion of an industry that is defined as creative) for some specific industries in order to make them more relevant to Scotland at the current time.

The rationale for extending and amending the DCMS definition **is discussed in more detail in Section 2 and Annex 1 of the main report.**

The study also addresses a range of additional, wider economic impacts, including the indirect, induced and tourism impacts of the A&CI. It also attempts to estimate some of the harder to capture employment related to the A&CI, such as roles in further and higher education and local authorities, as well as those in creative occupations outside of the A&CI.

However, there remains an ongoing challenge of accurately identifying the scale of self-employment, sole traders, and portfolio and project based workers that are operating within the A&CI – these activities being more prevalent in the A&CI than in other sectors of the economy.

The Direct Contribution of the Arts & Creative Industries

Adopting the Scottish scope for defining the Arts and Creative Industries (A&CI) in Scotland shows that direct employment in the A&CI in Scotland in 2010 was 84,400. Software and Electronic Publishing is the largest industry in terms of employment, followed by Writing and Publishing and the Heritage sector.

[1] Most notably the approach has also been able to exploit the improved measurement that derives from new statistical classification systems (i.e. SIC2007) which represents the first major revision of the Standard Industrial Classification system since 1992, and enables a more refined assessment and categorisation of Arts and Creative Industries.

Conventionally accounted, A&CI GVA accounts for £3.2billion. In terms of GVA the largest sector is Software and Electronic Publishing (£940million), followed by conventional Publishing & Writing (£820 million). The next tier of industries – Fashion & Textiles (£350 million), Architecture (£250 million), Advertising (£230 million) and Design (£160 million) are all recognisably at the commercial end of the spectrum of creative activities.

For some areas of the A&CI, the conventional approach to GVA does not capture their full impact – particularly Heritage and broadcasting. The impact of bringing Heritage and Radio & TV accounting practices into line with other industries is to increase the estimate of the total GVA of the A&CI from £3.2 billion to £3.7 billion.

Key data for the 16 sectors are set out in the table below and in Section 4 of the main report:

Scottish Arts & Creative Industries - Direct Employment and Gross Value Added Results (2010)

CULTURAL DOMAIN	SCOTTISH ARTS & CREATIVE INDUSTRIES	Direct Employment (rounded)	Gross Value Added (£ million)	Adjusted Gross Value Added (£ million)
Visual Art	Advertising	3,600	230	230
	Architecture	6,100	250	250
	Visual art	800	30	30
	Crafts	2,300	80	80
	Fashion & Textiles	7,000	280	280
	Design	4,700	160	160
Performance	Performing Arts	4,700	90	90
Audio-Visual	Music	400	10	10
	Photography	900	30	30
	Film & video	3,500	120	120
	Computer games[2]	200	0	0
	Radio & TV	3,500	50	400
Books & Press	Writing & Publishing	16,400	810	810
Heritage	Heritage	10,700	120	250
Digital Industries	Software/Electronic Publishing	19,100	940	940
Cultural Education	Cultural Education	400	10	10
TOTAL FOR ARTS & CREATIVE INDUSTRIES IN SCOTLAND		**84,400**	**£3,220**	**£3,690**

This estimate is larger than that achieved by applying the standard DCMS CIEE 2011 definition for the Creative Industries. A table showing the comparison between the two datasets is set out at the end of this executive summary. These differences principally result from: the retention of some categories within Software and Electronic Publishing (in line with the recent Scottish Government User Consultation on Growth Sectors[3]); the

[2] Note: due to rounding of the GVA results, Computer Games is recorded as zero in the table above, but the sector does report GVA of less than £10 million.

[3] The retention of Software and Electronic Publishing reflects the Growth Sector has been named in the Government Economic Strategy as 'Creative Industries (including Digital)' and the recent User Consultation proposes the continued inclusion of business software.

inclusion of Textiles within the Fashion and Textiles category; the inclusion of museums, galleries and historic sites within the Heritage category; and the addition of the Creative Education category (a newly identified industrial classification code covering employment in informal instruction in the arts, drama and music).

The study aimed to capture the economic contribution of the Crafts sector through official statistics for the first time, by identifying the appropriate economic statistics for craft activities and assessing (through data analysis at the local level) which elements constitute manufacturing and therefore should be excluded. However, the results for employment within the Crafts sector remain lower than in recent other research estimates[4], likely reflecting the high numbers of sole traders and self-employed working in the sector.

Similarly, recent research for the Computer Games industry appears to be anomalous to other recent research which show a higher level of employment than the results here identify[5]. This variance is primarily thought to be due to how such businesses report their activity under industrial classifications - a proportion of firms involved in Computer Games will have been captured within Software and Electronic Publishing sector, and others may be divisions of non-Games businesses classified elsewhere in economic statistics under the parent company's code.

The study also splits out the Music, Visual and Performing Arts sectors for the first time, although it is recognised that the estimates for the music sector are thought to be an underestimate. Some Music activity continues to be classified under Performing Arts and nearly half of musicians are classified to non-creative industries such as entertainment.

Understanding Economic Performance

Geographically, Glasgow and Edinburgh together account for 40% of total employment in the Arts & Creative Industries (A&CI). Controlling for population size, Edinburgh, Glasgow, Aberdeen and Dundee all show higher than average employment intensity[6] for the A&CI. However, other areas also show above average employment intensity, including the Scottish Borders, Orkney and Shetland.

The study has used the DCMS CIEE 2011 definition to compare Scotland to other UK nations and regions. For employment, (which amounted to 593,000 for the UK in 2010), the dominance of London and then the South East is clear; these regions together account for more than half of all Creative Industries employment across the UK.

Given that London is the UK's largest region in terms of population, it is useful to consider the intensity of Creative Industry employment[7] across the UK's nations and regions. Scotland ranks fourth in terms of employment intensity, behind London, the South East and Yorkshire; the latter having notable levels of activity in the Publishing sector.

The economic performance of the A&CI in Scotland over time has reflected the wider economy but has been more cyclical; experiencing an earlier and more pronounced recession, although not all of the sixteen industries examined follow this pattern. The earlier decline in the economic performance of the A&CI (from 2007-2008) resulted mainly from trends in the Writing & Publishing and Software industries. More recently,

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[4] Crafts Council: Crafts in an Age of Change
http://www.creativescotland.com/sites/default/files/editor/Craft_in_an_Age_of_Change_-_Full_Report.pdf

[5] The research was commissioned by TIGA and carried out by Games Investor Consulting (GIC) and identified a total of 593 jobs in 2010.

[6] Employment intensity is expressed as the number of employee jobs in a local authority per '000 population

[7] Employment intensity is expressed as the number of employee jobs in a local authority per '000 population

Advertising and Architecture have contributed to the decline, as discretionary spending has fallen and investment projects in both the public and the private sector have borne the brunt of the UK recession.

Total turnover of businesses operating in the A&CI for 2010 is estimated to be £6.3billion, distributed across the various Arts & Creative Industries in a similar pattern to GVA. Again, bringing Heritage and broadcasting accounting practices into line with other industries increases this estimate to £7.2 billion.

Based on the most recently available data (2008) there are estimated to be around 12,000 business units operating in the Arts & Creative Industries in Scotland. One-third of these are in the Software industries, including many micro-enterprises. By UK standards, Scotland has relatively few A&CI businesses and they are typically larger than in most other nations and regions of the UK. In terms of business unit intensity[8] the results show that there are proportionately more A&CI business units in Edinburgh than elsewhere, with notably few in suburban areas.

The Wider Economic Contribution of the Arts & Creative Industries

The study estimates that the Arts and Creative Industries (A&CI) in Scotland generate an additional £3.06 billion turnover in indirect impacts (i.e. supply chain effects). The supply chain for the A&CI in Scotland is relatively Scottish-focused, with many of the industries tending to purchase from within their own industry (including freelancers), other sectors within the A&CI, or local business services or transport. This wider impact is discussed in **Section 5 of the main report.**

The A&CI in Scotland also generate induced effects (i.e. spending by those employed directly and indirectly in these industries) amounting to £2.22 billion turnover. Again, the main contributing sectors are Writing & Publishing, Software/Electronic Publishing and Radio & TV.

In terms of GVA, the A&CI in Scotland therefore generate an additional £1.35 billion GVA indirectly, and £1.25 billion GVA through induced impacts. Overall, the direct, indirect and induced impacts of the A&CI in Scotland amount to almost 130,000 jobs, £6.3 billion GVA, and £12.5 billion in turnover (see Table below).

Summary of Direct, Indirect and Induced Effects of Arts & Creative Industries in Scotland

	Direct (adjusted[9])	Indirect Effects	Induced Effects	Total
Turnover (£ million) excl. VAT etc.	£7,200	£3,060	£2,220	**£12,480**
GVA (£ million)	£3,700	£1,346	£1,254	**£6,300**
Employment	84,400	19,200	26,100	**129,700**

An assessment of the relationship of the A&CI to tourism shows that it has both a direct and indirect influence in attracting visitors, with the strongest effects being in the Heritage and Performing Arts sectors. Tourism expenditure of over £1 billion can be

[8] Business unit intensity is measured as the number of business units in a local authority per '000 population.
[9] The GVA and Turnover figures presented here and used in the analysis of the indirect and induced effects are the adjusted figures presented in Section 4. This is because, regardless of which GVA figure is used (conventional or adjusted) as the key headline measure, the supply chain and income effects should be based on the adjusted figure to ensure the wider (indirect and induced effects) of broadcasting and heritage are analysed.

ascribed to overnight tourism motivated by the A&CI, and this gives rise to a direct GVA of £280 million.

The study further examines associated employment impacts for the A&CI in Scotland **(Section 6 of the main report)**. Within the A&CI, creative occupations are very fragmented; the workforce is employed in a wide diversity of roles. Almost 6,500 worker proprietors have been identified within the A&CI in Scotland, accounting for close to 8 per cent of the identified 84,400 jobs. These 6,500 equate to around 4.5 per cent of worker-proprietors nationally (a greater proportion than in the wider economy), suggesting that the A&CI are effective cradles for entrepreneurs.

However, conventional categorisation still fails to capture many of those working as sole traders or in small businesses, and the 'portfolio lifestyle' of many freelancers involved in the A&CI is not yet adequately captured. There are estimated to be around 52,000 people employed in creative occupations in Scotland, with around 21,000 of these jobs sitting outside the 84,400 jobs already identified. These additional jobs are a combination of those in creative occupations but outside the Arts & Creative Industries sectors (e.g. graphic designers working in non-A&CI sectors), and those working within the A&C I sectors, but not captured because they work in non-PAYE, non-VAT registered jobs (e.g. sole traders and the self-employed in the A&CI).

An assessment of A&CI related employment within Higher Education and Further Education estimates that there are approximately 2,300 jobs in Higher Education and a further 1,800 in Further Education linked to A&CI related subjects.

Similarly, an assessment of A&CI related employment within local authorities estimates that there are more than 1,500 FTE staff employed by local authorities in related positions[10]. Local authority expenditure in 2009-10 on identifiable A&CI related services is estimated to be in the region of £130 million.

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[10] This data is drawn from CIPFA Cultural Statistics 2010 and is therefore regarded as providing coverage primarily related to the arts and cultural services related areas of activity.

Scottish Arts & Creative Industries Economic Contribution Study - Direct Employment (2010) – comparing with DCMS				
DCMS (CIEE 2011)	**CIEE Employment (rounded)**	**SCOTTISH ARTS & CREATIVE INDUSTRIES**	**SACI Employment (rounded)**	**Reason for variance**
Advertising	3,600	Advertising	3,600	Same definition used
Architecture	4,700	Architecture	6,100	Definition extends beyond SIC architecture to also include 'Urban planning and landscape architectural activities'and 'Engineering design activities for industrial process and production' (partial) and higher proportion of 'Specialised design activities' based on Scottish Input-Output tables
Art & antiques	600	Visual art	800	'Music and Visual and Performing Arts' sector has been separated out into three sectors – and antiques included within crafts (see below). Addition of 'Artistic creation' (weighting of 50% based on Scottish occupational and self-employment data.
Crafts	0	Crafts	2,300	Crafts is not captured by DCMS – wide range of SIC codes included, with extra analysis carried out to remove large scale (non-crafts) production. Crafts includes SIC codes for Furniture and wood crafts; Jewellery; Pottery; Glass; Textile craft goods; Antiques markets
Designer Fashion	100	Fashion & Textiles	7,000	Definition includes designer fashion as defined by DCMS and also includes range of fashion and textiles SIC codes aimed at capturing Scottish fashion and textiles sector. This includes some larger-scale textiles and fashion not included within the 'Textile craft goods' captured within the Crafts sector definition above, but not large routine-product factories.
Design	1,700	Design	4,700	Part of 'Engineering design activities for industrial process and production' added, based on assessment of Scottish Input Output tables
Music & Visual & Performing Arts	6,200	Performing Arts	4,700	'Music and Visual and Performing Arts' sector has been separated out into three sectors
		Music	400	'Music and Visual and Performing Arts' sector has been separated out into three sectors
Film & Video & Photography	3,400	Photography	900	Film & Video & Photography sector from DCMS has been separated out. Also 'film processing' now included - has become creative, not mechanical
		Film & video	3,500	Film & Video & Photography sector from DCMS has been separated out. Also part of 'Motion picture, television and other theatrical casting' included. Part of 'Motion picture, video and television programme post-production activities' included here (moved from Radio & TV)
Digital & Entertainment Media	200	Computer games	200	Same SIC definition used (although recognise that other sector estimates are wider in scope than either DCMS CIEE or SACI)

Scottish Arts & Creative Industries Economic Contribution Study - Direct Employment (2010) – comparing with DCMS				
DCMS (CIEE 2011)	**CIEE Employment (rounded)**	**SCOTTISH ARTS & CREATIVE INDUSTRIES**	**SACI Employment (rounded)**	**Reason for variance**
Radio & TV	3,600	Radio & TV	3,500	Part of 'Motion picture, television and other theatrical casting' included. Part of 'Motion picture, video and television programme post-production activities' moved to Film & Video
Publishing	9,500	Writing & Publishing	16,400	Part of 'Artistic creation' included, and 'Translation and interpretation activities' also included. Definition of printing is wider than DCMS definition – based on assessment of occupational data for Scotland.
		Heritage	10,700	Not included in DCMS CIEE
Software & Electronic Publishing	600	Software & Electronic Publishing	19,100	Definition of Software/Electronic Publishing includes aspects now excluded from (but previously within) DCMS. So this covers: 'Other software publishing'; 'Business and domestic software development'; and 'Computer consultancy activities'. The retention of Software and Electronic Publishing also reflects the Growth Sector as defined in the Government Economic Strategy: 'Creative Industries (including Digital)' and the recent User Consultation about Key Sectors proposes the continued inclusion of business software.
		Cultural Education	400	Not included in DCMS CIEE
TOTAL	**34,200**		**84,400**	

SECTION 1: INTRODUCTION

1.1 DC Research Ltd and partners (cogentsi and pirnie*limited*) were commissioned by Creative Scotland, in partnership with Scottish Enterprise, to carry out an Economic Contribution Study of the Arts & Creative Industries (A&CI) in Scotland.

1.2 Creative Scotland's vision is for a nation where the A&CI are supported and celebrated and their economic contribution fully captured. In order to support decision-making and planning, it is recognised as essential that Creative Scotland and partners have access to robust information about the scale and nature of the contribution of the A&CI to the wider Scottish economy.

1.3 As such, Creative Scotland is currently undertaking a programme of research to capture and develop, on an ongoing basis, a nation-wide understanding of the economic impact of the A&CI and their component sectors and activities. The current programme of research comprises:

- A full scale economic impact study (EIS) examining the A&CI in Scotland, their component sub-sectors and activities, and linkages to and influences on wider economic activity.
- A series of case studies looking in more detail at economic activity in specific geographical areas and industry sub-sectors.

1.4 This Scotland-wide study has taken place at the same time as the first of the case studies mentioned above, focusing on the Outer Hebrides.

1.5 There are a number of guiding principles that have underpinned the approach to this national study that are worth emphasising:

- First, in commissioning this economic contribution study, Creative Scotland recognises the critical importance of understanding the wider social impacts attributable to the A&CI. Research around the wider social impacts remains an area of interest to Creative Scotland, but this is something that is felt to be best addressed through separate work. **This study is therefore designed to address only the economic impacts of the A&CI.**
- Second, the approach has been built on the use of available, official statistics. The intention is firstly that the work should be **transparent** and able to draw strength from the quality assurance procedures of the Government Statistical Service and the United Kingdom Statistics Authority, and secondly that it should be **replicable** inexpensively in future years. The collection of primary data for this project, or dependence on any proprietary private data collection, was thus excluded.
- Third, an underpinning principle of the approach was to **engage with those involved in the Arts & Creative Industries in Scotland**, recognising that the sector itself, alongside Creative Scotland and other partners, form the main audience for the report findings. Whilst this study did not collect primary data from the sector, it did engage with them to test out some of issues identified in developing the definition of the A&CI used in the study. For example, a number of issues were identified from the data analysis and desk research that called for amendments to be made to the definition used, to ensure that it better reflected the A&CI in Scotland. These were tested out in various ways – including through discussion with sector representatives. More about these issues, how they influenced the study, and how they were

addressed within the analysis are summarised in Section 2 and set out in more detail in Annex 1.

- Fourth, there have been many other economic impact studies relating to specific components of the A&CI within Scotland carried out in recent years. However, one of the reasons for commissioning this study was the need for a **comprehensive understanding** of the economic contribution of the A&CI **across the whole of Scotland**. Many of the recent economic impacts studies (some *examples* of which are included in Annex 6 to this report) are largely focused on: specific festivals or events (e.g. the Edinburgh Festivals Impact Study, Glasgow Film Festival 2011), venues (e.g. Scottish Opera and Theatre Royal, Pitlochry Festival Theatre, National Museums Scotland), sectors (Craft in an Age of Change, Broadcasting Industry in Scotland, UK Film Industry) or geographies (e.g. Economic Contribution of Glasgow's Cultural Sector, Social and Economic Impact of Shetland Music).

1.6 The approach adopted in this study does not seek to undermine or cut across these other, more specific, studies but intends to capture the economic contribution of the A&CI across Scotland. Given the different remits and aims, it should be noted that it is not appropriate to compare and contrast the results of this study with any of these other studies – partially due to the varying remits, but also due the specific scope of the A&CI that is adopted in this study. It is intended that that the results from this study can be used by sectors and organisations as a benchmark where appropriate.

1.7 The overall approach adopted has been to identify total employment in the A&CI and to estimate the output (turnover and Gross Value Added) of those industries, using data from the ONS Annual Business Survey, but aiming for consistency with Scottish National Accounts[1].

[1] Ideally these production-based estimates would be reconciled with independent estimates of spending on creative artefacts and services. The detailed reconciliation work would strengthen the estimates considerably and offer considerable additional analysis and information. However the approach, known as cultural satellite accounts, has only been attempted in a handful of countries and is beyond the scope of this project.

Aims of Study

1.8 The original Project Specification stated that the purpose of this Economic Impact Study was to:

- Obtain a comprehensive and robust picture of the contribution of the Arts & Creative Industries (A&CI) to the wider Scottish economy; and,
- Develop a framework for Creative Scotland and partner organisations wishing to conduct their own economic impact assessments.

1.9 More specifically, the objectives of the study were to:

- Agree an approach to the economic assessment of the Arts & Creative Industries (A&CI) in Scotland with Creative Scotland and its key stakeholders. This approach will be required to cover the 13 industries identified by the DCMS in their definition of the A&CI.
- Develop a framework of indicators for measuring economic impact, using 2009 data as the baseline year. This framework should, as far as possible:
  - Address existing gaps in available data as identified in the scoping study
  - Allow for disaggregation to assess impacts on geographies or by sectors
  - Facilitate the benchmarking of performance
  - Allow for the replication of the study over time, using the same indicators.
- Undertake a 'baseline' assessment of the economic impact of the A&CI in Scotland, by mapping the extent of these industries and making a detailed assessment of economic impacts. This work should cover:
  - The direct impacts of the A&CI (those within the sector)
  - Indirect or supplier linkage effects
  - Induced or income multiplier effects
  - Economic activity generated by visitor activity induced by the A&CI
- Explore historical patterns in this data, where time-series data is readily available and would allow backward facing analysis of trends over time.

1.10 These aims have evolved as the study progressed, with two particular aspects to note:

- Firstly, it became possible, due to the release of particular datasets, to carry out the analysis using 2010 as the baseline year. This is obviously preferable as it allows the results from the study to be more up to date.
- Secondly, in the early stages of this study it became apparent that there was both a valid rationale, as well as an appetite amongst key stakeholders and representatives from the sector, for amending the scope of what is defined as the A&CI in Scotland.

1.11 As such, the study has given consideration to setting out a definition for the A&CI in Scotland that is both more current and better reflects Scotland than the standard DCMS (Creative Industries Economic Estimates - CIEE) scope, whilst remaining consistent with it.

1.12 The reconsideration of the definition of the A&CI is timely as the Creative Industries (including Digital) is one of the Growth Sectors identified in the Government Economic Strategy 2011, and there has been a recent user consultation exercise undertaken by the Scottish Government that will inform a revised definition of Creative Industries[2]. This revision was partially driven by changes to the way in which official statistics are classified (with a move from a previous industrial classification system, SIC 2003, to a new system SIC 2007) and the resultant improvements that can be made to the way data on the economic contribution of the A&CI can be captured.

1.13 In addition, this revision aimed to modify the DCMS (CIEE 2011) definition, based on an analysis of the position in Scotland, with a rationale that whilst it would have implications for comparability across the UK, "the most refined definition for Scotland is preferable"[3].

1.14 A fuller discussion of the approach taken to defining the A&CI is included in the technical annexes to this report, and also at relevant points in Sections 2 and 3 of this main report.

Structure of Report

1.15 In order to address the aims and objectives of the Study, this Report is structured as follows:

- **Section 2** explains the background and context for the study, considering issues around defining and measuring the economic contribution of the Arts & Creative Industries (A&CI). In particular, the section presents the **results from, and discusses the issues with, the current DCMS (CIEE 2011) approach**. The results enable comparisons to be made between Scotland and other areas within the UK using this commonly accepted approach. This section also highlights some of the issues with applying this approach to Scotland, and considers where amendments could be made to the standard DCMS approach to enable a more considered estimation of the economic contribution of A&CI in Scotland.
- **Section 3** outlines a **refined scope/definition for the A&CI in Scotland**, reflecting on a number of influencing factors – including changes in data quality, changes to data classification, updating DCMS assumptions, as well as reflecting the views of representatives from the A&CI in Scotland.
- **Section 4** adopts this refined scope/definition and presents analysis of the **direct impacts of the A&CI in Scotland**. This includes presenting the results for Scotland in terms of employment, Gross Value Added, turnover, and business stock.
- **Section 5** builds on Section 4 and outlines some of the **wider impacts of the A&CI in Scotland**. This includes assessing the indirect and induced impacts of the impacts set out in Section 4 as well as considering the tourism impacts of the A&CI in Scotland.
- **Section 6** considers some of the wider, 'associated' employment impacts of the A&CI in other areas – notably in higher and further education, local government, and in creative occupations (i.e. creative employment that exists outside of the creative industries themselves).

[2] http://www.scotland.gov.uk/Topics/Statistics/Browse/Business/KeySectors
[3] http://www.scotland.gov.uk/Resource/0038/00389556.doc page 4.

Approach and Method Summary

1.16 Following the early inception and scoping work for this study, it was agreed that a four phase approach would be adopted for the analysis:

- **Phase 1:** Adopting the standard DCMS Methodology for assessing Arts & Creative Industries.
- **Phase 2:** Adjusting standard methodology to more appropriately reflect the Arts & Creative Industries in Scotland.
- **Phase 3:** Measuring the Indirect (Supply Chain), and Induced (Income) Effects of the Arts & Creative Industries in Scotland.
- **Phase 4:** Assessing Wider Aspects of Arts & Creative Industries in Scotland.

1.17 The key stages and tasks that were carried out as part of this study are as follows:

- **Inception and Progress Reporting**. This stage involved an inception meeting and a number of progress meetings that took place at relevant points throughout the study. These meetings involved the study team and the study Steering Group – comprising representatives from Creative Scotland, Scottish Enterprise, Scottish Government, Visit Scotland and the Voice for Culture and Leisure Managers in Scotland (VOCAL).
- **Desk Based Research**. This involved consideration and development, through various iterations, of the agreed scope/definition for the Arts & Creative Industries (A&CI) to be used in this study. This stage also involved the mapping the direct effects of the A&CI in Scotland based on detailed analysis of standard official economic data sources (i.e. Business Register Employment Survey 2010, Annual Population Survey 2010, Annual Business Inquiry 2008, the Annual Business Survey 2010 (provisional results) and the Scottish National Accounts Project, as well as analysis of other existing data, evidence and reports.
- **Consultations.** This stage involved the study team conducting a series of four cross-cutting sector consultation events in February 2012. Engagement and consultation with the sector was regarded as an important aspect of the approach and method for this study, and the events involved a range of representatives from across the A&CI in Scotland and took place in Glasgow, Edinburgh, Inverness and Dundee. A total of just under 60 individuals attended the events and they achieved both a broad geographic and sectoral mix. The findings from these consultations informed and influenced key aspects of the study including the scope of what is defined as the A&CI in Scotland
- **Analysis – Direct, Indirect and Induced impacts.** This stage drew on all of the previous elements to estimate the direct, indirect and induced contribution of the A&CI in Scotland – providing results for: Gross Value Added (GVA), Employment, Turnover, and Business Stock. These results are (where possible) presented for the individual sectors of the A&CI in Scotland and as time-series to allow trends to be identified. Stage 4 also involved considering and estimating some of the wider impacts of the A&CI – including A&CI-related employment in the higher and further education sectors, local authority employment related to the A&CI, as well as the relationship of the A&CI to tourism.

SECTION 2: MEASURING THE CREATIVE INDUSTRIES – THE DCMS APPROACH

Section 2 Summary Table: Key Economic Indicators for Creative Industries using DCMS CIEE 2011, Scotland and UK (2010)

	Scotland		UK	
	Employment (2010) (rounded)	**GVA (2010) £ million (rounded)**	**Employment (2010) (rounded)**	**GVA (2010) £ million (rounded)**
Advertising	3,600	230	96,100	6,000
Architecture	4,700	190	58,600	2,340
Art & Antiques Market	600	20	8,100	210
Crafts	0	0	0	0
Design	1,700	80	35,300	1,680
Designer Fashion	100	10	2,500	120
Video, Film and Photography	3,400	90	45,400	2,830
Music and Visual and Performing Arts	6,200	200	97,300	3,790
Publishing	9,500	600	165,600	11,910
Software & Electronic Publishing	600	50	8,600	660
Digital & Entertainment Media	200	10	6,600	500
Radio & Television	3,600	90	68,700	4,420
TOTAL	**34,200**	**£1,540**	**593,000**	**£34,460**

Section 2 Key Findings

- Adopting the DCMS CIEE 2011 definition and weightings provides an estimate for employment in the Arts & Creative Industries (A&CI) in Scotland in 2010 of around 34,000 jobs, with GVA in the region of £1.54 billion.
- For employment, Publishing represents the largest sector, followed by Music and Visual and Performing Arts, and Architecture. In comparison to UK averages, sectoral employment in Scotland is proportionately higher for Architecture, Music and Visual and Performing Arts, and Film, Video & Photography.
- The scale of working proprietors for Creative Industries in Scotland (as a percentage of employment in each sector) is above the Scottish all-industry average for all sectors within the Creative Industries. This shows the scale of working proprietors is more pronounced for the Creative Industries than it is for the rest of the economy.
- For GVA, similar sectoral patterns emerge. The industry making the largest contribution to Scotland's Creative Industries GVA is Publishing, followed by Advertising, Music and Visual and Performing Arts, and Architecture. In comparison to the UK, industries whose relative importance to Scotland is notably above the UK average are Architecture and Publishing.
- Based on these DCMS CIEE 2011 results, Creative Industries in Scotland account for 1.7% of all employment in Scotland in 2010, and 1.5% of Scottish GVA for 2010.
- However, underpinning all of these results is the fact that there are a range of issues about applying the standard DCMS approach to Scotland - and there is a rationale, based on attempting to address some of these issues, for extending and amending the DCMS definition to ensure it more appropriately reflects Scotland.

