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for Economic Affairs
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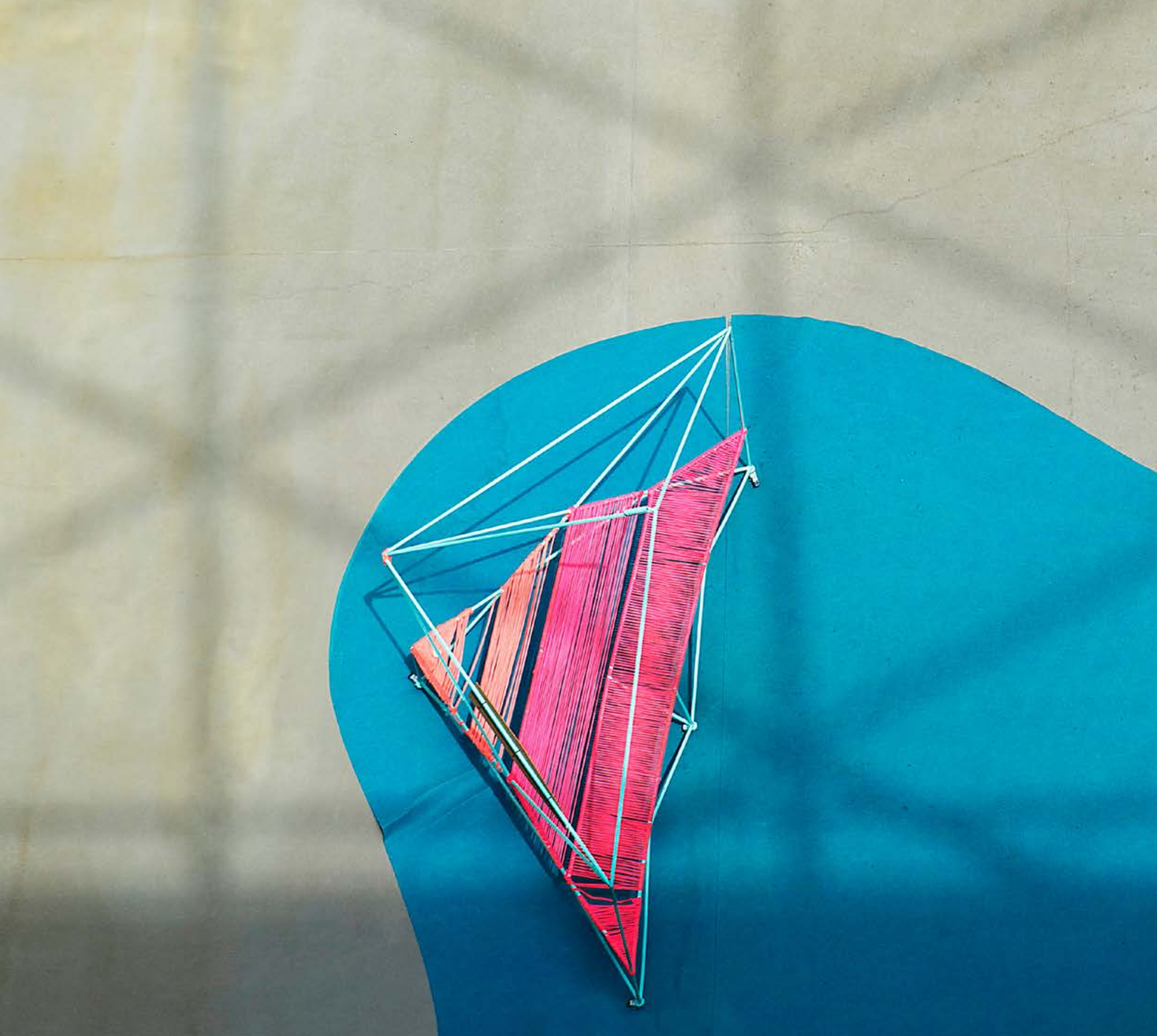
Federal Government Commissioner
for Culture and the Media

Cultural and Creative Industries
Initiative of the
Federal Government

2018 Cultural and Creative Industries Monitoring Report

Summary



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Text and editing
Prof. Irene Bertschek, ZEW Mannheim
Dr Jörg Ohnemus, ZEW Mannheim
Dr Daniel Erdsiek, ZEW Mannheim
Dr Christian Rammer, ZEW Mannheim
Contact:
Dr Jörg Ohnemus
joerg.ohnemus@zew.de
Centre for European Economic Research (ZEW)
Mannheim

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Overview of the Cultural and Creative Industries in 2017

254,700
companies

€102.4 billion
gross value added

2.0% more gross value added (compared to 2016)

€158.6 billion
turnover

€622,700
turnover per company

3.4% more core workers (compared to 2016)

4.3% more employees subject to the payment of social security contributions (compared to 2016)

1,157,683
core workers

5.1% start-up rate

517,604
people in marginal employment and marginal self-employment

3.6% of total spending on innovation in Germany

€136,980
sales per core worker

€88,460
gross value added per core worker

22.0% self-employed
(proportion of core workers)

approx. 9,500
new start-ups

3.1%
share of GDP

903,026
employees subject to the payment of social security contributions

€5.6 billion
annual spending on innovation

1,675,287
total number of workers

1 Introduction

On behalf of the Federal Ministry for Economic Affairs and Energy, the Centre for European Economic Research (ZEW) in Mannheim and the Fraunhofer Institute for Systems and Innovation Research ISI in Karlsruhe undertake continual research into the cultural and creative industries (CCI) in Germany. The results of this work appear in an annual monitoring report that presents key economic indicators[1] on the cultural and creative industries.[2] The analyses contained in the report are based on data from publicly available sources[3], data held by ZEW, and from a representative survey on the cultural and creative industry sector in Germany conducted by ZEW specifically for this project. This abridged version of the report presents the key results for the project year 2018.[4]

This year's report focuses on the following questions:

- What is the current economic importance of the cultural and creative industries within the overall economy and compared to other traditional sectors in Germany?
- What are the key distinguishing features of the individual submarkets in these industries?
- How have the cultural and creative industries and their submarkets developed over the last few years in terms of core indicators such as turnover, value added, number of companies and employment etc.?
- What start-up activities are being seen in the cultural and creative industries in Germany?
- How innovative are CCI businesses compared with other sectors?
- What is the importance of the cultural and creative industries as drivers of innovation and growth in the overall economy?

This monitoring report is based on the definition of the cultural and creative industries developed by the Conference of Economic Affairs Ministers, which is as follows: "The cultural and creative industries comprise all cultural and creative enterprises that are mainly market-oriented and deal with the creation, production and/or dissemination through the media of cultural/creative goods and services."[5]

The main criterion for the definition is the commercial character of the company. All market-based companies (or parts thereof) that are subject to Value Added Tax (VAT) or that aim to generate revenue from art, culture and creativity belong to this group of companies. Companies not included in this group are companies or entities that do not derive most of their funding through the market, but rather receive government funding or licence fees, or are supported by non-profit funds or private investors.

According to the definition used by the Conference of Economic Affairs Ministers[6], the cultural and creative industries are made up of a total of 11 sub-markets (see Figure 1.1). The cultural industry is made up of (1) the music industry, (2) the book market, (3) the art market, (4) the film industry, (5) the broadcasting industry, (6) the performing arts market, (7) the design industry, (8) the architecture market and (9) the press market. For its part, the creative industry comprises (10) the advertising market and (11) the software and games industry.

This means that Germany takes a sector-specific approach to considering the cultural and creative industries, focussing on companies that mainly carry out activities that fall under these two industries.

From an economic policy perspective, this approach makes good sense, as most statistics are available at the sectoral level and it allows for comparisons to be drawn with other

1 These include indicators such as the number of companies, turnover, gross value added, and various definitions used to measure employment.

2 Most of the key figures for the cultural and creative industries are available from 2009 and are presented in this report as far as possible. Where this is not the case, these figures can be obtained upon request from the authors of this report.

3 The main source of data is official statistics from the Federal Statistical Office and the Federal Employment Agency. Detailed explanations of the various data sources and calculation methods are provided in the annex to the unabridged version of this report.

4 For last year's report, see Federal Ministry for Economic Affairs and Energy, 2018.

5 See Conference of Economic Affairs Ministers, 2009.

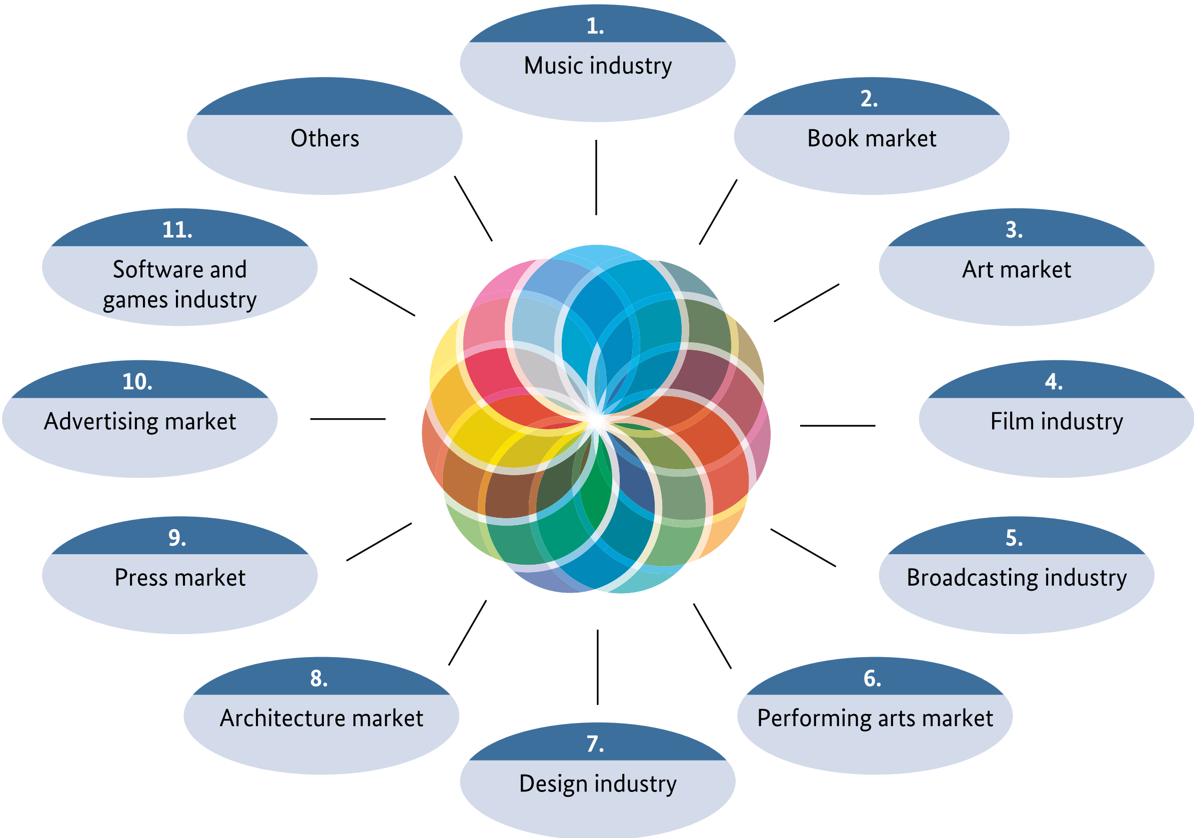
6 See Söndermann, 2012, and Conference of Economic Affairs Ministers, 2009.

sectors. In contrast to the sector-specific approach used in this report, alternative analytical methods for considering the cultural and creative industries can also be used. Notably, these include looking at the two industries in terms of the cultural and creative occupations or activities involved, or methods that specifically focus on the goods and services provided.

Various other studies on the cultural and creative industries, particularly on their individual sub-markets[7], often diverge from the definition used by the Conference of Economic Affairs Ministers, which can lead to differing results in the respective reports compared with those shown in this monitoring report.

The aim of this monitoring report is to present the cultural and creative industries in a way that is as transparent and uniform as possible, and to show how they have developed over time. The data held relating to the past years are therefore constantly rechecked and are updated where necessary. In-house estimates are replaced with actual figures from official statistics as soon as these are available. As the official statistics are often not published straight away, certain data have to be (either fully or partially) estimated – particularly data close to the final period that is covered, i.e. in this case, data for the year 2017. These estimations are made using a prognosis model developed by ZEW. All estimates are labelled as such.

Figure 1.1: The submarkets of the cultural and creative industries



Source: Federal Ministry of Economics and Technology, 2009.

7 For example, the study on the music industry in Germany (Seufert, Schlegel and Sattelberger, 2015), the study on the economic importance of the film industry in Germany (Goldmedia/HMS/DIW Econ, 2017) and the study on the computer and video games market in Germany (Castendyk and Müller-Lietzkowen, 2017) define the respective market considerably more broadly than is the case in the definition established by the Conference of Economic Affairs Ministers.

2 Overview of the Overall Economic Importance of the Cultural and Creative Industries

The various economic indicators for the cultural and creative industries in Germany developed differently in 2017. While the number of core workers, i.e. the sum of self-employed persons and of employed persons subject to the payment of social security contributions and gross value added continued to rise and reached new record levels, the number of companies operating rose only marginally. Following a record figure in 2016, turnover declined slightly, though largely remained at the high level seen in 2015.

