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European Cluster Observatory

Priority Sector Report: Creative and Cultural Industries

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Executive summary

- In 2006 European creative and cultural industries firms employed a total of 6.5 million persons.
- Regions with high concentrations of creative and cultural industries have Europe's highest prosperity levels.
- Large urban areas and capital city regions dominate the creative and cultural industries, but some city regions do better than others. The super clusters London and Paris stand out, followed by Milan and Amsterdam.
- The creative and cultural industries are significant generators of intellectual property, in particular copyrights, and the largest creative and cultural industries regions are also among the largest employment centres for copyright-based industries.
- Among the regions of Europe which rank among the top 25 either by population or creative and cultural industries employment the following have a disproportionally large creative and cultural sector: Athens, Berlin, Budapest, Denmark, Frankfurt, Helsinki, Ireland, Inner London, Outer London, Maastricht, Madrid, Munich, Nijmegen, Oxford, Rome, Stockholm, and Stuttgart.
- As a share of the regional labour market, creative and cultural industries account for the largest shares in Inner London (5.95%), Stockholm (5.87%), Prague (5.81%), and Bratislava (5.01%).
- Most of the regions in the top 25 highest cultural and creative growth regions are small and medium sized regions. However, the following regions with labour markets over 1 million people were in the top 25 for annual employment growth: Seville (7.78%), Southampton (7.22%), Valencia (6.25%), Bilbao (6.51%), Galicia (5.45%), Lithuania (5.79%).
- The highest annual employment growth rates in the period 2001-2006 are found in Austria (6.2%), Lithuania (5.79%), Estonia (4.02%), Slovakia (3.88%), Latvia (3.87%), and Slovenia (3.76%).
- Creative and cultural industries manufacturing and production activities are the most regionally concentrated, and consumer oriented activities such as retail the least regionally concentrated.
- Further statistical work is needed to measure the true size of the creative and cultural industries. The data used in this report covers employees but not sole traders (i.e. firms with no employees but one active owner) or freelancers.

Introduction

The European cultural and creative industries (CCI) represent a significant set of industries. Social, cultural and technological changes have helped fuel our thirst and demand for cultural products, new forms of entertainment, distraction, and inspiration. Driven by these changes entirely new industries have emerged (e.g. computer games, web design), older cultural industries have gone from being the preserve of the elite to mass market global industries (e.g. books, high fashion, designer goods), and traditional consumer industries have tried to redesign and repackage what they have always done to suit consumers' insatiable desire for culture and creativity.

Europe's creative and cultural industries are global leaders and competitive exporters in a wide range of fields. They are the heart of creating Europe's culture and identity, and central to promoting Europe's identity around the world. Moreover they are an aggregate group of industries that in 2006 employed a total of **6,576,558 persons** or **2.71%** of the European labour market.

This report presents regionalised data and trends for these 6.5 million employees in 30 European countries. The report rests upon a methodology that has aimed at caution, minimalism and accuracy above all[1]. It is important to note at the outset then that, the number of people working in Europe's creative and cultural industries is likely much higher. The data used in this report covers employees but does not include sole traders: i.e. it excludes firms with no employees but one active owner. The cultural and creative industries are fields where many micro-businesses and freelancers are active and it is important to note they may account for a significant number of people actively engaged in the European creative and cultural economy. Taking Sweden as an example, the number of establishments with no employees in Sweden is presently 73,150 out of a total of 88,372 creative and cultural industries establishments: i.e. Sweden 82.7% of establishments are not covered by employment statistics compared to 73.2% in the overall Swedish economy.

1 Creative and cultural industries and prosperity

The creation of employment opportunities is crucial to economic and social well-being. There is a strong relationship between the presence of creative and cultural industries and regional prosperity. Figure 1 shows that those regions with above average concentrations[2] of Europe's creative and cultural industries employees are generally those where economic prosperity is highest.

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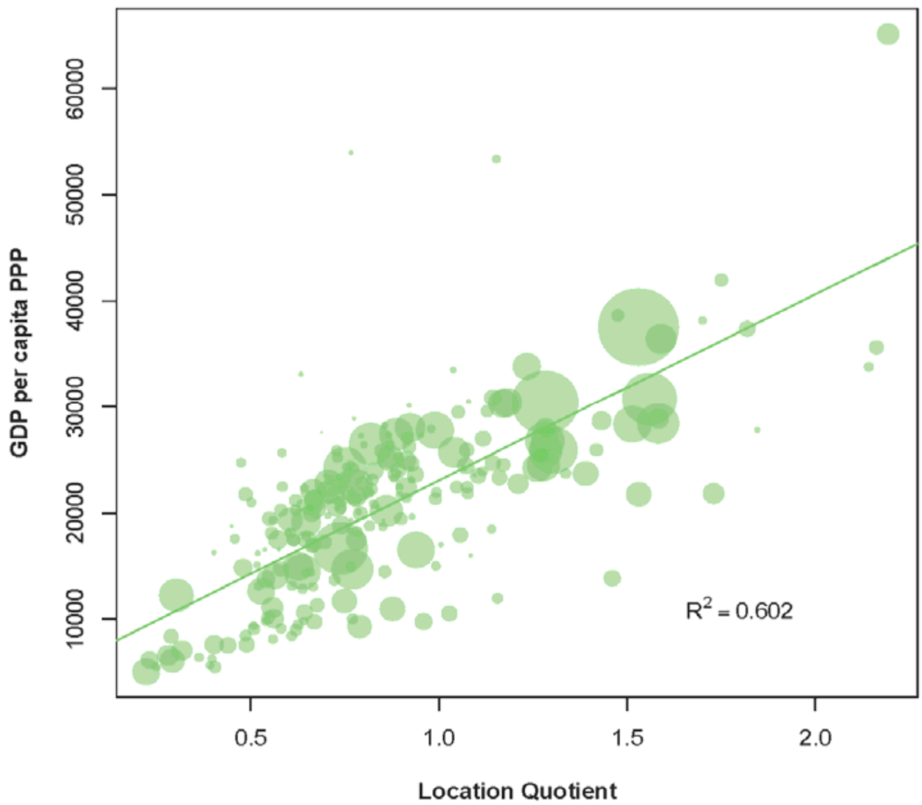
[1] An extensive methodological appendix to this report goes into detail in how we have defined creative and cultural industries and the various measures and data we have used in this report.

[2] Measured by location quotients. Location quotients measure the level of regional specialisation. Values over 1 indicate above-average levels of concentration.

Figure 1: Creative and cultural industries concentration and regional prosperity.



If we take into account no other factors, regional creative and cultural specialisation explains 60% of the variance in GDP per capita. Europe's wealthiest regions are home to disproportionate levels of creative and cultural industries concentration. It is likely that creative and cultural firms and employees are drawn to the markets represented by prosperous regions but also that the creative and cultural industries are themselves important components of and contributors to the economies of Europe's wealthiest regions.

2 Principal labour markets

The largest concentrations of creative and cultural industries employees in Europe are major urban areas. This confirms academic research findings and literature that suggests that creative and cultural activities that become industrialised are concentrated in and attracted to large urban areas. Creativity and cultural innovation, of course, happen in many different types of region across Europe but it seems that large scale industrialisation of these activities occurs in large urban areas.

Table 1. Europe's Top 25 regions for creative and cultural industries employment clusters.