The recent emergence of the creative industries as a distinct area of interest for economists, statisticians, cultural specialists and public-policy makers reflects a growing awareness of their economic potential and their role in fostering cultural diversity through the market. The concept of creative industries for the purpose of public policy making remains very young and not all governments are convinced of the need to address this sector with targeted initiatives.

With the advent of new technologies in the last 20 years such as the internet, e-commerce and electronic files that make sharing, trading and consuming cultural goods and services easier than ever before, globalisation has had a profound impact on the creative industries. Statistical methodologies, which are so important to provide officials with the information they need to develop suitable policy to support the creative industries, have yet to catch up with this reality. In order to harness the opportunities offered by the creative industries, governments first need to undertake thorough mapping and statistical research to better understand them.

From 'Understanding Creative Industries' (UNESCO, 2006)

Introduction

2.1 This section provides a background for the study, setting the scene by considering issues around defining and measuring the Arts & Creative Industries (A&CI). It presents the results from, and discusses concerns with, the standard Department for Culture, Media and Sport (DCMS) approach to measuring the Creative Industries, as used in the Creative Industries Economic Estimates (CIEE) 2011 published in December 2011[4].

2.2 Using the CIEE 2011 method, this section presents updated results for the A& CI in Scotland (i.e. the results are for 2010 rather than the 2009 figures reported in the December 2011 DCMS CIEE release. These results enable comparisons to be made between Scotland and other areas within the UK using a commonly accepted approach.

2.3 However, this section also identifies some of the issues with applying this approach to Scotland in 2012, and considers where amendments could be made to the standard DCMS approach to enable a more considered estimation of the economic contribution of the A&CI in Scotland.

Measuring the Creative Industries

2.4 Defining the scope of what exactly constitutes the A&CI (for Scotland or for any other area) has been a perennial area of debate amongst cultural economists, statisticians and policy makers, with no agreed international approach to the definition of, or the economic measurement of, Creative Industries. Annex 1 of this report presents and discusses these debates in more detail.

2.5 This study started by taking the scope of the Creative Industries used by the Department for Culture, Media and Sport for its latest Creative Industries Economic Estimates[5] '***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 economic property'***.

[4] Creative Industries Economic Estimates, DCMS, December 2011

[5] Creative Industries Economic Estimates, DCMS, December 2011

2.6 The industries listed in those estimates are taken from the thirteen Creative Industries selected after the DCMS Creative Industry Mapping Projects of 1998 and 2001[6]. They are normally presented in alphabetical order:

Table 2.1: List of Creative Industries (DCMS)	
1.	Advertising
2.	Architecture
3.	Art & Antiques Market
4.	Crafts
5.	Design
6.	Designer Fashion
7.	Film & Video
8.	Interactive Leisure Software
9.	Music
10.	Performing Arts
11.	Publishing
12.	Software & Computer Services
13.	Television & Radio

2.7 The original choice of industries for inclusion in the Mapping made by DCMS elevated considerations of international competitiveness, growth, and exports alongside art and culture. It has been valuable in showing that creative endeavour has a substantial economic contribution to make at the national level.

2.8 However there are several respects in which the DCMS selection, and the means used to measure it, do not speak to Scotland's creative and cultural condition or to its current economic circumstances. Such issues have been highlighted through the various strands of work that have taken place as part of this study, and these disjunctions became even more obvious at the local level. These concerns have been reaffirmed in the sector consultations and also in the case study work in the Outer Hebrides.

2.9 In addition, there have been recent changes to the DCMS approach – outlined in the December 2011 Creative Industries Economic Estimates (CIEE) – that have been the subject of some debate and criticism. These issues are outlined in Annex 1, but in particular relate to changes made possible by the introduction of a new industrial classification system by which official statistics are classified (SIC 2007, which replaced the previous SIC 2003). These changes have included the removal of specific sectors from recent estimates that were previously included, and also the removal of a 'grossing-up' factor that was previously used in the CIEE but which has now been removed.

Applying the DCMS CIEE 2011 Definition to the A& C I in Scotland

2.10 While the focus of this study is the definition of A&CI in Scotland as set out and applied in Section 3 and beyond, the DCMS scope has been retained in this section to enable comparisons with other areas in the UK. The employment and GVA results presented below are based on applying the 2011 CIEE DCMS methodology to the most recently available data (i.e. data from 2010)[7].

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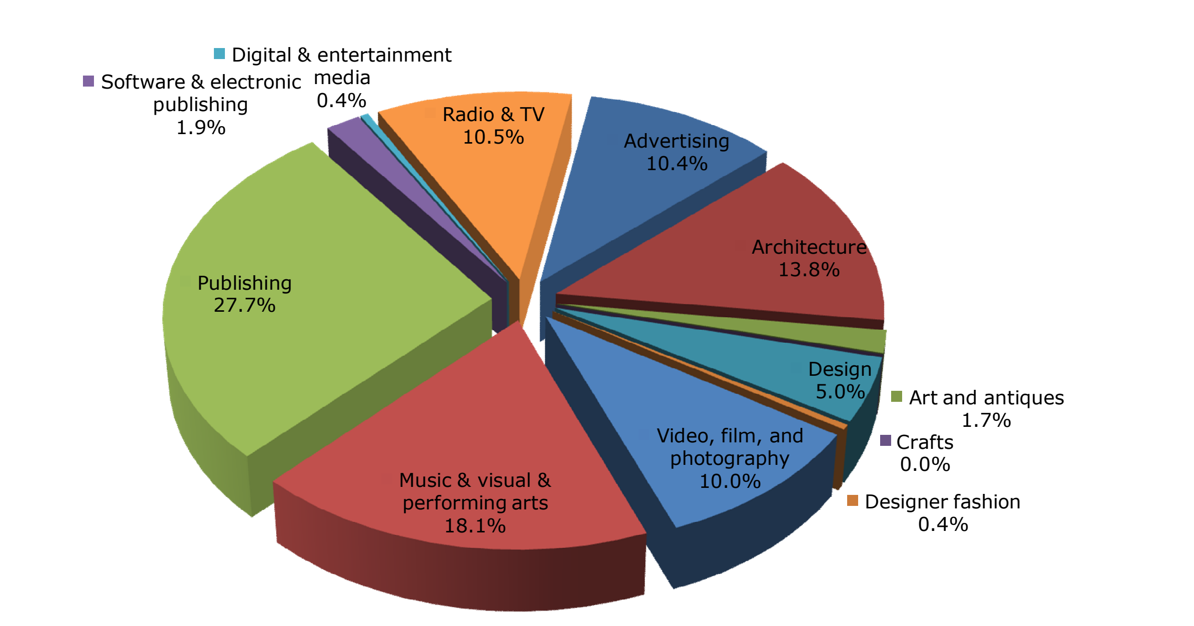
[6] Creative Industries Mapping Document, DCMS (1998); Creative industries Mapping Document, DCMS (2001): http://webarchive.nationalarchives.gov.uk/+/http:/www.culture.gov.uk/reference_library/publications/4632.aspx

[7] In interpreting these DCMS figures a number of points should be borne in mind: (1) DCMS does not attempt to measure 'Crafts' employment because it believes that the employment units are too small to show up in statistical surveys. (2) 'Art and antiques' in the DCMS definition includes only commercial galleries, not the

Employment

2.11 Applying the DCMS CIEE 2011 definitions and proportions yields a total of just over **34,000 people employed[8] in Creative Industries in Scotland in 2010**. Within Scotland in 2010, these 34,000 jobs accounted for less than 2% of all jobs within the economy. The Publishing sector is the largest of Scotland's Creative Industries accounting for employment of around 9,500 (Figure 2.1). This is followed by Music and Visual and Performing Arts (6,200) and then Architecture (4,700).

Figure 2.1: Creative Industries Employment DCMS CIEE 2011, Scotland (2010)



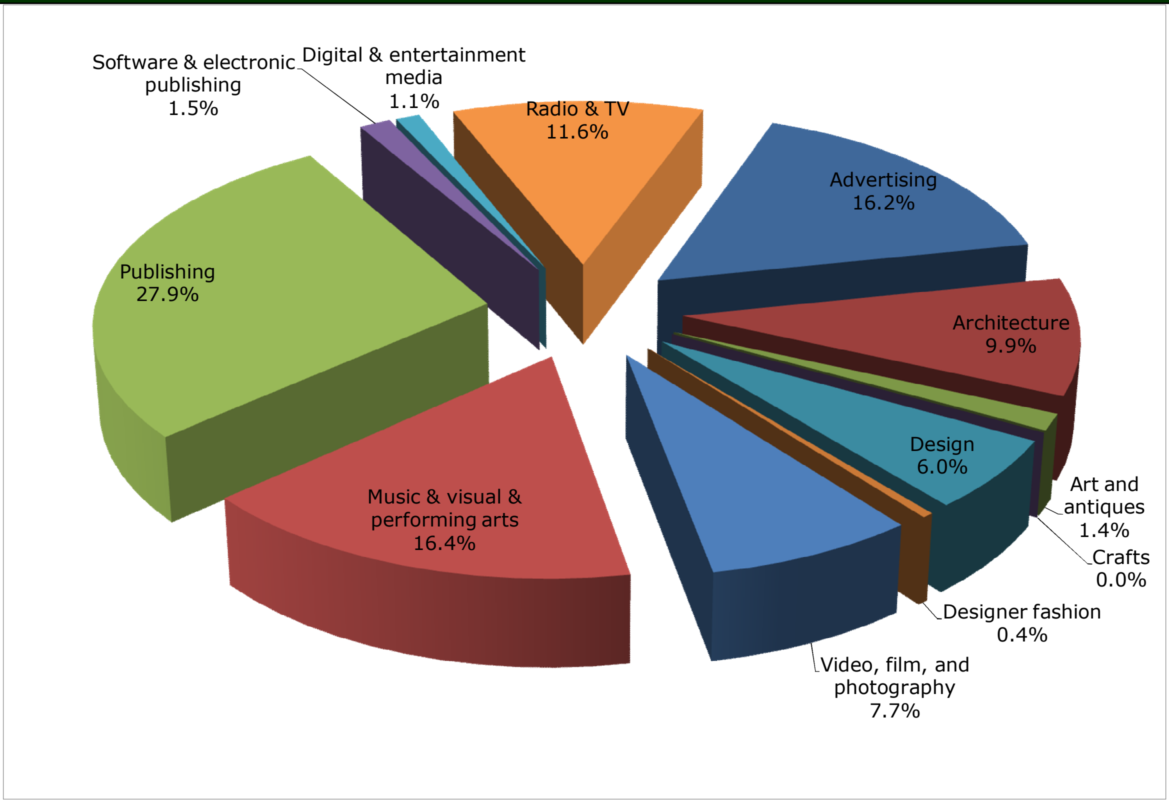
Source: Study Team Analysis of BRES, 2010 (Total Employment = 34,200 jobs)

2.12 This sectoral split can be compared to the total UK employment in the Creative Industries (outlined in Figure 2.2 below), which amounts to almost 593,000 for 2010. This shows that Scotland accounted for 5.8% of Creative Industries employment across the UK in 2010.

artists themselves in the DCMS definition. They, and the whole of the music industry, are conceptually included under the heading 'Visual and performing arts', under SIC 90030. These points, alongside a number of wider issues and factors are addressed later on in this report and have influenced the development of the approach to estimating the economic impact of Arts & Creative Industries set out in Section 3 and the technical annexes to this report.

[8] In the main sections of this report, where employment numbers are stated they refer to the number of total jobs (i.e. number of employee-jobs plus number of working proprietors). They thus include both full time and part time positions and are **not** full time equivalent (FTE) numbers.

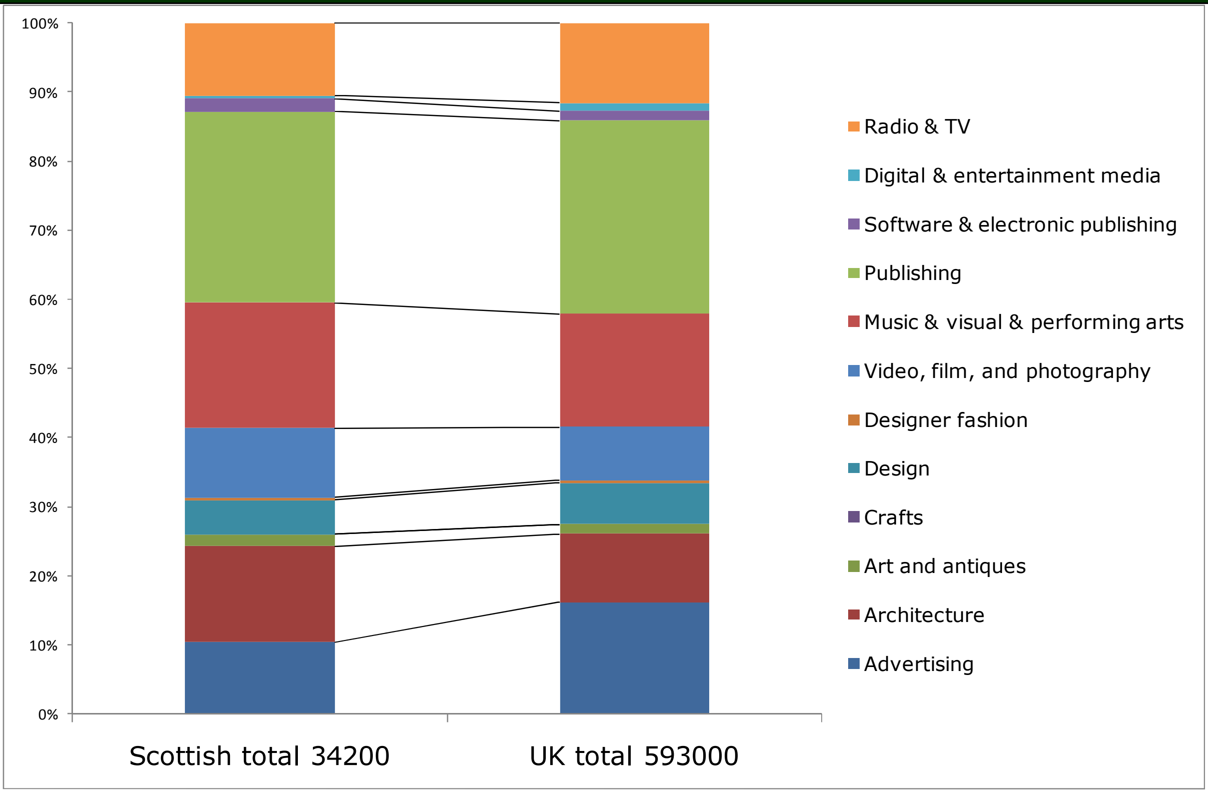
Figure 2.2: Creative Industries Employment DCMS CIEE 2011, UK (2010)



Source: Study Team Analysis of BRES, 2010, (Total Employment = 593,000 jobs)

2.13 Figure 2.3 compares employment in the Creative Industries for Scotland and the UK (using the DCMS CIEE 2011 definitions and weightings) for 2010.

Figure 2.3: Creative Industries Employment DCMS CIEE 2011, Comparing Scotland & UK (2010)



Source: Study Team Analysis of BRES, 2010

2.14 Figure 2.3 shows broad similarities between the UK and Scottish employment, with notable positive variances (where employment in Scotland is higher than the UK) being architecture (13.8% of employment in Scotland and 9.9% in the UK); Music and Visual and Performing Arts (18.1% in Scotland and 16.4% in the UK) and Video, Film and Photography (10% in Scotland and 7.7% in the UK). UK employment levels are notably higher than in Scotland for Advertising (16.2% for the UK and 10.4% for Scotland).

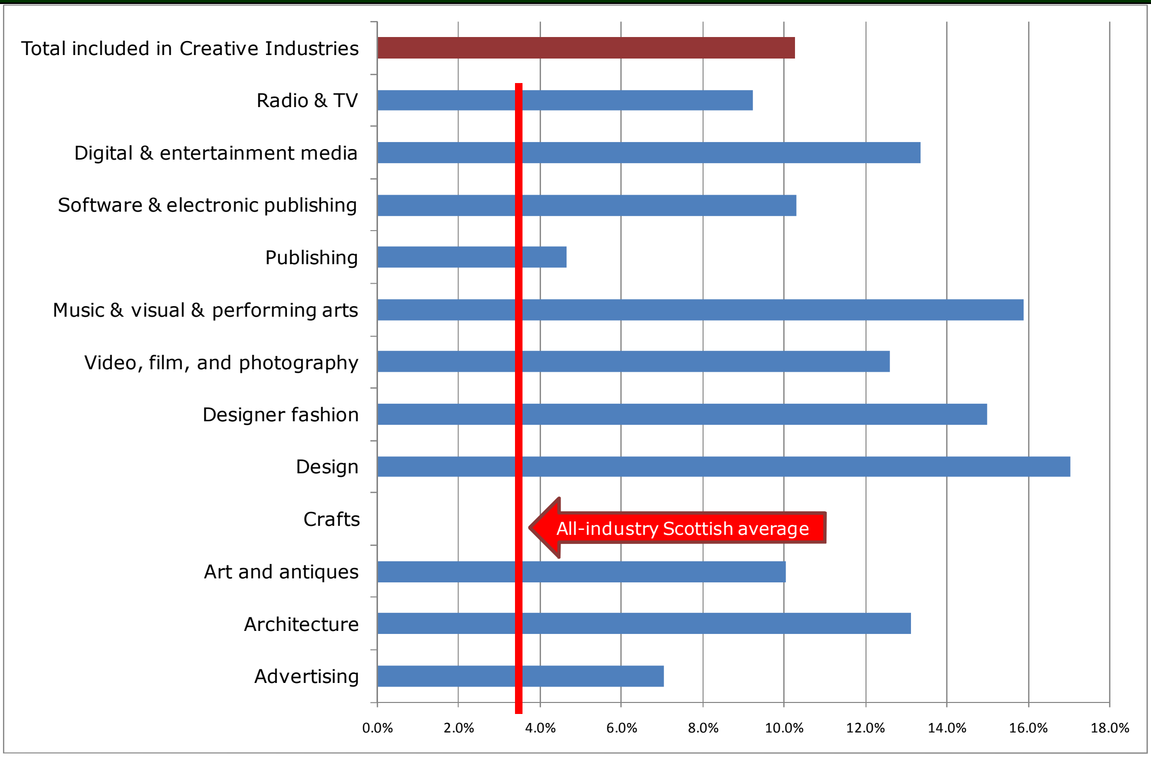
2.15 In addition to overall employment patterns, the number of sole working proprietors can also be identified (although it should be noted that this data is not thought to effectively capture the great majority of sole traders). There are a total of more than 3,500 working proprietors in Scotland with Design; Music, Visual and Performing Arts; and Designer Fashion showing the highest concentrations of working proprietors and Publishing and Advertising representing the lowest proportions.

2.16 More generally, and important to note, Figure 2.4 shows that, with the exception of Crafts[9], (due to data issues with Crafts when following the DCMS CIEE 2011 definition) the proportion of working proprietors (as a percentage of all employment in a sector) is above the Scottish all-industry average for all sectors within the Creative Industries. This shows the scale (and role) of working proprietors is more pronounced for the Creative Industries than it is for the economy more generally.

[9] Whilst DCMS includes Crafts within the CIEE 2011 definition as one of the sectors of the Creative Industries, no attempt is made in the CIEE to estimate the value of Crafts and it is therefore recorded as zero. This issue for Crafts is addressed later on in this report when the scope for Arts & Creative Industries in Scotland is set out, but it does mean that there are some key gaps in the results below using the DCMS CIEE 2011 definition.

2.17 The importance of self-employment to the A&CI is discussed in more detail in Section 6 of this report.

Figure 2.4: Proportion of Working Proprietors by Creative Industry DCMS CIEE 2011, Scotland (2010)



Source: Study Team Analysis of BRES, 2010

Gross Value Added

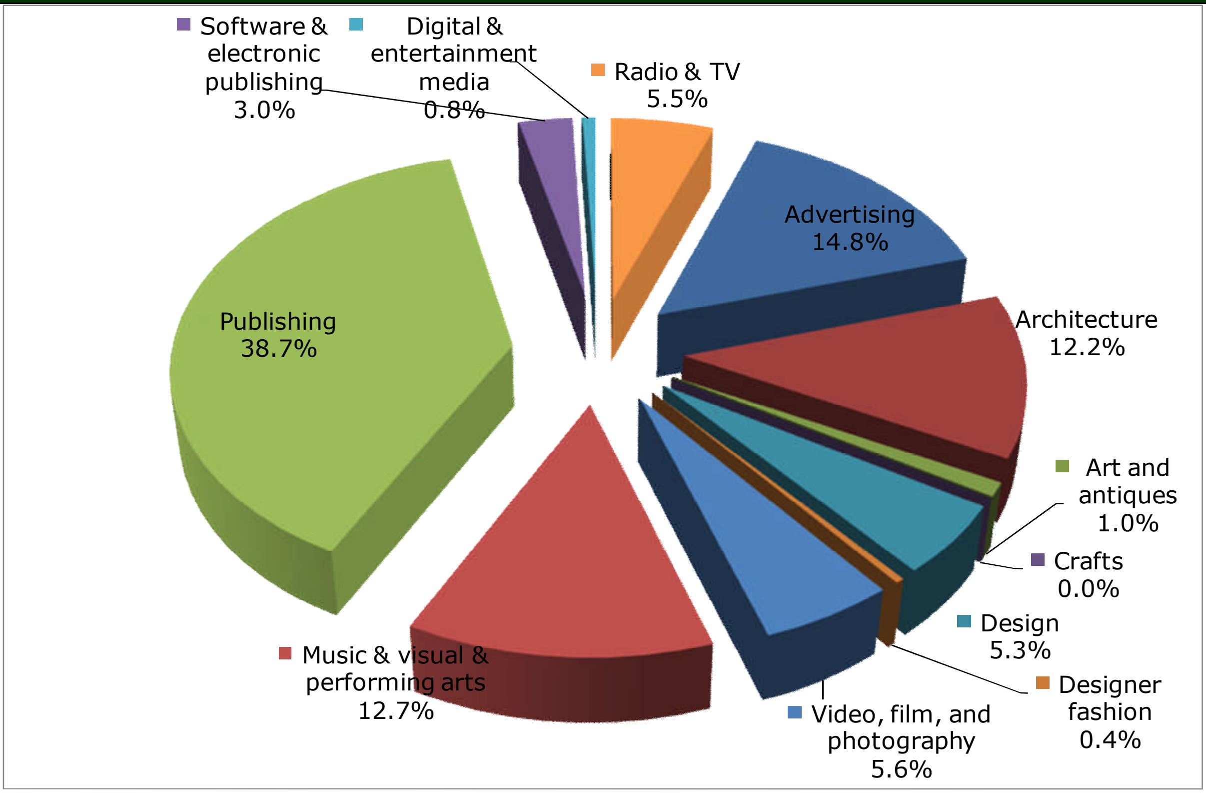
2.18 Gross Value Added (GVA) is the normal metric by which contributions to economic growth and development are gauged and the means by which DCMS measures the economic contribution of the Creative Industries: "*Gross value added (GVA) represents the amount that individual businesses, industries or sectors contribute to the economy. Broadly, this is measured by the income generated by the business, industry or sector less their intermediate consumption of goods and services used up in order to produce their outputs. GVA is therefore the standard measure used in official statistics to measure the contribution of industries to the economy, and enables comparisons across sectors/industries.*" (DCMS, 2011, p.7)

2.19 In terms of GVA the result for Scotland for 2010 (again using the DCMS CIEE 2011 definitions and weightings) are shown below in Figure 2.5. In total, Scottish GVA in 2010 for the Creative Industries was estimated at £1,539 million[10]. The industry making the largest contribution to this GVA is Publishing (39%), followed

[10] An important consideration in assessing the GVA of Creative Industries is that income received as a grant-in-aid is accounted negatively in GVA calculations. Thus the BBC, national companies, and other institutions (e.g. museums and others in the heritage sector) whose running costs are subsidised are formally accounted as value subtracting, rather than value adding. Income received as a transfer – principally donations and bequests – is not considered in the GVA accounts at all, because the objective of the GVA accounts is to measure primary income. These issues (and how they can potentially be addressed) are given more consideration in Section 4 (and Annex 3) of this report when the main results from the study are presented.

by Advertising (15%), Music and Visual and Performing Arts (13%), and Architecture (12%).

Figure 2.5: Gross Value Added in the Creative Industries DCMS CIEE 2011, Scotland (2010)

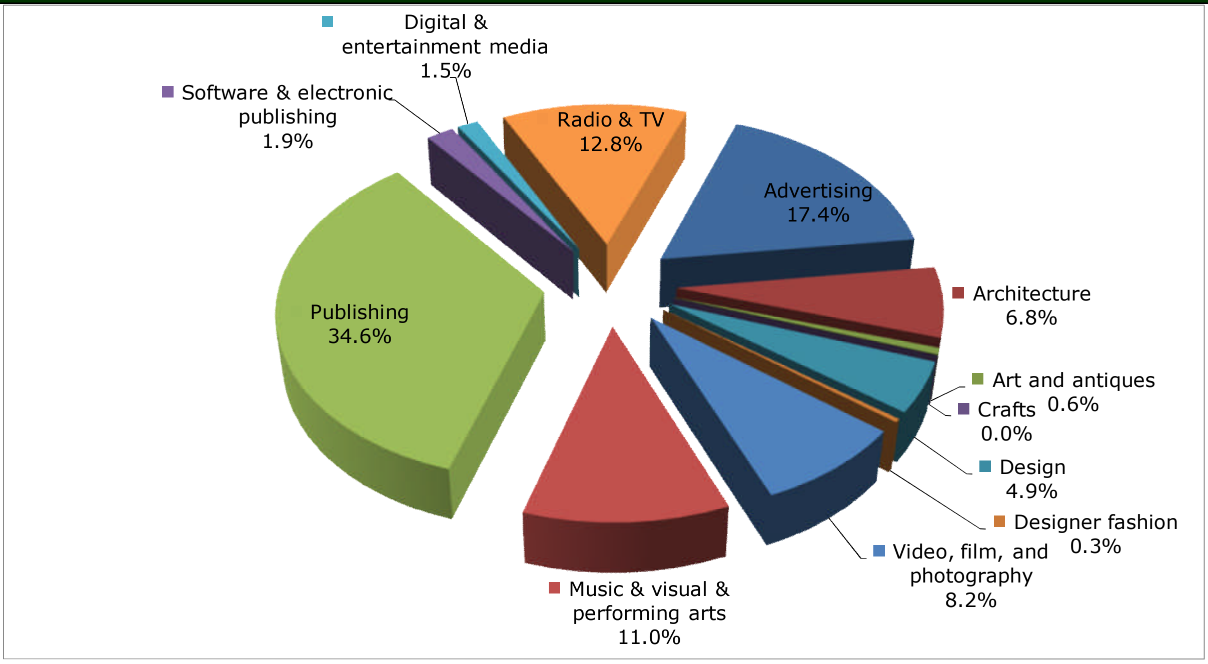


Source: Study Team Analysis of BRES, 2010 and national/regional accounts (Total = £1,540 million)

2.20 The equivalent **2010 GVA estimate for the UK is £34,460 Million** (Figure 2.6). Using this definition the Creative Industries in Scotland accounted for 4.5% of the UK total for GVA for the Creative Industries in 2010.