2.1 Key Data on the Cultural and Creative Industries in Germany

Still more than a quarter of a million companies in the German cultural and creative industries

The number of companies in the cultural and creative industries (CCIs) in Germany grew minimally in 2017, climbing to an estimated 254,700 businesses. This is equivalent to a further 200 companies and a growth rate of less than 0.1% (see Table 2.1).[8] Despite this current slowdown in the rate of new companies being set up, the number of companies in the CCIs has continually grown since 2009, with 16,000 new companies added over this period. However, the proportion of all companies in Germany which are part of the CCIs has remained relatively constant, i.e. this indicator shows that the cultural and creative industries have grown at a similar rate to the economy as a whole. In 2017, the CCIs accounted for around 7.7% of all companies in Germany.

Total revenue largely constant, at over €158 billion

Following considerable growth in revenue in 2016 to around €158.8 billion, revenue for 2017 lies at an estimated €158.6 billion – 0.1% below the record figure in 2016. Despite this slight decline, revenue from companies in the CCIs is at a very high level and is about 18% higher than in 2009. In contrast to the continuously increasing number of companies, there have already been years in the past when sales have declined slightly, for example in 2013, when sales fell just below the preceding year's level. In 2017, around 2.6% of turnover in Germany was generated by the CCIs.

€102.4 billion: gross value added continues to rise

Based on the figures arrived at using the new calculation method[9] introduced last year, GDP in the cultural and creative industries in Germany in 2017 amounted to an estimated €102.4 billion. This marks an approximately 2% rise over 2016 – a year in which gross value added also saw an extraordinarily high rise. Gross demographic product in the cultural and creative industries has been rising continuously since 2009, when it remained fixed at €74.2 billion. The sector currently contributes approximately 3.1% of Germany's GDP.

Significant rise in the number of core workers to just under 1.158 million

In 2017, the CCIs counted almost 38,000 core workers. This rise is largely attributable to an increase in the number of jobs subject to the payment of social security contributions that year. The number of self-employed persons in 2017 remained almost constant.

With a current total of 1.158 million core workers, the CCIs in Germany now provide work for a record number of people. Compared with 2009, the cultural and creative industries now count more than 21% more core workers.

The number of employees subject to the payment of social security contributions continued to rise sharply in 2017, reaching 903,000. This means that nearly 188,000 new jobs subject to the payment of social security contributions have been added to the sector since 2009. It is also remarkable to note that the proportion of jobs subject to the payment of social security contributions created in the CCIs has been slightly higher than in the rest of the economy.

8 The values for 2016 which were estimated in the previous year's report have been replaced in the current report with the actual values recorded for that year. Discrepancies may therefore occur between the figures for 2016 in this current report and those provided in the previous year's report.

9 For last year's report and the explanations contained on the new method of calculating gross value added, see Federal Ministry for Economic Affairs and Energy, 2018.

Marginal employment and marginal self-employment falling

The number of persons in both marginal employment and marginal self-employment declined in the CCIs in 2017. This means that the total number of persons in marginal employment and self-employment fell again following a slight rise in the previous year and is now, at 517,600, at its lowest level since 2009. While in 2009, the CCIs still accounted for some 6.8% of all marginally employed and marginally self-employed persons, today its share is just 4.4%.

Total number of persons working the CCI sector shows significant rise

Thanks to the strong rise in the number of core workers, which is largely accounted for by the rise in the number of jobs subject to the payment of social security contributions, the overall number of persons working in the CCIs – comprising the sum of both core workers and marginally employed persons – rose significantly, going up to 1,675,300. This represents an increase of around 2.2% over 2016.

Average of €136,476 turnover and €88,461 gross value added per core worker

Structurally, the cultural and creative industries are traditionally dominated by a large number of small and micro enterprises. On average, CCI companies only employed 4.55 core workers in 2017. The figure across the economy is much higher, at 11 core workers per company. Viewing the CCIs in Germany as a whole, each core worker in this area generates a turnover of €136,476 and contributes €88,461 to gross added value. This means that the sector continued to fail to achieve the average figure of €174,600 per core worker achieved across the economy in 2017, but its per-capita figure is €5,120 higher than that of the economy as a whole. The two figures reflect the fact that the CCIs make less use of upstream inputs and require greater labour input than is the case for the overall economy. The percentage of core workers in the cultural and creative industries currently lies at around 22.0%.

Current status of the key economic data for the cultural and creative industries in Germany

In addition to the detailed overview of the key indicators for the cultural and creative industries in Germany as a whole and over time presented in Table 2.1, Table 2.2 provides an overview of the current status of the key indicators in 2017, broken down into submarkets. The submarkets with the highest and lowest percentages for each indicator are marked in green and red respectively.

While the art market is among the smallest submarkets within the CCIs in all the indicators, the software and games industry and the advertising market represent the highest percentages for almost all indicators.

Table 2.1: Key data on the cultural and creative industries in Germany 2009 – 2017*

Category	2009	2010	2011	2012	2013	2014	2015	2016	2017*	Change 2016/2017
No. of companies (in thousands)[1a]										
Cultural and creative industries (CCIs)	238.5	239.5	244.3	245.8	246.4	247.0	250.4	254.5	254.7	0.07%
Contribution of CCIs to overall economy	7.61%	7.57%	7.60%	7.56%	7.60%	7.62%	7.69%	7.79%	7.74%	
Turnover (in € billion)										
Cultural and creative industries (CCIs)	134.3	137.3	141.0	143.3	143.2	146.9	152.1	158.8	158.6	-0.15%
Contribution of CCIs to overall economy	2.74%	2.62%	2.48%	2.49%	2.48%	2.50%	2.54%	2.61%	2.56%	
Employment										
Core labour force (in thousands)[2a]										
Cultural and creative industries (CCIs)	953.1	952.5	976.8	1,011.7	1,037.3	1,056.0	1,084.9	1,120.1	1,157.7	3.36%
Contribution of CCIs to overall economy	3.10%	3.06%	3.07%	3.11%	3.16%	3.16%	3.19%	3.23%	3.27%	
Employees subject to the payment of social security contributions (in thousands)[3a]										
Cultural and creative industries (CCIs)	714.6	713.0	732.5	765.9	790.9	809.1	834.5	865.6	903.0	4.32%
Contribution of CCIs to overall economy	2.59%	2.55%	2.56%	2.62%	2.67%	2.68%	2.71%	2.75%	2.81%	
No. of self-employed persons (in thousands)[4a]										
Cultural and creative industries (CCIs)	238.5	239.5	244.3	245.8	246.4	247.0	250.4	254.5	254.7	0.07%
Contribution of CCIs to overall economy	7.61%	7.57%	7.60%	7.56%	7.60%	7.62%	7.69%	7.79%	7.74%	
No. of persons in marginal employment (in thousands)[5a]										
Cultural and creative industries (CCIs)	574.2	593.4	593.6	586.8	556.1	561.3	519.3	520.0	517.6	-0.45%
Contribution of CCIs to overall economy	6.80%	6.95%	6.80%	6.78%	6.38%	6.44%	4.38%	4.37%	4.35%	
No. of marginally self-employed persons (in thousands)[6a]										
Cultural and creative industries (CCIs)	197.1	214.0	224.8	221.9	203.3	211.1	211.2	209.5	207.6	-0.91%
Contribution of CCIs to overall economy	18.26%	19.57%	18.90%	20.84%	20.42%	22.17%	23.34%	23.93%	25.76%	
No. of marginally employed persons (in thousands)[7a]										
Cultural and creative industries (CCIs)	377.1	379.3	368.8	365.0	352.8	350.2	308.1	310.5	310.1	-0.14%
Contribution of CCIs to overall economy	5.12%	5.09%	4.89%	4.81%	4.57%	4.48%	4.00%	4.00%	3.97%	
Total employment (in thousands)[8a]										
Cultural and creative industries (CCIs)	1,527.3	1,545.9	1,570.4	1,598.6	1,593.4	1,617.3	1,604.2	1,640.0	1,675.3	2.15%
Contribution of CCIs to overall economy	3.90%	3.90%	3.87%	3.88%	3.83%	3.84%	3.50%	3.52%	3.54%	
Gross value added (in € billion)[9a]										
Cultural and creative industries (CCIs)	74.2	78.4	82.9	86.6	88.8	90.6	94.6	100.4	102.4	1.98%
CCIs' share of GDP	3.02%	3.04%	3.07%	3.14%	3.14%	3.08%	3.10%	3.18%	3.12%	
GDP Germany, nominal	2,460.3	2,580.1	2,703.1	2,758.3	2,826.2	2,938.6	3,048.9	3,159.8	3,277.3	3.72%
Additional key indicators of the cultural and creative industries										
Turnover per company (in € thousand)	563.3	573.3	577.1	583.1	581.1	594.8	607.2	624.1	622.7	-0.22%
Turnover per employee subject to the payment of social contributions (in € thousand)	188.0	192.6	192.5	187.1	181.0	181.6	182.2	183.5	175.6	-4.29%

→

1a Taxable entrepreneurs with annual income of at least €17,500.

2a Core labour force consists of taxable entrepreneurs with an annual income of at least €17,500 and employees subject to social security contributions.

3a Employees subject to the payment of social security contributions in full and part time employment, but not people in marginal employment.

4a The number of self-employed people corresponds to the number of taxable entrepreneurs with an annual income of at least €17,500.

5a People in marginal employment and marginal self-employment.

6a Marginal self-employment includes freelancers and self-employed persons with less than €17,500 annual income based on the microcensus.

7a People in marginal employment (marginal low-paid and temporary employment) based on employment statistics from the Federal Employment Agency (deadline used in each case 30 June).

8a Total number of workers includes all self-employed and employed persons including people in marginal employment and marginal self-employment.

9a Gross value added based on reports of the national accounts, calculated on basis of breakdown of sales in VAT statistics.

Table 2.1: Key data on the cultural and creative industries in Germany 2009 – 2017*

Category	2009	2010	2011	2012	2013	2014	2015	2016	2017*	Change 2016/2017
Turnover per core worker (in € thousand)	140.9	144.2	144.3	141.7	138.0	139.1	140.2	141.8	137.0	-3.39%
Employees subject to the payment of social security contributions per company	3.00	2.98	3.00	3.12	3.21	3.28	3.33	3.40	3.55	4.25%
No. of core workers per company	4.00	3.98	4.00	4.12	4.21	4.28	4.33	4.40	4.55	3.29%
Gross value added per core worker (in € thousand)	77.8	82.3	84.9	85.6	85.6	85.8	87.2	89.7	88.5	-1.34%
Proportion of core workers who are self-employed	25.02%	25.15%	25.01%	24.30%	23.75%	23.39%	23.08%	22.72%	22.00%	

*Data for 2017 based partly on in-house estimates and preliminary official figures. Estimates partly based on development rates of previous years. Discrepancies from figures in previous reports due to revisions of data in the underlying statistics.

Source: Destatis, 2018a, b, c; Federal Employment Agency 2018; in-house calculations by ZEW.

Table 2.2: Key economic data for the cultural and creative industries in 2017 by submarket

	Number of companies*	Turnover* (in € million)	Gross value creation* (€ million)	Core workers*	Employees subject to the payment of social security contributions	Marginal employees	Mini self-employed persons*
Cultural and creative industries (CCIs)	**254,657**	**158,578**	**102,409**	**1,157,683**	**903,026**	**310,051**	**319,622**
Overall economy	*3,289,461*	*6,190,332*	*2,954,696*	*35,454,434*	*32,164,973*	*7,806,047*	*3,120,875*
Ratio of CCIs to overall economy	*7.74%*	*2.56%*	*3.47%*	*3.27%*	*2.81%*	*3.97%*	*10.24%*
Breakdown by market segment, absolute and percentage							
1. Music industry	14,197 **4.62%**	8,858 5.00%	6,822 5.99%	51,667 4.01%	37,470 3.82%	14,675 3.93%	22,177 **5.44%**
2. Book market	17,254 5.62%	13,572 7.66%	5,451 **4.79%**	70,895 5.50%	53,641 5.46%	16,471 4.42%	28,540 7.00%
3. Art market	12,616 **4.11%**	2,151 **1.21%**	1,442 **1.27%**	17,997 **1.40%**	5,380 **0.55%**	3,882 **1.04%**	26,053 **6.39%**
4. Film industry	19,013 6.19%	9,523 5.37%	8,057 7.08%	60,989 4.73%	41,976 4.27%	22,955 6.15%	40,173 9.85%
5. Broadcasting industry	18,071 5.89%	10,484 5.91%	8,930 7.84%	42,930 **3.33%**	24,859 2.53%	1,766 **0.47%**	28,821 7.07%
6. Performing arts market	19,419 6.33%	4,851 **2.74%**	7,891 6.93%	43,679 3.39%	24,260 **2.47%**	19,476 5.22%	46,378 **11.37%**
7. Design industry	59,548 **19.40%**	19,428 10.96%	10,738 9.43%	150,118 **11.65%**	90,570 9.22%	60,779 **16.29%**	69,869 **17.13%**
8. Architecture market	39,605 **12.90%**	10,829 6.11%	7,050 6.19%	127,411 9.88%	87,806 8.94%	19,279 5.17%	27,260 6.68%
9. Press market	31,569 10.28%	29,855 **16.84%**	13,318 **11.70%**	146,762 11.39%	115,193 **11.73%**	81,751 **21.91%**	34,839 8.54%
10. Advertising market	28,490 9.28%	28,344 **15.99%**	11,931 **10.48%**	152,768 **11.85%**	124,278 **12.66%**	102,467 **27.47%**	27,657 6.78%
11. Software and games industry	39,016 **12.71%**	38,005 **21.44%**	31,010 **27.23%**	408,382 **31.68%**	369,366 **37.61%**	27,863 7.47%	44,425 **10.89%**
12. Other	8,183 **2.67%**	1,343 **0.76%**	1,228 **1.08%**	15,362 **1.19%**	7,179 **0.73%**	1,698 **0.46%**	11,701 **2.87%**
Cultural and creative industries (including double counts)	**306,980**	**177,244**	**113,867**	**1,288,958**	**981,978**	**373,063**	**407,893**

*Data based partly on estimates. Figures are percentages of the cultural and creative industries as a whole, including double counts. Values marked in green are 3 highest figures per indicator; values marked in red are the three lowest figures per indicator.