Region	CCI Rank	Employment	LQ
Île de France (Paris), FR	1	301,895	1.53
Inner London, UK	2	235,327	2.19
Lombardia (Milan), IT	3	195,848	1.28
West-Nederland (Amsterdam), NL	4	195,646	1.56
Madrid, ES	5	172,800	1.58
Cataluña (Barcelona), ES	6	153,202	1.30
Danmark, DK	7	124,352	1.28
Lazio (Rome), IT	8	118,047	1.51
Oberbayern (München), DE	9	97,050	1.59
Stockholm, SE	10	86,239	2.16
Kozep-Magyarorszag (Budapest), HU	11	82,429	1.73
Outer London, UK	12	80,845	1.28
Berks, Bucks and Oxon (Oxford), UK	13	80,628	1.82
Attiki (Athens), GR	14	78,920	1.26
Oost-Nederland (Nijmegen), NL	15	74,064	1.39
Andalucía (Sevilla), ES	16	71,843	0.74
Ireland, IE	17	70,602	1.18
Zuid-Nederland (Maastricht), NL	18	70,543	1.28
Darmstadt (Frankfurt am Main), DE	19	68,238	1.23
Piemonte (Turin), IT	20	66,291	1.04
Köln, DE	21	65,341	1.28
Etelä-Suomi (Helsinki), FI	22	64,500	1.43
Veneto (Venice), IT	23	63,024	0.89
Stuttgart, DE	24	61,626	1.17
Berlin, DE	25	60,736	1.53

Note: LQ is an indicator of CCI employment relative to the total employment of the region, where LQ>1 indicates an over-representation of CCI employment.

Most of the largest employment clusters have higher than average levels of CCI concentration. This can be seen from location quotients listed in the Table 1 above. However, two of the top 25 clusters have lower than average shares of CCI employment: Seville and Venice.

Table 2. Regions which rank in the top 25 either by regional population size or creative and cultural industries employment.

Region	Largest City	Population Rank	CCI Rank
Île de France (FR)	Paris	1	1
Lombardia (IT)	Milan	2	3
Andalucía (ES)	Sevilla	3	16
West-Nederland (NL)	Amsterdam	4	4
Cataluña (ES)	Barcelona	5	6
Vlaams Gewest (BE)	Antwerpen	6	31
Rhône-Alpes (FR)	Lyon	7	37
Campania (IT)	Naples	8	39
Madrid (ES)	Madrid	9	5
Danmark (DK)	-	10	7
Düsseldorf (DE)	Düsseldorf	11	26
Lazio (IT)	Rome	12	8
Mazowieckie (PL)	Warszawa	13	42
Sicilia (IT)	Palermo	14	58
Provence-Alpes-Côte d'Azur (FR)	Marseille	15	50
Slaskie (PL)	Katowice	16	160
Veneto (IT)	Venice	17	23
Outer London (UK)	Outer London	18	12
Valencia (ES)	Valencia	19	27
Köln (DE)	Köln	20	21
Piemonte (IT)	Turin	21	20
Oberbayern (DE)	München	22	9
Emilia-Romagna (IT)	Bologna	23	28
Ireland (IE)	-	24	17
Puglia (IT)	Bari	25	72
Stuttgart (DE)	Stuttgart	27	24
Attiki (GR)	Athens	28	14
Darmstadt (DE)	Frankfurt am Main	30	19
Zuid-Nederland (NL)	Maastricht	35	18
Oost-Nederland (NL)	Nijmegen	36	15
Berlin (DE)	Berlin	39	25
Inner London (UK)	Inner London	46	2
Kozep-Magyarorszag (HU)	Budapest	49	11
Etelä-Suomi (FI)	Helsinki	60	22
Berks, Bucks and Oxon (UK)	Oxford	82	13
Stockholm (SE)	Stockholm	98	10

Note: CCI rank is the rank in CCI employment

Whilst there is a relationship between CCI and large urban areas this is not always so. Though many of Europe's most populous regions are home to highly ranked CCI clusters, some of the largest regions are lagging in CCI employment.

Among the regions of Europe which rank among the top 25 either by population or CCI employment the following cities host an over-representation of the creative and cultural sector: Athens, Berlin, Budapest, Denmark, Frankfurt, Helsinki, Ireland, Inner London, Outer London, Maastricht, Madrid, Munich, Nijmegen, Oxford, Rome, Stockholm, and Stuttgart.

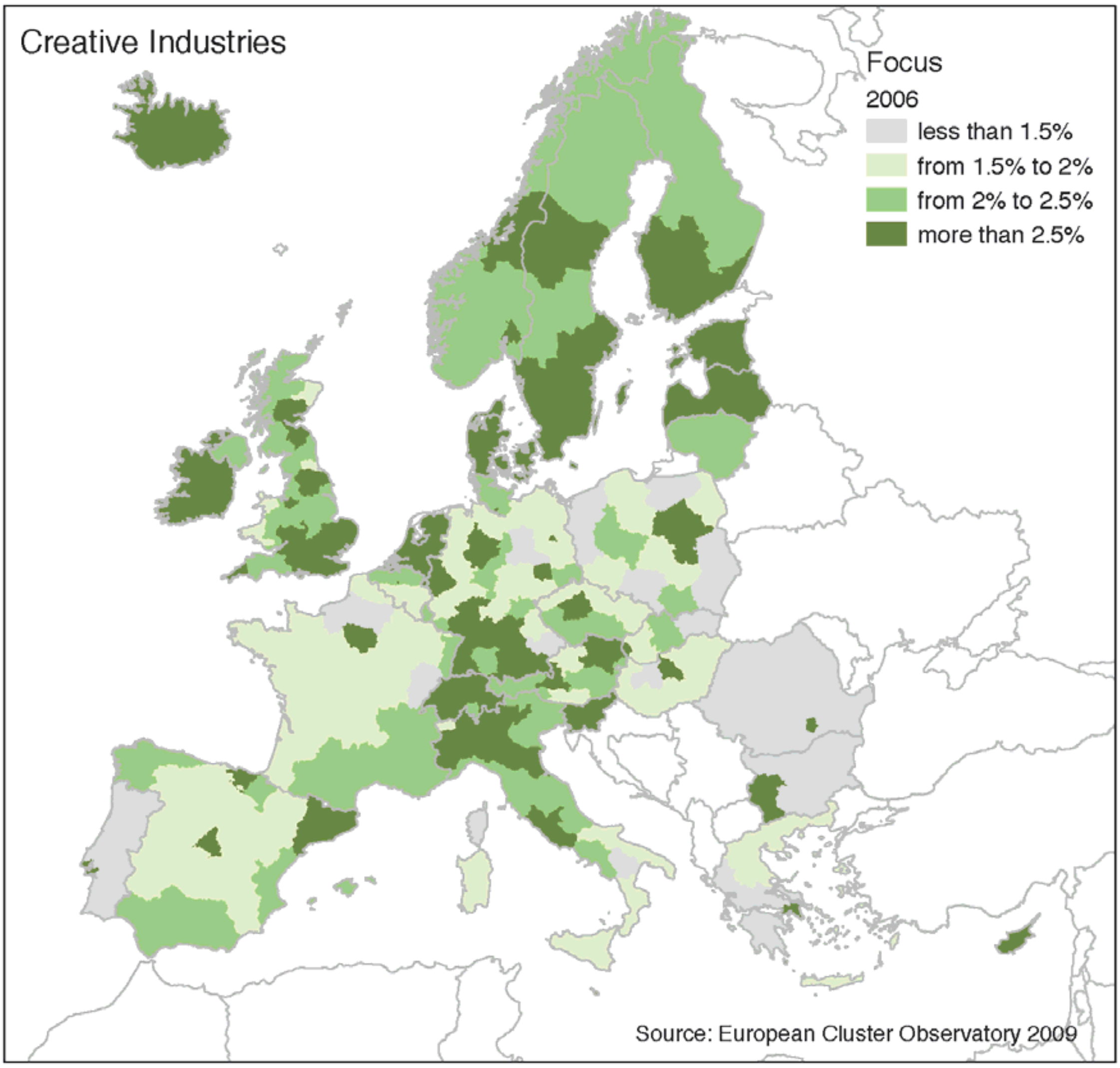
Of the regions with 25 largest populations the following have a far lower than expected representation of creative and cultural industries: Antwerp, Bari, Bologna, Düsseldorf, Katowice, Lyon, Marseille, Naples, Palermo, Seville, Valencia, Venice, Warszawa.

As with many industrial sectors, firms and labour are unequally distributed and this indicates the existence of regional industrial and innovation systems and clusters underpinned by favourable regional conditions. Employment and competitiveness in the creative and cultural industries is not directly related to labour market size or population and cannot be considered a simple by-product of human habitation. Creative and culture activities are knowledge driven industries that are drawn to specialised labour markets and to clusters. Clusters and large labour markets support organisational and project-base scale and scope.