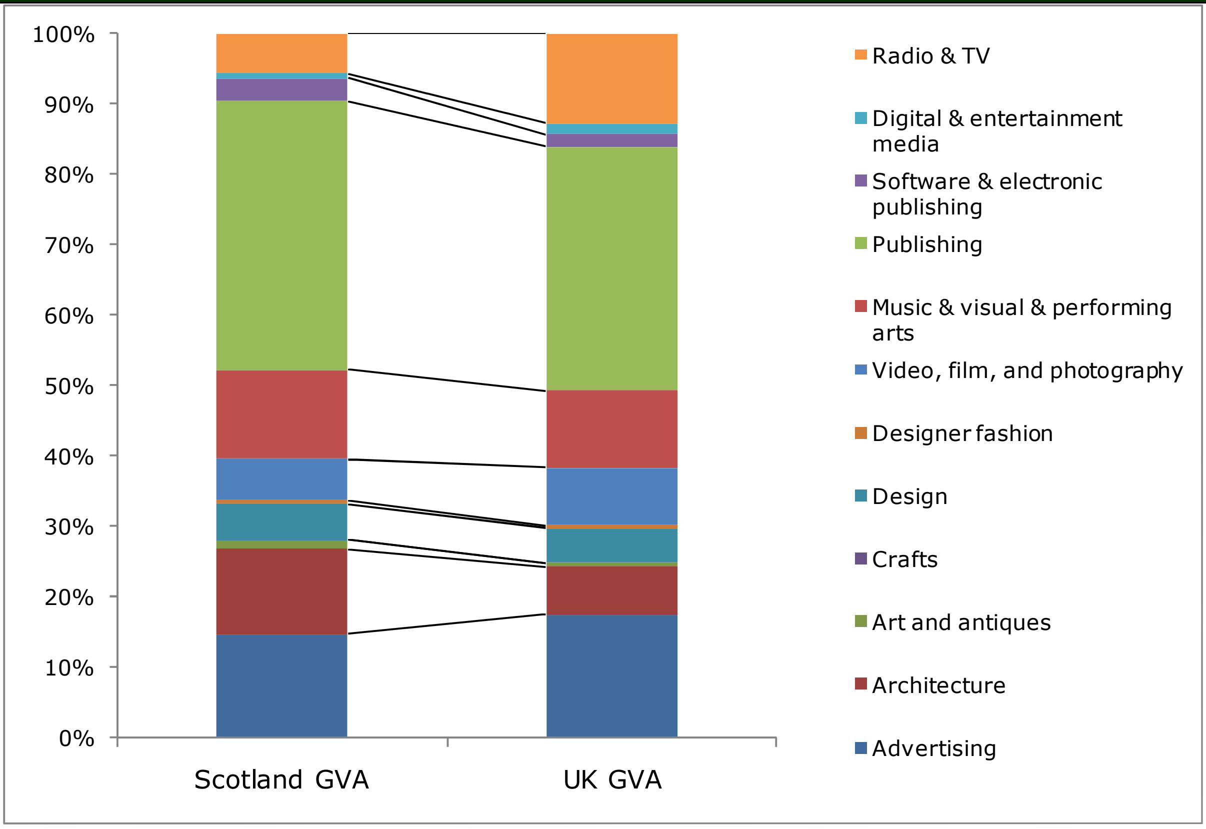
2.21 Figure 2.7 compares the sectoral breakdown of Scottish GVA to UK GVA for 2010. Notable industries where the Scottish GVA proportion is above the UK average are Architecture and Publishing.

Figure 2.6: Gross Value Added in the Creative Industries DCMS CIEE 2011, UK (2010)



Source: Study Team Analysis of BRES, 2010 and national/regional accounts (Total = £34,460 million)

Figure 2.7: Creative Industries GVA DCMS CIEE 2011, Comparing Scotland & UK (2010)

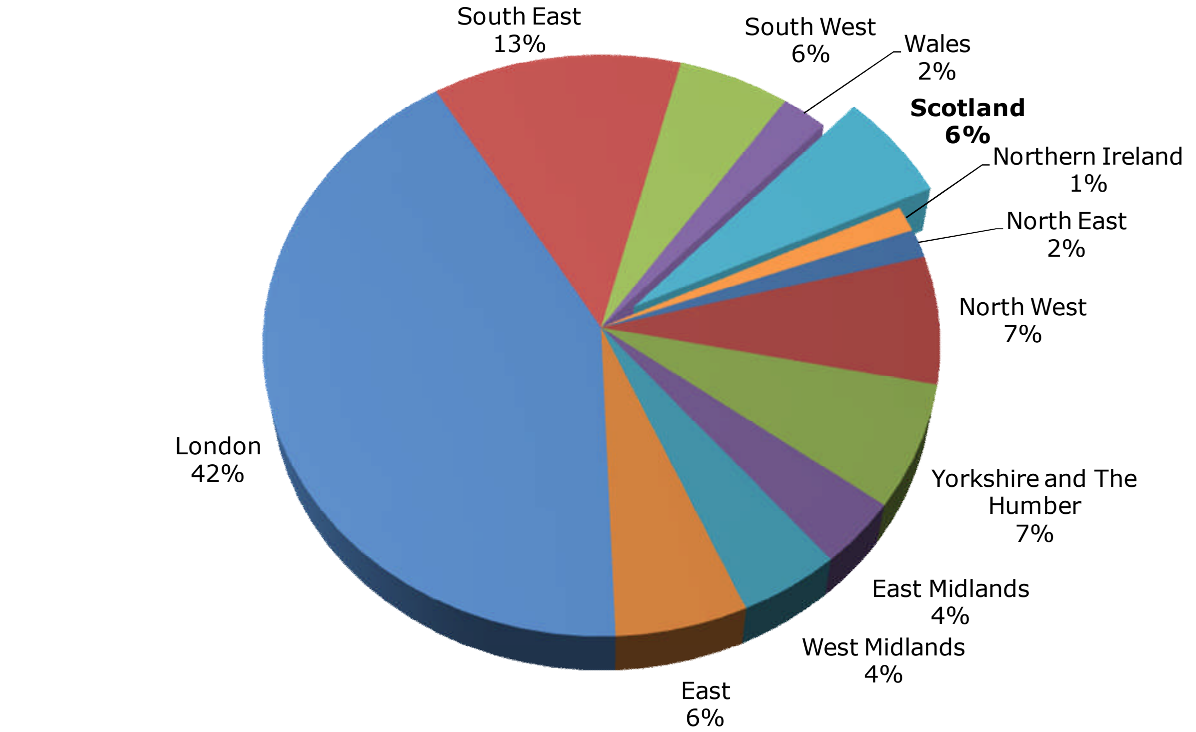


Source: Study Team Analysis of BRES, 2010 and national/regional accounts

2.22 Following on from the above, an assessment of Scotland's share of UK GVA in total and for each Creative Industry shows that in none of the creative industries is Scotland's share of UK GVA as high as Scotland's share of the UK population (8.4%). However, this finding needs to give due recognition to the distribution of creative industries in the UK, and the fact that this is heavily focused in London and the South East.

2.23 Figure 2.8 below shows the breakdown of total employment in the creative industries (using the DCMS CIEE 2011 definition and weightings) across the nations and regions of the UK. As outlined above earlier in this section, total UK employment in the Creative Industries is estimated to be 593,000 in 2010, and of these, jobs 513,200 of them are employee jobs. London accounts for 42% of this employment, followed by the South East (13%). Scotland accounts for 6% of total UK Creative Industries employees.

Figure 2.8: Creative Industries Employees DCMS CIEE 2011, UK (2010)

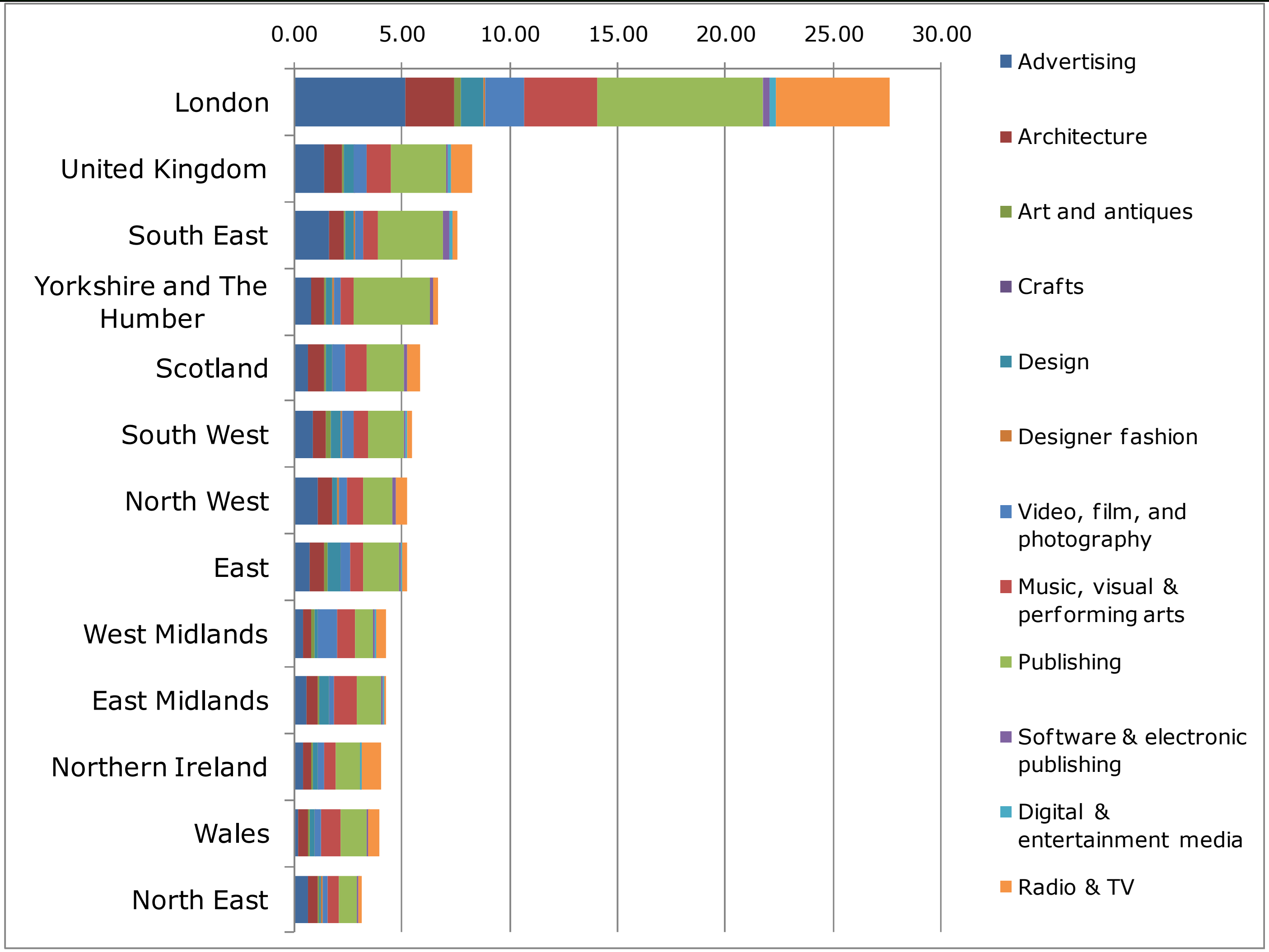


Source: Study Team Analysis of BRES, 2010 (Total = 513,200)

2.24 Thus London and the South East account for more than half of Creative Industries employee jobs. London is, of course, the UK's largest region in terms of population, so it is useful to consider (as shown in Figure 2.9 below) the 'intensity' of Creative Industry employment, expressing this as the number of employee jobs per '000 population[11].

[11] Employment figures across Council areas have been standardised on the basis of population. This was thought preferable to possible alternatives, such as total local employment or the population of working age. Such measures would have introduced distortions and distractions based on commuting or on differences between the age of the Creative Industries workforce and that of other industries.

Figure 2.9: Creative Industries Employment Intensity DCMS CIEE 2011 by region (employee jobs per '000 population), UK (2010)



Source: Study Team Analysis of BRES, 2010

2.25 This shows that London has by far the largest employment intensity figure (27.6) and is the only region above the UK average of 8.2 – exemplifying how much the London dominance affects the UK average figure. After London, the South East has the next highest employment density (7.6) followed by Yorkshire (6.7) – both of which have notable employment intensity around publishing – due to the very large printing industries that exist in these regions.

2.26 At a rate of 5.9, Scotland comes fourth in terms of employment intensity – showing higher employment intensity for the Creative Industries than all of the remaining regions and nations.

Business Stock

2.27 The most recently available data on business stock for the Creative Industries in Scotland is included within the DMCS CIEE 2011 report (December 2011)[12], which uses data from the IDBS (Inter Departmental Business Survey) to show the number of business units in Scotland. This is the most current data available for business stock and presents data up to and including 2011.

2.28 A summary of the number of business units in Scotland for 2010 is set out in Table 2.2 below. Whilst data from 2011 is available (from the CIEE 2011 report) data from 2010 is used here to ensure that all the results presented in this section are from the same year.

Table 2.2: Number of Creative Industries Local Business Units DCMS CIEE 2011, (2010)

Sector	Scotland	UK
Advertising	590	15,170
Architecture	1,090	12,200
Art & Antiques	250	3,490
Crafts	-	-
Design	680	14,340
Designer Fashion	50	950
Film, Video & Photography	440	10,780
Music & Visual and Performing Arts	1,120	31,150
Publishing	510	8,700
Software & Electronic Publishing	110	1,940
Digital & Entertainment Media	10	330
TV & Radio	320	7,970
Total	**5,170**	**107,010**
Proportion of all creative local units	**4.8%**	**100%**
Source: DCMS CIEE 2011 Report – extract from Table 15, page 34		

2.29 Table 2.2 shows that Scotland had a total of almost 5,200 business units operating within the Creative Industries in 2010, accounting for less than 5% of all units across the UK.

2.30 The industry where Scotland clearly exhibited a higher than UK average for the proportion of business units within specific sectors was Architecture, with

[12] Available at: http://www.culture.gov.uk/images/research/Creative-Industries-Economic-Estimates-Report-2011-update.pdf Additional data on business stock is included in the Annexes to the CIEE 2011 report (it can be found on pages 33 – 35) and is therefore not repeated here.

Publishing and Art & Antiques also accounting for a higher than UK average proportion. Conversely, Music & Visual & Performing Arts and Advertising accounted for a lower than UK average proportion of business units.

Issues with the Current DCMS Methodology

2.31 Underpinning all of the results presented in this section (i.e. the application of the DCMS CIEE 2011 definition and weightings) is the fact that there are a range of concerns with applying this standard approach to Scotland.

2.32 A key influencing factor in the investigation of these issues is the principle that the study ought to reflect the character of artistic, cultural and creative endeavour in Scotland, and its industrial structure – not only as a whole, but within the country's various geographic areas. The study therefore aimed to develop a more nuanced understanding of some of the interactions and organisational structures that exist within the Arts & Creative Industries (A&CI) in Scotland and capture these as appropriately as possible.

2.33 DCMS CIEE methodology has recently changed and recognises alternative approaches. Recent work from a range of sources, including the Scottish Government, NESTA, sector-groups (e.g. for the Crafts sector, Creative & Cultural Skills), and a range of other sources and commentators indicates that mechanistically applying the DCMS CIEE 2011 methodology will not capture appropriately the economic contribution of the A&CI.

2.34 The study methodology included reviewing a range evidence sources to test the extent to which the DCMS definition should (or should not) be amended/extended to ensure that as far as is possible, A&CI in Scotland can be appropriately reflected and measured.

2.35 This review included: a range of data analyses (including drawing on findings from examining industry and occupation data for Scotland and for the UK); literature/document reviews (covering academic literature and current policy debates); and assessing examples of international practice in defining and measuring the economic contribution of the A&CI. It also as drew on the views of representatives from the A&CI sectors – especially those sections of A&CI where the data analysis and other research identified issues with how the standard DCMS definition dealt with them. Discussions in the four sector consultation were carried out as part of this study reaffirmed some of the concerns with the DCMS approach. A summary of the findings from the sector consultations are included in Annex 1.

2.36 Together, this research identified a number of issues which suggested that applying the standard CIEE 2011 definition would not appropriately reflect Scotland. In addition, it was possible to identify (primarily due to the availability of new statistical classification systems as well as a detailed analysis of occupational and industrial data) a more refined approach to the assessment and categorisation of A&CI. The rationale for amending and extending the scope of the A&CI for the purpose of this study include:

- The lack of ability for the DCMS CIEE to provide any data on the Crafts sector – a sector regarded as important within Scotland's A&CI.
- The uses of weightings for some sectors (e.g. designer fashion) that are now regarded as outdated and do not appropriately reflect the current industrial/economic structure in Scotland. More broadly, there is a need to ensure that the weightings attributed to particular sectors/sub-sectors are

appropriate to Scotland (rather than the UK) and are appropriate to the structure of the economy in 2012.

- The lack of inclusion of sectors that are accepted as being core elements of the creative and cultural landscape/ecology within Scotland. Consultees stressed the need to include sectors outside the 'DCMS 13' definition but regarded as core parts of the A&CI in Scotland (such as heritage/museums, and textiles).
- The identification of new, more specific, data on relevant industrial classifications that fall within the definition of A&CI (e.g. Cultural Education – 85520 in SIC2007).
- The removal, within the most recent CIEE definition, of specific sectors from the definition of Creative Industries (e.g. parts of the Software Industries) whilst a rationale remains that would support their retention (at least in part).
- The issues around the 'grossing up' factor used in previous DCMS CIEE definitions. The recent decision to remove this grossing up factor is understood to have been made on the basis that forthcoming data improvements would remove the need for such a factor. However, investigation has shown that issues still exist with the data, as well as identifying that a blanket grossing up factor is not an appropriate solution.
- The lack of inclusion of some sectors that, whilst not previously regarded as creative when the original DCMS definition was set out, could now, due to changes in practice, be regarded as creative (e.g. photographic processing)
- The use of broad sector groupings (e.g. the conflation of Music and Visual and Performing Arts into one group) that restrict the usefulness of data to both policy makers and those active in the A&CI sectors. The strong view from the sector is that the disaggregation of such 'lumping together' was an important issue that needed to be addressed.
- Many of the issues mentioned above led to calls for the categorisation of A&CI in such economic impact studies to be made meaningful to those in the sector (rather than simply a construct that fits neatly with statistical definitions).

2.37 In addition to the above issues, the sector consultation events helped to reaffirm some wider issues about capturing the economic contribution of particular areas of the A&CI, both of which have been addressed in Section 6 of this report where self-employment, working proprietors, and employment in creative occupations are considered.

2.38 First, there were concerns about the extent to which an economic impact assessment can sufficiently reflect and capture the 'portfolio lifestyle' of many of those involved in the A&CI. The scale of portfolio working is accepted as more prevalent here than in other sectors, and therefore any issues/challenges with capturing this type of contribution are more pronounced for the A&CI. Linked to this is the issue and challenge of trying to capture cross-sector and cross-art form activity.

2.39 Second, consultees stressed the importance of capturing the role of freelancers and sole traders in the A&CI (who may not be accurately captured by standard economic datasets), was emphasised especially when the scale of freelancers and sole traders is thought to be more significant in these sectors. In addition, the role of volunteers is thought to be significant, and for some activities, events and organisations, volunteers can play a critical role (but one that is often under-valued in economic terms).

2.40 It should also be noted that whilst there was recognition from the A&CI sector that the focus of this work is on assessing the economic contribution of A&CI in Scotland, there were strong calls from some within the sector for further work to go 'beyond GVA', to reflect the contribution to other (non-economic) agendas such as health, education, mental well-being, quality of life. In addition, there were concerns about going beyond GVA within an economic paradigm, recognising that GVA-based assessments will not capture all of the contribution of A&CI due to the way that some aspects of activity are treated.

SECTION 3: DEVELOPING A SCOTTISH APPROACH TO ESTIMATING THE ARTS & CREATIVE INDUSTRIES

Section 3 Key Findings

- This section sets out a refined scope for defining the Arts & Creative Industries (A&CI) in Scotland. This scope has been developed following reflection on a number of the factors identified in Section 2 (as well as a range of wider debates and issues). To arrive at the final scope work by DCMS, the Scottish Government and international and academic commentary has been drawn on, along with findings from examining industry and occupation data for the UK and Scotland.
- In the final scope adopted for this study, a list of sixteen industries has been established (compared to the standard thirteen used in the DCMS CIEE 2011), with Crafts being further subdivided into a number of subsectors.
- The key adjustments that have been made to the arrive at the extended scope for defining the A&CI in Scotland have included: splitting out/rearranging some industries into more appropriate categories; adding in industries regarded as part of the wider scope of the A&CI in Scotland; retaining some categories recently removed by DCMS; attempting to capture 'Crafts'; amending some DCMS weightings for specific industries to better reflect current industrial and occupational structure in Scotland; including some other sectors which *prima facie* might not have been considered 'creative'.
- The final list of sixteen industries included within the Scope are: Advertising; Architecture; Visual Art; Crafts; Fashion & Textiles; Design; Performing Arts; Music; Photography; Film & Video; Computer Games; Radio & TV; Writing & Publishing; Heritage; Software/Electronic Publishing; and Cultural Education.

Defining the Arts & Creative Industries for Scotland

3.1 This study began by taking the scope of creative industries, as used by the Department for Culture, Media and Sport for its most recent Creative Industries Economic Estimates (DCMS (UK), December 2011) '*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 economic property'*.

3.2 However, while (as presented in Section 2) the DCMS scope has been retained for comparisons with areas beyond Scotland, the scope adopted within Scotland has been significantly extended. This Scottish structure seeks to reflect the character of artistic, cultural and creative endeavour in Scotland, and its industrial structure not only as a whole, but within the country's various geographic areas.

3.3 This Scottish definition reflects the understanding that has emerged from various strands of analysis, detailing some of the interactions and organisational structures that exist within the A&CI in Scotland. It also seeks to exploit the potential for improved measurement that derives from new statistical classification systems (i.e. SIC2007). Finally, to arrive at the final scope/definition, further work by DCMS, the Scottish Government (including the recent Growth Sectors – SIC 2007 Definitions - User Consultation), and international and academic commentary has been drawn on, along with findings from examining industry and occupation data for the UK and Scotland.

3.4 In the final scope adopted for this study, a list of **sixteen industries** has been established (compared to the standard thirteen used in the DCMS CIEE 2011), with Crafts being further subdivided into a number of subsectors. Annex 1 provides a detailed discussion about the issues considered in the development of this scope, and includes a breakdown of the final scope adopted – setting out the various definitions and classifications adopted.

3.5 Not all of these industries and subsectors are present everywhere in Scotland, but presenting them all helps to capture the creative environment and its economic ramifications as well as official statistics can, and to show how distinctive creative activity is. With one exception, the sixteen industries fall into five cultural domains (as set out by DCMS in the 2004 DCMS Evidence Toolkit), and in addition software development (which has until recently been part of the DCMS Creative Industries scope) has been included as a sixth, alongside Creative Education[13] as a seventh domain.

3.6 **Key adjustments** that have been included in this scope - as compared to the DCMS methodology - include:

- **Splitting out/rearranging some industries into more appropriate categories.** This includes splitting out the 'Music and Visual and Performing Arts' into three separate categories; separating the art dealers element from antiques within the DCMS 'Art and Antiques' category and re-categorising them more appropriately; and assigning a part of artistic creation (based on occupation data for artists) to the art galleries category.
- **Adding in industries regarded as part of the wider scope** of the **Arts & Creative Industries in Scotland.** Specifically the inclusion of Textiles (within the 'Fashion and Textiles' category), of museums, galleries, historic sites etc. within the 'Heritage' category, and the addition of the 'Creative Education' category.
- The **retention of some categories recently removed by DCMS.** Within Software/Electronic Publishing the classifications covering computer consultancy activities and business and domestic software development have been included within the scope despite recently (2011) having been removed from the DCMS CIEE definition). This retention is consistent with the recent Scottish Government User Consultation on Growth Sectors, which proposes the continued inclusion of business software, reflecting that the Growth Sector has been named in the Government Economic Strategy as 'Creative Industries (including Digital)'.
- Attempting to **capture the 'Crafts' sector** (something that DCMS definition has not been able to do) by identifying the appropriate Standard Industrial Classifications for craft activities and assessing (through data analysis at the local level) which elements within each class can be appropriately designated as crafts rather than manufacturing. In a number of crafts related industries the analysis has sought to exclude large establishments (e.g. in local authorities where hundreds of people are employed making glassware, this has been assumed to be bottles, but places with smaller employment have been assumed to be craft activities). Similar approaches have been used in furniture, ceramics and textiles, and antiques and furniture restoration have also been included within Crafts).

[13] The analysis for this study has taken advantage of the identification of 'Cultural Education' in the new Standard Industrial Classification (SIC 2007). This class includes provision of instruction in the arts, drama and music. Establishments giving this kind of instruction might be labelled 'school', 'studios' or 'classes'. They provide formally organised instruction mainly for recreational purposes, and such instruction does not lead to a *professional* diploma, baccalaureate or graduate degree [study team italics]. Establishments that do lead to a professional qualification are classed elsewhere in the education sector, and their cultural content can only be adduced from education statistics. Arts & Creative Industries in the education sector is considered in Section 5 of this report.

- **Amendments to the DCMS weightings** for some specific industries (e.g. through the use of various aspects of analysis (comparing industrial (SIC) with occupational (SOC) data, assessing Scottish Input-Output Tables, etc.) some issues with the DCMS weightings were able to be addressed in order to make them more relevant to Scotland at the current time.
- Examination of the occupational structure has also led to the **inclusion of some other sectors** which *prima facie* might not have been considered 'creative' (e.g. photographic processing used to be a mundane mechanical industry, whereas now it includes creative photo-editing processes, similar to those employed in other areas of graphic design).

3.7 Table 3.1 below summarises the scope used – setting out the domains and industries included. More information on how each industry is precisely defined in terms of the Standard Industrial Classification (SIC 2007), are set out in Annex 1 and 2 to this main report.