Source: Destatis, 2018a, b, c; Federal Employment Agency 2018; in-house calculations by ZEW.

2.2 Contribution of the Cultural and Creative Industries towards Value Added

New calculation of gross value added in the cultural and creative industries

The previous computation of the gross value added by the German cultural and creative industries was replaced by a more comprehensive approach last year.

Up to 2015, the calculation of value added was based on a rough aggregation of the cultural and creative industries, as defined by economic sectors 58 (publishing), 59 – 60 (audiovisual media and broadcasting), 73 (advertising and market research) and 90 – 92 (art and culture, games of chance) according to the 2008 classification of economic sectors. This made it possible to take the figures for value added directly from the national accounts tables of the Federal Statistical Office. The disadvantage of this definition was, however, that many companies which are generally regarded as being part of the cultural and creative industries in Germany and which are included in the definition of the cultural and creative industries used elsewhere in this report are not included in the calculation of gross value added since they did not fall within the definition used for this very rough aggregation. On the other hand, the definition included some companies which are not part of the cultural and creative industries.[10]

The new calculation method used last year for the first time is based on the customary definition of the submarkets. This means that for the first time, information about value creation in the submarkets was provided, and the figures for gross value have been able to be compared with the other indicators (e.g. sales, number of companies, core workers) in the cultural and creative industries since this change.

The new calculation method is based on the gross value added figures contained in the national accounts. Since these figures are only available in rather aggregated form (mainly at the sectoral level), a weighting of the figures is undertaken on the basis of the breakdown of turnover according to the VAT statistics, in order to assign individual value creation figures to the various branches of the cultural and creative industries. The figures for the comparative sectors, such as mechanical engineering, were also taken from the national accounts. These figures did not need to be weighted on the basis of VAT statistics as they are homogeneous sectors whose gross value added figures are directly available in the national accounts.

The new calculation method for the cultural and creative industries provides a more comprehensive and precise picture of gross value creation. In particular, due to the fact that far more companies from the cultural and creative industries are now included in the value creation figures (e.g. in the past, the software and games submarket was largely disregarded), the gross value creation figures recorded since the last reporting year (for the reference year and the preceding years) are much higher than the figures in previous reports.[11]
It should be noted that the high gross value added figures reported for the software and games industry are mainly attributable to the software industry.

Gross value added experiences a considerable rise

Despite the pronounced increase in gross value added in 2016, in 2017, figures for this indicator made another leap, reaching €102.4 billion. This means 2017 was the eighth consecutive year that gross value creation in the CCIs has risen. Since 2009, gross demographic product in the cultural and creative industries has risen by almost €30 billion (2009: €74.2 billion).

Gross value creation in the CCIs continues to be at around the same level as that in machinery and equipment manufacturing (see Table 2.1). The CCIs are clearly ahead of other important sectors in Germany, such as the chemical industry, energy supply and financial services, in terms of value creation. Only the vehicle construction sector (automotive industry and other vehicle construction) outpaces the others.

Figure 2.2 shows the development of gross value added in the various CCI submarkets (cf. also table 7.7 in the annex). While in 2017 gross value creation figures developed positively in certain submarkets such as the music market, the performing arts market and the architecture market, there are others that experienced the exact opposite. These include the film industry and the broadcasting industry in particular.

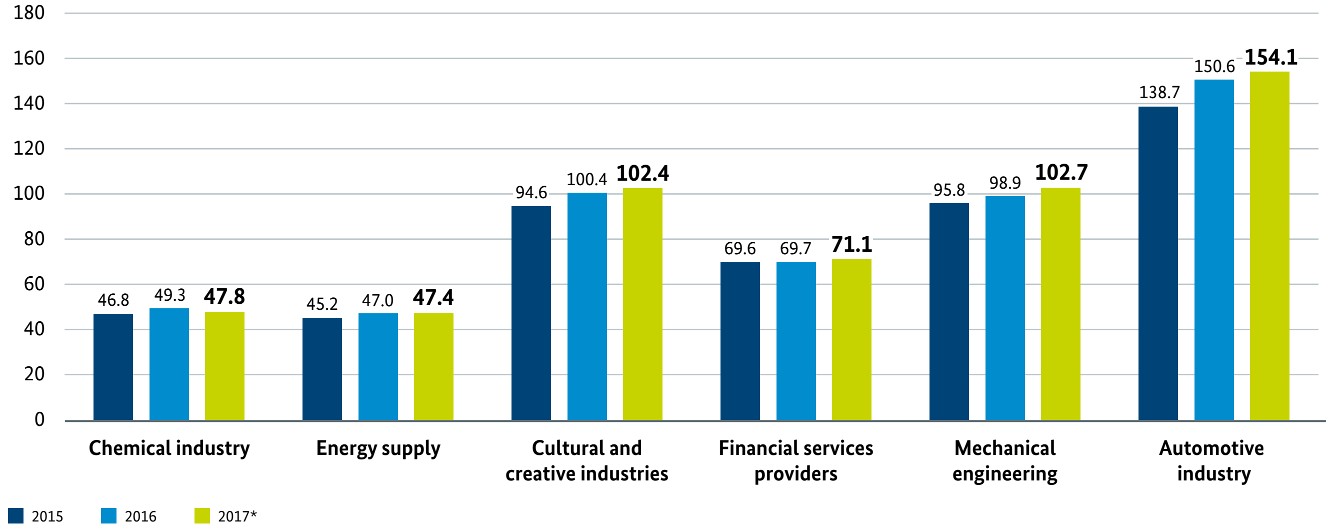
When it comes to the CCIs, the software and games industry is of key importance. This is true both for the growth of value added and the importance of the submarket for the cultural and creative industries in Germany as a whole. In 2017, more than 27% of gross value creation in the CCIs was generated by the games industry (see Figure 2.3).

All of the other submarkets generate (much) less than half of the value created by the software and games industry, even though the press market, the advertising market and the design industry do generate output of more than €10 billion. At €1.4 billion, the art market generated the least value of all the CCI submarkets in 2017.

10 According to the VAT statistics for 2015, roughly half (approx. 125,000) of the companies in the cultural and creative sector did not feature in the present calculations. The figures also include nearly 11,000 companies in the fields of market research and opinion polling, and also gambling and lotteries, which are not really defined as CCI companies.

11 Other methodological notes about the calculation of gross value added can be found in the annex to the unabridged version of this report.

Figure 2.1: Contribution of the cultural and creative industries to gross value added compared to other economic sectors 2015 – 2017* (in € billion)

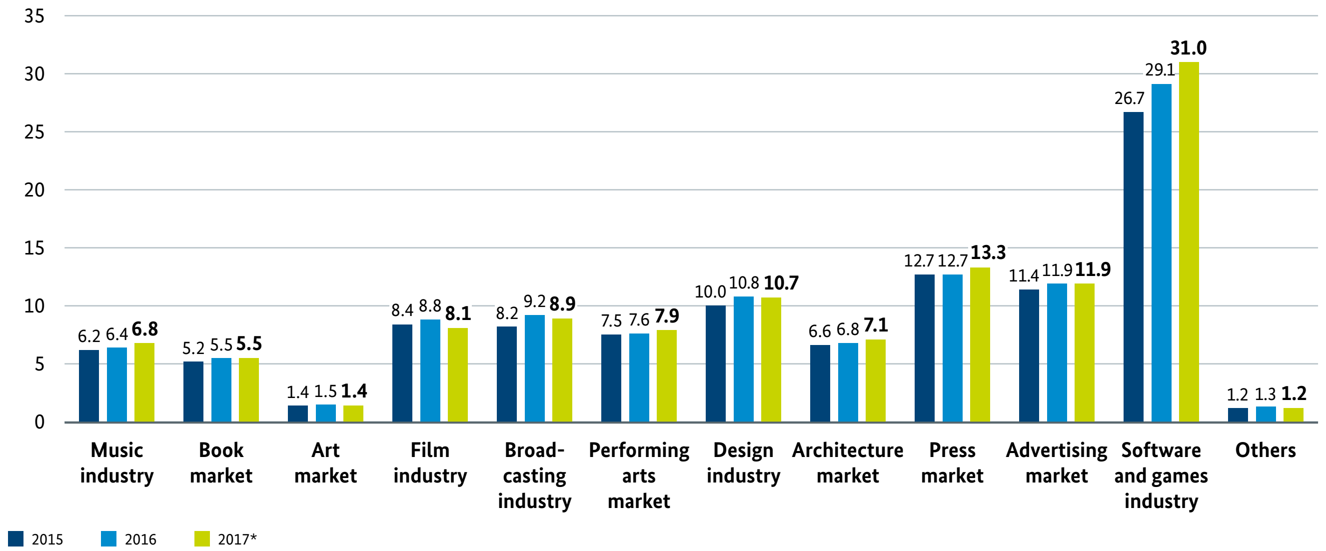


Aid to interpretation: Gross value added in the cultural and creative industries amounted to €102.4 billion in 2017, lower than in the mechanical engineering and automotive industry, but higher than in the chemical and energy supply industries and financial services.

*Some figures estimated. Gross value added based on national accounts figures, calculated for the CCIs on basis of breakdown of sales in VAT statistics.

Source: VAT statistics, Destatis, 2018b; national accounts, Destatis, 2018c; in-house calculations by ZEW.

Figure 2.2: Contribution of the CCI submarkets towards gross value added of CCIs 2015 – 2017* (in € billion)

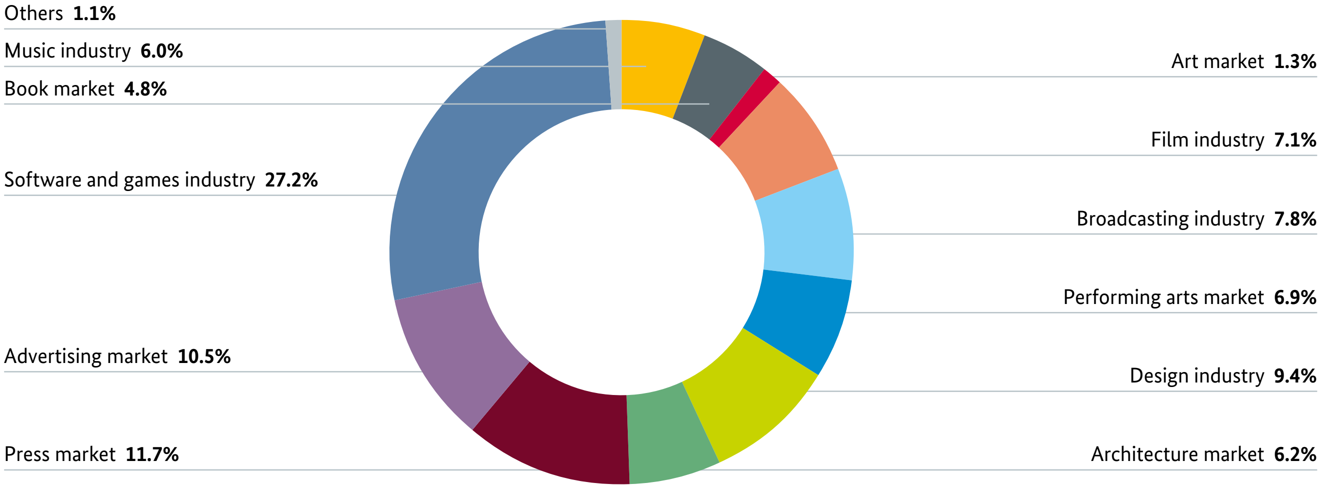


Aid to interpretation: In 2017, gross value added in the music industry amounted to €6.8 billion and to €10.7 billion in the design industry.

*Figures estimated.

Source: VAT statistics, Destatis, 2018b; national accounts, Destatis, 2018c; in-house calculations by ZEW.

Figure 2.3: Share of individual submarkets in total value creation in the cultural and creative industries in 2017* (in %)



Aid to interpretation: The design industry submarket generated 9.4% of gross value creation in the CCIs in Germany in 2017.

*Figures estimated. These calculations based on gross value added in the cultural and creative industries including double counts. Altogether, these figures add up to produce a total of 100%.

Source: VAT statistics, Destatis, 2018b; national accounts, Destatis, 2018c; in-house calculations by ZEW.