3 Regional specialisation and focus

Regional creative and cultural industries specialisation is not limited to the largest urban areas but capital city regions and certain of the largest cities exhibit strong CCI Focuses. The table and map below show the share of a region’s labour force employed by creative and cultural industries.

Figure 2. CCI Focus: Creative and cultural industries share of regional labour force 2006



Of the 15 regions with the highest CCI Focus most are capital city regions. In all but two countries capital city regions have the highest national CCI Focus: Germany where Hamburg is the city with the highest CCI Focus and Munich is the largest employment centre; and Switzerland where Basel the city with the highest CCI Focus and Zurich is the largest employment centre.

Of the Top 15 CCI Focus regions, three are in Central and Eastern Europe: Prague, Bratislava, and Budapest. The creative and cultural industries have almost the same share of the entire regional labour market in Prague as is the case in Inner London.

Table 3. Top 15 regions by CCI Focus.

	CCI Focus	Employment	CCI Rank
Inner London, UK	5.95%	235,327	2
Stockholm, SE	5.87%	86,239	10
Praha, CZ	5.81%	53,461	35
Bratislavsky kraj (Bratislava), SK	5.01%	21,776	87
Berks, Bucks and Oxon (Oxford), UK	4.94%	80,628	13
Hamburg, DE	4.75%	54,867	32
Kozep-Magyarorszag (Budapest), HU	4.69%	82,429	11
Oslo og Akershus, NO	4.61%	39,778	44
Oberbayern (München), DE	4.32%	97,050	9
Karlsruhe, DE	4.30%	55,794	30
Madrid, ES	4.30%	172,800	5
West-Nederland (Amsterdam), NL	4.23%	195,646	4
Berlin, DE	4.15%	60,736	25
Île de France (Paris), FR	4.15%	301,895	1
Lazio (Rome), IT	4.11%	118,047	8

Note: Focus indicates how large share of the region's total employment the CCI sector constitutes.

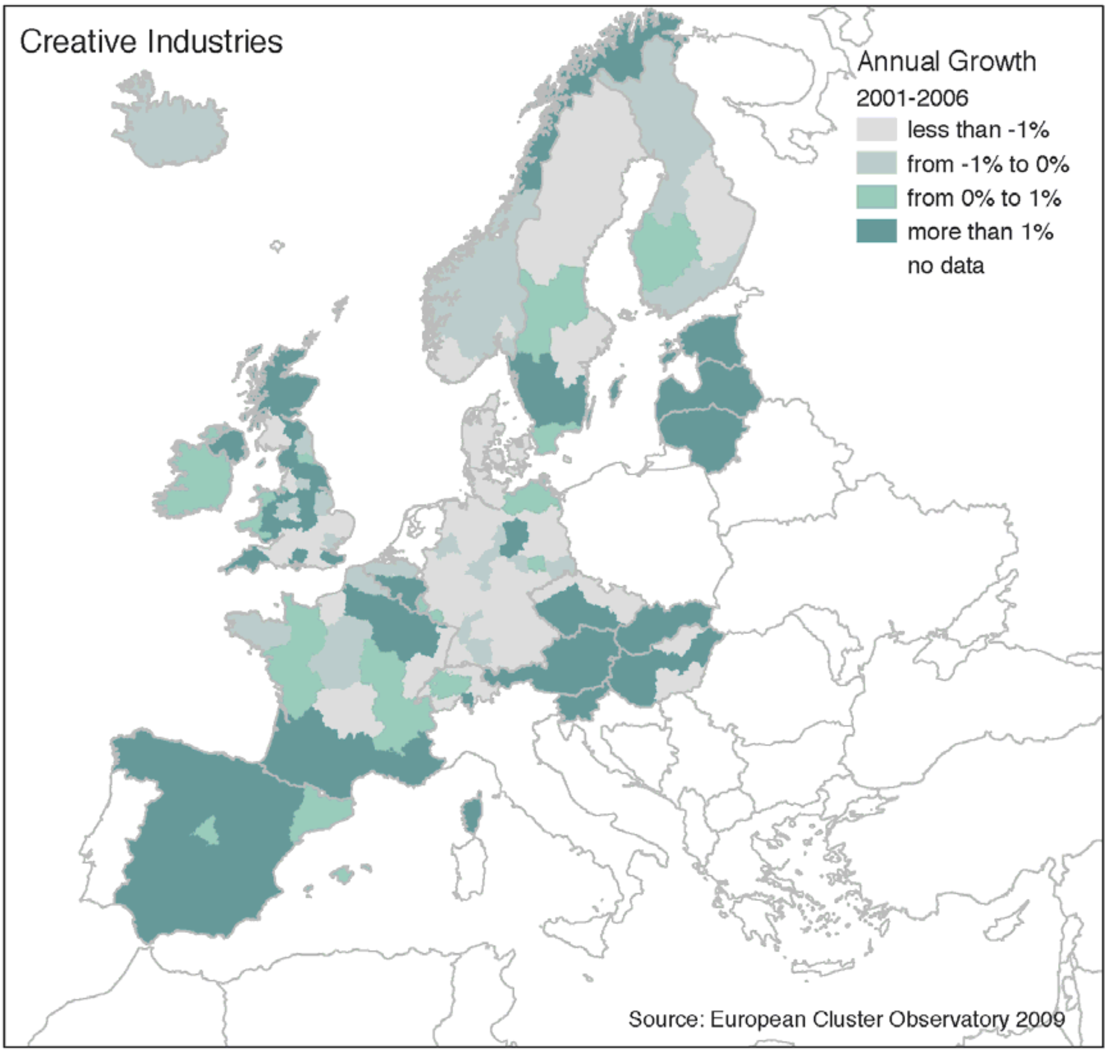
Creative and cultural industries command unusually high share of regional employment in Bratislava. This demonstrates that relatively small European regions can also score highly on specialisation and focus measures, even if the opposite is more common.

4 Growth

The creative and cultural industries are a sector of the European economy that exhibit strong growth[3]. However, as the map below shows that growth is not evenly spread over Europe. As can be seen higher levels of growth was broadly concentrated in areas of central Europe, areas of France, Spain, UK and the Baltic States. In Germany and Scandinavia there is a mixed picture with certain regions showing higher growth rates whilst others suffered CCI employment decline in the period.

[3] Time series data was not available for the following countries: Bulgaria, Cyprus, Greece, Italy, Netherlands, Poland, Portugal, Romania.

Figure 3. Creative and cultural industries average annual growth 2001-2006.



Note: Growth is measured using compound annual growth rates (CAGR).

In 24 of the top 25 CCI growth regions the creative and cultural industries grew at a faster rate than the rest of the labour market.

Table 4. Regions with the highest average annual growth in CCI employment 2001-2006.

	CCI Growth	Rest of the economy	CCI LQ	CCI Rank	CCI Employment
Niederösterreich (St. Pölten), AT	16.63%	7.60%	1.07	84	22,593
Salzburg, AT	10.00%	6.32%	1.08	161	10,434
Oberösterreich (Linz), AT	8.99%	6.97%	0.73	126	14,506
Asturias (Oviedo), ES	8.42%	3.05%	0.85	146	11,399
Zapadne Slovensko (Nitra), SK	8.35%	1.96%	0.68	106	17,728
Cumbria (Carlisle), UK	8.31%	2.47%	0.84	220	5,087
La Rioja (Logroño), ES	7.99%	5.64%	0.70	237	3,217
Andalucía (Sevilla), ES	7.78%	5.27%	0.74	16	71,843
Hants and Isle of Wight (Southampton), UK	7.22%	1.18%	1.27	45	38,851
Castilla-La Mancha (Toledo), ES	6.87%	4.79%	0.67	109	16,528
Jihovychod (Brno), CZ	6.65%	0.39%	0.86	89	21,606
País Vasco (Bilbao), ES	6.51%	2.52%	1.12	51	36,539
Murcia, ES	6.35%	5.25%	0.61	152	10,906
Valencia, ES	6.25%	4.48%	0.86	27	59,901
Kärnten (Klagenfurt), AT	6.13%	4.55%	0.73	222	4,950
Lietuva, LT	5.79%	3.63%	0.88	68	26,102
Galicia (A Coruña), ES	5.45%	2.71%	0.78	60	29,294
Picardie (Amiens), FR	5.41%	1.31%	0.55	181	8,934
Nyugat-Dunantul (Györ), HU	5.33%	-0.51%	0.65	180	9,002
Extremadura (Mérida), ES	5.32%	3.11%	0.66	188	8,022
Canarias (Tenerife), ES	4.97%	4.16%	0.79	88	21,765
Steiermark (Graz), AT	4.87%	5.63%	0.76	144	11,479
Corse (Ajaccio), FR	4.72%	4.08%	0.45	247	1,092
Heref, Worcs and Warws (Hereford), UK	4.67%	0.84%	1.12	91	21,115
E Riding and N Lincs, UK	4.55%	1.61%	0.75	177	9,104

Note: LQ is an indicator of CCI employment relative to the total employment of the region, where LQ>1 indicates an over-representation of CCI employment. Growth is measured using compound annual growth rates (CAGR).