Table 3.1: Summary of Scope of Definition of the Arts & Creative Industries

DCMS CULTURAL DOMAINS	SCOTTISH ARTS AND CREATIVE INDUSTRIES	
Visual Art	1) Advertising	
	2) Architecture, planning and building design	
	3) Visual art and art dealers/ commercial galleries	
	4) Crafts	4a) Furniture and wood crafts
		4b) Jewellery
		4c) Pottery
		4d) Glass
		4e) Textile craft goods
		4f) Other crafts
		4g) Antiques markets
	5) Fashion and Textiles (includes designer fashion)	
	6) Design and design-dependent industries	
Performance	7) Performing arts including arts facilities and support	
Audio-Visual	8) Music including sound recording, music publishing and distribution and instruments	
	9) Photography	
	10) Film and video	
	11) Computer games etc	
	12) Radio and TV	
Books and Press	13) Writing and Publishing	
Heritage	14) Museums and galleries, archives, libraries, historic sites	
Digital Industries (Formerly in DCMS Creative Industries but not in Cultural Domains)	15) Software/electronic publishing	
Cultural Education	16) Cultural education	

SECTION 4: ESTIMATING ARTS & CREATIVE INDUSTRIES IN SCOTLAND – DIRECT IMPACTS

Section 4 Summary Table: Scottish Arts & Creative Industries Economic Contribution Study - Direct Employment and Gross Value Added Results (2010)

DCMS CULTURAL DOMAINS	SCOTTISH ARTS & CREATIVE INDUSTRIES	Direct Employment (rounded)	GVA (£M)	Adjusted GVA (£M)
Visual Art	Advertising	3,600	230	230
	Architecture	6,100	250	250
	Visual art	800	30	30
	Crafts	2,300	80	80
	Fashion & Textiles	7,000	280	280
	Design	4,700	160	160
Performance	Performing Arts	4,700	90	90
Audio-Visual	Music	400	10	10
	Photography	900	30	30
	Film & video	3,500	120	120
	Computer games	200	0	0
	Radio & TV	3,500	50	400
Books & Press	Writing & Publishing	16,400	810	810
Heritage	Heritage	10,700	120	250
Digital Industries	Software/Electronic Publishing	19,100	940	940
Cultural Education	Cultural Education	400	10	10
TOTAL		**84,400**	**£3,220**	**£3,690**

Section 4 Key Findings

- Adopting the scope for defining the Arts & Creative Industries (A&CI) in Scotland (as set out in Section 3) shows direct employment in the Arts & Creative Industries in Scotland in 2010 was 84,400 and GVA was in the region of £3.2 billion.
- Software/Electronic Publishing is the largest industry in terms of Arts & Creative Industries (A&CI) employment within Scotland, followed by Writing and Publishing, Heritage and Fashion & Textiles.
- Geographically, Glasgow (21%) and Edinburgh (19%) together account for 40% of total employment. Controlling for population size, cities are in the local authorities that show higher than average employment intensity, with Edinburgh, Glasgow, Aberdeen and Dundee all within this group. However, other areas also show above average employment intensity, including Scottish Borders, Orkney and Shetland.
- Conventionally accounted, A&CI GVA accounts for £3.2billion, with the largest sector being Software & Electronic Publishing followed by Writing & Publishing.
- The total turnover of the A&CI in 2010 was £6.3billion. This is distributed across the various industries in a similar pattern to GVA, with Writing and Publishing and Software/Electronic Publishing together accounting for more than half of all turnover.
- For some areas of the A&CI, the conventional approach to GVA does not capture their full impact – particularly Heritage and Radio & TV. The impact of bringing Heritage and broadcasting accounting practices into line with other industries is to increase the estimate of total GVA for the A&CI from £3.2billion to £3.7billion and to increase A&CI turnover from £6.3 billion to £7.2 billion.

- There are estimated to be around 12,000 business units in Scotland within the A&CI (in 2008). One-third of these are in the Software industries, including many micro-enterprises. The Writing & Publishing industry is next largest in terms of business count, followed by Architecture, Design, Performing Arts and the Heritage sector. By British standards, Scotland has relatively few A&CI businesses and they are typically larger than in most regions.

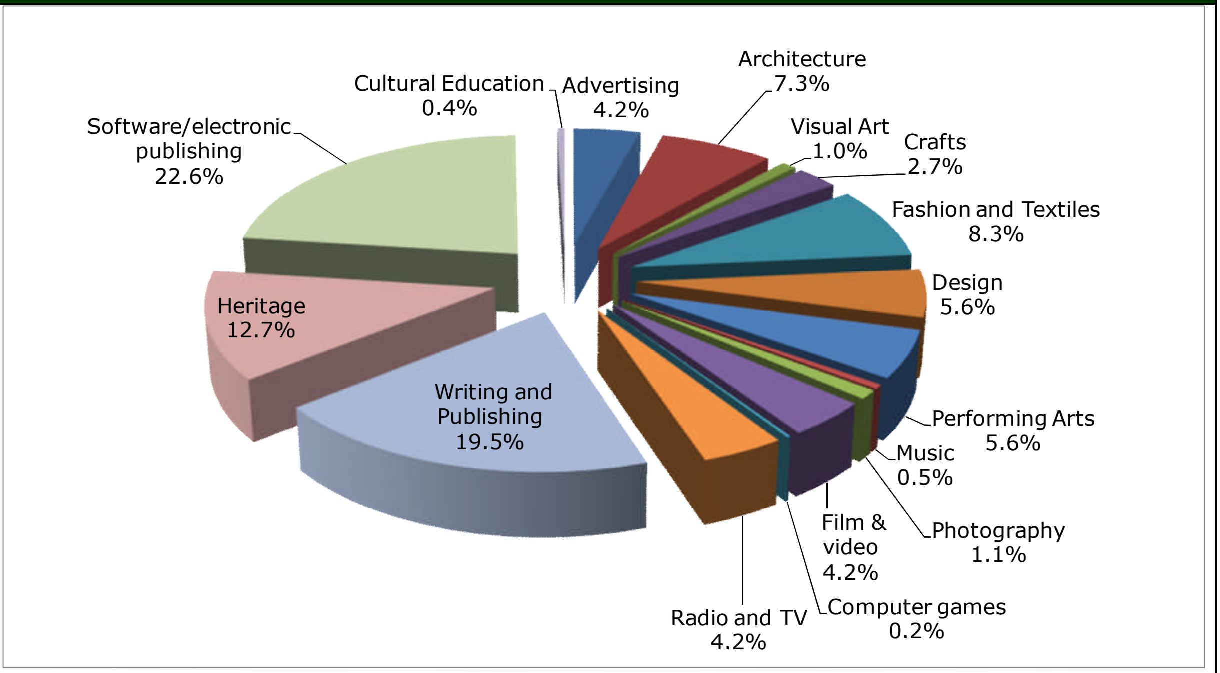
Introduction

4.1 This section adopts the scope of the Arts & Creative Industries (A&CI) in Scotland set out in Section 3 and presents the results for the **direct impacts** of the A&CI in Scotland. This includes presenting the results for the A&CI in Scotland in terms of employment, turnover, Gross Value Added, and business stock.

Arts & Creative Industries Employment in Scotland

4.2 The Business Register Employment Survey[14] (BRES) reported that in September 2010 there were 2.45 million jobs in Scotland. Based on the outlined scope of Arts & Creative Industries (A&CI) set out previously, 84,400 of these were in the A&CI. In terms of employment in Scotland, the A&CI therefore account for 3.4% of total employment in 2010.

Figure 4.1 Employment in the Arts & Creative Industries in Scotland, 2010



Source: Study Team Analysis of BRES, 2010

4.3 Figure 4.1 above shows that Software/Electronic Publishing is the largest industry in terms of A&CI employment within Scotland (accounting for 23% of total employment in the A&CI), followed by Writing and Publishing (20%), Heritage (13%) and Fashion and Textiles (8%).

[14] The Register on which BRES is based covers all PAYE-registered employers, and all VAT-registered businesses, and some other activity. The Register itself aims to be comprehensive. For larger firms the survey aims for complete coverage, but for smaller firms a sampling approach is used, with 'grossing up' and 'modelling down' to fill gaps. It actually achieves around 70 per cent coverage in terms of organisations, and the high 90s in terms of formal employment, and so is considered by the Office for National Statistics (ONS) to be the best source of employment data.

4.4 The breakdown of employment in the A&CI by the 16 sectors, provides some notable findings:

- Software/Electronic Publishing accounts for the largest proportion of employment (23%) – with the vast majority of this accounted for by those working in computer consultancy activity (SIC 62020) and business and domestic software development (SIC 62012).
- Within Writing & Publishing much of the employment is within the printing and publishing elements of this sector with Printing (other than printing of newspapers and printing on labels and tags) not elsewhere classified (SIC 18129) and publishing (e.g. Publishing of newspapers - SIC 58130; and Publishing of consumer, business and professional journals and periodicals – SIC 58142 and Book publishing – SIC 58110) accounting for more than 80 per cent of employment within this sector. Conversely, the Writing aspects of this sector (captured under Artistic Creation – SIC 90030) only accounting for a small proportion of employment, around 5%.
- Employment in the Heritage sector includes jobs in museums and galleries, archives, libraries, historical sites and buildings and the largest proportion of jobs are within libraries (around 40% of employment within this sector) followed by museums (accounting for 35% of jobs within this sector).
- The approach taken in this study has enabled an assessment of employment within the crafts sector to be carried out (something that DCMS has not been able to do within the CIEE definition) and shows employment in the region of 2,300 jobs. This level of employment is lower than the recent Crafts Council Crafts Sector study[15], which included some primary research of those working in the sector. It is likely that the high level of sole traders and self-employed within crafts explains much of the difference between the results.
- The results for Computer Games, where only 200 jobs are identified, appear to be anomalous, as recent research had identified a higher level of employment than the results here show. This variance is primarily thought to be due to how such businesses report their activity under industrial classifications – a proportion of firms involved in Computer Games will have been captured within the Software/Electronic Publishing sector instead. Those included within Computer Games are those in 'ready-made interactive leisure and entertainment software development' – SIC 62011 and 'publishing of computer games' – SIC 58210. Those within SIC 58290 (other software publishing) have been captured within Software/Electronic Publishing. Furthermore, some firms may also be divisions of non-Games businesses, in which case they will be classified under the parent company's code.
- For the music sector, whilst these results are an improvement on the DCMS CIEE definition – given that the analysis has been able to present results for Music separate to those for Visual and Performing Arts – the results here (400 jobs) are thought to be an underestimate of jobs within the music sector. This can partly be explained by the fact that music recording and publishing and performer representation are London-concentrated. In addition, venues are classified under Performing Arts (rather than Music) and this is the industry where the largest number of musicians sampled[16] report themselves as working. Furthermore, looking at occupational data, nearly half of musicians are classified to non-creative industries including Other Amusement and Recreation Activities, Activities of Religious Organisations, and Education.

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15 http://www.creativescotland.com/sites/default/files/editor/Craft_in_an_Age_of_Change_-_Full_Report.pdf
16 Via the Annual Population Survey (APS)

Self Employment and Working Proprietors

4.5 The BRES data, used for the overall employment analysis above, can also be used to provide an assessment of one element of self-employment, namely working proprietors/working owners. Working proprietors/owners may include individuals who receive drawings or a share of the profits but are not paid via PAYE.

4.6 Based on an assessment of the number of working proprietors in the A&CI in Scotland in 2010, of the 84,400 employment in A&CI across Scotland, 6,500 are working proprietors. That is, 7.7% of total A&CI employment in 2010 is made up of individual working owners.

4.7 In 2010, there were a total of 141,000 working proprietors across Scotland, and the 6,500 therefore represents 4.6% of all working proprietors. When this is compared to the figures for employees (where A&CI accounts for 3.4% of employees), the higher proportion of working proprietors suggests that the A&CI could be described as effective cradles for entrepreneurs.

4.8 The scale of self employment within the A&CI, including working proprietors, is considered in more detail in Section 6 of this report which looks at some of the other economic impacts and contributions of the A&CI in Scotland.

The geography of Arts & Creative Industries Employment in Scotland

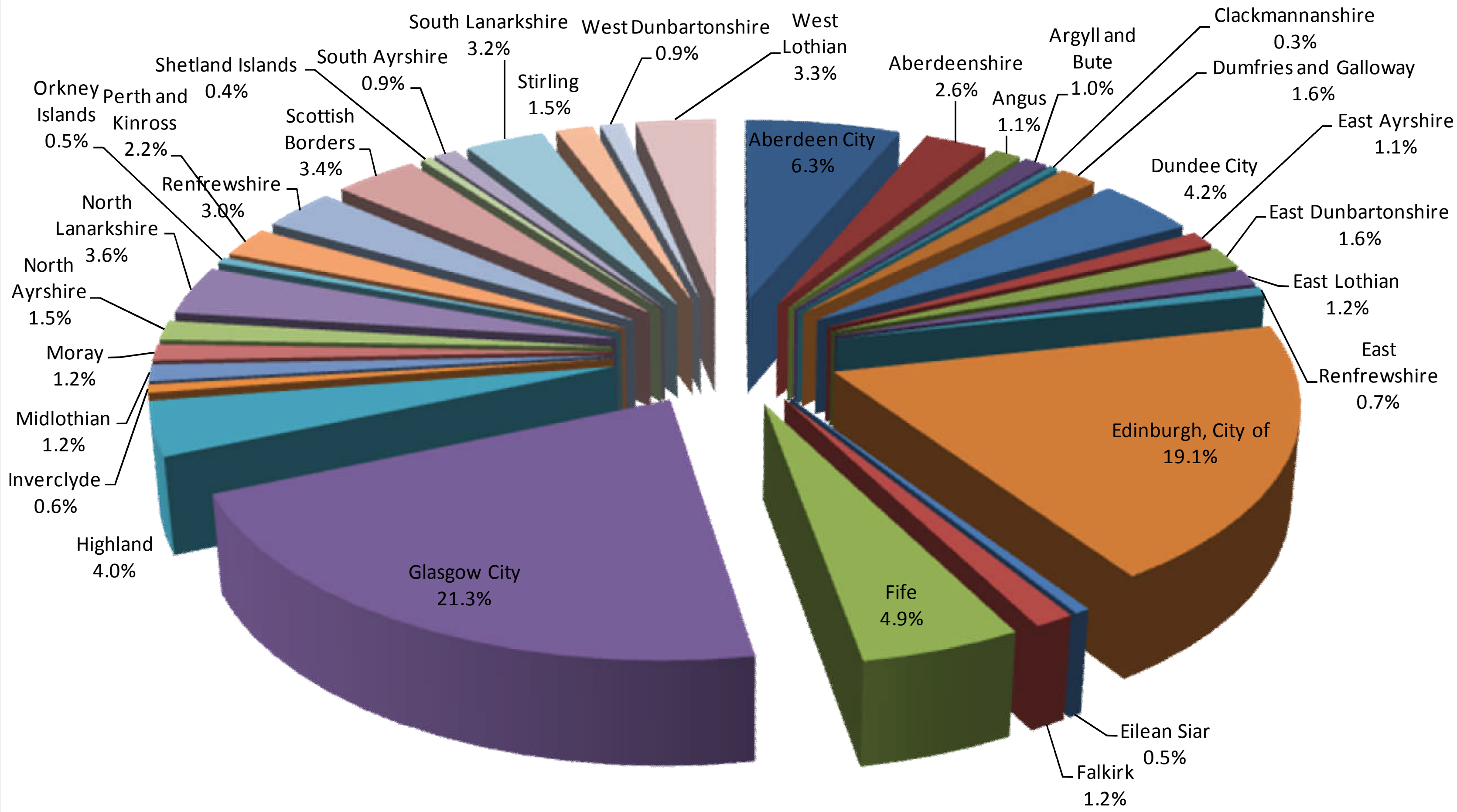
4.9 Looking at employment in the Arts & Creative Industries (A&CI) across Scotland, the importance of the cities, and especially the two largest cities, for A&CI employment is clear from Figure 4.2 below.

4.10 Of the total Scottish employment in the A&CI (84,400), Glasgow accounts for more than 21%, and Edinburgh accounts for just over 19%. As such, the two largest cities together account for 40% of total employment within the A&CI in Scotland, with the next largest proportion of employment being in Aberdeen (6.2%).

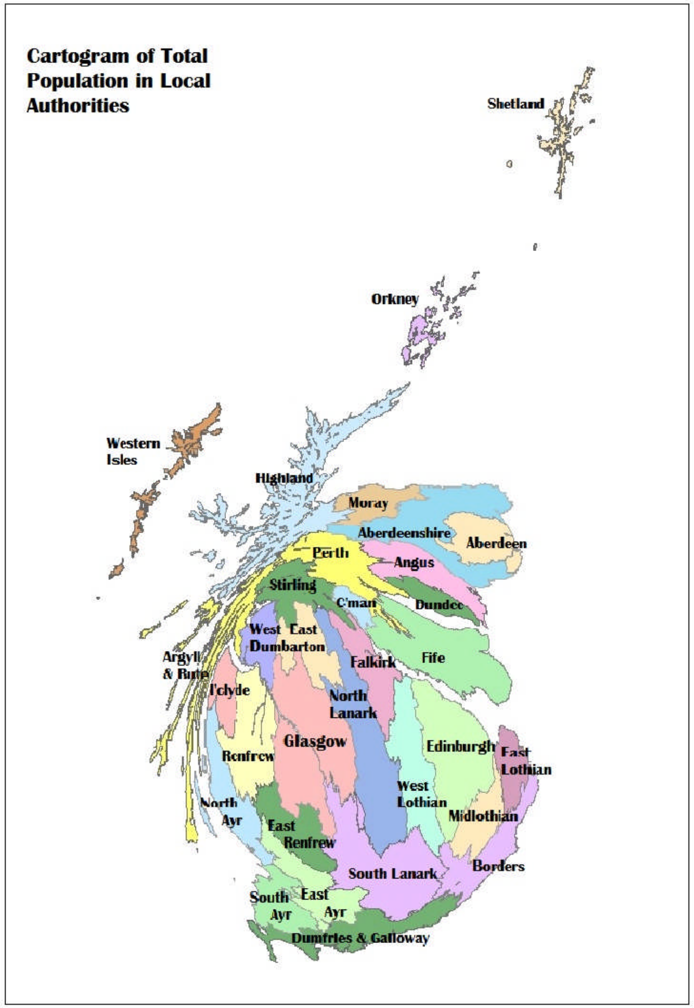
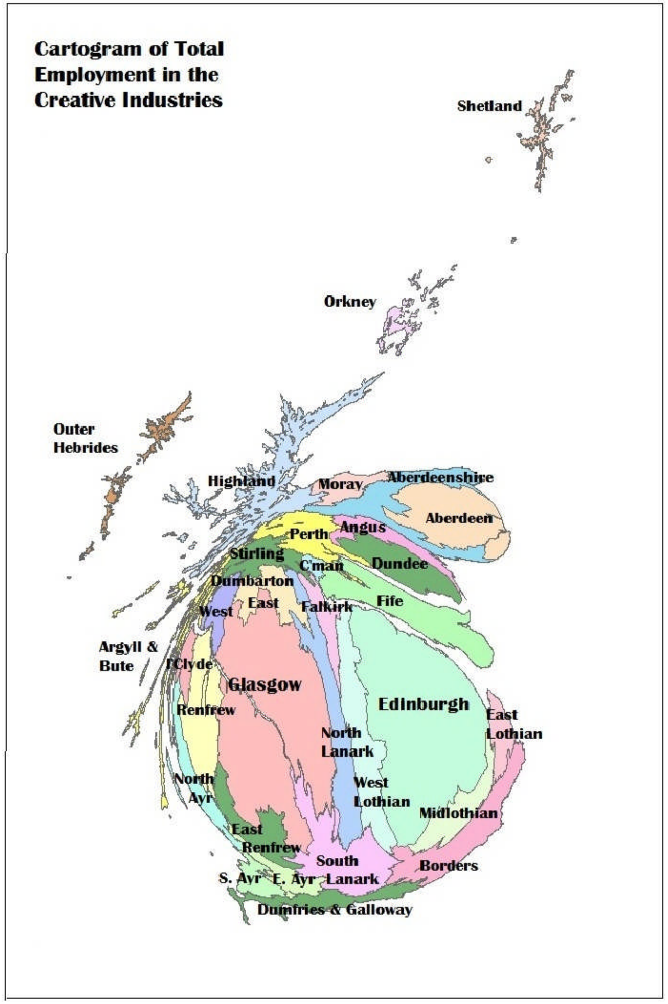
4.11 Figure 4.2 is followed by an alternative way to consider the same data - in the form of cartograms (Maps 4.1 and 4.2).

4.12 In Map 4.1 the area of each local authority has been adjusted to represent the amount of A&CI employment present in that local authority. This can be compared with Map 4.2 where the scaling principle is based on population by local authority.

Figure 4.2: Arts & Creative Industries Employment across Scotland



Source: Study Team Analysis of BRES, 2010

Map 4.1: Arts & Creative Industries Employment in Scotland – local authority (2010)	Map 4.2: Census Population in Scotland – local authority
	

Source: Study Team Analysis of BRES, 2010 and national/regional accounts

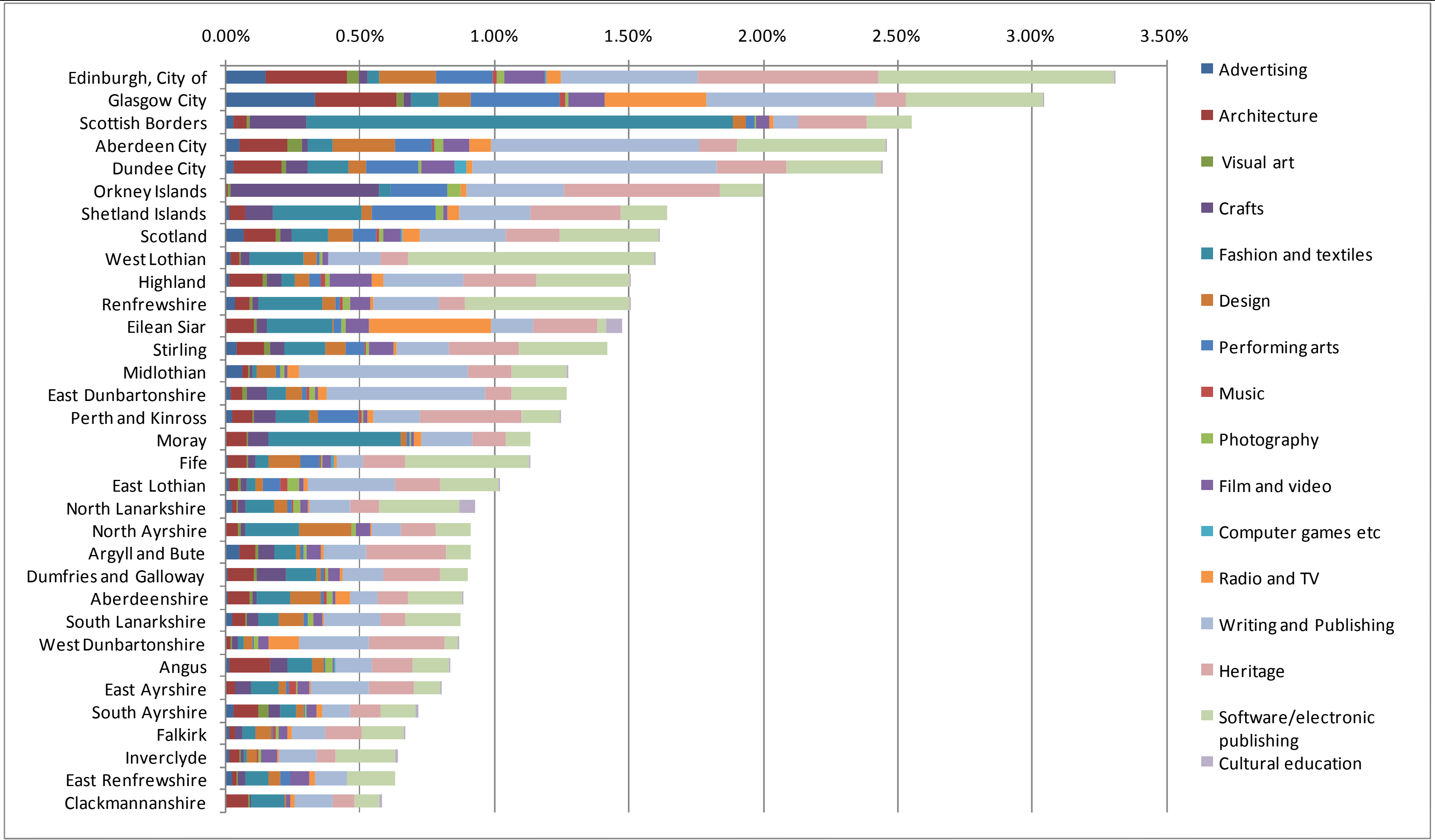
4.13 In order to control for population size and assess the scale/proportion of A&CI employment in any particular area, the geographic pattern of employment can be presented as 'employment intensity' by local authority, where the measure used is total employment as a proportion of total population.

4.14 The results presented below (in Figure 4.3 and Table 4.1) show employment intensity by local authority for 2010, ranked from highest to lowest. Figure 4.3 is followed by Map 4.3 showing the employment intensity by local authority across Scotland.

4.15 Again, even controlling for population size, it can be seen that cities are dominant in the local authorities that show higher than the Scottish average for employment intensity, with Edinburgh, Glasgow, Aberdeen and Dundee all within this group.

4.16 However, other areas also show an above average (i.e. higher than the overall Scottish average) of employment intensity for the A&CI. This includes the Scottish Borders, where the role of textiles clearly plays a very important role, as well as Orkney (with the role of both Crafts and Heritage being particularly important) and Shetland (where a range of industries - including Heritage and Fashion & Textiles - clearly contribute).

Figure 4.3: Arts & Creative Industries Employment Intensity across Scotland, 2010



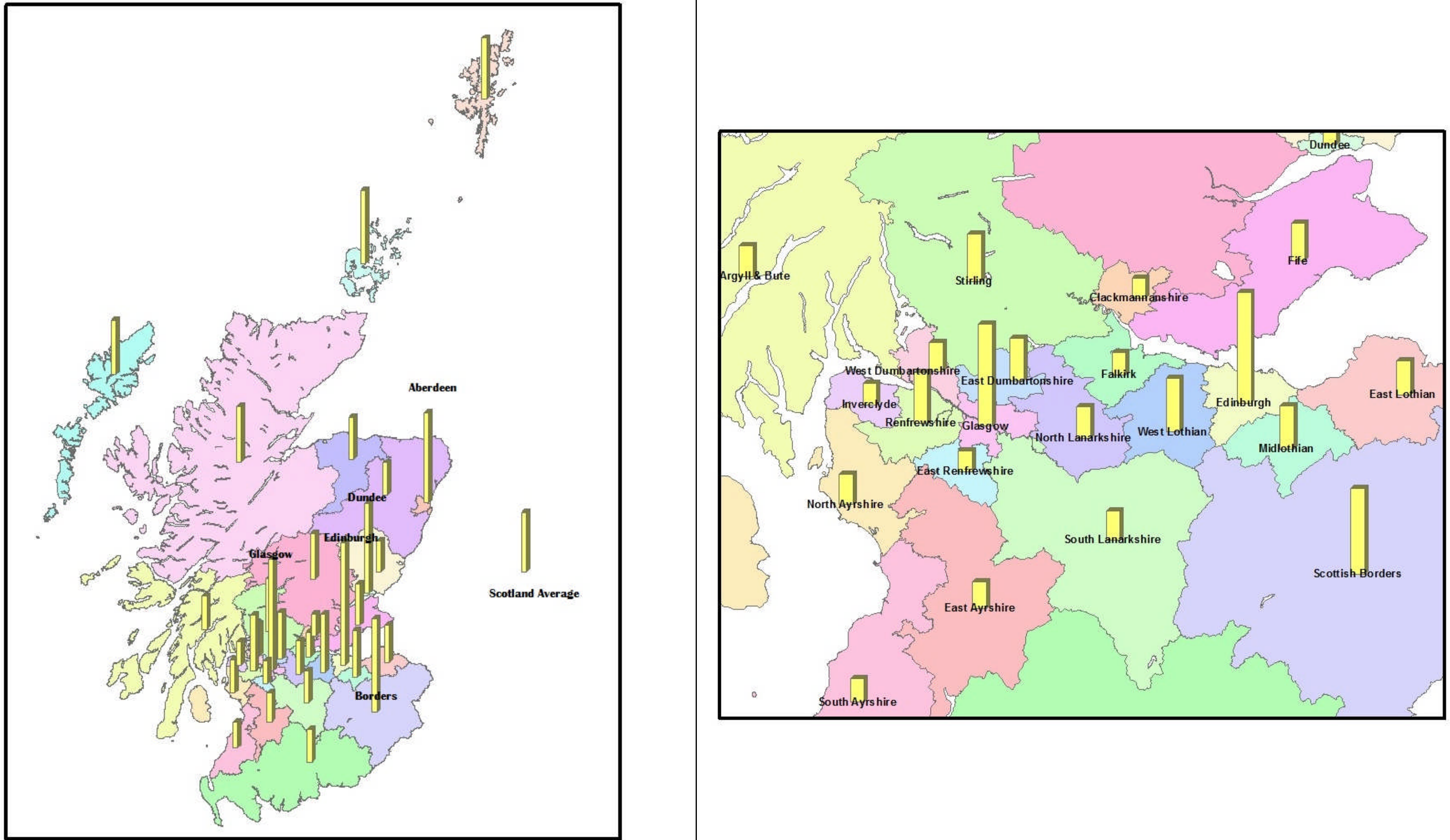
Source: Study Team Analysis of BRES, 2010 and national/regional accounts

Table 4.1: Arts & Creative Industries Employment Intensity across Scotland, 2010 (A&CI employment as proportion of total population)

Local Authority	Arts & Creative Industries Employment Intensity
Edinburgh, City of	3.31%
Glasgow City	3.04%
Scottish Borders	2.55%
Aberdeen City	2.46%
Dundee City	2.45%
Orkney Islands	2.00%
Shetland Islands	1.64%
Scotland (national average)	**1.62%**
West Lothian	1.60%
Highland	1.51%
Renfrewshire	1.51%
Eilean Siar	1.47%
Stirling	1.42%
Midlothian	1.27%
East Dunbartonshire	1.27%
Perth and Kinross	1.25%
Moray	1.14%
Fife	1.13%
East Lothian	1.02%
North Lanarkshire	0.93%
North Ayrshire	0.91%
Argyll and Bute	0.91%
Dumfries and Galloway	0.90%
Aberdeenshire	0.88%
South Lanarkshire	0.87%
West Dunbartonshire	0.87%
Angus	0.83%
East Ayrshire	0.80%
South Ayrshire	0.72%
Falkirk	0.67%
Inverclyde	0.64%
East Renfrewshire	0.63%
Clackmannanshire	0.58%

Source: Study Team Analysis of BRES, 2010 and national/regional accounts

Map 4.3: Arts & Creative Industries Employment in Scotland per head of population – local authority (2010)



Source: Study Team Analysis of BRES, 2010 and national/regional accounts

Assessing Employment Patterns Over Time

4.17 Given the changes that have occurred to the industrial structure of Scotland in recent decades, it is useful to consider how the employment patterns within the A&CI have changed over time. The overall trends are shown in Figure 4.4 overleaf, which are based on applying the same proportions that are used to present data are to historic data[17].