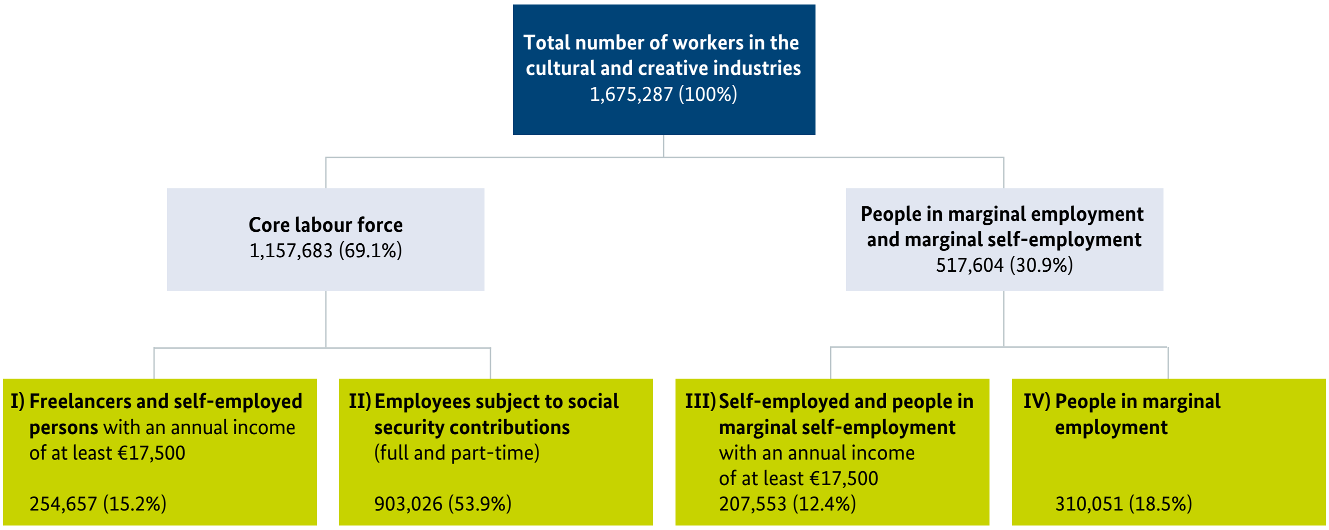
2.3 Employment in the Cultural and Creative Industries

Total number of workers increasing further

The total number of persons working in the cultural and creative industries in 2017 has risen to almost 1.7 million, its highest figure since 2009 (see Figure 2.4 and Table 2.3). The number of core workers, consisting of employees subject to the payment of social security contributions and the self-employed, also rose significantly and accounts for 69% of total employment in the CCIs. The increase in the number of core workers is attributable to a rising number of jobs subject to the payment of social security contributions and only fractionally to an increase in the number of self-employed persons. In contrast to the number of core workers in the CCIs, the number of persons in marginal employment declined and currently only accounts for around 31% of the total number of workers.

In 2017, a total of 1,157,683 people worked as freelancers and self-employed persons or as dependent employees (includes both "core" and "marginal" workers). In addition, at a total of 517,604, the number of persons in marginal jobs (self-employed and marginally self-employed with an annual turnover of less than €7,500, and marginally employed) in these industries is comparatively high compared to other sectors and the overall economy. In particular, the number of people in marginal self-employment in the cultural and creative industries is extremely high and now comprises more than one quarter (25.8%) of the people in this category across the economy. This brings the total number of people working in the cultural and creative industries in 2016 to 1,637,961. Table 2.3 and Figure 2.5 provide an overview of the development of (self-)employment in recent years.

Figure 2.4: Structure of employment in the cultural and creative industries in 2017*



*Some figures estimated.

Source: Destatis, 2018a,b; employment statistics, Federal Employment Agency, 2018; in-house calculations by ZEW.

Table 2.3: Structure and development of all workers in the cultural and creative industries 2009 – 2017*

	2009	2010	2011	2012	2013	2014	2015	2016	2017*
I) Freelancers and self-employed[1b]	238,479	239,534	244,290	245,816	246,353	246,967	250,439	254,484	254,657
	15.6%	15.5%	15.6%	15.4%	15.5%	15.3%	15.6%	15.5%	15.2%
II) Employees subject to the payment of social security contributions[2b]	714,629	712,986	732,483	765,913	790,915	809,071	834,488	865,597	903.026
	46.8%	46.1%	46.6%	47.9%	49.6%	50.0%	52.0%	52.8%	53.9%
Core labour force (I + II)	**953,108**	**952,520**	**976,772**	**1,011,729**	**1,037,268**	**1,056,038**	**1,084,927**	**1,120,080**	**1,157,683**
	62.4%	**61.6%**	**62.2%**	**63.3%**	**65.1%**	**65.3%**	**67.6%**	**68.3%**	**69.1%**
III) People in marginal self-employment[3b]	197,081	214,042	224,790	221,883	203,305	211,145	211,236	209,467	207,553
	12.9%	13.8%	14.3%	13.9%	12.8%	13.1%	13.2%	12.8%	12.4%
IV) People in marginal dependent employment[4b]	377,070	379,328	368,803	364,956	352,819	350,158	308,051	310,499	310,051
	24.7%	24.5%	23.5%	22.8%	22.1%	21.7%	19.2%	18.9%	18.5%
People in marginal dependent employment and marginal self-employment (III + IV)	**574,150**	**593,370**	**593,593**	**586,840**	**556,124**	**561,303**	**519,287**	**519,966**	**517,604**
	37.6%	38.4%	37.8%	36.7%	34.9%	34.7%	32.4%	31.7%	30.9%
Total employment (I + II + III + IV)	**1,527,258**	**1,545,890**	**1,570,366**	**1,598,569**	**1,593,392**	**1,617,341**	**1,604,213**	**1,640,047**	**1,675,287**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

*Data for 2017 based partly on in-house estimates and preliminary official figures. Discrepancies from figures in previous reports due to revisions of data in the underlying statistics.

1b Taxable entrepreneurs with annual income of at least €17,500.

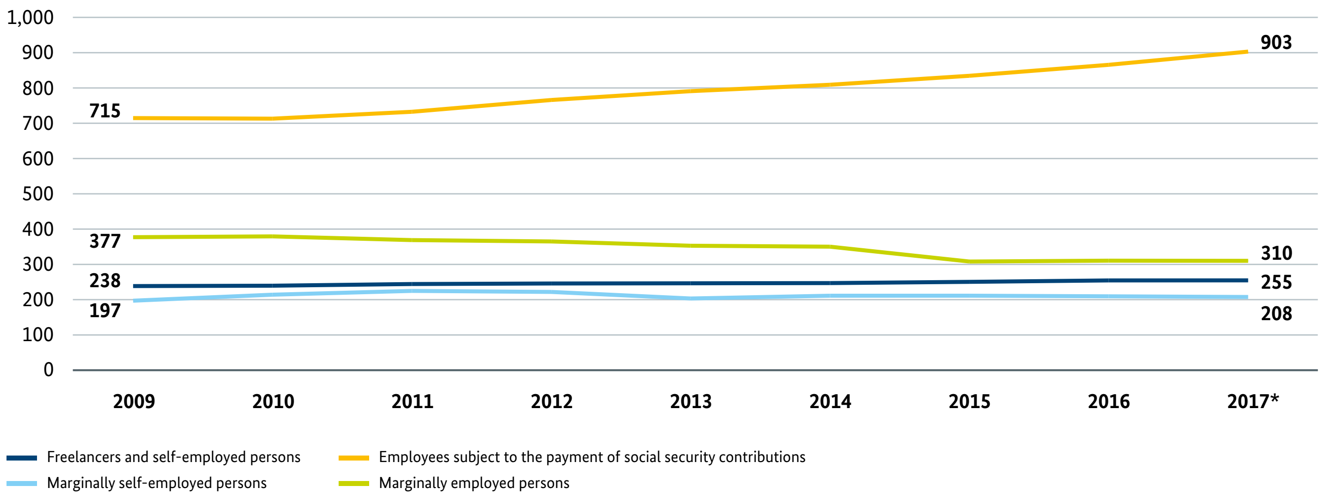
2b Employees subject to the payment of social security contributions in full and part time employment, but not people in marginal employment.

3b Marginal self-employment includes freelancers and self-employed persons with less than €17,500 annual income based on the microcensus.

4b People in marginal employment (marginal low-paid and temporary employment) based on employment statistics from the Federal Employment Agency (deadline used in each case 30 June).

Source: Microcensus, Destatis, 2018a; VAT statistics, Destatis, 2018b, employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

Figure 2.5: Structure and development of total labour force in the cultural and creative industries 2009 – 2017* (in thousands)



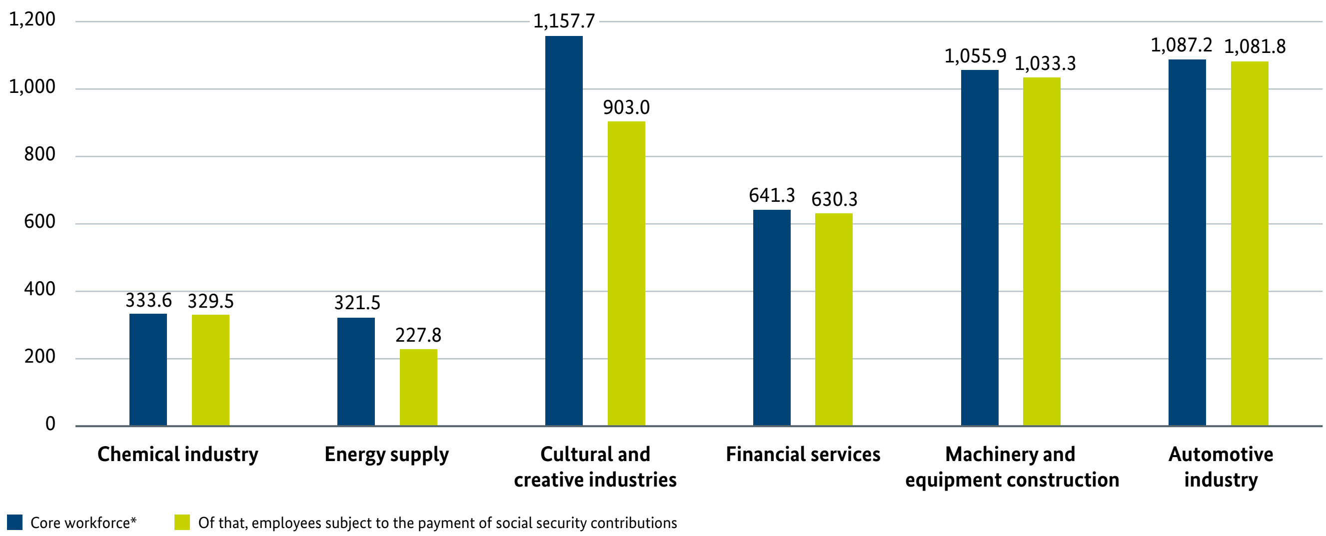
*Some figures for 2017 are estimated.

Source: VAT statistics, Destatis, 2018b, employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

The cultural and creative industries had more core workers in 2017 than any comparable sector; machinery and equipment manufacturing and vehicle construction (automotive industry and other vehicle construction) came closest to it (see Figure 2.6).

It is also apparent that in all comparable sectors – with the exception of energy supply – the percentage of self-employed persons is significantly lower than in the cultural and creative industries.

Figure 2.6: Comparison of core workers (self-employed persons and employees subject to the payment of social security contributions) across different sectors in 2017* (in thousands)



Number of self-employed persons equals number of taxable entrepreneurs with an annual income of at least €17,500.

*Some figures estimated

Source: VAT statistics, Destatis, 2018b, employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

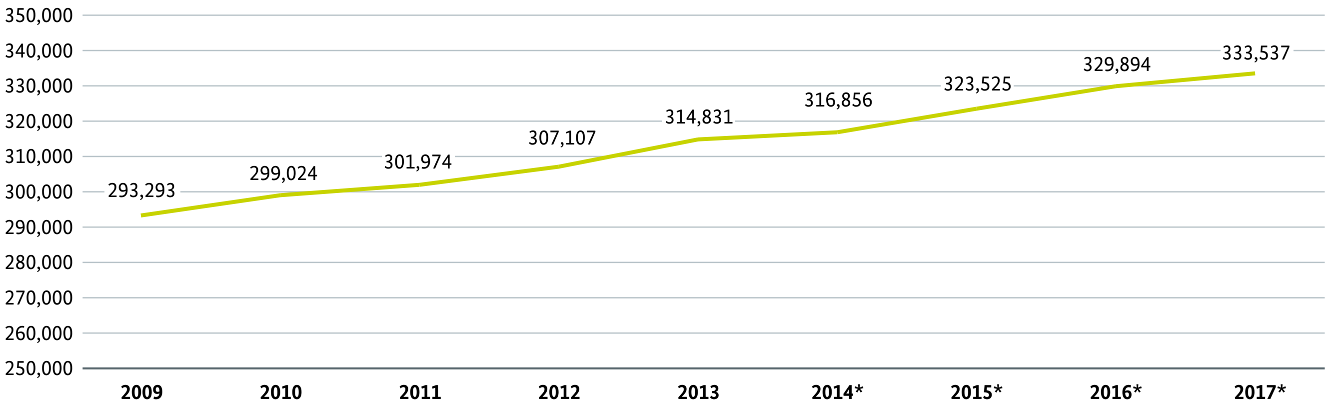
2.4 Mini-Self-Employment in the Cultural and Creative Industries

For several years now, the concept of mini-self-employment has established itself in several sectors, not least in the cultural and creative industries. Under the conventional classifications used for measuring employment in the CCIs, not all of these jobs are taken account of in the category marginal self-employment. Given that this group of workers makes up such an important part of the cultural and industries, it therefore makes sense to measure it independently.