It is striking that 15 of the top 25 growth regions between 2001 and 2006 were in either Austria or Spain. Austria accounts for 5 of the top CCI Growth regions and Spain 10 top CCI Growth regions.

Indeed growth and contraction are highly regionalised in Europe. This can be seen for instance in the United Kingdom where certain regions had high annual growth rates - Cumbria (Carlisle) 8.31%; Hampshire and Isle of Wight (Southampton) 7.22%; Hereford, Worcester and Warwickshire (Hereford) 4.67%; East Riding and North Lincolnshire 4.55 - whilst the 6 regions with the largest labour markets suffered decline – Inner London -1.29%, Outer London -3.42%; Berkshire, Buckinghamshire and Oxfordshire (Oxford) -1.6%; East and West Surrey (Brighton) -3.17%; Greater Manchester -1.4%; West Midlands (Birmingham) -1.64%.

Many of the fastest growing regions are relatively small and are growing from a lower than average baseline. Indeed 20 of the top 25 growth regions have CCI shares of regional employment below or well below the average European region. Higher than average growth in certain of these regions may reflect lower base lines as well as the quickening pace of catch-up.

Most of the regions in the top 25 highest cultural and creative growth regions are small and medium sized regions. However, the following regions with labour markets over 1 million people were in the top 25 for annual employment growth: Seville (7.78%), Southampton (7.22%), Valencia (6.25%), Bilbao (6.51%), Galicia (5.45%), Lithuania (5.79%).

For those European regions we have growth data for, almost as many regions suffered declines in CCI employment as there were regions that experienced growth: 92 regions grew versus 89 declined (66 regions with no growth data).

From the data at our disposal it is difficult to draw any conclusions about why there is such a mixed growth picture. One possible explanation, for which there is some evidence, is that CCI growth/decline is linked to cycles in the rest of the regional labour market and that CCI will grow where there is growth and decline where there is general decline. This would indicate that creative and cultural industries are embedded and interdependent with the surrounding economy; rather than independent of the region as entirely export oriented industries may be.

An alternative explanation is that the data only concentrates on employment trends and it may be that declines in employment are due to, or compensated for, by increases in sole-trading and other entrepreneurial activity that would not appear in our statistics. Certainly many sectors within the creative and cultural industries have come under pressure from digital transitions which have created new opportunities and threats as well as leading to productivity gains and changing organisational forms that may have led to employment decreases.

Regionalised patterns of growth and change seem to be a strong feature of the creative and cultural industries.

5 National perspectives on growth and size

In most cases, employment in the creative and cultural industries seems largely to reflect growth rates in the entire economy. For many countries creative and cultural industries employment growth was an amplified version of general growth: if employment was going up it went up faster in creative and cultural industries and vice versa.

As can be seen from Table 5, the general pattern is that overall employment increases in the country are equalled or bettered by creative and cultural industries, whilst negative overall growth is coupled by higher levels of decline in the creative and cultural industries. For example in Austria and Lithuania overall employment growth was strong in the period 2001-2006 and creative and cultural industries employment reflected and bettered this positive upturn. In Norway and Germany the opposite was the case: as employment in the overall economy turned negative, employment in the creative and cultural industries fell even faster. Spain, Ireland, and France are notable exceptions to this tendency: in these countries positive annual growth rates for the entire economy were significantly above CCI growth rates.

Table 5. Average annual employment growth 2001-2006 in creative and cultural industries and in all sectors of the economy.

Country	CCI Growth	All Growth
Austria	6.20%	5.42%
Lithuania	5.79%	3.63%
Estonia	4.02%	2.71%
Slovakia	3.88%	0.63%
Latvia	3.87%	3.89%
Slovenia	3.76%	0.78%
Spain	2.78%	3.86%
Hungary	1.45%	0.08%
Czech Republic	0.80%	0.30%
Luxembourg	0.72%	1.55%
Ireland	0.55%	3.75%
France	-0.14%	1.40%
Iceland	-0.22%	0.10%
Finland	-0.47%	-0.10%
United Kingdom	-0.55%	0.32%
Belgium	-0.82%	0.07%
Sweden	-0.97%	-0.32%
Switzerland	-1.47%	-0.13%
Denmark	-1.99%	-1.07%
Germany	-2.08%	-1.39%
Norway	-2.41%	-0.28%

Note: Growth is calculated here as a Compound Annual Growth Rate (CAGR) over the period.

Small countries tend to have a higher CCI Focus than large countries. As Table 6 shows, of the 12 countries with the highest CCI Focus only two have a population of over 10 million: the Netherlands and the UK. The lower share of total employment that CCI account for in larger countries may be due to the ability to exploit greater economies of scale in creative and cultural product provision. It may also be that smaller countries own language, cultural heritage and specificity mean that substitutes are harder to import, or demand more labour to tailor to local conditions and demands. All countries big or small need a foundation of cultural and media institutions and it can be assumed that all need an indigenous basic provision: something that cannot be imported from outside.

Table 6. National labour markets and CCI Focus.

Country	CCI Focus	CCI Rank	CCI Employment
Iceland	4.01%	28	8,633
Netherlands	3.94%	6	377,903
Sweden	3.76%	7	205,831
Denmark	3.48%	15	124,352
Switzerland	3.40%	8	167,479
Finland	3.25%	18	96,511
Ireland	3.20%	20	70,602
Estonia	3.14%	26	23,965
United Kingdom	3.12%	1	1,131,697
Norway	2.96%	19	81,874
Malta	2.94%	29	5,765
Slovenia	2.87%	24	29,151
Austria	2.83%	12	131,015
Germany	2.79%	2	956,668
Spain	2.74%	4	655,042
Hungary	2.73%	11	134,921
Italy	2.66%	3	767,521
Czech Republic	2.64%	10	156,272
Latvia	2.60%	23	31,720
Cyprus	2.52%	27	10,794
France	2.52%	5	634,251
Lithuania	2.38%	25	26,102
Slovakia	2.30%	22	61,777
Greece	2.28%	13	128,421
Belgium	2.26%	16	101,646
Portugal	2.13%	17	96,741
Luxembourg	2.08%	30	5,273
Poland	1.69%	9	162,408
Bulgaria	1.63%	21	65,587
Romania	1.18%	14	126,637
Europe	2.71%		6,576,558

Note: Focus indicates how large share of the nation's total employment the CCI sector constitutes.