4.18 The most notable change is in the textile industry which was much larger in 1971 than it is now. However, based on an analysis of the industrial structure, the textile sector was less creative in those days, with the bulk of the industry made up by a great deal of manufacturing activity. Not only was the industry less driven by aesthetics and symbolism, so that the process of adding value was intrinsically less 'creative', the distribution of functions around the globe was different. So in Scotland there was a much greater weight of physical manufacturing, within an industry which was itself much more concerned with standard products.

4.19 Similarly, forty years ago the information technology industry had barely begun in Scotland, which at that time was in the form of very high-tech defence instrumentation in and near Edinburgh, electric typewriter assembly in Greenock, and cash-register production in Dundee. After passing through a spell when chips were ubiquitous and 'Silicon Glen' was the focus of European computer hardware manufacture, Scotland now has a legacy of software development.

4.20 Table 4.2 below summarises the employment growth rates over the period 1971 to 2010, showing both the long term annual average growth over the full time period, as well as the more recent impact of the recession:

[17] The historic employment estimates are based on converting past industrial classifications to SIC2007. For SIC 2003 a converter kindly provided by the Office for National Statistics was used, itself based on the Inter-Departmental Business Register in 2009. For earlier years the converters were built by cogentsi as part of its own economic accounting model, using the detailed definition of the classifications and official information available at and about the time of the classification change. As far as the study team are aware this model is the sole source of such information, so it is not possible to verify it beyond the internal quality checks carried out. However one validity check is possible. A time series of the old Creative and Cultural Industries was prepared by the Scottish Government under its Key Sectors programme, and although the coverage of the Arts & Creative Industries is significantly broader, it is clear that the overall trend shown by cogentsi's analysis and that shown in the past Key Industries statistics were broadly parallel between 1998 and 2006.

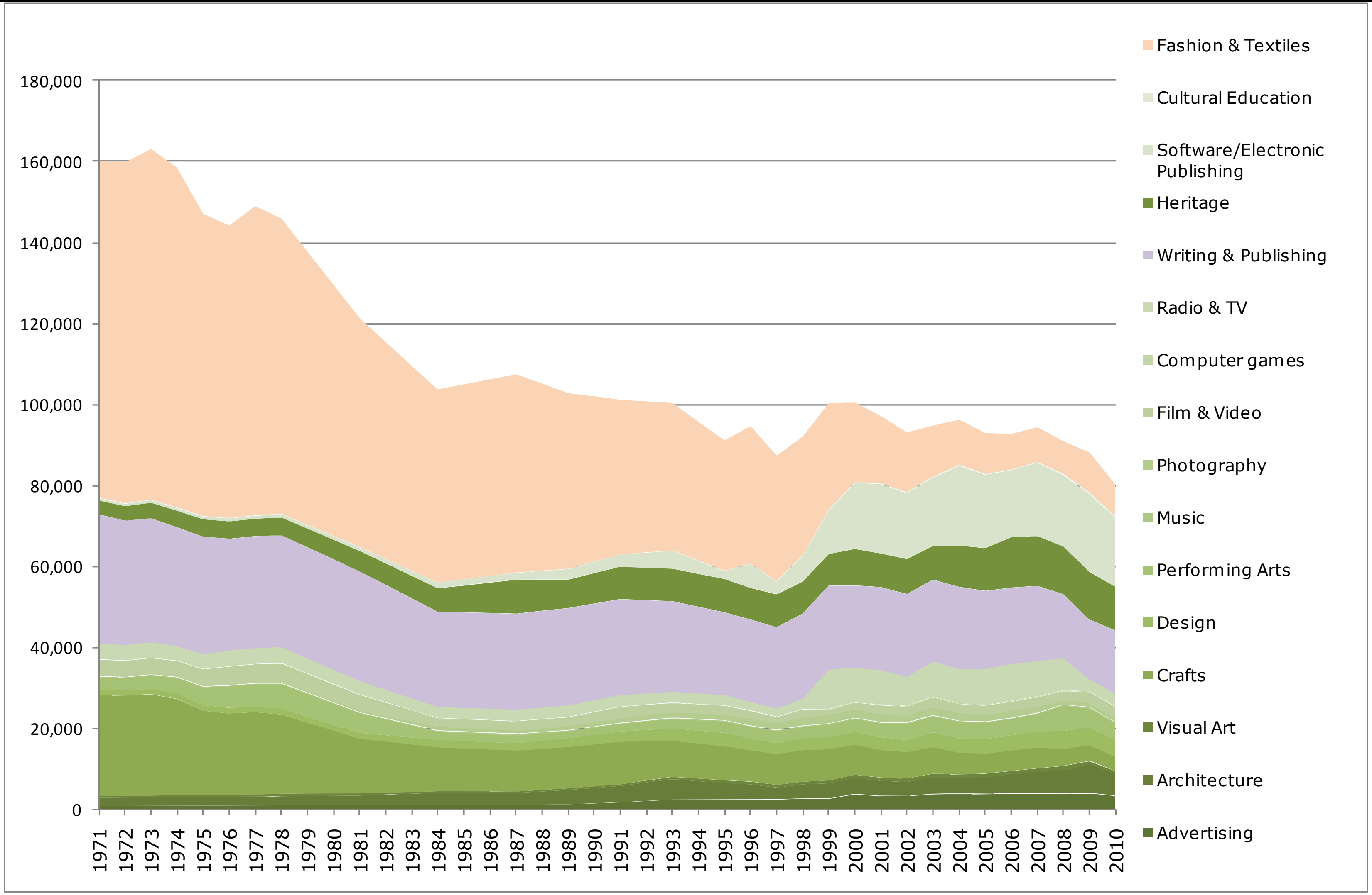
Table 4.2: Arts & Creative Industries Employment Growth Rates 1971-2010		
Industry	**Long term annual average growth 1971-2010**	**Recession impact to 2010**
Advertising	3.7%	-18%
Architecture	2.5%	-24%
Visual Art	1.4%	-40%
Crafts	-5.8%	dominated by non-cyclical changes
Fashion and Textiles	-5.9%	dominated by non-cyclical changes
Design	3.0%	-8%
Performing Arts	0.6%	-34%
Music	1.3%	-32%
Photography	4.9%	dominated by non-cyclical changes
Film & Video	-0.7%	-35%
Computer games	9.0%	-21%
Radio & TV	-0.6%	dominated by non-cyclical changes
Writing & Publishing	-1.8%	dominated by non-cyclical changes
Heritage	3.0%	-13%
Software/Electronic Publishing	9.2%	-13%
Cultural Education	3.0%	-31%
Source: Study Team Analysis of BRES, 2010 and previous government surveys		

4.21 Table 4.2 shows that Software and Computer Games are by far the fastest growing creative industries in employment terms[18]. At the other extreme the decline of textiles dominates the employment statistics, but as discussed above the statistics primarily reflect the decline of a standardised-product, large-scale manufacturing based industry. What remains in the textile industry is relatively creative, and this creative element may have been growing over time. Other growth rates fall in the range from 4 per cent per annum growth to 2 per cent decline, with Advertising at the top of this range and Writing & Publishing at the bottom.

4.22 In considering the impact of the recession it is difficult to cover those industries which seem already set on a long term decline. Amongst other industries there has been a reduction of around a third, perhaps reflecting that many A&CI are connected to discretionary expenditure.

[18] Current results for Computer Games appear to be anomalous as recent research had identified a higher level of employment than the results here show. This variance is primarily thought to be due to how such businesses report their activity under industrial classifications - a proportion of firms involved in Computer Games will have been captured within Software/Electronic Publishing sector instead. Some firms will also be divisions of non-Games businesses, in which case ONS will classify them under the parent company's code.

Figure 4.4 Employment Trends in the Arts & Creative Industries, 1971-2010



Source: Study Team Analysis of BRES, 2010 and previous government surveys

Arts & Creative Industries Gross Value Added (GVA) and Turnover

4.23 As explained in Section 2, Gross Value Added (GVA) represents the amount that individual businesses, industries or sectors contribute to the economy and broadly, this is measured by the income generated by the business, industry or sector less their intermediate consumption of goods and services used up in order to produce their outputs. GVA is the standard measure used in official statistics to measure the contribution of industries to the economy.

4.24 This section presents the GVA and Turnover results for 2010 **using the Scottish scope for A&CI as set out in Section 3** of this report. These results therefore are based on an extended scope as compared to the DCMS results for GVA presented in Section 2 which only cover the DCMS (CIEE 2011) definition and weightings for the Creative Industries.

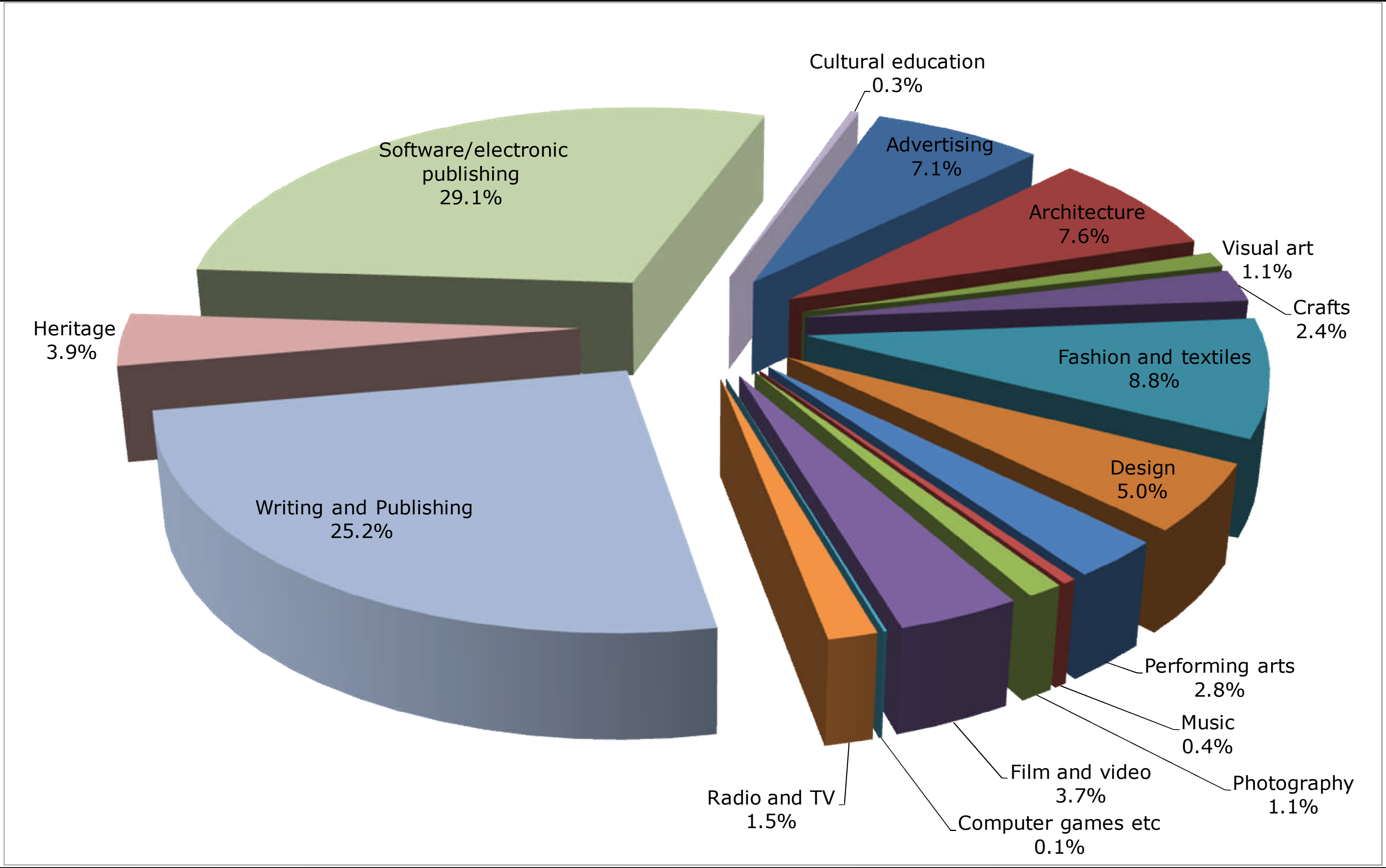
4.25 This subsection also considers and attempts to address the accounting conventions underlying GVA estimation in grant-aided activities (giving particular consideration to broadcasting and heritage enterprises) and presents an adjusted GVA estimation based on a rationale where broadcasting and heritage enterprises were accounted in a similar way to free-market or central government activities.

Gross Value Added

4.26 Conventionally accounted, the A&CI GVA accounts for £3.2billion, or about 3.2 per cent of Scotland's total GVA for 2010.

4.27 Figure 4.5 shows that the largest sector is Software/Electronic Publishing (£940million GVA), followed by Writing and Publishing (£810million). The next tier of industries – clothing and textiles (£280million), architecture (£250m), advertising (£230m) and design (£160m) are all recognisably at the commercial end of the spectrum of creative activities.

Figure 4.5: Arts & Creative Industries in Scotland, Gross Value Added (2010) – by sector



Source: Study Team Analysis of BRES, 2010 and national/regional accounts

4.28 Table 4.3 below summarises the GVA in each of the 16 industries.

Table 4.3: Gross Value Added for Arts & Creative Industries in Scotland, 2010 – by industry

Industry	GVA (rounded) £ millions	Percent
Advertising	230	7.1%
Architecture	250	7.6%
Visual Art	30	1.1%
Crafts	80	2.4%
Fashion and Textiles	280	8.8%
Design and design-dependent industries	160	5.0%
Performing Arts	90	2.8%
Music	10	0.4%
Photography	30	1.1%
Film and Video	120	3.7%
Computer Games	0	0.1%
Radio and TV	50	1.5%
Writing and Publishing	810	25.2%
Heritage	120	3.9%
Software/Electronic publishing	940	29.1%
Cultural Education	10	0.3%
TOTAL	**£3,220**	**100%**

Source: Study Team Analysis of BRES, 2010

Note: due to rounding of the GVA results, Computer Games is recorded as zero in the table above, but the sector does report GVA of less than £10 million.

Assessing Trends in GVA

4.29 Currently, there is only one official time series of Scottish economic data published on the new classification (SIC 2007), which is shown in Figure 4.6. This shows that, measured in current prices, Scottish GVA (for the whole economy) grew continuously from 1997 until the onset of the global recession in 2008.

4.30 Whilst gaining a historical perspective of the developments in the A&CI is important, it is currently beset by statistical issues, primarily related to the introduction of the new Standard Industrial Classification - SIC 2007. This has necessitated some statistical manipulation.

4.31 The regional accounts estimates set out in Figure 4.6 have been used to prepare a preliminary time series of GVA for the A&CI in Figure 4.7. This is in effect a matter of re-weighting Figure 4.6 above to reflect the annual share of A&CI within each, using detailed employment statistics to estimate shifts in that share.

4.32 Although this analysis, shown in Figure 4.7 produces no major surprises, it does generate a different picture from the overall economy. Generally – and particularly because of the inclusion of software – the trends for A&CI have been more erratic and broadly more cyclical; and an earlier, steeper and more pronounced recession occurred within the A&CI. A&CI GVA started falling at the turn of 2007/2008 rather than 2008/2009, and has fallen about 8 percentage points more than the broader Scottish economy[19].

4.33 The more detailed analysis set out in Figure 4.8 confirms the general conclusion about the recession. It shows that in an era when general economic growth has been slow but relatively steady, the A&CI have tended to expand in fits and starts. Very fast growth was experienced in 1998, 2003, and 2007, but there were steep declines in 2001, 2005-6 and 2008-9. In money terms the creative economy expanded slightly in 2010, but the 0.6 per cent growth rate was not at a level anywhere near enough to keep up with inflation[20].

4.34 It should be noted that not all of the A&CI follow this pattern – for example, Design did not experience this earlier decline and more closely followed the wider, national trend for the whole economy.

4.35 This earlier recession for the A&CI in 2007-2008 resulted mainly from declines in Writing & Publishing and Software. The Writing & Publishing sector's decline has continued in the latest available figures, and a significant part of it comprises a decline in newspaper publishing, whilst the decline in Software & Electronic Publishing has halted. More recently, Advertising and Architecture have contributed to the decline, as discretionary spending has fallen and investment projects in both the public and the private sector have borne the brunt of the UK recession.

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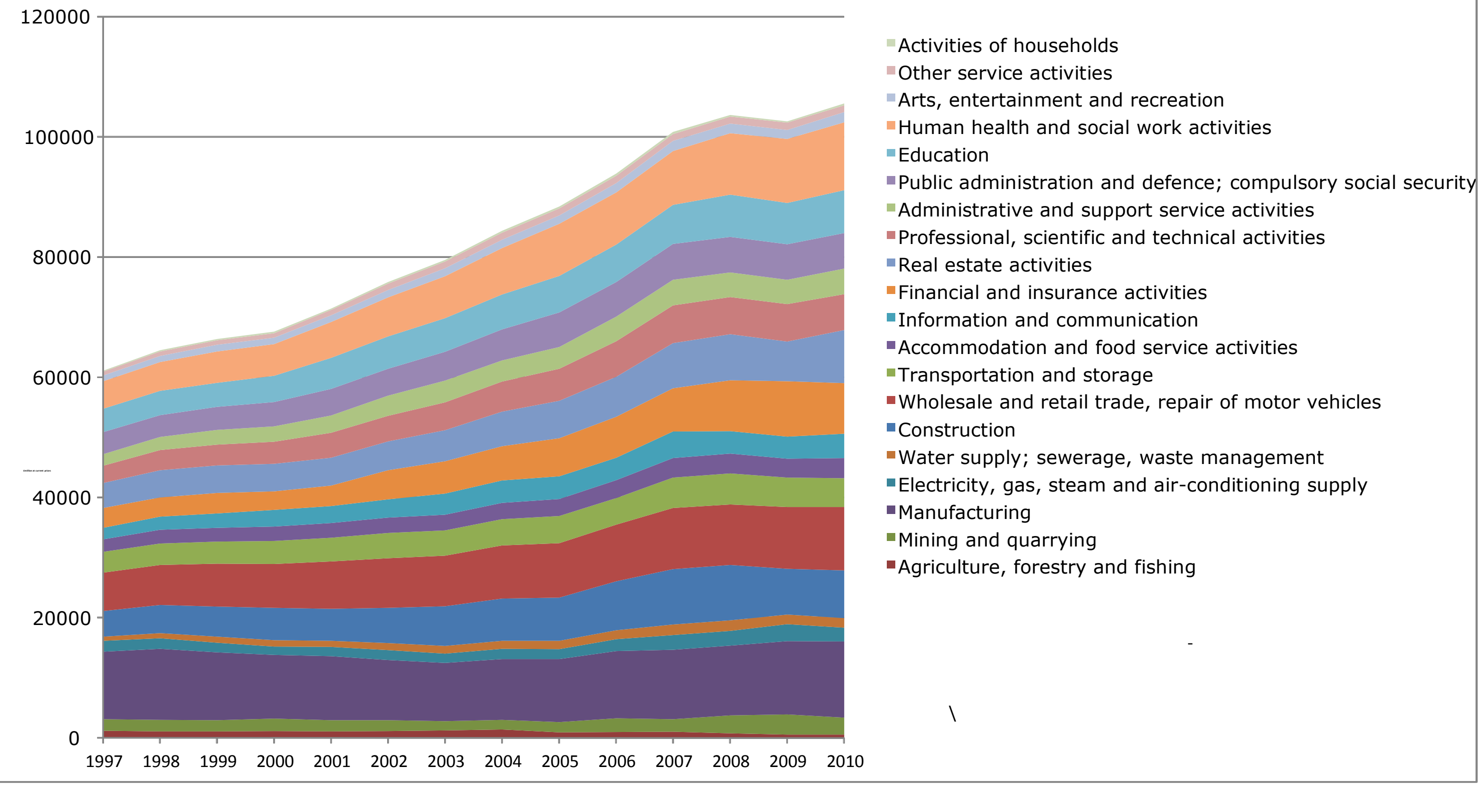
[19] It is worth noting that this analysis differs from the Scottish Government's key sector statistics on the Creative Industries, including digital, which is based on the DCMS definition of the Creative Industries which shows GVA growing in 2007 and 2008. See http://www.scotland.gov.uk/Topics/Statistics/Browse/Business/KeySectors/Database

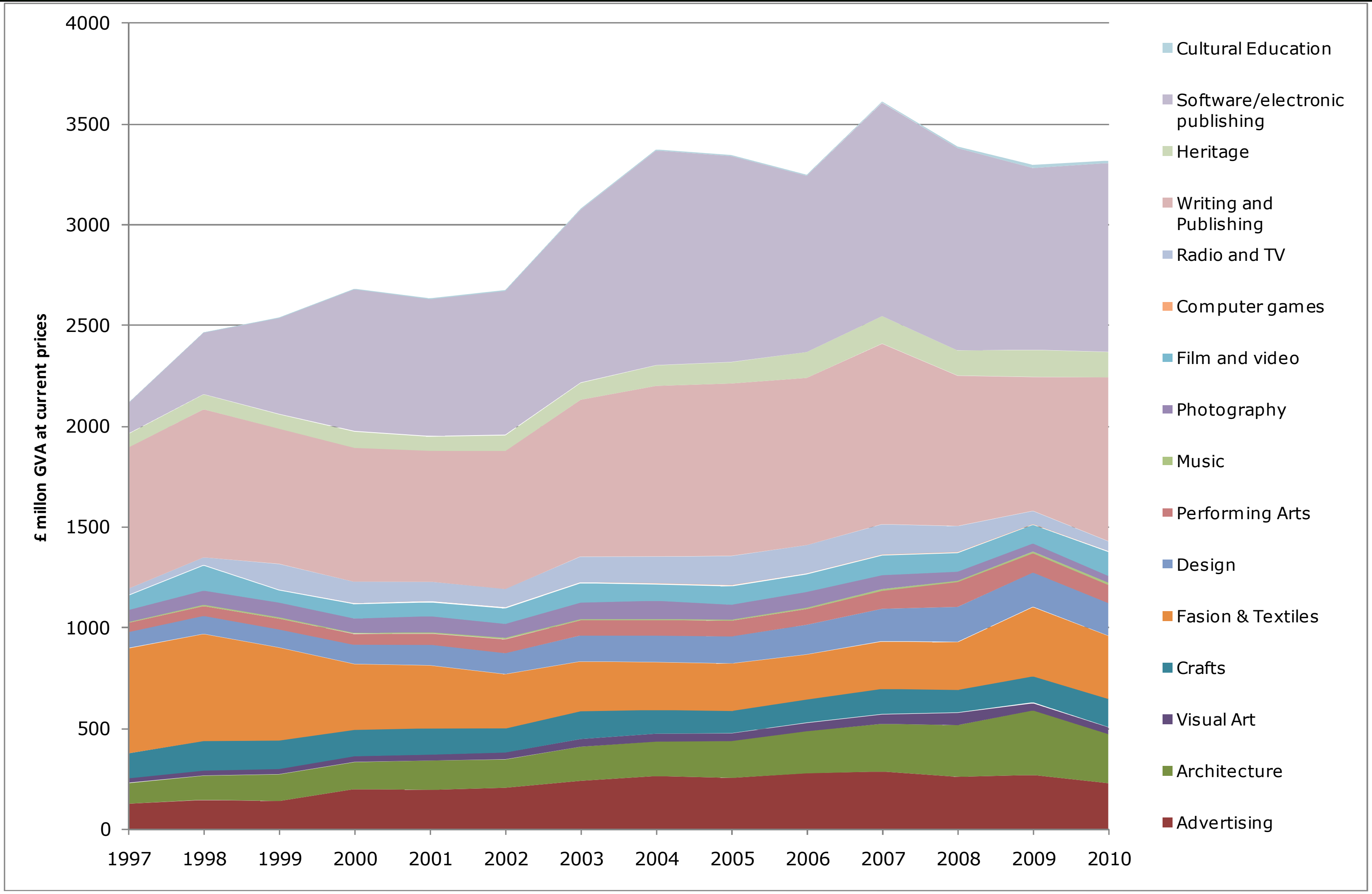
[20] Scottish economic data due to be published in the summer of 2012 will enable a more nuanced view of economic growth, and a longer time series stretching back to the 1970s. In the meantime, a validity check on the time series data is possible. A time series of the old Creative and Cultural Industries was prepared by the Scottish Government under its Key Sectors programme. Although the coverage of the A&CI is significantly broader, it is clear that the overall trends were essentially similar between 1998 and 2006.