In this report, mini-self-employment is used to describe the work of entrepreneurs with an annual income of less than €17,500. The only difference between self-employed persons with mini-jobs and micro-enterprises is the income limit of €17,500 per annum for the former. Other criteria such as the company's legal form or qualitative classifications, such as marginal, part-time or full-time self-employment, do not – as a general rule – make any difference.[12]

The number of self-employed persons with CCI mini-jobs in 2017 was an estimated 333,537 (see Figure 2.7). This represents a slight increase over the figure of 329,894 recorded for the preceding year. Between 2009 and 2017, the number of self-employed persons with mini-jobs in the CCIs rose by over 40,000 or by 13.7%. Across the economy as a whole, the long-term increase in the number of self-employed persons with mini-jobs between 2009 and 2017 was slightly higher, reaching 14.3%. This shows that the discussion around mini-self-employment is not only of importance in the cultural and creative industries, but also current across the economy as a whole.

Figure 2.7: Development of the number of self-employed persons with mini-jobs in the cultural and creative industries 2009 – 2017*



*Some figures estimated

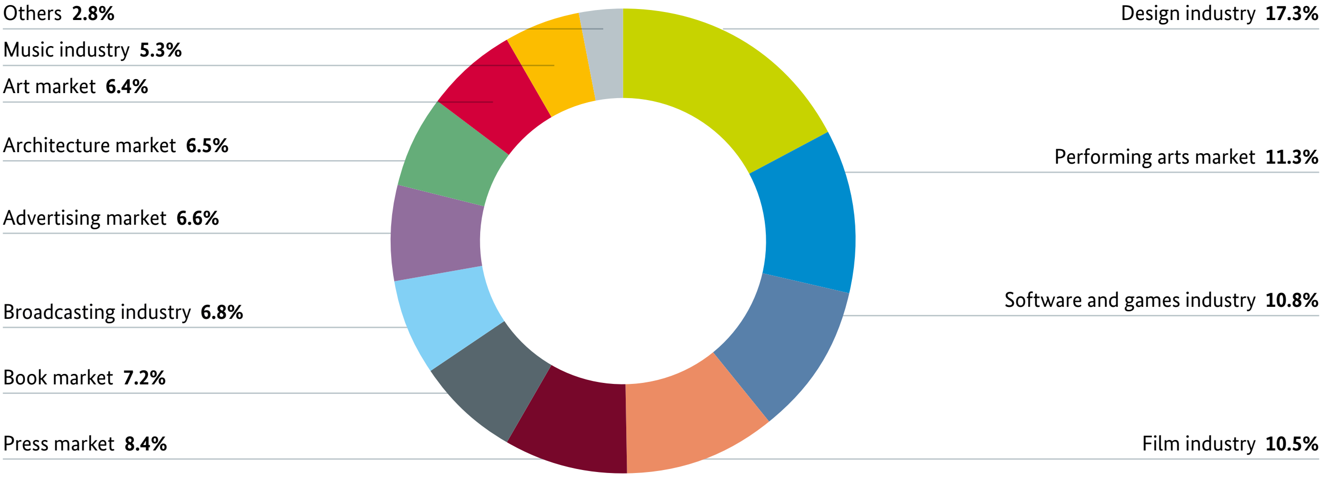
Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

12 See Working Group on the Cultural and Creative Industries in the Conference of Economic Affairs Ministers, *Überarbeitung des Leitfadens zur Erfassung von statistischen Daten für die Kultur- und Kreativwirtschaft* (Revision of the Guidelines on the Collection of Statistical Data for the Cultural and Creative Industries), 2016 edition, 20 July 2016.

At 17.3%, the design industry accounted for the largest number of self-employed persons with mini-jobs in the cultural and creative industries (see Figure 2.8). A further 11.3% are in performing arts, and 10.8% fall under the software and games industry. Just 5.3% of self-employed persons with mini-jobs come from the music industry. Further figures for mini-self-employment can be found in Tables 7.6 and 7.11 where they are broken down by sub-market and individual branches of the economy.

Among the different sub-markets, the software and games industry experienced the highest growth in self-employed persons with mini-jobs between 2009 and 2017 (at 43.2%, not shown), followed by the market for performing arts (39.7%) and the design industry (29.1%). The number of persons in mini-self-employment in the advertising market is declining greatly over time. Between 2009 and 2017, the number of workers in this group fell by over 10,000, representing a decline of 26.7%.

Figure 2.8: Share of persons in mini-self-employment in the individual submarkets of the cultural and creative industries in 2017* (in %)



Aid to interpretation: At 17.3%, the design industry accounted for the most self-employed persons with mini-jobs in the cultural and creative industries. Just 5.3% of self-employed persons with mini-jobs come from the music industry.

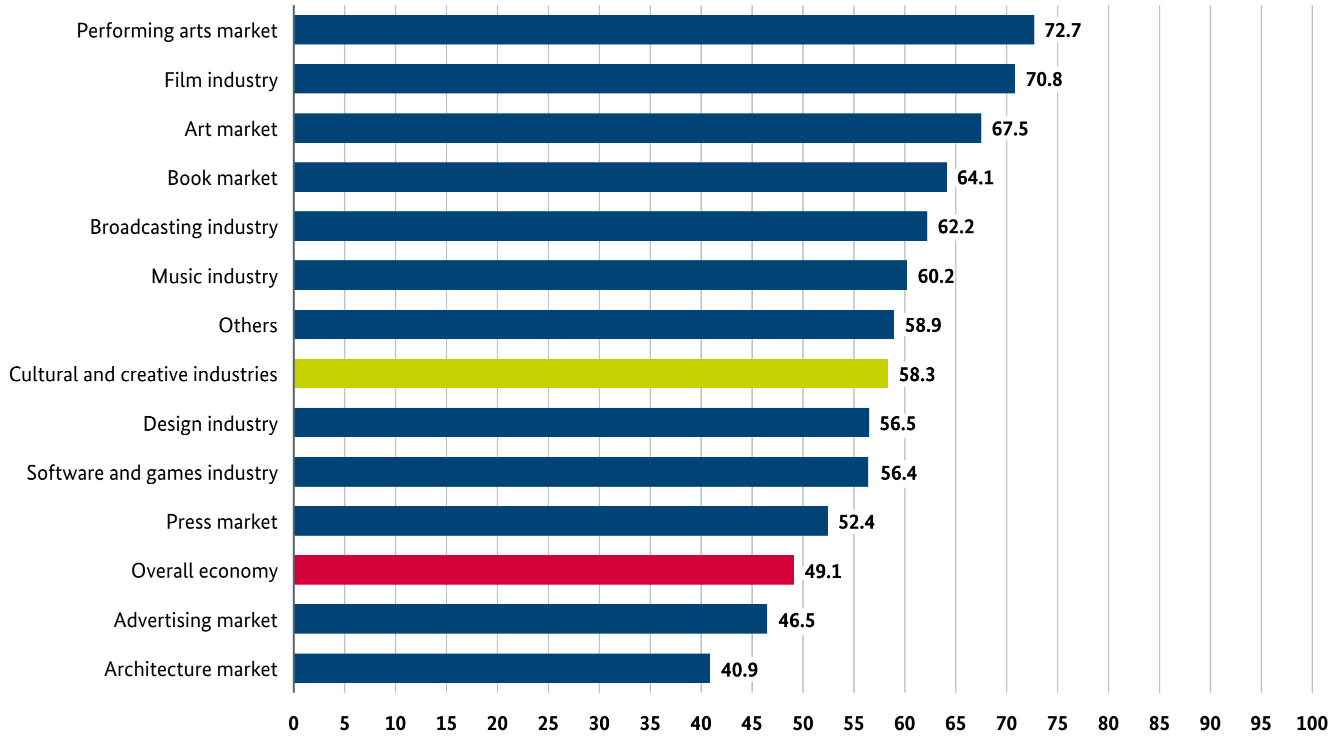
*Data based on estimates. Figures are percentages of the cultural and creative industries as a whole, including double counts. Discrepancies possible due to rounding.

Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

Looking at the figures for all self-employed persons together (regular self-employed persons and self-employed persons with mini-jobs), the CCIs account for 58.3% of self-employed persons with mini-jobs (see Figure 2.9). Seven individual submarkets top this average for the cultural and creative industries as a whole, with the performing arts representing the largest of these at 72.7%.

Across the overall economy, there are slightly more regular self-employed persons than self-employed persons with mini-jobs, at 49.1%. In all of the CCI submarkets (excl. the architecture market and the advertising market at 40.9% and 46.5% respectively), the percentage of self-employed persons with mini-jobs is above the average for the economy as a whole.

Figure 2.9: Percentage of self-employed persons with mini-jobs among all self-employed persons in 2017* (in %)



Aid to interpretation: Looking at the figures for all self-employed persons together (regular self-employed persons and self-employed persons with mini-jobs), the CCIs account for 58.3% of self-employed persons with mini-jobs. Among all CCI submarkets, the percentage of self-employed persons with mini-jobs is the highest for the performing arts, at 72.7%.

*Data based on estimates. The number of regular self-employed persons corresponds to the number of taxable entrepreneurs with an annual income of at least €17,500.

Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

3 The Cultural and Creative Industries – Stimulating the Overall Economy

This year's monitoring report places a special focus on the importance of the cultural and creative industries in Germany as a driver of innovation and economic growth across the whole economy. This is investigated using the relevant statistics, which are presented in the unabridged version of this report, as well as two business surveys conducted by ZEW – one among CCI companies in spring/summer 2018 to gain a qualitative assessment of the interaction effects, and one among companies in the industrial sector (see box "Company survey in the cultural and creative industries and the industrial sector in Germany"). Key results from these surveys are presented in the following two sections.

3.1 Cultural and Creative Industries as a Stimulus

The ZEW conducted a representative survey of self-employed people and companies in order to gather extensive, up-to-date information about creative stimuli in the cultural and creative industries and their submarkets. The survey particularly looks at the structure of clients of CCI businesses, at the influence that CCI businesses have on the corporate success of their business clients, and at possible factors that might inhibit demand for services offered by CCI businesses. The following section gives an overview of the situation across the cultural and creative industries in general.[13]

High percentage of clientele are business clients

By developing an overview of the structure of clients of CCI businesses, we are able to start to analyse the way in which they impact various parts of the overall economy. Around 81% of CCI businesses supply products and services to other companies. This itself indicates that the cultural and creative industries can often contribute to value creation at other companies. Clients of CCI businesses are particularly found in the broadcasting industry (100%), the advertising market (94.3%) and the design industry (94.2%). Even in submarkets with the lowest share of corporate clients, the percentage served is still substantial, e.g. in the architecture market (59.4%) and the market for performing arts (47.1%). Apart from corporate clients, the CCI also often serves private clients (56.2%), public institutions (47.6%) and associations or initiatives (37.5%).

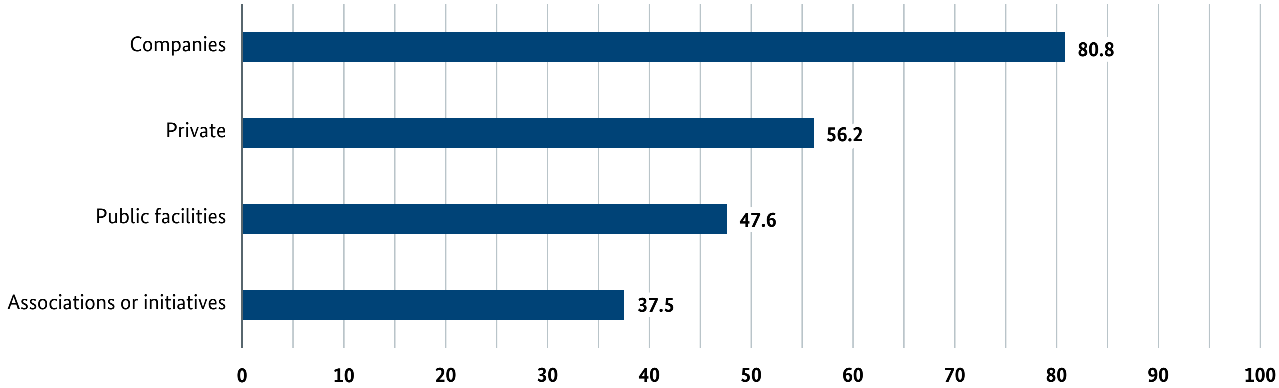
Company survey in the cultural and creative industries and the industrial sector in Germany

The company survey of CCI companies was conducted at the end of the first quarter of 2018. Questions on this year's topic of special focus were also included in the quarterly ZEW Business Survey in the Information Economy. The information economy as defined by ZEW already contains a whole range of branches of the cultural and creative industries in Germany. In order to ensure that all of the different cultural and creative industries were included, and this in a representative manner, companies from the branches of the economy which had hitherto not been featured were also included in the survey. The updated ZEW Business Survey in the Information Economy is thus based on the use of stratified random sampling. Stratification is based on the twelve CCI submarkets (including Other) as well as the size of the company, measured by the number of employees (1 – 4 employees, 5 – 19 employees, 20 – 99 employees and 100 employees or more). The companies were contacted in writing and were able to either complete the two-page questionnaire in writing and return it by post or fax, or to answer the same survey questions online. To evaluate the results, the individual company data were weighted and extrapolated to the total number of companies in the respective submarket. Some 1,248 companies and self-employed persons took part in the survey.