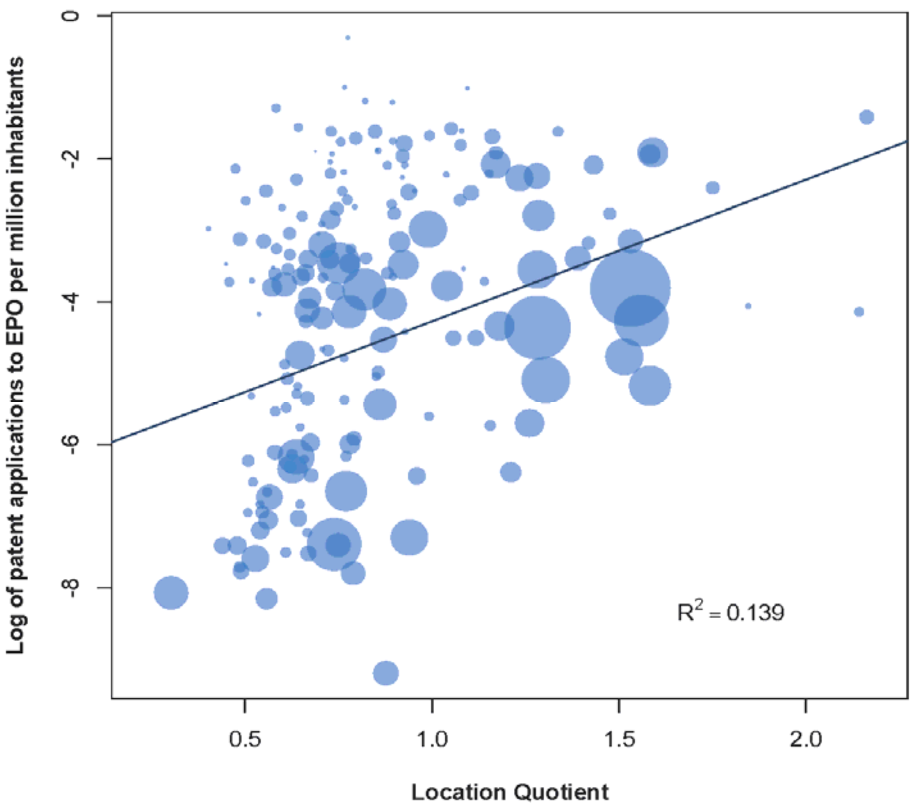
Table 6 clearly demonstrates the need to take a regional and cluster approach to these industries. For example whilst Romania has the lowest share of its total employment in creative and cultural industries, as a nation it ranks 14th in Europe and the capital region of Bucharest ranks 34th of all European regions whilst being home to 42.6% of the nation's creative and cultural industries employees.

6 Innovation

The Lisbon Treaty as well as a significant academic literature posits a relation between regional innovation and the presence of creative and cultural industries. Since creative and cultural industries operate in fast moving and often fashion oriented markets continual innovation and creativity is core to competitive advantage. Regional clusters must innovate in order to survive or grow and innovation is likely to be reflected in employment growth.

Equally one might expect to see knowledge and innovation spill-over from creative and cultural industries to other areas of the economy. There is a relationship between CCI employment and traditional innovation indicators such as patent applications but as can be seen in the Figure below it is not a definite or direct relationship. Thus the thesis that creative and cultural industries and workers are interlinked to other types of ‘creative’ and innovative industries is not definitely provable.

Figure 4. Creative and cultural industries concentration and patent applications.



Note: LQ is an indicator of CCI employment relative to the total employment of the region, where LQ>1 indicates an over-representation of CCI employment.

Similarly it is not possible to draw direct relationships between standard regional innovation performance measures and creative industries growth. With the exceptions of Gothenburg, Malmoe Prague and Vienna, those regions with the 20 highest Regional Innovation Scoreboard value (RIS) [4]

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[4] Regional Innovation Scoreboard 2006 conducted by Maastricht Economic and social Research and training centre on Innovation and Technology (MERIT): 2006 European Regional Innovation Scoreboard, MERIT, 2006.

all suffered negative creative and cultural industries growth. RIS is therefore not an adequate predicator of growth in this area.

Table 7. Top 20 regions on the Regional Innovation Scoreboard (RIS) and average annual growth in creative and cultural industries.

Region	RIS 2006	Annual CCI Growth (CAGR)
Stockholm, SE	0.895	-2.07%
Västsverige (Gothenburg), SE	0.828	1.07%
Oberbayern (München), DE	0.791	-1.84%
Etelä-Suomi (Helsinki), FI	0.782	-0.38%
Karlsruhe, DE	0.775	-0.55%
Stuttgart, DE	0.768	-1.52%
Braunschweig, DE	0.759	-0.98%
Sydsverige (Malmö), SE	0.758	0.39%
Île de France (Paris), FR	0.746	-0.85%
Östra Mellansverige (Uppsala), SE	0.742	-1.93%
Berlin, DE	0.737	-1.74%
Tübingen, DE	0.718	-0.85%
Praha, CZ	0.698	1.37%
Darmstadt (Frankfurt am Main), DE	0.693	-3.11%
Dresden, DE	0.687	-0.49%
Köln, DE	0.686	-2.31%
Danmark, DK	0.681	-1.99%
Pohjois-Suomi (Oulu), FI	0.679	-0.33%
Mittelfranken (Nürnberg), DE	0.676	-3.12%
Wien, AT	0.675	2.36%

The mixed results above likely point to the difficulty of using standard innovation performance indicators – such as RIS and patent data – to measure innovation levels and conditions in creative and cultural industries. Many of the types of knowledge, goods, services and business models produced by the creative and cultural industries simply cannot be protected by patents. Other types of intellectual property appropriation and exploitation regimes are much more central to the creative and cultural industries. In particular copyright is a more prevalent form of intellectual property appropriation in creative and cultural industries than patent. Regional innovation measures tend to stress a region's science and high technology emphasis and it is not clear that all of the creative and cultural industries are reliant upon such types of 'innovation' system to maintain their own creativity and innovation.

Innovation performance indicators better attuned to the innovation dynamics (and likely spill over areas) of the creative and cultural industries are needed in order to make more definite conclusions about their impact on and role in regional innovation.

7 Intellectual property

The creative and cultural industries are significant generators of intellectual property in particular copyrights. Using the World Intellectual Property Organization (WIPO) definition for Copyright-Based Industries[5], it can be seen that the largest creative and cultural industries regions are generally also the largest employment centres for copyright-based industries.

Table 8. Top 10 regions by employees in CCI and Copyright-based Industries.

CCI			WIPO		
1	Île de France (Paris)	301,895	1	Île de France (Paris)	371,400
2	Inner London	235,327	2	Inner London	212,479
3	Lombardia (Milan)	195,848	3	Madrid	209,784
4	West-Nederland (Amsterdam)	195,646	4	West-Nederland (Amsterdam)	193,344
5	Madrid	172,800	5	Lombardia (Milan)	182,503
6	Cataluña (Barcelona)	153,202	6	Cataluña (Barcelona)	151,286
7	Danmark	124,352	7	Lazio (Rome)	123,822
8	Lazio (Rome)	118,047	8	Danmark	122,189
9	Oberbayern (München)	97,050	9	Oberbayern (München)	101,417
10	Stockholm	86,239	10	Zuid-Nederland (Maastricht)	86,830

Regions with a high creative and cultural industries focus – the share of a region's labour force employed by creative and cultural industries – also have a high focus on copyright-based industries.

Table 9. Top 10 regions by CCI Focus and Copyright-based Industries Focus.

Region	CCI Focus	Employment	WIPO Focus	Employment
Inner London, UK	5.95%	235,327	5.64%	212,479
Stockholm, SE	5.87%	86,239	5.48%	76,601
Praha, CZ	5.81%	53,461	6.48%	57,113
Bratislavsky kraj (Bratislava), SK	5.01%	21,776	5.10%	21,287
Berks, Bucks and Oxon (Oxford), UK	4.94%	80,628	4.36%	68,148
Hamburg, DE	4.75%	54,867	4.60%	51,170
Kozep-Magyarorszag (Budapest), HU	4.69%	82,429	4.34%	73,615
Oslo og Akershus, NO	4.61%	39,778	4.62%	38,250
Oberbayern (München), DE	4.32%	97,050	4.68%	101,417
Karlsruhe, DE	4.30%	55,794	3.71%	46,270

Note: Focus indicates how large share of the region's total employment the CCI sector constitutes.

[5] See Methodological Appendix for details and comparison of the WIPO definition to the Cluster Observatory definition.