Figure 4.6: Scottish GVA 1997-2010 – UK regional accounts estimates



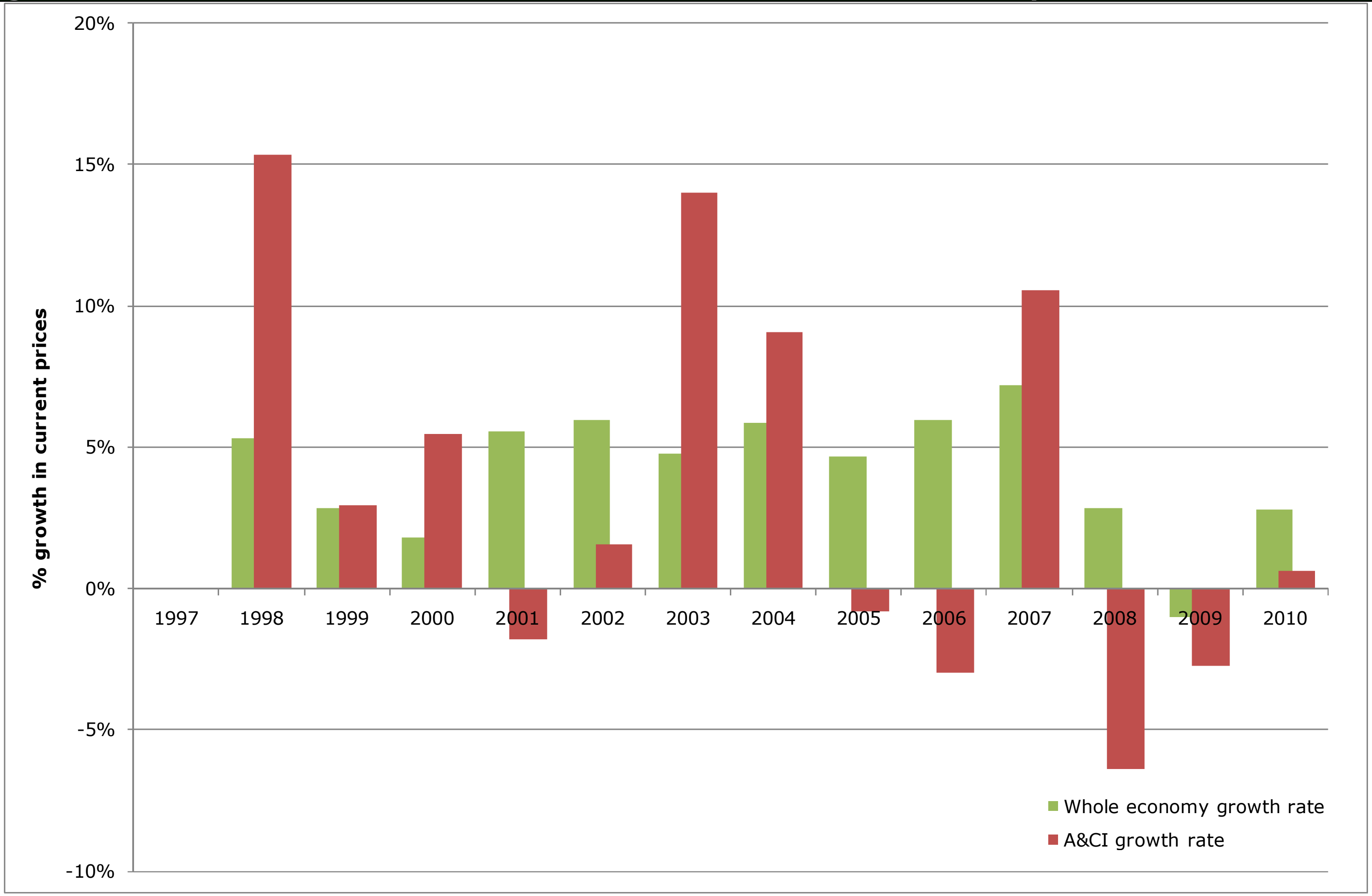
Source: Study Team Analysis of BRES, 2010 and ONS national/regional accounts

Figure 4.7: Estimated GVA for Scottish Arts & Creative Industries, 1997-2010



Source: Study Team Analysis of BRES, 2010 and ONS national/regional accounts

Figure 4.8: Growth rates for Arts & Creative Industries and the Whole Economy



Note: Growth rate in money terms (not in real terms)

Source: Study Team Analysis of BRES, 2010 and ONS national/regional accounts

Turnover

4.36 The **total turnover**[21] **of the Arts & Creative Industries (A&CI) for 2010 was £6.3billion**. This is distributed across the various industries in a similar pattern to GVA, as shown by Figure 4.9 below.

4.37 The industries that account for the largest proportion of turnover are Writing and Publishing (30%), and Software/Electronic Publishing (23%) which together account for more than half of all turnover.

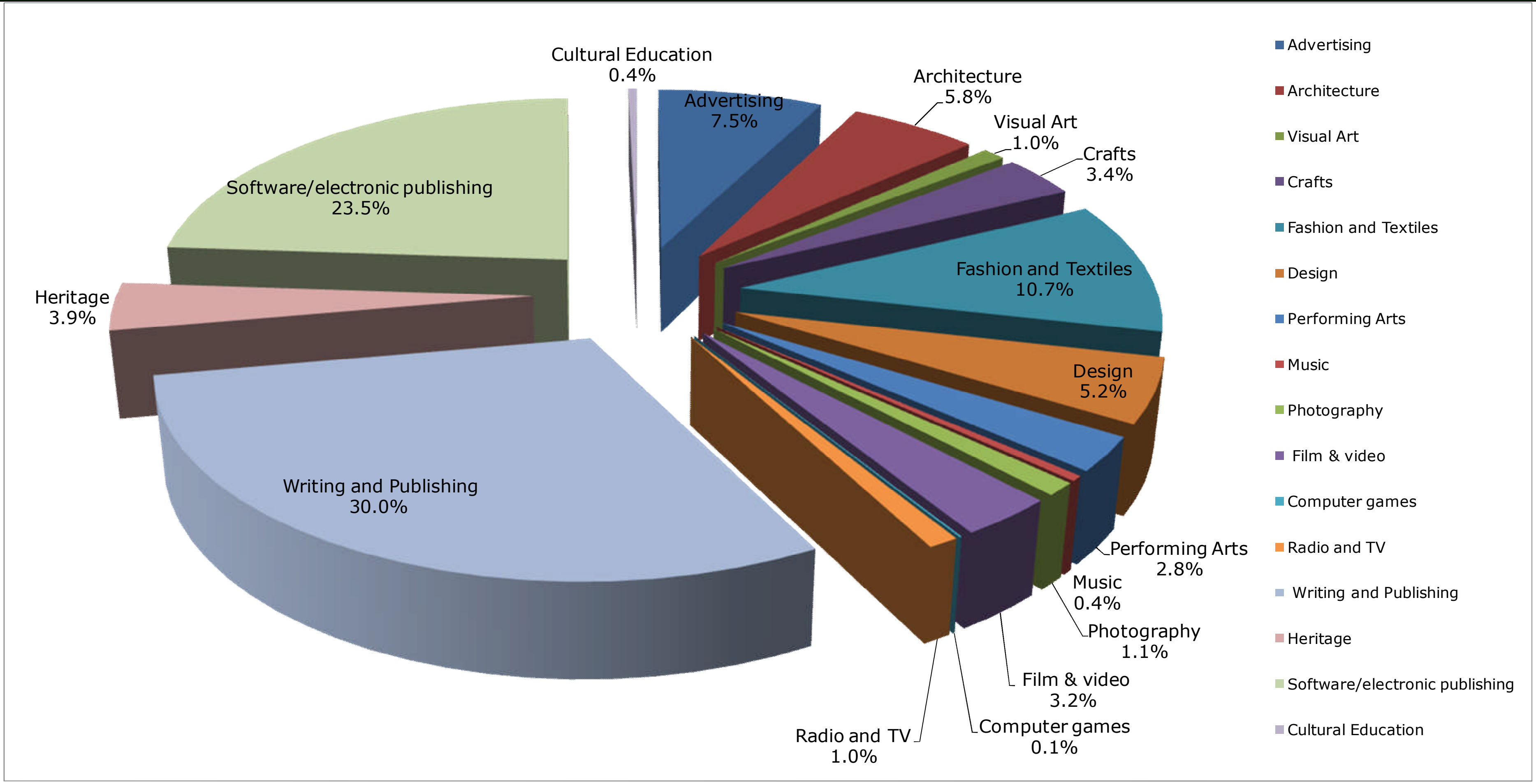
4.38 Whilst for most purposes GVA is the appropriate and accepted concept to assess the economic role of the industries, turnover is also relevant, partly because it is closer to the concept of expenditure (although it is still net of VAT and duties) and thus to the revenues of operators. It also is an important stage in multiplier calculations, and some appraisal frameworks make use of it.

4.39 In addition, turnover is regarded as a more useful (and more commonly used and accepted) metric by practitioners in the A&CI. As such, the results below will be of particular interest to those involved in the A&CI.

4.40 While, in principle, it is possible to generate a series of turnover trends for the A&CI, this would in practice amount to no more than a reweighting of the GVA series, and tell us little about growth. While turnover has a very important meaning for a specific business, its meaning across the whole economy can vary, depending on how vertically integrated different activities are. When a new time-series of Scottish Input-Output tables based on SIC2007 are produced (probably in October 2012) it would be sensible to revisit this issue.

[21] Net of VAT and duties

Figure 4.9: Arts & Creative Industries in Scotland, Turnover – by sector (2010)



Source: Study Team Analysis of BRES, 2010 and national/regional accounts

'Alternative' estimates of GVA and Turnover

Accounting issues

4.41 There are important conceptual issues arising from the formal definition of Gross Value Added, which are relevant to Arts & Creative Industries (A&CI) in general, but are of particular relevance to two sectors - broadcasting and Heritage.

4.42 The detailed issues around this are set out in Annex 3 to this report. In brief, there are standard approaches for assessing GVA that are applied to commercial bodies. (ONS statistical systems, principally the Annual Business Survey, collect these data from every large enterprise in the country, and a good sample of smaller ones, in the same way as the BRES does for employment).

4.43 This approach does not work for most government activities, mainly because there are no/very few sales, but also because national and local government accounts are kept differently from commercial ones. Sometimes a private sector sales figure can be used as a guide, but more usually statisticians simply assert that the value of government output must be at least as much as the cost of the inputs, so the GVA must be at least as much as the employment costs and any capital use.

4.44 However it makes the original 'supply based' estimates, ONS reconciles them with 'use-based' estimates from such sources as consumer surveys and export and investment data. The balanced 'Supply and Use Tables', summarised into more than 100 industries and products, usually provide figures that are statistically stable, and consistent across the whole economy.

4.45 When the Annual Business Survey results for the UK were examined in detail, it was found that broadcasting and the heritage sector present some anomalies due to the way in which they have dealt with by the accounting conventions. Across the whole UK the Heritage sector is shown in formal national accounts as a value subtractor, rather than a value adder, and the BBC is shown as subtracting value, greatly reducing the value which commercial broadcasters are shown as adding. According to the Annual Business Survey, GVA is negative for both these sectors.

4.46 What has happened is that these two sectors have fallen, in accounting terms, between the two stools which were designed for purely commercial institutions and for government.

- **If** the sectors were considered to be 'selling' services to the public (like universities, or many parts of the NHS) then the grants-in-aid would be treated as sales, and so there would be positive value added. This was the case for the BBC until about five years ago, when the licence fee was considered to be a payment for service. Now, it is considered to be taxation, and so when it is transferred to the Corporation it is considered a subsidy.

- **If** the sectors were considered to be wholly a part of government, whether UK, Scottish or local, they would qualify for having their GVA estimated by rounding up their costs.

4.47 The study team's interpretation as set out above has been confirmed by ONS, both in general and by the specific sector teams that compile the relevant sector data.

4.48 Given these issues with broadcasting and heritage, set out below are estimates of what the GVA of the sector would be if heritage and broadcasting accounts were compiled in the same way as other sectors of the economy. These are referred to below as 'adjusted' conventional accounts. The approach used is effectively a clear, simple method to dealing with what is a difficult issue. In order for a more detailed and rigorous analysis to be achieved, a separate study would need to be carried out.

4.49 The first step in estimating the 'adjusted' conventional accounts is to attempt to generate a 'turnover' figure for the sector.

4.50 In the heritage sector an estimate of 'turnover' was therefore made by adding estimated purchases to the estimated wage bill and a margin equivalent to 30% of employment costs. This yielded an adjusted turnover figure for Heritage of approximately £400 million, or 70% higher than formal accounting suggests. GVA would be approximately £250 million, or double the conventional estimate.

4.51 In broadcasting the BBC has recently published a response to a Freedom of Information request, indicating that just over 1,000 people (plus part-timers and freelances) are employed in BBC Scotland, at an average annual salary of £35,300. Adding on-costs and the other components of value added pro-rata would give £74,000 GVA per head, which equates to 60 per cent of a UK figure (developed based on ABS estimates). This no doubt takes take account of different market conditions and a truncated organisational structure in Scotland, and so will conditions at other broadcasters. The ABS figures may include very highly-salaried London-based executives, and some freelancers. But any of these three sets of figures (set out in Annex 3) leads to many times the £64million turnover and £48million GVA reported in the conventional estimate above.

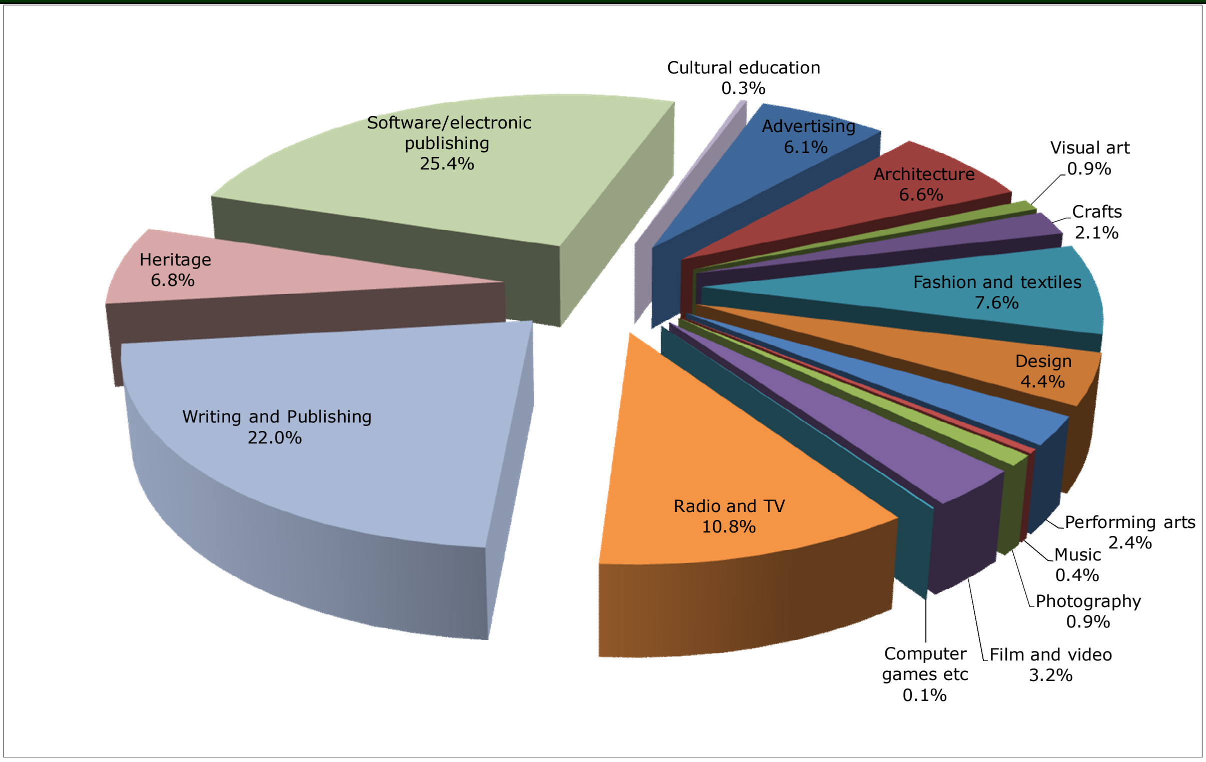
4.52 Accordingly, it was thought appropriate to reduce the ABS-based figures to about 40 per cent, to give an adjusted estimate for Radio and TV of £800 million turnover and £400 million GVA.

4.53 Thus the impact of bringing heritage and broadcasting accounting practices into line with other industries is to increase the estimate of the A&CI turnover from £6.3 billion to £7.2 billion and to increase the total GVA of the A&CI from £3.2 billion to £3.7 billion. Needless to say, as well as giving higher weight to the economic importance of the A&CI sectors, these adjustments have a visible impact on the measured overall performance of Scotland[22].

4.54 The adjusted GVA is presented in Figure 4.10 below, which splits out the total £3.7 billion into the 16 categories. This shows that the contribution of Heritage has increased from 3.9% to 6.8% of GVA for the A&CI in Scotland, whilst Radio and TV has increased its proportion of Scottish GVA from 1.5% to 10.8%. The adjusted Turnover is shown in Figure 4.11 below.

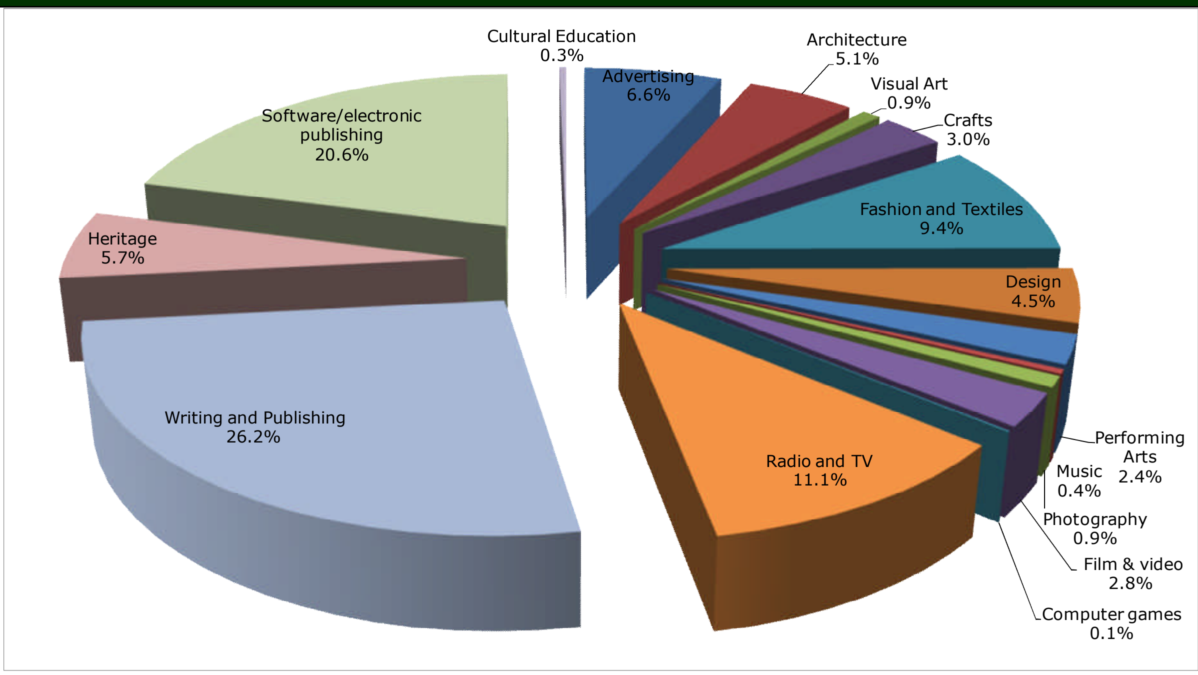
[22] These should be considered preliminary estimates which can probably be refined once issues with the National Accounts have been resolved and the Scottish Government has published new input output tables for Scotland.

Figure 4.10: Arts & Creative Industries in Scotland, Adjusted GVA (2010)



Source: Study Team Analysis of BRES, 2010 and national/regional accounts (Total = £3.7 billion)

Figure 4.11: Arts & Creative Industries in Scotland, Adjusted Turnover (2010)



Source: Study Team Analysis of BRES, 2010 and national/regional accounts, (Total = £7.2 billion)

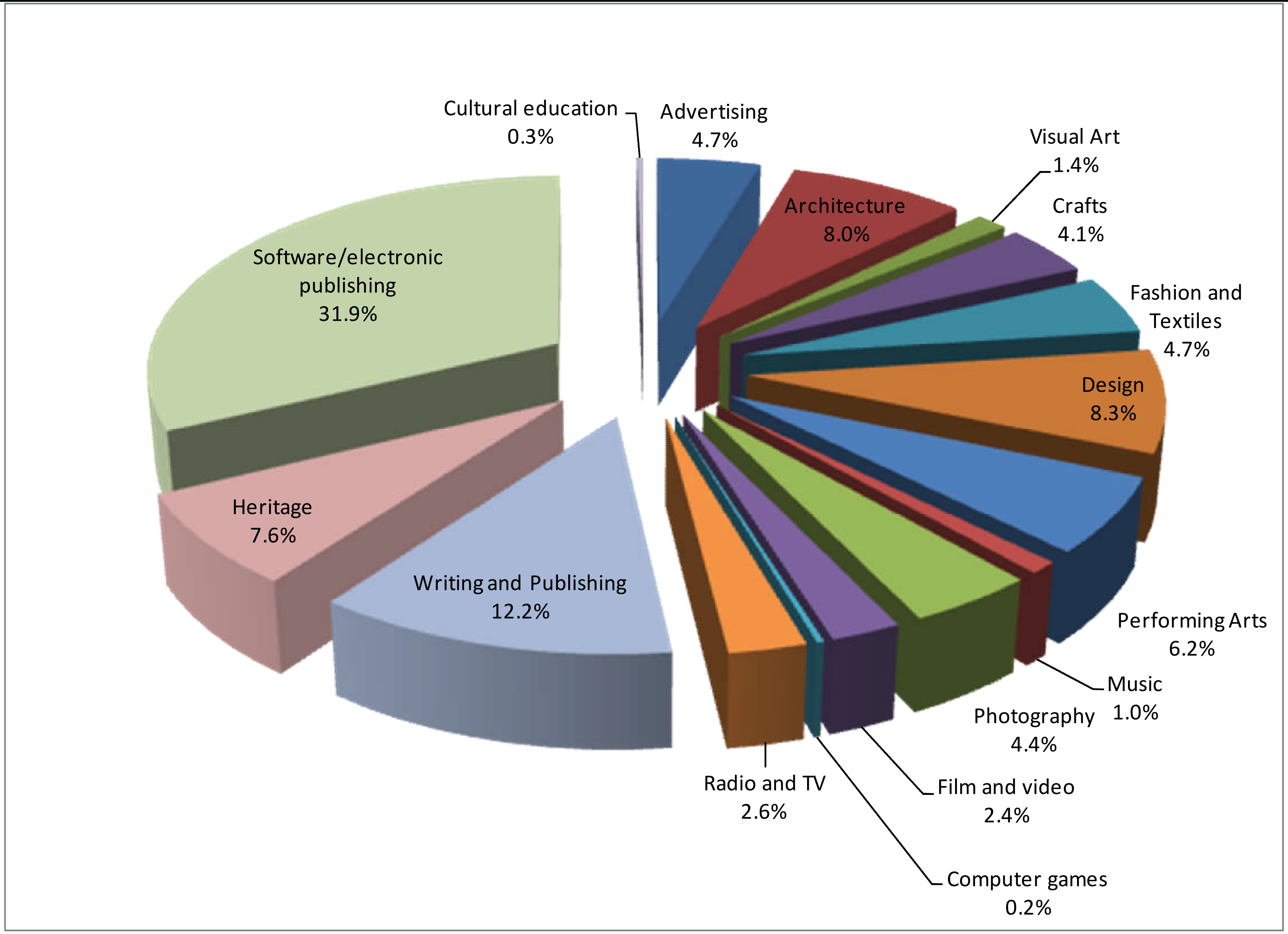
Business Stock in the Arts & Creative Industries

4.55 Based on the most recently available data (2008) there are estimated to be nearly 12,000 business units[23] in the Arts & Creative Industries (A&CI) in Scotland[24]. A third of these are in the Software industries, including many micro-enterprises. The Writing and Publishing industry is next largest in terms of business count, followed by Architecture, Design, Performing Arts and the Heritage sector. Figure 4.12 shows the sectoral breakdown of these units.

[23] A business unit approximates to a workplace – so that for example a chain retailer will have one or more business units in nearly every town, even though they are all part of the same business enterprise.

[24] In terms of methodology, it is important to note that business stock data was estimated by converting the latest (2008) statistics from ONS from SIC2003 to SIC2007. ONS has said it intends to resume publications on business demography in September 2012.

Figure 4.12: Business Stock in the Arts & Creative Industries, Scotland (2008)



Source: Study Team Analysis of Annual Business Inquiry, 2008

4.56 As illustrated in Figure 4.13, by British standards, Scotland has relatively few A&CI businesses (using the Scottish definition for the A&CI as set out in this study as the basis for comparisons). Per head of population the numbers for Scotland are slightly more than a quarter as many as London, and only the North East of England and Wales have fewer than Scotland, with Yorkshire reporting the same level of intensity. Since the same low ranking is not found for turnover, employees or GVA, it follows that Scottish businesses are typically larger than in most regions.

4.57 Figure 4.14 shows that within Scotland the distribution of business units covers all local authorities, with the two main cities, not surprisingly, having the largest proportions of business units.

4.58 In order to more appropriately assess this geographic spread of business units (by controlling for the population size of individual local authorities), Figure 4.15 presents business unit intensity in the A&CI, ranked by local authority (from highest to lowest) for Scotland in 2008.

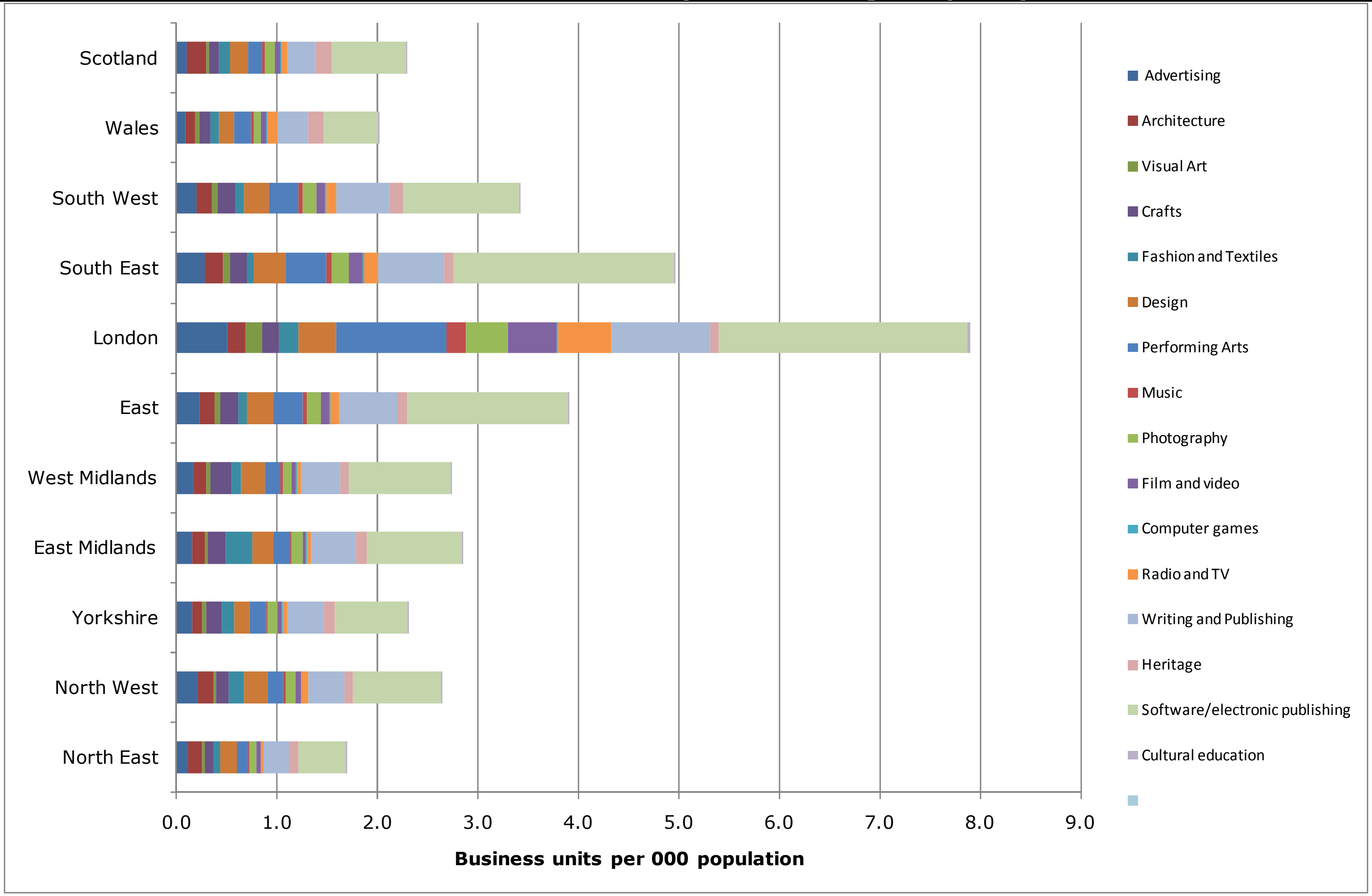
4.59 These results show that, per head of population there, are more A&CI business units in Edinburgh than elsewhere, and notably few in suburban areas.