In order to assess the importance of the cultural and creative industries in the value creation process across the economy as a whole, the ZEW also conducted a separate survey in branches outside the cultural and creative industries. In early summer 2018, a survey was undertaken among various branches of industry (machine and equipment manufacturing, vehicle construction, electronics/electrical engineering, textiles/clothing/leather goods and other manufacturing) in Germany. This survey also used stratified random sampling based on branch of industry and size of company (5 – 19 employees, 20 – 99 employees and more than 100 employees). Again, the companies were contacted in writing and were able to either complete the two-page questionnaire in writing and return it by post or fax, or to answer the same survey questions online. To evaluate the results, the individual company data were weighted and extrapolated to the total number of companies in the respective sector of industry. Some 381 companies and self-employed persons took part in the survey.

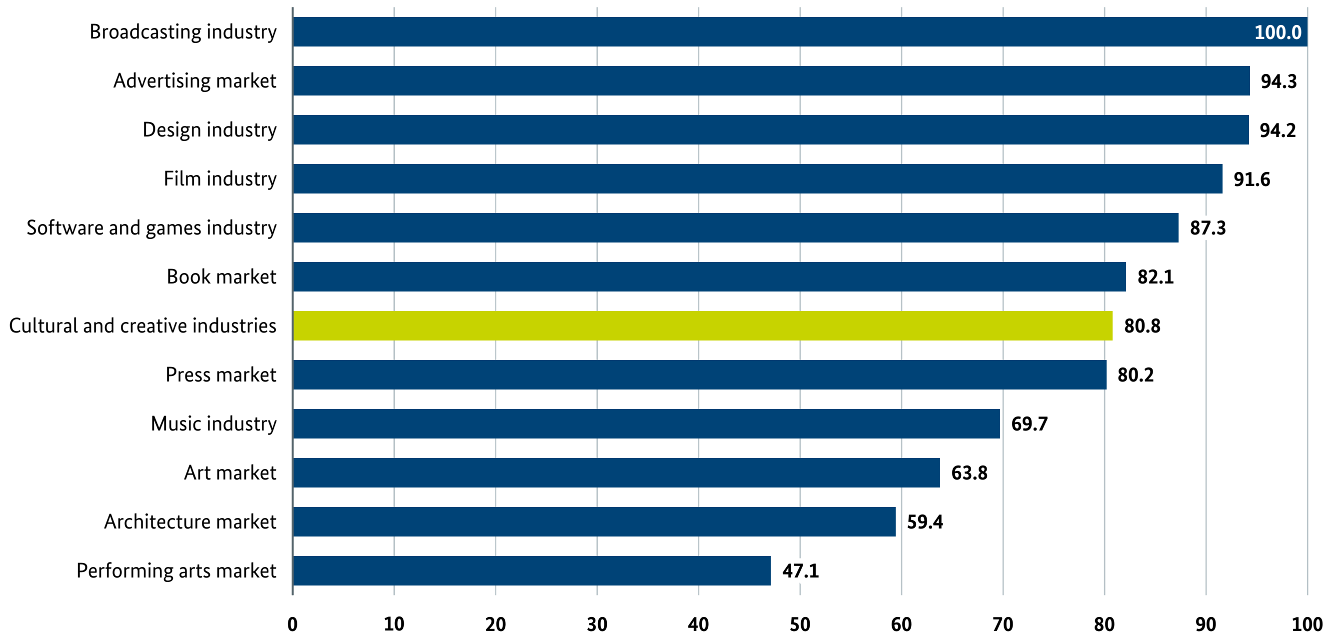
13 A breakdown of figures to submarket level can be found in the relevant sections of the unabridged version of the report.

Figure 3.1: Client groups of companies in the cultural and creative industries (share of companies in %)



Source: ZEW Company Survey on the Cultural and Creative Industries, 1st half 2018.

Figure 3.2: Corporate clients in the cultural and creative industries (share of companies in %)



Source: ZEW company survey, 1st half 2018.

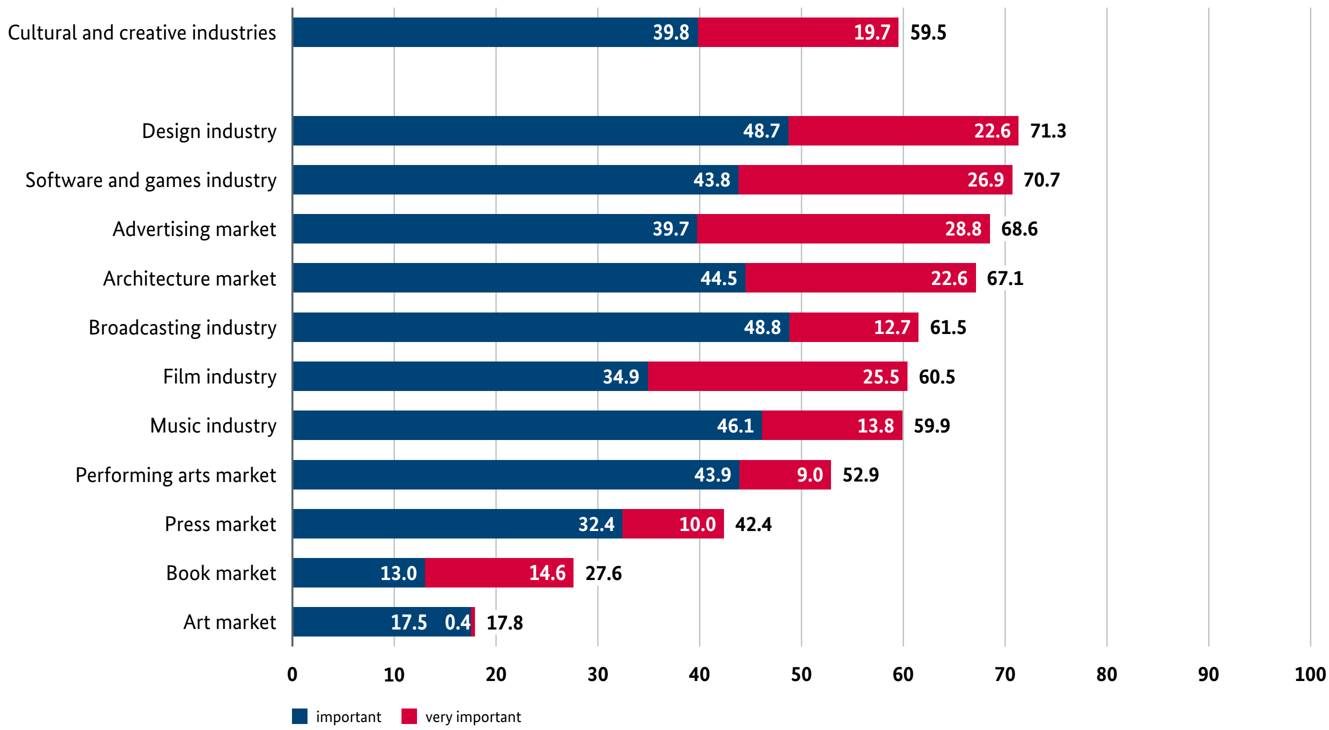
Impact on the success of corporate clients rated as very positive

Most CCI companies rate the impact of their services on the business success of their corporate customers as very positive. Some 39.8% describe the positive effect as "strong" and a further 19.7% as "very strong". In the design industry and the software and games industry, most companies (more than 70%) believe that the services they provide have a clearly positive effect. Across the CCI submarkets, the book market (27.6%) and the art market (17.8%) report such a positive influence relatively rarely.

One channel via which CCI submarkets can have a positive impact on the business success of their corporate clients is by supporting these clients in introducing innovations. A total of 45.5% of companies in the cultural and creative industries state that, with their help, corporate clients are able to introduce new products or services to the market or implement new processes. In particular, companies in the software and games industry (65.3%), the design industry (60.5%) and the advertising market (55.5%) were frequently able to support their clients' activities to develop new innovations. These are also the same three submarkets that most frequently perceive that their services have a very positive influence on the business success of their clients (see above). But it is not only the submarkets that rank the highest that have a positive impact on their corporate clients' business success. The book market and the art market perform well below average in both of these categories.

The companies in the cultural and creative industries support their corporate clients in various different fields of activity. A total of 65.0% of companies with corporate clients support them in the areas of content and design. Some 20.5% rated their contributions in this area as "important" and 44.5% as "very important". In addition, cultural and creative services are often used in public relations work (62.1%), to access new customer groups (54.0%), or to introduce products onto the market (37.8%). Almost 60% of the

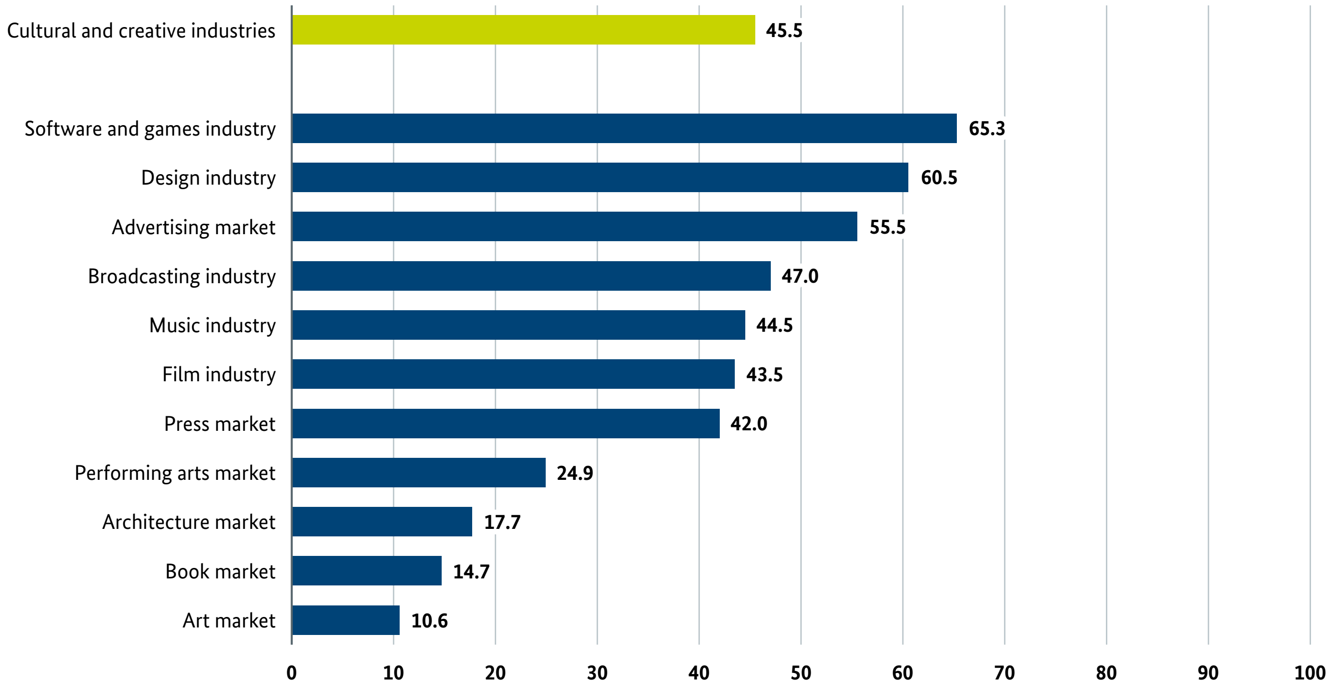
Figure 3.3: Impact on the business success of corporate clients (share of companies with corporate clients in %)



Note: Discrepancies possible due to rounding.

Source: ZEW Business Survey on the Cultural and Creative Industries, 1st half 2018.

Figure 3.4: Support with innovation among corporate clients (share of companies with corporate clients in %)

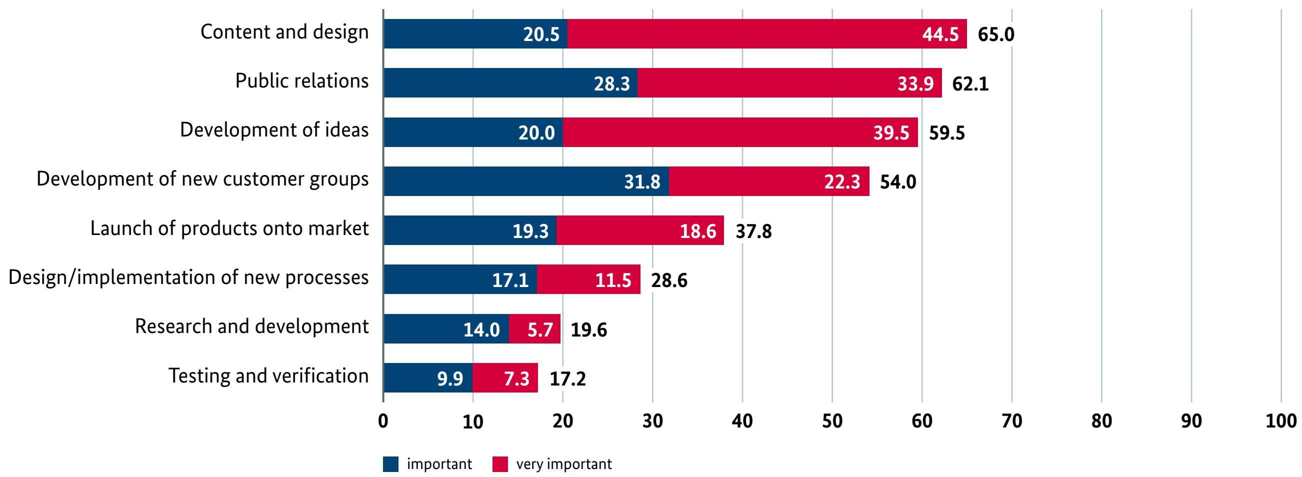


Source: ZEW Business Survey on the Cultural and Creative Industries, 1st half 2018.

companies also state that they make important or very important contributions to the development of ideas at their client companies. This can create the basis for fostering innovation.