8 Breaking down the creative and cultural industries

There has been considerable debate over the idea that the industries we suggest comprise the creative and cultural industries can in fact be aggregated. We agree that despite many similarities and interdependencies the activities gathered under the umbrella of creative and cultural industries need also to be understood as separate industries in their own rights. The knowledge requirements, working methods, business and organisational models and consumer interfaces that define competitiveness in computer games are, for instance, very different to those that shape competitiveness in performance arts.

It is necessary to understand the creative and cultural industries not as a unified category but as an aggregate category. It is necessary to understand that the industries that make up the European creative and cultural industries competitiveness share much but also exhibit unique and different cluster dynamics.

The creative and cultural industries are a term that includes a variety of different related industries. Our definition includes not just 'cultural' industries but also 'creative' industries such as certain types of software work (e.g. publishing of software, software consultancy and supply, new media and computer games). These are industries that are defined by their creative working and by the intellectual property they create. Together they employ **1,471,915** Europeans in 30 countries: 22.3% of creative and cultural industries employees work with software publishing, consultancy or supply.

Table 10. Top 15 employment centres for software.

Region	Software Employment
Île de France (Paris), FR	63,617
West-Nederland (Amsterdam), NL	47,843
Inner London, UK	44,081
Berks, Bucks and Oxon (Oxford), UK	41,955
Lombardia (Milan), IT	41,857
Madrid, ES	37,145
Lazio (Rome), IT	33,486
Stockholm, SE	33,239
Danmark, DK	31,525
Oberbayern (München), DE	31,074
Cataluña (Barcelona), ES	28,741
Karlsruhe, DE	28,332
Darmstadt (Frankfurt am Main), DE	26,785
Surrey, E and W Sussex (Brighton), UK	24,173
Outer London, UK	23,833

The following maps show employment concentrations for four activity areas within the creative and cultural industries: Artistic creation and literary interpretation; Advertising; Radio and television activities; Museum activities and preservation of historical sites and buildings.

The maps indicate that for these parts of the creative and cultural industries clustering is a prominent feature. In particular Inner London and its surrounding regions and the Paris region are the largest centres in each of the four industries. Amsterdam, Madrid and Milan are also important centres. However despite the existence of prominent clusters in each of the industries many other centres exist.