4.60 The average for Scotland is 2.15, which means that all those authorities listed from Edinburgh to East Lothian are above the Scottish average for business unit intensity, with those listed from Dumfries and Galloway to West Dunbartonshire are below the national average. The concentration is typically in the cities, and rural areas often have a significant number of small businesses, for the size of their population.

Trends in Arts & Creative Industries Business Establishments

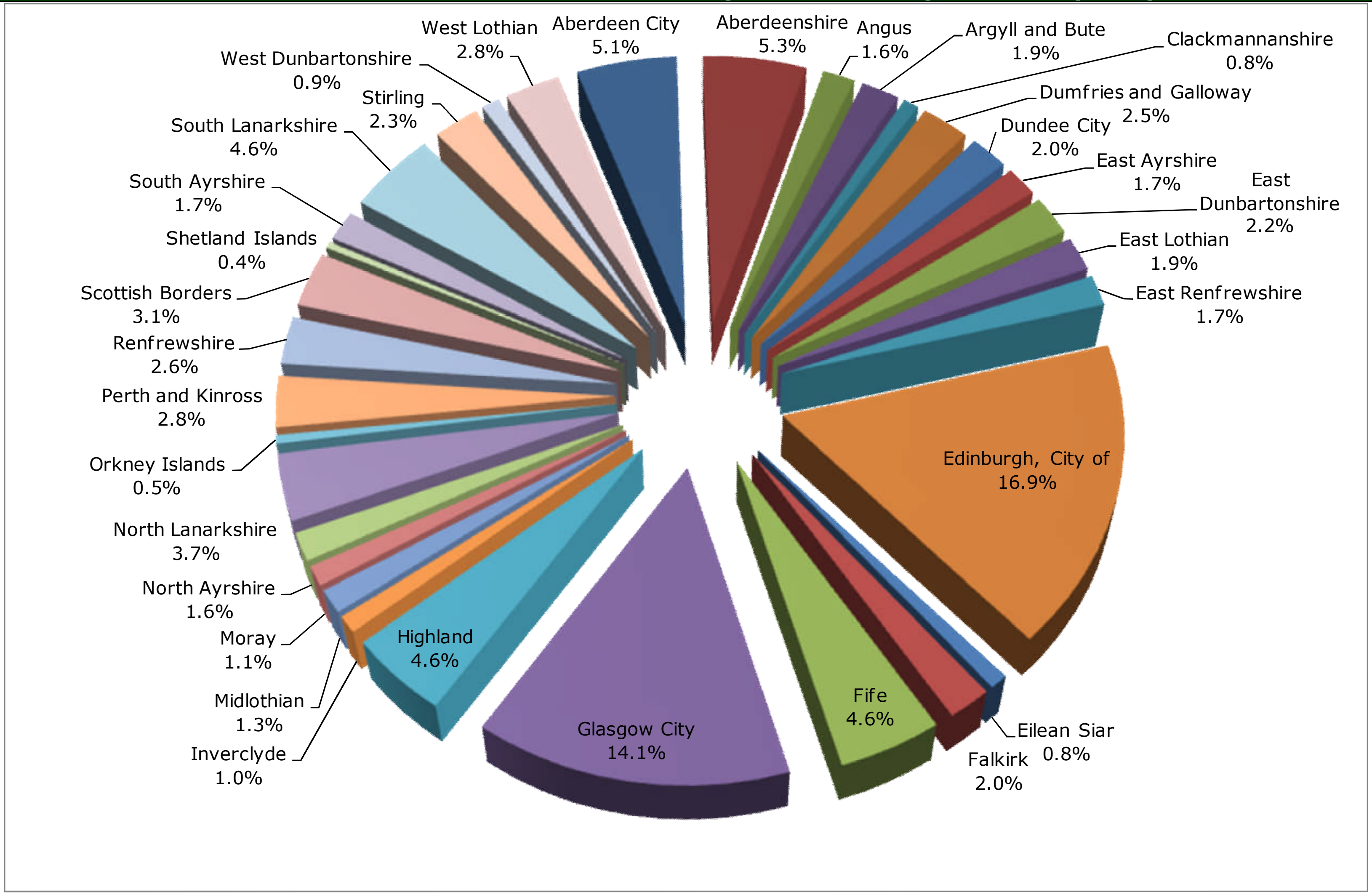
4.61 Whilst it would be desirable to analyse trends in the number of Arts & Creative Industries (A&CI) business establishments, historic statistics from 1998 to 2008 are disrupted in 2003 by another change in Standard Industrial Classification. The statistics – presented in Figure 4.16 – do, however, provide an indication that the number of Arts & Creative Industry establishments was rising to some degree through the middle of the first decade of this century.

Figure 4.13: Arts & Creative Industries Business Unit Intensity across GB regions (2008)



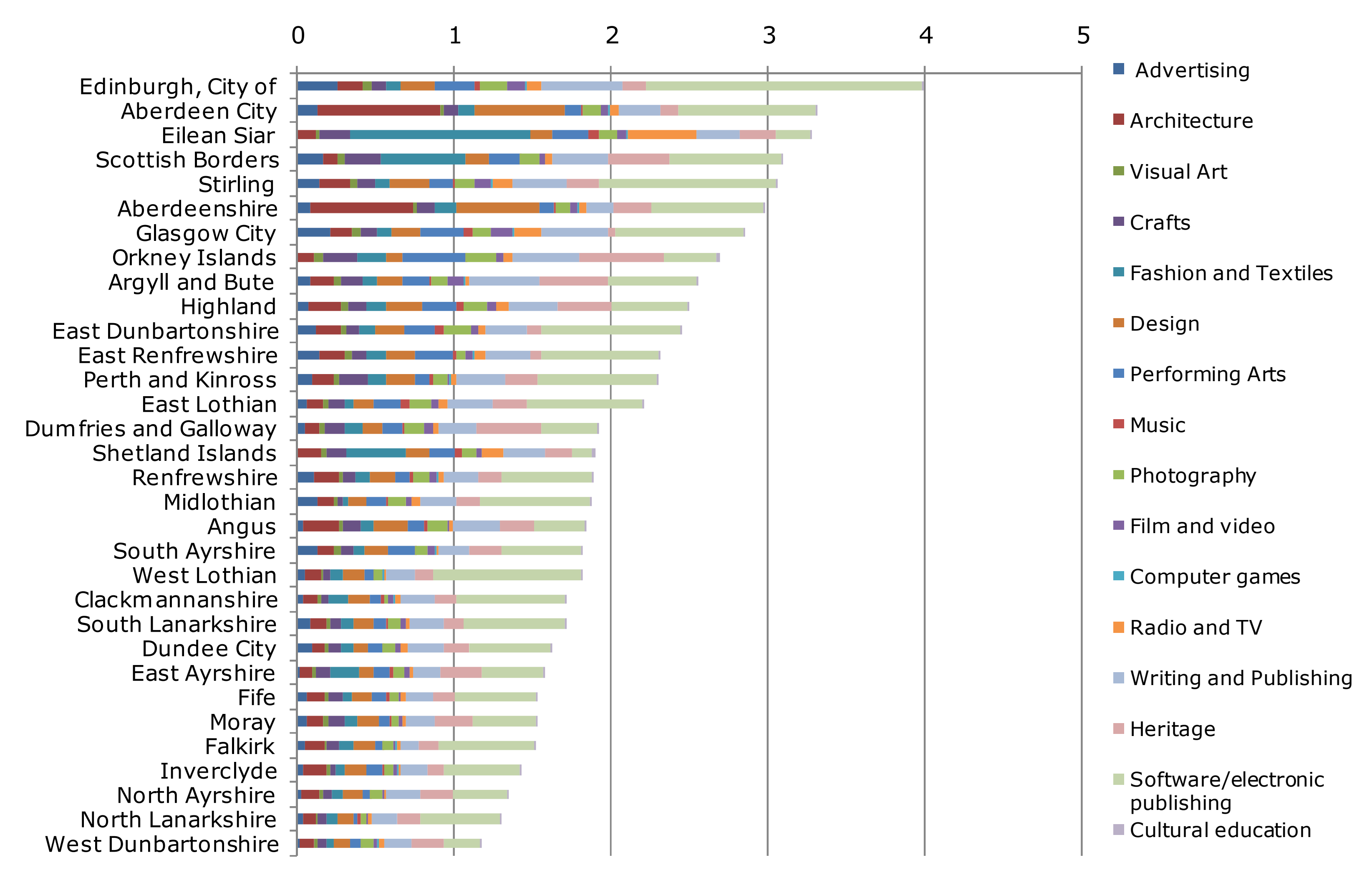
Source: Study Team Analysis of Annual Business Inquiry, 2008

Figure 4.14: Business Stock in the Arts & Creative Industries – By Local Authority, Scotland (2008)



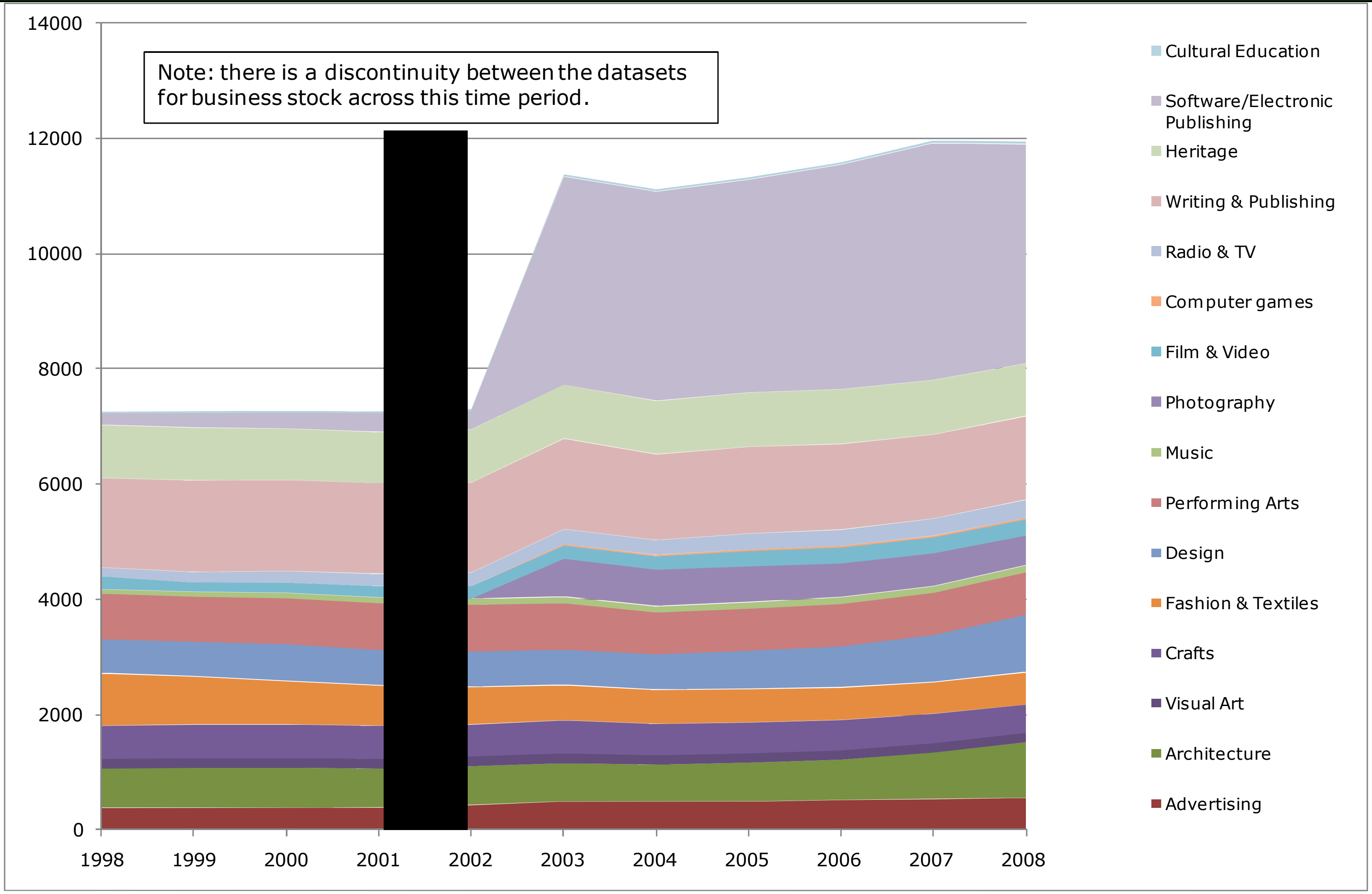
Source: Study Team Analysis of Annual Business Inquiry, 2008

Figure 4.15: Business Unit Intensity in the Arts & Creative Industries – By Local Authority, Scotland (2008)



Source: Study Team Analysis of Annual Business Inquiry, 2008

Figure 4.16: Trends in Arts & Creative Industries Business Establishments, Scotland (2008)



Source: Study Team Analysis of Annual Business Inquiry, 2008

SECTION 5: ECONOMIC CONTRIBUTION OF THE ARTS & CREATIVE INDUSTRIES – WIDER IMPACTS

Section 5 Key Findings

- This section deals with the indirect, induced and tourism impacts relating to the Arts & Creative Industries.
- The Arts & Creative Industries (A&CI) in Scotland generate an **additional £3.06 billion in turnover in indirect impacts** (i.e. supply chain effects) with the largest contributors to this being Writing & Publishing followed by Software/Electronic Publishing and Radio & TV.
- In addition, the A&CI in Scotland also generate **induced effects amounting to £2.22 billion turnover**. Again, the main contributing sectors are Writing & Publishing, Software/Electronic Publishing and Radio & TV.
- Overall, the **direct, indirect and induced impacts** of the Arts and Creative Industry in Scotland amount to **almost 130,000 jobs, £6.3 billion Gross Value Added, and £12.48 billion in turnover**.
- An assessment of the tourism role and contribution of the A&CI shows that the A&CI works both directly and indirectly in attracting visitors with the strongest effects being in the Heritage and Performing Arts sectors. **Tourism expenditure of over £1 billion can be ascribed to overnight tourism motivated by the Arts & Creative Industries**, and this gives rise to a direct **GVA of £280 million**.

Introduction

5.1 This section builds on the results from Section 4 and outlines some of the wider impacts of Arts & Creative Industries (A&CI) in Scotland. This includes assessing the indirect and induced impacts of the direct impacts set out in Section 4, and also considers and reflects on the tourism impacts of particular aspects of the A&CI.

Indirect and Induced Impacts

5.2 As well as the direct effects outlined in Section 4, the A&CI also have wider knock-on effects into other areas of the economy. These include the **indirect effects** (i.e. the supplier linkage effects – Turnover, GVA and employment generated elsewhere in the economy as a consequence of the purchases of inputs needed to produce Arts & Creative Industries goods and services). In addition, there are also **induced effects** (i.e. the income multiplier effects – Turnover, GVA and employment generated in the economy as a consequence of the purchases of those employed through both the direct and indirect effects).

Indirect/Supply Chain Effects

5.3 The supply chain for the A&CI in Scotland is relatively Scottish-focused, because many of the industries tend to purchase from:

i. Themselves (i.e. their own industry - other operators and within-industry subcontractors, including freelancers);

ii. Each other (i.e. other sectors within the A&CI);

iii. Or they purchase business services or local transport.

5.4 The starting point for the development of the multipliers used in this analysis is the Scottish Input-Output Multipliers[25]. However, these multipliers are current for 2007, are based on the two-digit level (approximately) of the previous Standard Industrial Classification (i.e. SIC2003), and Scottish Government statisticians do not expect to publish multipliers for SIC2007 until late 2012.

5.5 Therefore, an interim estimated Scottish input output table was prepared for 2010, combining information from the published Scottish table, selected information from the UK tables, and data from other sources including the Annual Business Survey. This was constructed at the five-digit level of the SIC, although it must be recognised that there is only limited information on detailed cost structures at this level. A further important difference is that in the multipliers used in this study self-employment incomes are included in the scope of the calculations, whereas the previous Scottish Government publication considered only employees' earnings.

5.6 Table 5.1 shows the summary of the indirect effects, broken down by the 16 sectors – i.e. this analysis has been carried out on each of the sectors individually to ensure that the indirect effects take account of the differing supply chain structures within each of the 16 industries.

5.7 Overall, the A&CI has a Type I multiplier value of 1.43, which is similar to that obtained for many service industries, and would place the A&CI almost exactly in the middle of the ranking of Scottish multipliers.

5.8 Table 5.1 overleaf shows the breakdown of the indirect effects for the A&CI in Scotland, for each of the 16 industries, showing Turnover, GVA, Spend on Purchases, major types of purchases by industry, and the resultant indirect – Type I multipliers.

[25] http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Input-Output/Downloads

Table 5.1: Composition of total indirect and induced effects of the Arts & Creative Industries in Scotland								
	Turnover (£M)	Value Added (£M)	Purchases (£M)	Major purchases	Scottish supply chain (£M)	Type I Multiplier	Type II Multiplier	Induced effects
1) Advertising	470	230	240	Market research, advertising, printing and publishing, broadcasting services	150	1.32	1.60	130
2) Architecture	370	250	120	Architecture, design, business services, computer services	163	1.44	1.74	112
3) Visual art	50	30	20	Artists materials and diverse retail	17	1.34	1.62	14
4a) Furniture and wood crafts	80	20	60	Wood, textiles, diverse	32	1.40	1.69	24
4b) Jewellery	30	10	20	Metals and precious stones	9	1.29	1.56	8
4c) Pottery	10	2	8	Ceramics, clay, energy	4	1.40	1.69	3
4d) Glass	220	70	150	Glass, minerals, energy	68	1.31	1.59	61
4e) Textile craft goods	80	30	50	Textiles	32	1.40	1.69	24
4f) Other crafts	0	0	0	Diverse			0.00	0
4g) Antiques markets	10	5	5	Diverse retail	3	1.34	1.62	3
5) Fashion and Textiles	750	310	440	Textiles, fibres (natural and man made)	225	1.30	1.57	205
6) Design	330	160	170	Design, business services, computer services	145	1.44	1.74	100

Table 5.1: Composition of total indirect and induced effects of the Arts & Creative Industries in Scotland

	Turnover (£M)	Value Added (£M)	Purchases (£M)	Major purchases	Scottish supply chain (£M)	Type I Multiplier	Type II Multiplier	Induced effects
7) Performing Arts	180	90	90	Business services, food and drink, energy, transport	117	1.65	2.00	62
8) Music	30	10	20	Business services, food and drink, energy, transport	20	1.65	2.00	10
9) Photography	70	30	40	Business services, transport	28	1.40	1.69	21
10) Film and video	200	120	80	Business services, transport	80	1.40	1.69	59
11) Computer games etc	5	3	2	Business services, software, computer services	2	1.34	1.62	1
12) Radio and TV	800	400	400	Radio and TV, Business services, software, computer services, energy, transport	480	1.60	1.94	269
13) Writing and Publishing	1910	820	1090	Paper, publishing, transport, energy	821	1.43	1.73	574
14) Heritage	410	250	160	Energy, g transport, diverse	148	1.36	1.65	117
15) Software/ electronic publishing	1490	940	550	Business services, software, computer services	507	1.34	1.62	419
16) Cultural education	20	10	10	Education, business services, energy	5	1.24	1.50	5
Total	**7200**	**3790**	**3730**		**3060**	**1.43**	**1.73**	**2220**

5.9 The total indirect effects for all the 16 Arts & Creative Industries combined are estimated to amount to £3.060 billion in terms of turnover.

5.10 In terms of sectors, the Writing and Publishing industry is the largest single contributor (£821 million), partly because its supply chain stretches right back through the economy to Scottish trees and Scottish oil. The next largest contributors are Software/Electronic Publishing (£507 million) and Radio & TV (£480 million).

Induced/Income Effects

5.11 Table 5.1 also shows the summary of the induced effects, again broken down by the 16 sectors – i.e. this induced analysis has been carried out on each of the sectors individually to ensure that the induced effects take account of the differing employment and income patterns within each of the 16 industries.

5.12 Overall, the A&CI has a Type II multiplier value of 1.73. This is higher than the typical figure shown in the Scottish Input Output Tables (which is 1.65), because the A&CI are relatively labour-intensive, and because the analytical impact model used in this study includes self-employment income, which is important in some of the A&CI but is not included in the Scottish Input-Output table calculations.

5.13 For the induced effects, Table 5.1 shows the breakdown for the A&CI in Scotland, for each of the 16 industries, identifying a Type II multiplier for each individual industry.

5.14 The total induced effects for all the 16 Arts & Creative Industries combined are estimated to amount to £2.220 billion in terms of turnover.

5.15 In terms of sectors, as with the indirect effects, the Writing and Publishing industry is the largest single contributor (£574 million), and again, the next largest contributors are Software/Electronic Publishing (£419 million) and Radio & TV (£269 million).

5.16 Table 5.2 below summarises the direct, indirect and induced effects for the A&CI in Scotland.

Table 5.2: Summary of direct, indirect and induced effects

	Direct (adjusted[26])	Indirect Effects	Induced Effects	Total
Turnover (£ million) excl. VAT etc.	£7,200	£3,060	£2,220	**£12,480**
GVA (£ million)	£3,700	£1,346	£1,254	**£6,300**
Employment	84,400	19,200	26,100	**129,700**

5.17 In summary, the total direct, indirect and induced employment for the A&CI is almost 130,000 jobs. For GVA, the total direct, indirect and induced GVA from the A&CI in Scotland is £6.3 billion.

[26] The GVA and Turnover figures presented here and used in the analysis of the indirect and induced effects are the adjusted figures presented in Section 4. This is because, regardless of which GVA figure is used (conventional or adjusted) as the key headline measure, the supply chain and income effects should be based on the adjusted figure to ensure the wider (indirect and induced effects) of broadcasting and heritage are analysed.

Tourism Impacts of the Arts & Creative Industries

Introduction

5.18 The role and contribution of Arts & Creative Industries (A&CI) to tourism and the visitor economy is well recognised and is something that has been examined in various different economic impact assessments - many of which are venue-, festival-, or event-specific studies.

5.19 In addition, it should be noted that, whilst they cannot be separately distinguished or identified from other economic activity, the on-site tourism impacts for the A&CI – i.e. the employment, GVA and Turnover that takes place within the A&CI due to tourism – have already been captured in the main analysis and results set out in Section 4 of this report.

5.20 However, in addition to these on-site/within industry impacts, the A&CI play a role in attracting tourists to an area, and there will be wider impacts from such tourist activity. This takes the form of 'off-site' spend – i.e. spend in other sectors of the economy that is due to the tourism induced by the A&CI but that does not take place in the A&CI. Examples including spend on accommodation, food and drink, other (non-arts/culture) leisure/recreation activities.

5.21 The contribution of the A&CI to these wider, 'off site' economic impacts is not captured in the previous analysis, and this section therefore attempts to assess and quantify the role and contribution of the A&CI in attracting and retaining visitors. Annex 5 to this report provides greater detail of the methods and the model.

Approach and Key Findings

5.22 Several of the A&CI are likely to be instrumental in attracting tourists, and this is likely to lead to a significant economic impact. However that impact is difficult to measure, because other features of a destination, aside from the A&CI activity, need to be assessed so that the influence of the cultural and creative features can be separated out and measured. It is necessary to take account of other factors that attract tourists – empty spaces, mountains, lochs, forests, and aspects of 'buzz' like nightlife - that go with city centres and collections of people.

5.23 Building on work done for the Forestry Commission in 2008, cogentsi and partners have a separate programme of research using econometric and other methods to explore the determinants of destination attractiveness. This covers attractiveness to developers (of accommodation) as well as to tourists themselves. Using Arts & Creative Industry employment as the best available statistical description of the depth of the creative offer, positive effects were found in all five econometric relationships currently under investigation.

5.24 The overarching work from which these results are drawn is still in progress, elaborating not only the treatment of the A&CI but also of other factors influencing visitors. What it indicates at the moment is that the **Arts & Creative Industries works both directly and indirectly in attracting visitors**.

5.25 Firstly, the arts/creative offering encourages the hotel industry to provide accommodation. The importance of this offer from the A&CI to Scottish destinations is ranked with other factors such as a high quality built environment, a seaside or island location, and proximity to forests.

5.26 Secondly the commercial provision of accommodation, in its turn, influences strongly the number of overnight visitors. The influence is especially strong in the case of overseas visitors, but not quite so strong in the case of UK-based visitors (including Scottish residents) who are more likely to have the option of staying with friends and relations.

5.27 Thirdly, over and above the accommodation-related effect, the offering from the A&CI **attracts visitors directly**. It has been found that for different elements of the arts/creative offering, and for different types of visitors, the relative strength of the direct and indirect effects varies. The **strongest effects are Heritage and Performing Arts**, and the impact of the Music industry (as measured by BRES-employment in the Music industry which, as noted in Section 4, may underestimate the scale of the sector) is not clear or well-defined.

5.28 At the margin, Performing Arts are estimated as motivating 20 per cent of bed provision, 5 per cent of UK visitors and 25 per cent of overseas visitors. Heritage is estimated as motivating 5 per cent of bed provision, 15 per cent of UK visitors and 8 per cent of international visitors. These findings are summarised in Table 5.3 below:

Table 5.3: Summary of Arts & Creative Industry elasticities - Tourism			
Tourism bedspace accommodation - model elasticities			
	elasticity to Heritage employment	*elasticity to Performing Arts employment*	*elasticity to Music employment*
	0.045	0.196	0.041
UK visitor numbers - model elasticities			
Elasticity of visitor numbers to bed provision			0.481
	elasticity to Heritage employment	*elasticity to Performing Arts employment*	*elasticity to Music employment*
via bedspace provision	0.022	0.094	0.020
in addition to bed effects	0.130	-0.042	-0.080
Total	0.152	0.053	-0.061
International visitor numbers - model elasticities			
Elasticity of visitor numbers to bed provision			0.532
	elasticity to Heritage employment	*elasticity to Performing Arts employment*	*elasticity to Music employment*
via bedspace provision	0.024	0.104	0.022
in addition to bed effects	0.059	0.141	-0.055
Total	0.083	0.246	-0.033
Source: cogentsi, 2012			

5.29 To provide an estimate of the impact these elasticities have on expenditure these can be applied to tourism accounts for Scotland. The results of this are shown in Table 5.4:

Table 5.4: Estimates of Tourism Spending and GVA - Arts & Creative Industries				
Tourism spending and GVA motivated by heritage				
	Overseas expenditure	UK visitor expenditure	Total	
Annual expenditure	1.500	2.600	4.100	
Elasticity at margin	0.083	0.152	0.127	
Motivated by heritage	0.125	0.394	0.519	
Value added content of this (based on Scottish Tourism Satellite Accounts)				0.142
Tourism spending and GVA motivated by performing arts				
	Overseas expenditure	UK visitor expenditure	Total	
Annual expenditure	1.500	2.600	4.100	
Elasticity at margin	0.246	0.053	0.123	
Motivated by performing arts	0.368	0.137	0.505	
Value added content of this (based on Scottish Tourism Satellite Accounts)				0.138
Source: cogentsi, 2012				

5.30 Using this model, tourism expenditure of over £1 billion can be ascribed to overnight tourism motivated by the A&CI, and this gives rise to a direct GVA of £280 million. It is likely that a similar sum can be ascribed to day visits. (Indicatively, day visitor expenditure in the Tourism Satellite Accounts is £3 billion compared to £4.1 billion for overnight visits, but the latest Leisure Day Visit Survey results were published too late to be included in this study).