Companies provide direct support with the implementation of innovations by designing and implementing new processes (28.6%) or offering support with research and development (19.6%).

Figure 3.5: Areas in which corporate clients can be supported (share of companies with corporate clients in %)



Note: Discrepancies possible due to rounding.

Source: ZEW Business Survey on the Cultural and Creative Industries, 1st half 2018.

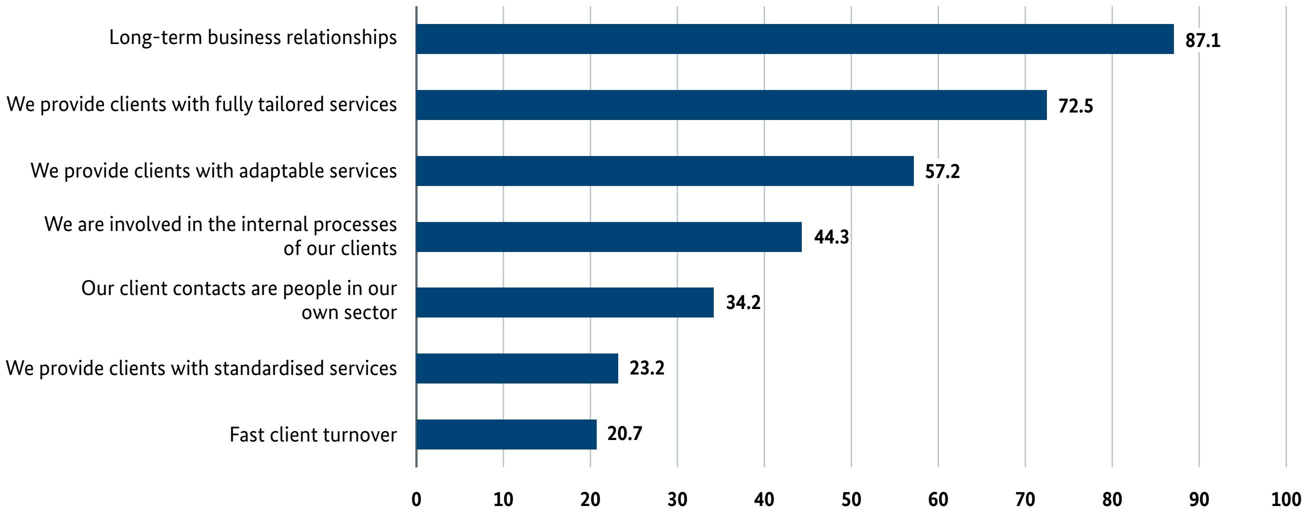
Long-term client relationships and customised services

Companies in the cultural and creative industries predominantly entertain long-term business relationships with their clients. In fact, around 87% state that these relationships are typically long-term. In contrast, only about one in five companies mainly relies on short-term business relationships or fast client turnover. In terms of service content, the majority of companies provide services that are completely customised (72.5%) or services that can be adapted by their clients (57.2%). Some 44.3% of the companies are even involved in the internal processes at their clients' companies. At 23.2%, significantly fewer companies provide standardised solutions. Cooperation between corporate clients and CCI companies is often led by creativity on the client side. For example, one in three companies states that the contact person at the client company often has a professional background in the cultural and creative industries.

High costs and perceived lack of benefit reduce demand

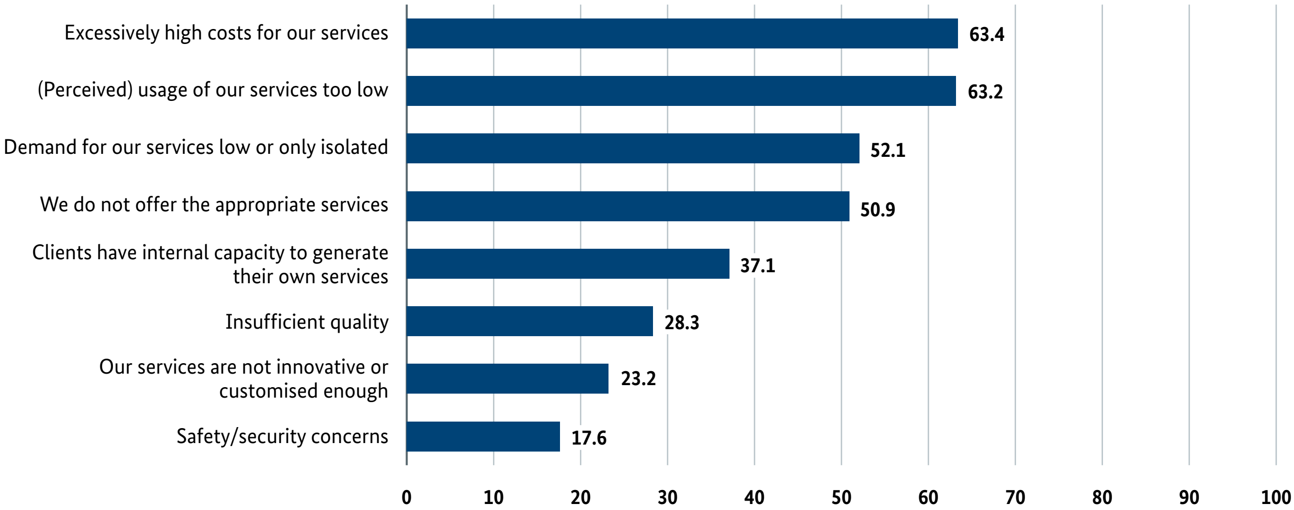
From the perspective of CCI companies, there are various factors that can limit the demand of the products and services they provide. Those often cited are excessively high costs and perceived lack of benefits of their services. Around 63% of CCI companies believe that this will lead to reductions in demand for their services. Almost half of the companies generally see little or only isolated need for their services, or believe that the services they provide are not appropriate. The self-critical view that CCI companies take can also be seen in the fact that 28.3% believe limited demand can be due to insufficient quality, and 23.2% think it can be down to a lack of innovation or customised services. According to the companies, another important obstacle is that potential customers have internal capacities to generate the services they need by themselves (37.1%).

Figure 3.6: Characteristics of client relationships (share of companies in %)



Source: ZEW Business Survey on the Cultural and Creative Industries, 1st half 2018.

Figure 3.7: Factors that might inhibit demand for services offered by CCI businesses (share of companies in %)



Source: ZEW Business Survey on the Cultural and Creative Industries, 1st half 2018.

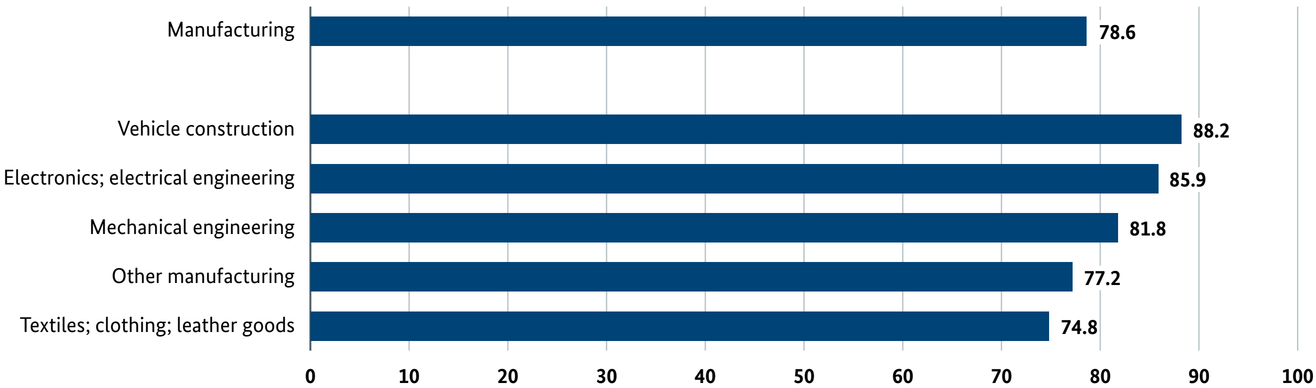
3.2 Stimulus from the Cultural and Creative Industries? – The Point of View of the Industrial Sector

In order to assess the stimulus that the cultural and creative industries provide for the overall economy, we also need to consider the opinion of companies that potentially buy their services. The ZEW therefore conducted a representative survey among manufacturing companies to gather extensive and up-to-date information.

More than three quarters of manufacturing companies buy cultural and creative services

On average, 78.6% of manufacturing companies have bought cultural and creative services from external companies in the past three years. Within manufacturing, this figure is the highest in vehicle construction. Some 88.2% of companies in this branch purchased cultural and creative services externally. The share of companies in electronics/electrical engineering (85.9%) and machine and equipment

Figure 3.8: Companies that have bought cultural and creative services in the last three years (share of companies in %)



Source: ZEW Company Survey in Industry, 1st half 2018.

manufacturing (81.8%) is also above average. In textiles, clothing and leather goods as well as in other branches of manufacturing, about three quarters of enterprises have bought cultural and creative services in the last three years.

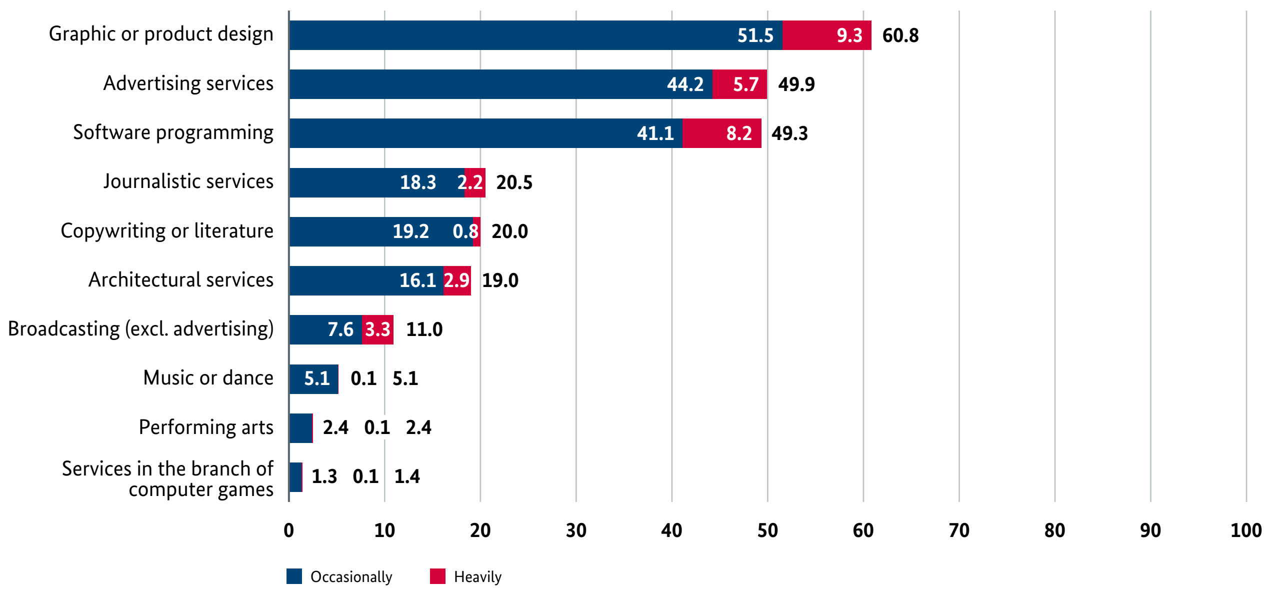
The CCI services that are bought by client companies cover a broad spectrum. Manufacturing companies are by far the most frequent purchasers of services in the area of graphic and product design. Some 51.5% of these companies purchase CCI services 'occasionally' and a further 9% 'heavily'. In total, 60.8% of client companies buy services in the field of graphic and product design. In addition, about half of manufacturing companies purchase advertising services (49.9%) or software programming services (49.3%) from CCI businesses. Around 8% of companies 'heavily' rely on provided software programming services bought from CCI businesses. This is followed at a considerable distance by services in the fields of journalism, architecture, copywriting and literature, which are purchased externally by around 1 in 5 companies. The share of client companies buying services in the areas of broadcasting (11.0%), music or dance (5.1%), performing arts (2.4%) and computer games (1.4%) is even lower.

Cultural and creative services are used in various areas of client companies

Cultural and creative services that are bought by external companies are used in various areas to fulfil a range of different functions. Around 54% of companies that already purchase cultural and creative services rate services purchased externally as "rather important" in the areas of content and design. Furthermore, some 16.4% of client companies consider these to be "very important". In addition, for more than half of the companies, cultural and creative services purchased from external companies are important for public relations work (57.3%) or the development of new customer groups (54.3%). CCI services also serve as an important stimulus for product development by helping with the development of ideas (44.7%), research and development (31.4%), or testing, assessment and verification (23.8 percent).