Figure 5. Artistic creation and literary interpretation

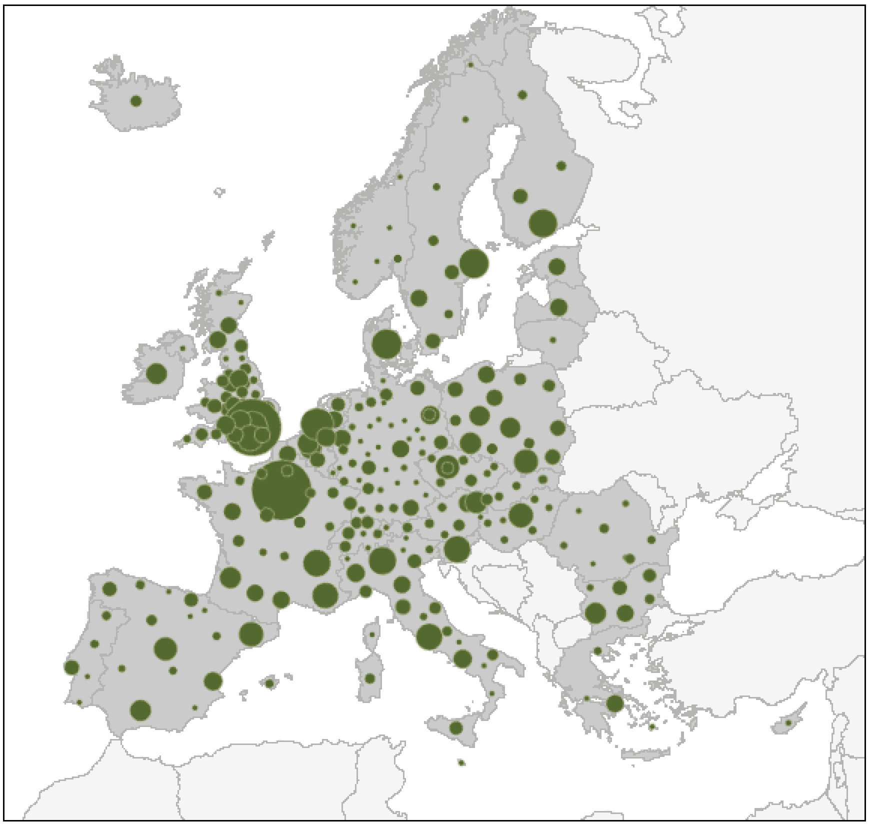


Figure 6. Advertising

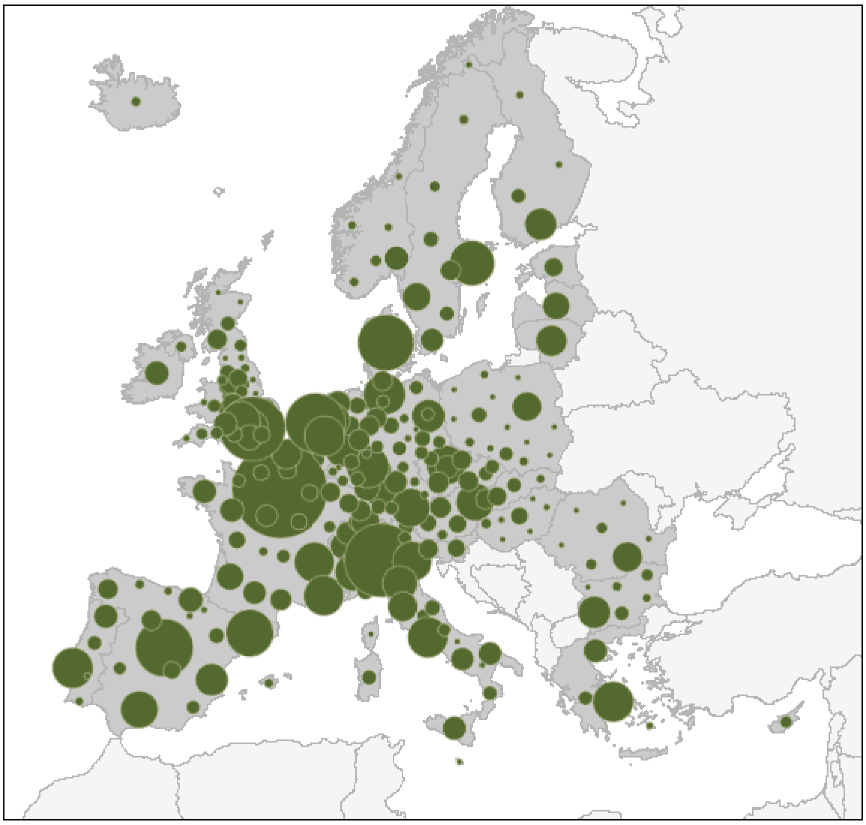


Figure 7. Radio and television activities

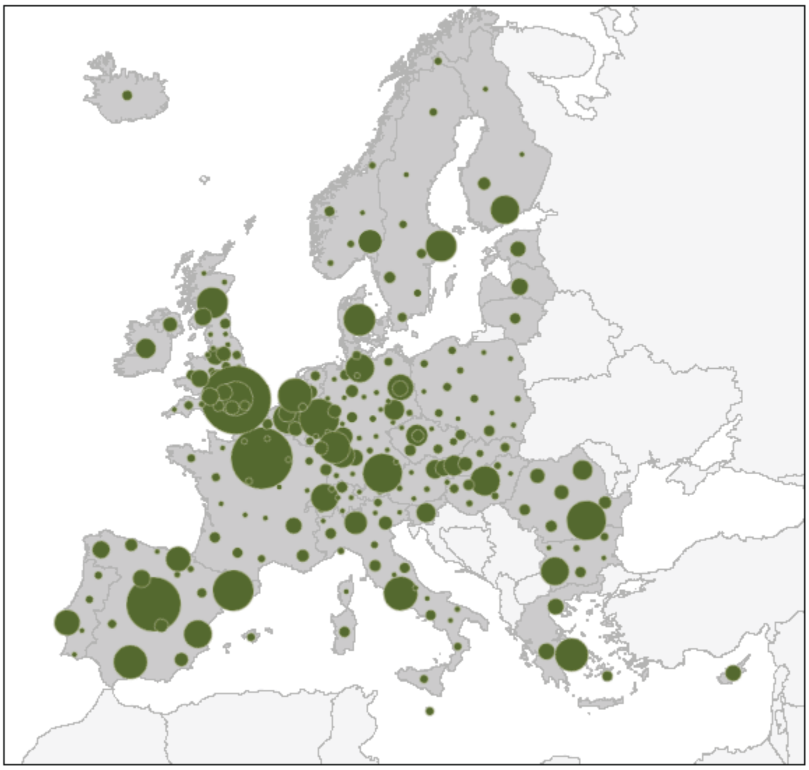
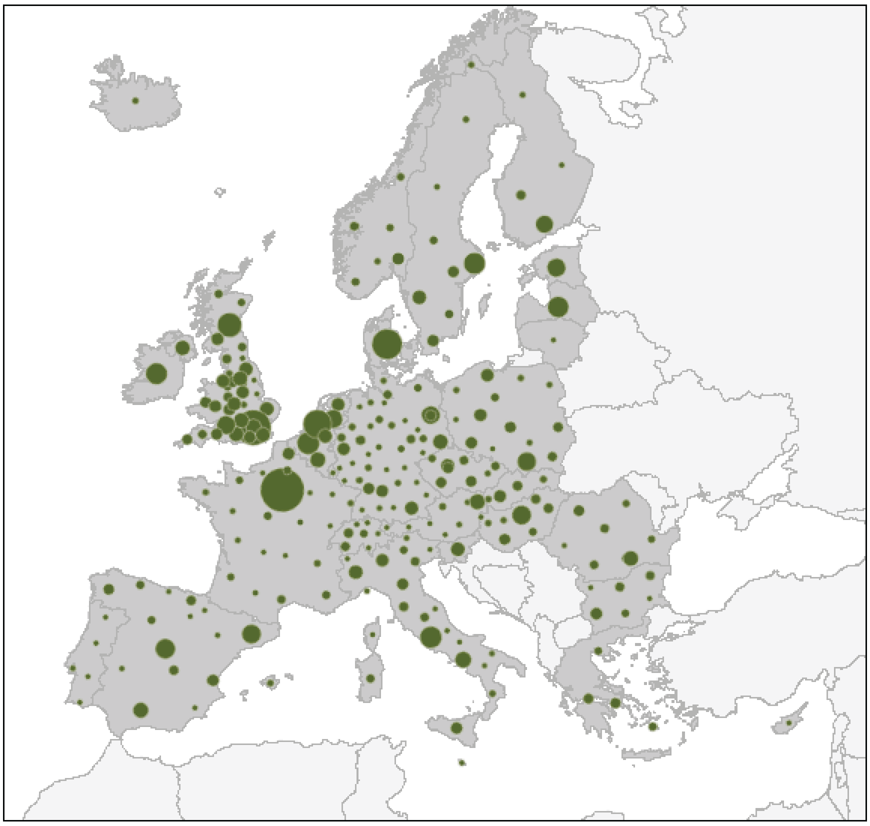


Figure 8. Museum activities and preservation of historical sites and buildings



The Table below lists the top 15 clusters (defined by employment and share of total European employment in that category) in the four fields illustrated above: Artistic creation and literary interpretation; Advertising; Radio and television activities; Museum activities and preservation of historical sites and buildings. These figures clearly show the role of Paris, London, Milan, Amsterdam and Madrid as Europe's most important employment centres for creative and cultural industries. Of these the super clusters London and Paris stand out.

Table 11: Top 15 regions by number of employees and share of European employment in four sectors of the creative and cultural industries.

		Employ-ment	European share		Employ-ment	European share
	Radio and television activities			**Advertising**		
1	Inner London	31,231	8.08%	Île de France (Paris)	52,202	7.56%
2	Île de France (Paris)	24,472	6.33%	Lombardia (Milan)	30,020	4.35%
3	Madrid	19,105	4.95%	Inner London	24,348	3.53%
4	Cataluña (Barcelona)	10,756	2.78%	West-Nederland (Amsterdam)	19,876	2.88%
5	Köln	10,317	2.67%	Madrid	18,738	2.71%
6	Bucuresti – Ilfov	10,122	2.62%	Danmark	17,343	2.51%
7	Oberbayern (München)	10,037	2.60%	Cataluña (Barcelona)	12,410	1.80%
8	West-Nederland (Amsterdam)	7,647	1.98%	Düsseldorf	11,653	1.69%
9	Lazio (Rome)	7,516	1.95%	Stockholm	11,230	1.63%
10	Outer London	7,515	1.95%	Darmstadt (Frankfurt am Main)	10,053	1.46%
11	Andalucía (Sevilla)	7,385	1.91%	Hamburg	9,664	1.40%
12	Attiki (Athens)	7,100	1.84%	Attiki (Athens)	9,266	1.34%
13	Danmark	6,648	1.72%	Lazio (Rome)	9,246	1.34%
14	Rheinhessen-Pfalz (Mainz)	6,644	1.72%	Lisboa	9,217	1.33%
15	E Scotland (Edinburgh)	6,351	1.64%	Zuid-Nederland (Maastricht)	8,970	1.30%
	Artistic and literary creation and interpretation			**Museum activities and preservation of historical sites and buildings**		
1	Île de France (Paris)	20,113	6.80%	Île de France (Paris)	10,675	6.24%
2	Inner London	18,434	6.23%	Inner London	6,993	4.09%
3	West-Nederland (Amsterdam)	5,774	1.95%	Danmark	5,162	3.02%
4	Outer London	5,357	1.81%	West-Nederland (Amsterdam)	4,525	2.64%
5	Danmark	5,156	1.74%	E Scotland (Edinburgh),	3,370	1.97%
6	Stockholm	4,983	1.68%	Vlaams Gewest (Antwerpen),	2,850	1.66%
7	Etelä-Suomi (Helsinki)	4,549	1.54%	Lazio (Rome)	2,720	1.59%
8	Lombardia (Milan)	4,448	1.50%	Stockholm	2,648	1.55%
9	Rhône-Alpes (Lyon)	4,165	1.41%	Ireland	2,631	1.54%
10	Slovenija	4,119	1.39%	Latvija	2,497	1.46%
11	Lazio (Rome)	4,000	1.35%	Madrid	2,240	1.31%
12	Provence-Alpes-Côte d'Azur (Marseille)	3,767	1.27%	Kozep-Magyarorszag (Budapest)	2,120	1.24%
13	Surrey, E and W Sussex (Brighton)	3,714	1.26%	Cataluña (Barcelona)	2,102	1.23%
14	Cataluña (Barcelona)	3,539	1.20%	Malopolskie (Kraków)	2,040	1.19%
15	Kozep-Magyarorszag (Budapest)	3,533	1.19%	Oost-Nederland (Nijmegen)	2,010	1.17%