5.31 Therefore, it is likely that tourism effect adds about a third to the direct effects traceable to the A&CI. It must be stressed that these estimates are inherently more uncertain than those elsewhere in the report, but nevertheless they are believed to be unbiased and suitable for policy analysis.

5.32 In summary, the results lead to the conclusion that the Scottish Arts & Creative Industries generate an additional £280 million GVA by motivating overnight tourism. This amount comes about equally from the Heritage and Performing Arts sectors.

SECTION 6: ECONOMIC CONTRIBUTION OF THE ARTS & CREATIVE INDUSTRIES – ASSOCIATED IMPACTS

Section 6 Key Findings

- There are a range of wider, associated impacts of the Arts & Creative Industries (A&CI) that are typically missed by, or under-estimated by, the standard data analysis set out in Section 4.
- Analysis of occupation data show that around 52,000 people are employed in creative occupations in Scotland, with around 40% (21,000) of these jobs sitting outside the 84,400 A&CI employment identified in Section 4.
- These 21,000 jobs are a combination of (i) those in creative occupations outside the A&CI and (ii) those not captured within the 84,400 because they work in non-PAYE non-VAT registered jobs (e.g. sole traders/self-employed). Whilst it is difficult to disentangle these two groups, these results do provide an estimate of the scale of sole traders and self employed working in the A&CI. As such, and with acknowledgement that it is a 'coarse' measure, it can be concluded that this 21,000 estimate does include a high proportion of the sole traders and self-employed working in the A&CI.
- An assessment of the A&CI related employment within Higher Education and Further Education estimates that there are approximately 2,300 jobs in Higher Education and a further 1,800 in Further Education that are linked to A&CI subjects.
- Similarly, an assessment of the A&CI related employment within local authorities estimates that there are more than 1,500 FTE staff employed by local authorities in A&CI related positions. In addition, local authority expenditure in 2009-10 on identifiable A&CI related services is estimated to be in the region of £130 million.

Introduction

6.1 In addition to the direct effects of the Arts & Creative Industries (A&CI) in Scotland there are a range of wider, associated impacts from the A&CI that can be assessed. These are typically areas that are missed by, or under-estimated by the standard data set out in Section 4. The key aspects given consideration included creative occupations, self-employment/sole traders in the A&CI, and some of the wider employment aspects of the A&CI – notably in Higher & Further Education and local government.

Employment in Creative Occupations and Assessing Self Employment

6.2 The employment results for the A&CI in Scotland presented in Section 4 of the report are all based on BRES[27] (Business Register Employment Survey) data and relate to A&CI employment within the industrial classifications for the A&CI as defined for this study.

6.3 In addition to the BRES, there is an important further source of detailed employment data, the Annual Population Survey (APS). In an approach adopted by DCMS in their Creative Industries Economic Estimates (CIEE), data from the APS can be used to explore creative occupations. DCMS uses a list of 32 such

[27] As mentioned earlier, the Register on which BRES is based covers all PAYE-registered employers, and all VAT-registered businesses, and some other activity. The Register itself aims to be comprehensive. For larger firms the survey aims for complete coverage, but for smaller firms a sampling approach is used, with 'grossing up' and 'modelling down' to fill gaps. It actually achieves around 70% coverage in terms of organisations, and the high 90%'s in terms of formal employment, and so is considered by the Office for National Statistics (ONS) to be the best source of employment data.

'creative occupations', based on the Standard Occupational Classification 2000. (A full list of the 32 occupations is included within the Annexes to this report).

6.4 It should be noted that the APS is a sample survey, and across Scotland only 21,500 households are sampled. This necessarily means that even the general economy figures from the APS have very wide confidence intervals, and industry-specific, occupation-specific, or local figures should be interpreted with great caution. ONS and the Scottish Government restrict, for good reason, the precision with which sample survey data can be presented[28].

6.5 Looking at the occupations within the A&CI included within the scope for this study, analysis[29] shows that there is a very wide diversity of occupations within the A&CI. Whilst software development is the largest occupation, with about 8,500 people professionally employed, it does not qualify as a creative occupation in the DCMS list. Journalists are the largest group that does, followed by a number of 'associate professionals' or technicians.

6.6 There are half a dozen individual occupations, each of them with 2,500 – 3,000 people engaged in the sector, in addition to which there is a wide range of other occupations that make up the rest of this occupational-based employment analysis, bringing home the diversity of the A&CI in Scotland and the jobs it provides.

6.7 It should be noted that whilst the overall picture for the types of occupations existing within the A&CI shows a large number of occupations, carrying out a sector by sector profile assessment indicates that within this large diversity across the entire A&CI many of the individual 16 sectors have only a handful of key occupations.

6.8 The data from the APS can be used to estimate the number of people across Scotland that are employed in creative occupations, but that are not captured by the BRES data. Based on an assessment of APS data the 32 creative occupations as set out by DCMS, in total, account for almost 52,000 people across Scotland.

6.9 Table 6.1 below shows that only 60% of these people (almost 31,000) are employed within the A&CI as defined for this study. The remainder (just over 21,000) are therefore either (i) spread across non-creative industries (and are doing creative jobs in non-creative industries), or (ii) are not captured by the BRES because they work in non-PAYE non-VAT registered jobs (and as such can be regarded as being sole traders/self employed that work within the A&CI. This is an important finding as this is an area of economic activity that is regarded as difficult to identify generally, but also one which is regarded as especially prevalent in the A&CI.

[28] Where Scottish-level data exists but falls below the publication guidelines the analysis has where appropriate used UK data pro-rata to strengthen the estimates.
[29] This analysis was achieved by assessing SIC and SOC data together to look at the profile of occupations held by those working within the Arts & Creative Industries.

Table 6.1 Occupations in the Arts & Creative Industries, Scotland, 2010

Occupation	Total in Scotland	Total employed in Arts & Creative Industries	% of occupation employed in Arts & Creative Industries
3543 Marketing associate professionals	5,220	380	7%
5492 Furniture makers, other craft woodworkers	4,170	370	9%
3421 Graphic designers	4,000	2,850	71%
3431 Journalists, newspaper & periodical editors	3,960	3,610	91%
3434 Photographers & audio-visual equipment operators	3,550	3,070	86%
2431 Architects	2,980	2,460	82%
3432 Broadcasting associate professionals	2,830	2,680	95%
3411 Artists	2,570	2,480	96%
2126 Design and development engineers	2,470	870	35%
2432 Town Planners	2,080	1,410	68%
5422 Printers	2,020	1,590	79%
3121 Architectural technologists and Town Planning technicians	1,990	1,650	83%
3422 Product, clothing & related designers	1,990	1,400	70%
3415 Musicians	1,930	1,070	55%
5496 Floral arrangers, florists	1,380	-	0%
1134 Advertising & Public Relations managers	1,190	330	28%
3412 Authors, writers	1,140	900	79%
3413 Actors, entertainers	1,050	680	65%
3416 Arts officers, producers and directors	860	590	69%
5499 Hand craft occupations not elsewhere classified	720	170	23%
5419 Textiles, garments & related trades not elsewhere classified	560	390	70%
5423 Bookbinders and print finishers	520	450	86%
5414 Tailors and dressmakers	480	310	64%
5244 TV, video and audio engineers	470	30	7%
5411 Weavers and knitters	420	330	79%
5491 Glass & ceramic makers, decorators and finishers	350	120	34%
5421 Originators, compositors & print preparers	300	240	83%
5495 Goldsmiths, Silversmiths, Precious Stone workers	230	190	80%
5413 Leather and related trades	180	80	43%
3414 Dancers and choreographers	130	110	83%
5493 Pattern makers (moulds)	130	-	1%
5424 Screen printers	120	20	19%
Total	**51,990**	**30,830**	**59%**

Source: Study Team Analysis of Annual Population Survey, 2010

6.10 Whilst it is difficult to distinguish between or identify which of the two categories these 21,000 people fall into – (i) creative occupations outside of the A&CI or (ii) sole traders and self-employed operating within the A&CI – it is thought that it does provide an estimate of the scale of sole traders and self-employed working in the A&CI. As such, and with acknowledgement that it is a 'coarse' measure, it can be concluded that this 21,200 estimate includes a high proportion of the sole traders and self-employed working in the creative industries.

Self-Employment and Working Proprietors

6.11 As first noted in Section 4, in addition to the occupation data above being able to provide one means of assessing self-employment within the Arts & Creative Industries (A&CI), the core employment data (sourced from BRES) can also be used to provide an assessment of one element of self-employment, namely working proprietors/working owners[30].

6.12 Based on an assessment of the number of working proprietors in the A&CI in Scotland in 2010, of the 84,400 total jobs across Scotland, 6,500 are working proprietors. That is, 7.6% of the total A&CI employment in 2010 is made up of individual working owners.

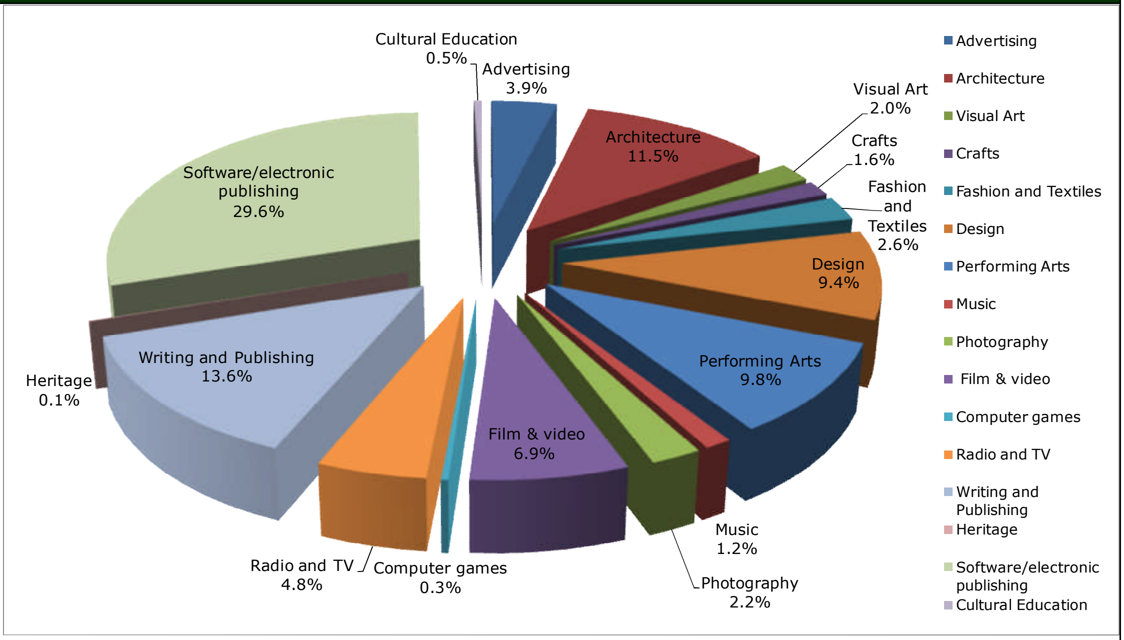
6.13 In 2010, there were a total of 141,000 working proprietors across Scotland, and the 6,500 therefore represents 4.6% of all working proprietors. When this is compared to the figures for employees (where the A&CI accounts for 3.4% of employees), the higher proportion of working proprietors in the A&CI suggests that the A&CI could be described as effective cradles for entrepreneurs.

6.14 Figure 6.1 below shows the split of working proprietors in the A&CI across the 16 industries. When assessing these figures it should be noted that this data does not include the great majority of sole traders, something which the APS results set out above provide a better estimate for. However, it does show the sectoral spread of working proprietors across the A&CI.

6.15 The figure shows that Software/Electronic Publishing accounts for the highest sectoral proportion of working proprietors (30%), followed by Writing and Publishing (14%), Architecture (12%), Performing Arts (10%) and Design (9.5%).

[30] Working proprietors/owners may include individuals who receive drawings or a share of the profits but are not paid via PAYE.

Figure 6.1: Working Proprietors: Arts & Creative Industries, Scotland (2010)



Source: Study Team Analysis of BRES, 2010

Arts & Creative Industries in Further and Higher Education

6.16 Within Further and Higher Education there is a range of activity that takes place related to the A&CI, much of which is difficult to identify from the sources used for the analysis in the main sections of this report (e.g. BRES). As such, alternative data sources from the Higher Education Statistics Agency (HESA) and the Scottish Funding Council (SFC)[31] have been used to try and identify the scale of the A&CI related activity that takes place within Higher and Further Education in Scotland.

6.17 The main purpose of this analysis was to estimate the level of A&CI related employment that takes place within Higher and Further Education, and it did not consider the wider economic and other impacts due to A&CI related activity within Higher and Further Education.

6.18 For Higher Education, employment data is available from HESA. However, this data is not available in a format that matches clearly the 16 industry definition used in this study, nor is data about staff numbers available by specific subject headings. Instead, staff employment is available by 'cost centre'. Therefore, in order to estimate the employment in Higher Education related to the A&CI the cost centres that most closely fit the A&CI scope adopted for this study were identified[32].

[31] The specific sources used are: Staff in Higher Education Institutions, 2010-11 (HESA, 2011); Students in Higher Education Institutions 2010-11 (HESA, 2011), Staffing Statistics for Further Education Colleges in Scotland 201-11 (Scottish Funding Council), and the Scottish Funding Council's Infact database (for Further Education student data).

[32] The specific cost centre headings included were: "Architecture, built environment & planning" – linked to Architecture planning and building design sector; "Information technology & systems sciences & computer software engineering" – linked to Software/Electronic Publishing, Computer Games sectors; "Media studies" - linked to various sectors, especially those in the Audio-Visual domain; "Design & creative arts" – cutting across numerous sectors; and "Archaeology" – linked to the Heritage sector.

6.19 Table 6.2 below shows the total (Full Time Equivalent) staff in Higher Education for academic cost centres relating to the A&CI. Almost 2,400 staff in Scottish Higher Education Institutions work within academic cost centres relating to the A&CI.

Table 6.2 Total HE Staff by Institution for Academic Cost Centres Relating to Arts & Creative Industries

Institution	Total for Arts & Creative Industries (rounded)
The University of Aberdeen	70
University of Abertay Dundee	60
The University of Dundee	220
Edinburgh College of Art	130
Edinburgh Napier University	220
The University of Edinburgh	340
Glasgow Caledonian University	150
Glasgow School of Art	170
The University of Glasgow	200
Heriot-Watt University	240
Queen Margaret University, Edinburgh	20
The Robert Gordon University	180
Royal Conservatoire of Scotland	100
The University of St Andrews	60
Scottish Agricultural College	0
The University of Stirling	40
The University of Strathclyde	50
University of the Highlands and Islands[33]	0
The University of the West of Scotland	140
Totals	**2390**

Source: Study team analysis of 'Staff in Higher Education Institutions', 2010-11 (HESA, 2012)

6.20 Table 6.3 below summarises the specific areas of the A&CI that these staff are involved in, across all HEI's in Scotland.

6.21 This shows that most staff are involved in the broad category of 'Information technology & systems sciences & computer software engineering' – which will clearly encapsulate Software/Electronic Publishing as well as Computer Games.

6.22 This total number of staff (circa 2,400) involved in A&CI academic cost centres compares to the Scottish total across all academic cost centres of more than 22,000 – showing that A&CI related staff account for almost 11% of academic staff at Scottish HEI's.

[33] Note: HESA states that "Due to the particular nature of the structure of the University of the Highlands and Islands, teaching and research activities are carried out by constituent partners and these staff have been returned as atypical. Non-academic staff at these partner organisations have not been returned." As such, the data for UHI should be regarded as a clear undercount of the number of staff involved in A&CI related subjects.

Table 6.3 Total HE Staff by Academic Cost Centre for Arts & Creative Industries	
Subject	Number of Staff (rounded)
Architecture, built environment & planning	470
Information technology & systems sciences & computer software engineering	950
Media studies	140
Design & creative arts	770
Archaeology	60
TOTAL	**2,390**

Source: Study team analysis of 'Staff in Higher Education Institutions', 2010-11 (HESA, 2012)

6.23 In addition to information about staff numbers, a more refined assessment of the scale of A&CI related activity within Higher Education can be identified by assessing the number of students (and number of qualifiers). Student data is available from HESA by subject of study (a far more detailed categorisation than cost centre), and therefore a detailed picture of the number of students and number of qualifiers for each relevant subject can be identified.

6.24 Table 6.4 shows the number of students studying A&CI related subjects broken down by subject. In total in 2010-11, there were almost 29,000 students at Scottish HEI's studying A&CI related subjects. This equates to 13% of all students, based on the total number of students at Scottish HEI's being 221,075.

Table 6.4: Total Higher Education students: Arts & Creative Industries subjects			
Broad Heading	Subject	Students	Qualifiers
Computer science (all)	Broadly-based programmes within computer science	35	5
	Computer science	6705	2110
	Information systems	1530	610
	Software engineering	570	150
	Artificial intelligence	190	70
	Others in computing sciences	25	15
Architecture, building & planning (all)	Broadly-based programmes within architecture, building & planning	0	0
	Architecture	2925	1120
	Building	2595	1000
	Landscape design	170	55
	Planning (urban, rural & regional)	845	385
	Others in architecture, building & planning	110	30
Mass Communications & Documentation (partial)	Publicity studies	420	155
	Media studies	1200	335
	Publishing	145	75
	Journalism	930	265
Historical & Philosophical Studies (partial)	Archaeology	425	115
Creative Arts & Design (all)	Broadly-based programmes within creative arts & design	0	0
	Fine art	1515	420
	Design studies	3735	1175
	Music	1880	635
	Drama	900	320
	Dance	70	20
	Cinematics & photography	870	300
	Crafts	80	25
	Imaginative writing	80	55
	Others in creative arts & design	945	260
Totals		**28,895**	**9,705**

Source: Study team analysis of 'Students in Higher Education Institutions', 2010-11 (HESA, 2012)

6.25 Table 6.5 below presents the overall number of students (and qualifiers) studying A&CI related subjects by institution, showing that A&CI related subjects play a role across almost all of Scotland's HEIs.

Table 6.5: Total HE students: Arts & Creative Industries subjects by institution

Institution	Students	Qualifiers
The University of Aberdeen	775	205
University of Abertay Dundee	1335	425
The University of Dundee	1965	650
Edinburgh College of Art	1660	630
Edinburgh Napier University	3175	1325
The University of Edinburgh	1915	715
Glasgow Caledonian University	2590	685
Glasgow School of Art	1790	610
The University of Glasgow	1460	460
Heriot-Watt University	1865	635
Queen Margaret University, Edinburgh	720	230
The Robert Gordon University	2845	915
Royal Conservatoire of Scotland	745	260
The University of St Andrews	275	110
The University of Stirling	895	270
The University of Strathclyde	1195	430
University of the Highlands and Islands	1350	595
The University of the West of Scotland	2340	570
Totals	**28,915**	**9,720**

Source: Study team analysis of 'Staff in Higher Education Institutions', 2010-11 (HESA, 2012)

(Note: Scottish Agricultural College has not been included in the list (A&CI students = 0)

6.26 For Further Education (FE), staff data is available from the Scottish Funding Council. However, this data is only available in aggregate form for each Further Education College. No split of FE staff by funding subject group (DPG) superclass summary, superclass or any other of any other form of subject related disaggregation is available.

6.27 As such, in order to provide an estimate of the scale of the A&CI related employment in Further Education, data on student numbers was used as a proxy measure. Student data is available by funding subject group (19 categories), superclass summary (23 categories), and superclass (194 categories).

6.28 In order to create as bespoke a list as possible of the A&CI related subjects, the superclasses that most closely aligned to the scope adopted for this study were identified.

6.29 The total number of FTE students for these A&CI subjects are summarised in Table 6.6 below, showing an overall total of more than 19,000 students.

Table 6.6: FTE Further Education Students for Arts & Creative Industries related Subjects	
Subject	**Number (rounded)**
IT: Computer Science/Programming/System	1980
Text/Graphics/Multimedia Presentation Software	1340
Software for Specific Applications/Industries	200
Libraries/Librarianship	0
Archaeology	0
Culture/Gender/Folklore	10
Literature	80
Cultural/Area/Social/Diaspora Studies	10
Art Studies/Fine Arts	1130
Art Techniques/Practice	1260
Design (non-industrial)	750
Crafts: Leisure/General	50
Decorative Leisure Crafts	40
Decorative Metal Crafts/Jewellery	260
Fashion/Textiles/Clothing (craft)	820
Fabric Crafts/Soft Furnishings	80
Wood Cane and Furniture Crafts	80
Glass/Ceramics/Stone Crafts	40
Communication/Media (general)	1160
Communication Skills	380
Writing (authorship)	130
Journalism	100
Photography	1300
Film/Video Production	590
Audio and Visual Media	910
Print and Publishing	220
Performing Arts (general)	710
Dance	860
Theatre and Dramatic Arts	970
Theatre Production	330
Music History/Theory	110
Music of Specific Kinds/Cultures	30
Music Performance	1210
Musical Instrument Technology	630
Arts/Culture/Heritage Administration	20
Built Environment (general)	720
Property: Surveying/Planning/Development	60
Building Design/Architecture	160
Interior Design/Fitting/Decoration	440
TOTAL	**19,140**
Source: DC Research analysis of Scottish Funding Council data, 2010/11	

6.30 In order to estimate the level of employment within FE that is related to A&CI subjects, the above data alongside data on total number of students at each FE College was used to create a proportion for each individual college of the percentage of FTE students that were studying A&CI subjects. This ratio was then applied to total staff numbers by institution to provide a proxy measure of the number of FTE staff at FE Colleges in Scotland that are involved in A&CI teaching.

6.31 The results of this analysis are summarised in Table 6.7 below, and estimates that a total of nearly 1,800 staff at FE Colleges in Scotland are involved in A&CI teaching. This is approximately 15% of all FTE Staff at FE Colleges in Scotland.

Table 6.7: Estimated FTE Staff at FE Colleges Arts & Creative Industries related Subjects – by FE College/Local Authority

FE College	FE FTE Staff (rounded) 2010-2011	Local Authority Area
Aberdeen College	80	Aberdeen City Council
Adam Smith College	70	Fife Council
Angus College	20	Angus Council
Anniesland College	40	Glasgow City Council
Ayr College	60	South Ayrshire Council
Banff and Buchan College of Further Education	10	Aberdeenshire Council
Barony College	0	Dumfries & Galloway Council
Borders College	10	Scottish Borders Council
Cardonald College	110	Glasgow City Council
Carnegie College	80	Fife Council
Central College Glasgow	20	Glasgow City Council
Clydebank College	40	West Dumbartonshire Council
Coatbridge College	30	North Lanarkshire Council
Cumbernauld College	10	North Lanarkshire Council
Dumfries and Galloway College	20	Dumfries & Galloway Council
Dundee College	110	Dundee Council
Edinburgh's Telford College	120	Midlothian Council
Elmwood College	10	Fife Council
Forth Valley College	50	Clackmannanshire, Stirling, Falkirk Councils
Glasgow College of Nautical Studies	10	Glasgow City Council
Glasgow Metropolitan	220	Glasgow City Council
Inverness College	10	Highland Council
James Watt College of Further & Higher Education	80	Inverclyde Council
Jewel and Esk College	50	Midlothian Council
John Wheatley College	20	Glasgow City Council
Kilmarnock College	10	East Ayrshire Council
Langside College	30	Glasgow City Council
Lews Castle College	10	Western Isles Council
Moray College	40	Moray Council
Motherwell College	40	South Lanarkshire Council
Newbattle Abbey College	0	Midlothian Council
North Glasgow College	30	Glasgow City Council
North Highland College	20	Highland Council
Oatridge College	0	West Lothian Council
Orkney College	10	Orkney Islands Council
Perth College	40	Perth & Kinross Council
Reid Kerr College	90	Renfrewshire District Council
Shetland College of Further Education	10	Shetland Isles Council
South Lanarkshire College	0	South Lanarkshire Council
Stevenson College Edinburgh	90	Edinburgh City Council
Stow College	60	Glasgow City Council
West Lothian College	20	West Lothian Council
TOTAL	**1,790**	

Source: DC Research analysis of Scottish Funding Council data, 2010/11
Note: SFC Staffing Data does not include data for Sabhal MorOstaig so it is not included in the analysis above.

Arts & Creative Industries Associated Employment in Local Authorities

6.32 As with Further and Higher Education, within the local authority sector there is a range of activity that takes place related to Arts & Creative Industries (A&CI), much of which is difficult to identify from the sources used for the analysis in the main sections of this report (e.g. BRES).

6.33 Again, alternative data sources have been used to try and identify the scale of the A&CI related activity that takes place within the local authority in Scotland.

6.34 The key source that has been used in this analysis is the CIPFA Cultural Statistics in Scotland 2010 publication, which provides data on actual spend and other statistics for 2009-10. This includes data on a wide range of aspects, some of which fall within the scope of A&CI (e.g. The Arts, Heritage & Museums, Libraries and Archives), and some of which clearly do not (e.g. Sport, Parks & Open Spaces). As such, only those areas that are thought to sit clearly within the scope of the A&CI as defined for this study are included in the results presented below.

6.35 Based on an assessment of the available data from 2010, presented below are some headline estimates of the level of local authority A&CI economic activity.

6.36 The main purpose of this analysis was to estimate the level of A&CI employment and other economic activity that takes place within the local authority sector.

6.37 Table 6.8 presents data on employment within local authorities in Scotland relating to the A&CI. The categories presented are those used by CIPFA in the Cultural Statistics in Scotland publication and relate to actual data from 2009-10[34].

Table 6.8 Total FTE employed by Local Authorities in Arts & Creative Industries

Sector	FTEs (rounded)
Theatres	277
Concert Halls	157
Visual Arts and Exhibition Spaces	42
Arts Centres	56
Museums and Galleries	990
Totals	**1,521**
Source: CIPFA Cultural Statistics in Scotland, 2010	

6.38 The table shows that there are more than 1,500 FTE employees within local authorities directly involved in the provision of A&CI related activity.

6.39 In terms of local authority expenditure on the A&CI, Table 5.10 below presents the total gross expenditure on A&CI activity by local authorities in Scotland in 2010.

[34] It should be noted that the CIPFA Cultural Statistics 2010 report notes that "whilst returns were received from all 32 authorities, there were a few authorities that provided incomplete data. In order to allow more meaningful comparisons to be made , totals have been 'grossed up' to take account of missing data... Non-financial data have not been grossed up due to insufficient data on which to base these totals." (p. 5). As such, some of the estimates set out in Tables 6.8 and 6.9 are likely to be underestimates – especially for non-financial data such as employment.

Table 6.9 Total Gross Expenditure on Arts & Creative Industries by Local Authorities (2010)	
Sector	**£**
Theatres and Concert Halls	£47,812,000
Art Centres and Concert Halls	£6,290,000
Arts Development	£25,584,000
Arts Festivals	£1,112,000
Major One-Off Arts Events	£969,000
Heritage	£7,444,000
Museums and Galleries	£40,195,000
Totals	**£129,406,000**
Source: CIPFA Cultural Statistics in Scotland, 2010	

6.40 The results in the table show that a total of almost £130 million was spent on A&CI related areas of service provision by local authorities in Scotland in 2009-10.

6.41 It is difficult to identify how much of this expenditure is already captured within the key results presented earlier in this report. To the extent that some of the expenditure will have been in the form of grant in aid to other organisations, this should have been captured in the analysis in Section 4 and earlier in Section 5. However, the level of expenditure that relates to direct service provision by the local authorities themselves will not have been captured in the earlier analysis. Unfortunately, it is not possible to distinguish between these two types of spend, based on the data available.