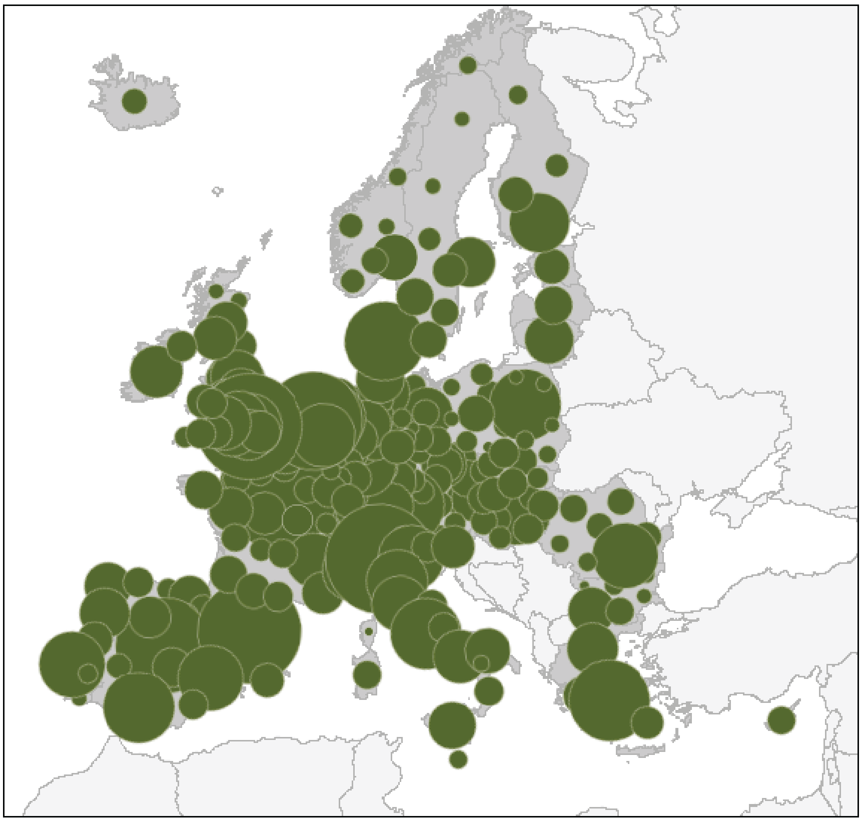
Not all parts of the creative and cultural industries, however, are so dominated by a couple of large cities. As the Table and Map below clearly show in Print Media there is a much more even spread of activities over Europe. This may be explained by the fact that print media employs large numbers of employees in production and distribution and it may not be necessary or desirable to locate these employees in the largest urban areas. The print media employs **2,285,744** people or 34.8% of all the creative and cultural industries and is thus central to the contribution of this sector to Europe competitiveness.

Table 12. Top 15 regions by number of employees and share of European employment in Print Media.

Rank		Employment	European share
1	Île de France (Paris)	81,696	3.57%
2	Lombardia (Milan)	68,582	3.00%
3	Inner London	64,323	2.81%
4	Cataluña (Barcelona)	62,015	2.71%
5	West-Nederland (Amsterdam)	55,884	2.44%
6	Madrid	53,244	2.33%
7	Attiki (Athens)	38,271	1.67%
8	Danmark	36,121	1.58%
9	Oberbayern (München)	30,313	1.33%
10	Andalucía (Sevilla)	28,753	1.26%
11	Mazowieckie (Warszawa)	28,720	1.26%
12	Lazio (Rome)	28,420	1.24%
13	Oost-Nederland (Nijmegen)	26,580	1.16%
14	Kozep-Magyarorszag (Budapest)	24,523	1.07%
15	Bucuresti – Ilfov	24,222	1.06%

Note: Print media is an aggregate of the following NACE codes: 22.11, 22.12, 22.13, 22.21, 22.22, 22.23, 22.24, 22.25, 52.47.

Figure 9. Print media employment.



8 Clustering and value chains

Whilst there are different cluster and location tendencies for different sectors of the creative and cultural industries it is interesting to note that different stages in the CCI value chain also exhibit different cluster tendencies. Manufacturing activities are the most regionally concentrated, and consumer oriented activities the least regionally concentrated.

Concentration measures clearly show that the most concentrated creative and cultural industries are those involved in specialised manufacture: recorded media and musical instruments. There is considerable evidence from other industries that specialised manufacturing benefits from, and is drawn to, industry clusters; it seems this is also the case in creative and cultural industries. A similar pattern can be found for production related activities such as publishing of software and music, news agencies, and film production.

The least concentrated activities are those in the value chain that are nearest the consumer: such as bookshops, cinemas, and exhibition spaces. Such activities do exhibit some cluster tendencies at a European level but locational concentration is likely more apparent within regions: e.g. at the level of shopping or theatre districts.

Employees in firms focused on advertising and in artistic and literary creation and interpretation are also less likely to be concentrated in dominant centres. This is likely due to the need to locally tailor advertising campaigns or artistic and literary products to local conditions: something that is most efficiently done in proximity to end users. Nonetheless as was shown earlier a degree of clustering on a European level can be found in both of these activities and several large urban areas are home to disproportionate concentrations of these activities.

Table 13. The most concentrated and clustered creative and cultural industries sub-sectors[6].

NACE Category	Gini		Krugman		Theil	
Reproduction of computer media	0.88	(1)	1.46	(1)	2.05	(1)
Reproduction of sound recording	0.85	(2)	1.40	(2)	1.71	(2)
Reproduction of video recording	0.80	(3)	1.25	(3)	1.39	(3)
Manufacture of prepared unrecorded media	0.76	(4)	1.24	(4)	1.17	(5)
Manufacture of musical instruments	0.73	(5)	1.11	(7)	1.30	(4)
Publishing of software	0.73	(6)	1.15	(5)	1.00	(7)
Publishing of sound recordings	0.72	(7)	1.14	(6)	1.01	(6)
Motion picture and video distribution	0.66	(8)	1.05	(8)	0.83	(8)
News agency activities	0.65	(9)	1.02	(9)	0.81	(9)
Motion picture and video production	0.61	(10)	0.92	(10)	0.74	(10)
Other publishing	0.60	(11)	0.86	(12)	0.73	(11)
Printing of newspapers	0.59	(12)	0.89	(11)	0.62	(12)
Radio and television activities	0.55	(13)	0.84	(13)	0.56	(13)
Publishing of books	0.53	(14)	0.80	(14)	0.48	(17)
Bookbinding	0.52	(15)	0.76	(16)	0.49	(14)
Publishing of journals and periodicals	0.51	(16)	0.76	(15)	0.48	(15)
Ancillary activities related to printing	0.51	(17)	0.72	(18)	0.48	(16)
Pre-press activities	0.48	(18)	0.69	(19)	0.43	(18)
Library and archives activities	0.48	(19)	0.74	(17)	0.40	(19)
Other entertainment activities n.e.c.	0.47	(20)	0.68	(20)	0.39	(20)
Operation of arts facilities	0.45	(21)	0.65	(21)	0.34	(21)
Other software consultancy and supply	0.44	(22)	0.63	(22)	0.32	(22)
Publishing of newspapers	0.40	(23)	0.57	(24)	0.27	(23)
Museums activities, etc.	0.39	(24)	0.58	(23)	0.25	(25)
Artistic and literary creation and interpretation	0.39	(25)	0.55	(25)	0.25	(24)
Advertising	0.37	(26)	0.53	(26)	0.23	(26)
Printing n.e.c.	0.30	(27)	0.42	(27)	0.15	(28)
Photographic activities	0.29	(28)	0.41	(29)	0.17	(27)
Motion picture projection	0.29	(29)	0.41	(28)	0.15	(29)
Retail sale of books, newspapers and stationery	0.25	(30)	0.36	(30)	0.12	(30)

[6] Based on data for 2006 for 16 countries where 4-digit NACE data was available at a regional level. The countries are: BE, BG, CH, DK, DE, FI, FR, IE, IS, LT LV, NL, NO, RO, SE and UK.

'Gini', 'Krugman' and 'Thiel' are statistical measures of regional inequality or coefficients of variation.

About the European Cluster Observatory

The European Cluster Observatory, launched in June 2007, is the most comprehensive database on clusters, cluster organisations, and cluster reports in Europe. It is managed by the Center for Strategy and Competitiveness (CSC) at the Stockholm School of Economics and funded by the European Commission's Directorate General for Enterprise and Industry.

The European Cluster Observatory website provides a wide variety of data on clusters in Europe, and is focused on the following issues:

- Cluster Mapping providing information on 38 cluster categories in 259 NUTS II regions
- Information, maps and lists of regional or local private-public partnerships focused on cluster improvements
- Providing reports on national and regional cluster policies and programmes
- Providing detailed knowledge thorough publishing Observatory reports, cluster case studies and other cluster-related documents

In 2009, the Observatory entered the second phase of development bringing new features and introducing a collaboration platform for cluster organisations and SMEs.

Please visit the European Cluster Observatory at www.clusterobservatory.eu.

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