Manufacturing companies can particularity benefit from cultural and creative services when it comes to the way in which they present themselves to the outside world. Just under 70% of these client companies were able to enhance their own image by buying cultural and creative services from external companies.

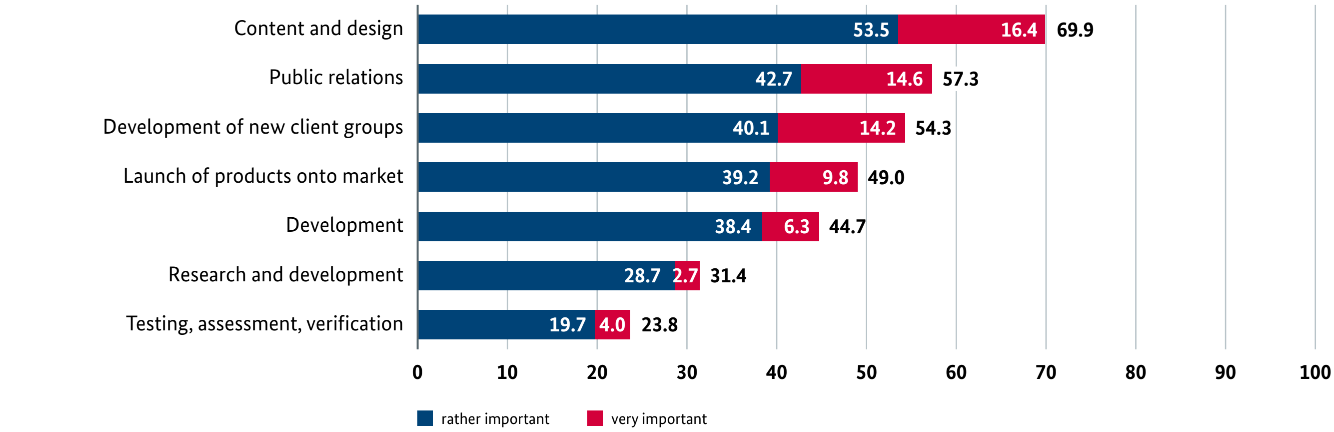
Figure 3.9: Type of cultural and creative services bought by client companies (share of companies in %)



Note: Discrepancies possible due to rounding.

Source: ZEW Company Survey in Industry, 1st half 2018.

Figure 3.10: Importance of buying cultural and creative services for companies in different areas/for different functions
(share of companies that buy cultural and creative services in %)

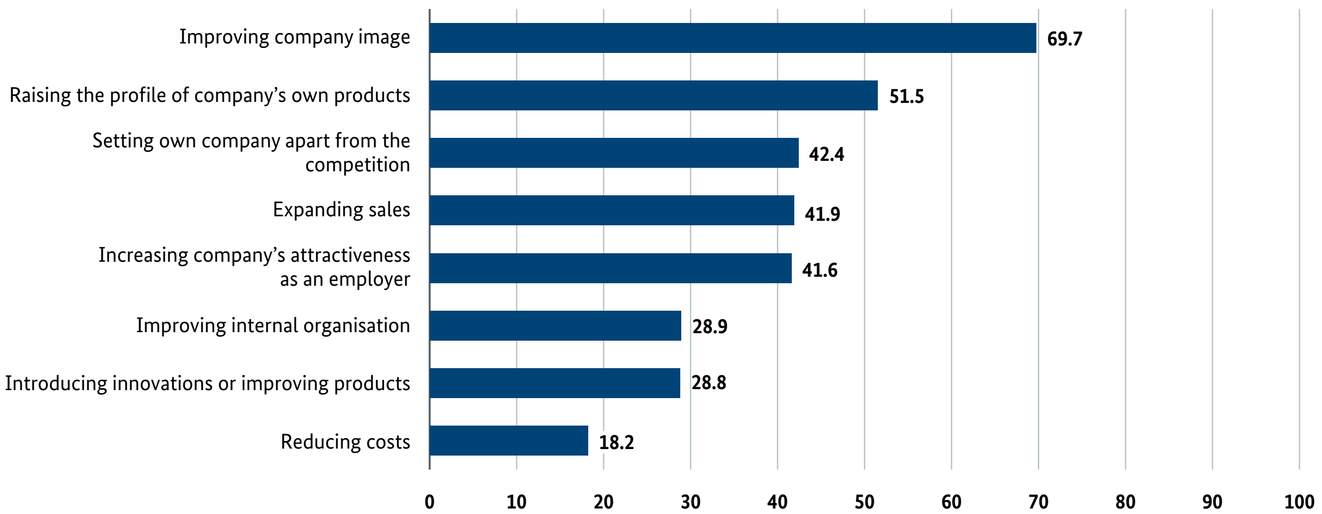


Note: Due to rounding, totals may differ from totals of individual values.
Source: ZEW Company Survey in Industry, 1st half 2018.

In addition, these services often increased the profile of the company's own products (51.5%) and increased its attractiveness as an employer (41.6%). Just over 40% of client companies were also able to set themselves apart from the competition and expand their own sales. Almost 29% of client companies were able to introduce innovations or improve internal processes by purchasing CCI services, which is likely to be an important factor.

These figures paint a picture that is congruent with the assessment made by CCI businesses, 45.5% of which report that they were involved in the process to develop innovations (see above).

Figure 3.11: Impact of cultural and creative services bought from CCI businesses
(share of companies that have bought cultural and creative services in %)



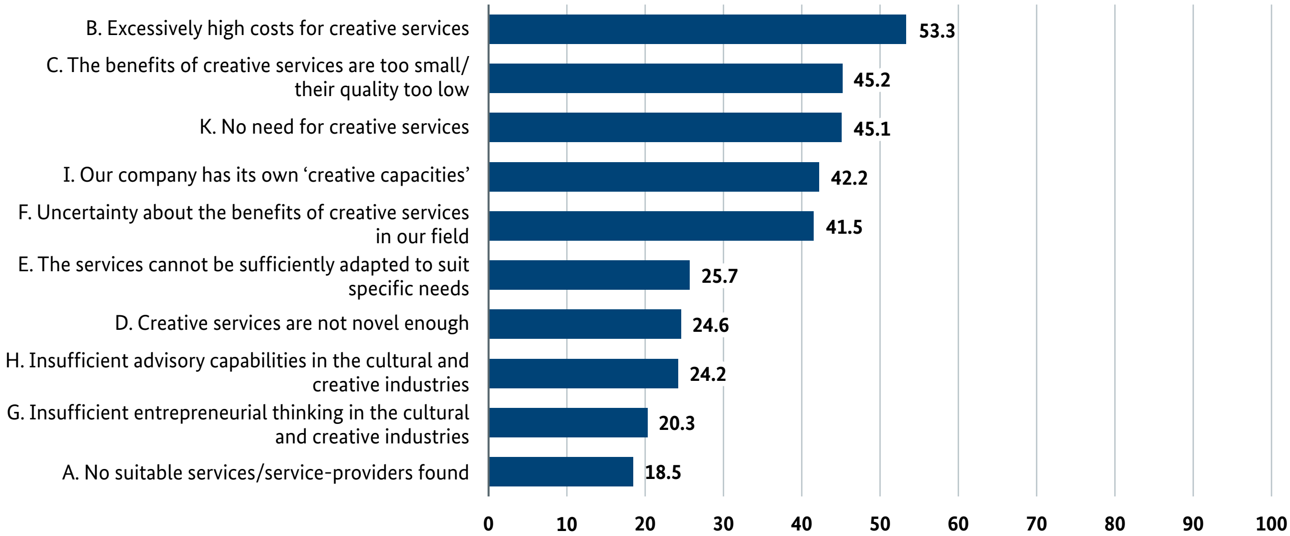
Source: ZEW Company Survey in Industry, 1st half 2018.

Factors that might inhibit demand for services offered by CCI businesses.

Companies in the manufacturing industry often perceive the cost of creative services as high. For around 53% of companies, these perceived high costs inhibit the level of corporate demand for cultural and creative services or can lead these businesses to do without such services altogether. In addition, companies often rate the benefits of creative services as too small/their quality as too low (45.2%) or are unsure about the benefits for the sector in which they operate (41.5%). Another important factor is that 45% of companies generally do not see a need to use creative services. However, some 42.2% of companies also state that they have their own 'creative capacities'. About a quarter of companies tend to see weaknesses in the content of creative services, which inhibit their demand for them. For example, companies state that the services offered cannot be sufficiently adapted to suit specific needs, that they are not novel enough, or that there are insufficient advisory capabilities in the cultural and creative industries.

The views held in the manufacturing industry concerning potential barriers to demand is very much in line with the self-assessment of companies in the cultural and creative industries. For example, both groups of companies most often see excessive costs as a barrier. The lack of (perceived) benefit of creative services and lack of demand for these services are seen as significant factors.

Figure 3.12: Factors that might inhibit demand for services offered by CCI businesses (share of companies in %)



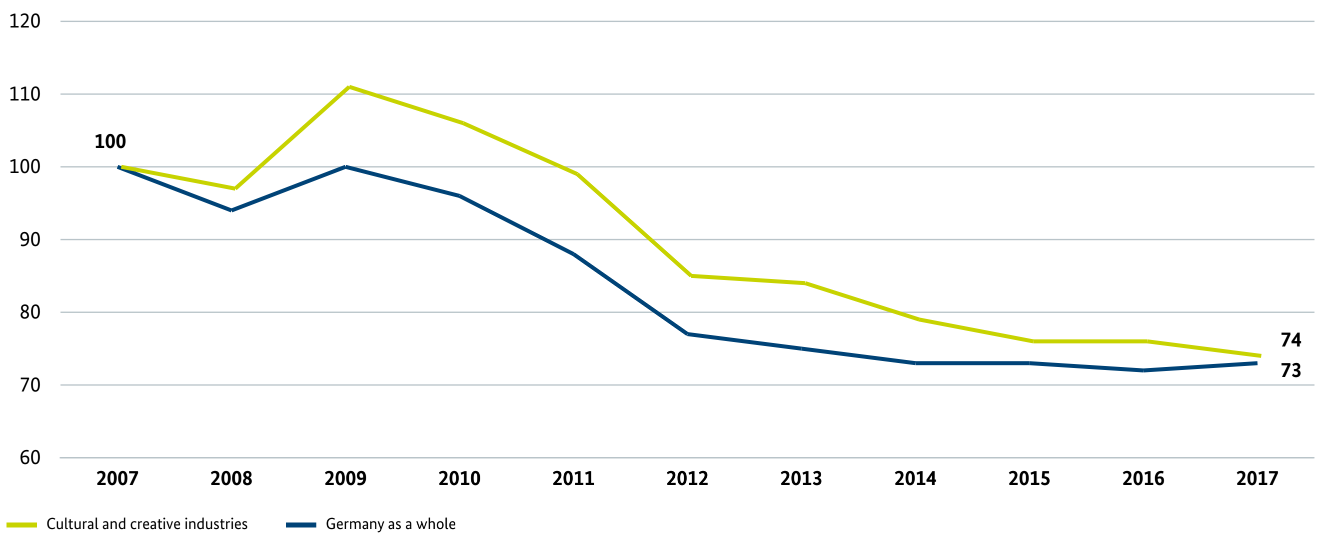
Source: ZEW Business Survey on the Cultural and Creative Industries, 1st semester 2018.

4 Start-ups in the Cultural and Creative Industries

The number of business start-ups is an indicator of the level of renewal taking place in CCI products and services. New companies often bring new ideas to the market and can increase competition with existing companies. The following figures only comprise start-ups whose economic activity is above a certain, minimum size. The entry of self-employed persons and freelancers into the market is only considered in the figures if the self-employment or professional activity concerned is comparable to a corporate activity performed by a partnership or corporation. Self-employed persons who perform cultural or creative activities for clients as part of contracts for work and services and therefore only use their own capital to a very limited extent (apart from their human capital), only have limited entrepreneurial freedom and are therefore not included in the statistics. Such 'free agents' are found particularly in the performing arts market, in the press market and in the music and film industry. Freelancers are very common in other submarkets, e.g. architecture.

According to the Mannheim Enterprise Panel (MUP), around 9,500 active companies were set up in the cultural and creative industries in Germany in 2017. The number of start-ups decreased slightly compared with the preceding year, continuing the negative trend in start-up figures since 2010. In 2017, the number of start-ups founded in Germany's CCIs was 33% lower than its highest figure recorded in 2009 (see Figure 4.1). The cultural and creative industries are thus following the general trend in Germany of a decline in start-ups right across the economy. One of the reasons for the high number of start-ups in 2009 was the introduction of the legal form of a limited liability entrepreneurial company ("Unternehmergesellschaft" or "mini-GmbH"). At the time, many self-employed people switched to this type of limited liability company as virtually no share capital needs to be subscribed in such entities. Starting in 2007, in comparison to the overall start-up scene in Germany, the CCI sector initially recorded a more positive development. However, since 2014, the number of start-ups being launched has declined relatively steeply compared to new companies across the economy as a whole. In 2017, the slight fall in this figure in the CCIs stood alongside a slight increase in new start-ups across the economy as a whole.

Figure 4.1: Number of start-ups in the cultural and creative industries and in the overall economy in Germany, 2007 – 2017 (Index, 2007 = 100)



Aid to interpretation: In 2017, the number of start-ups in the cultural and creative industries was 74% of the amount in 2007.

Source: Mannheim Enterprise Panel, ZEW, 2018.

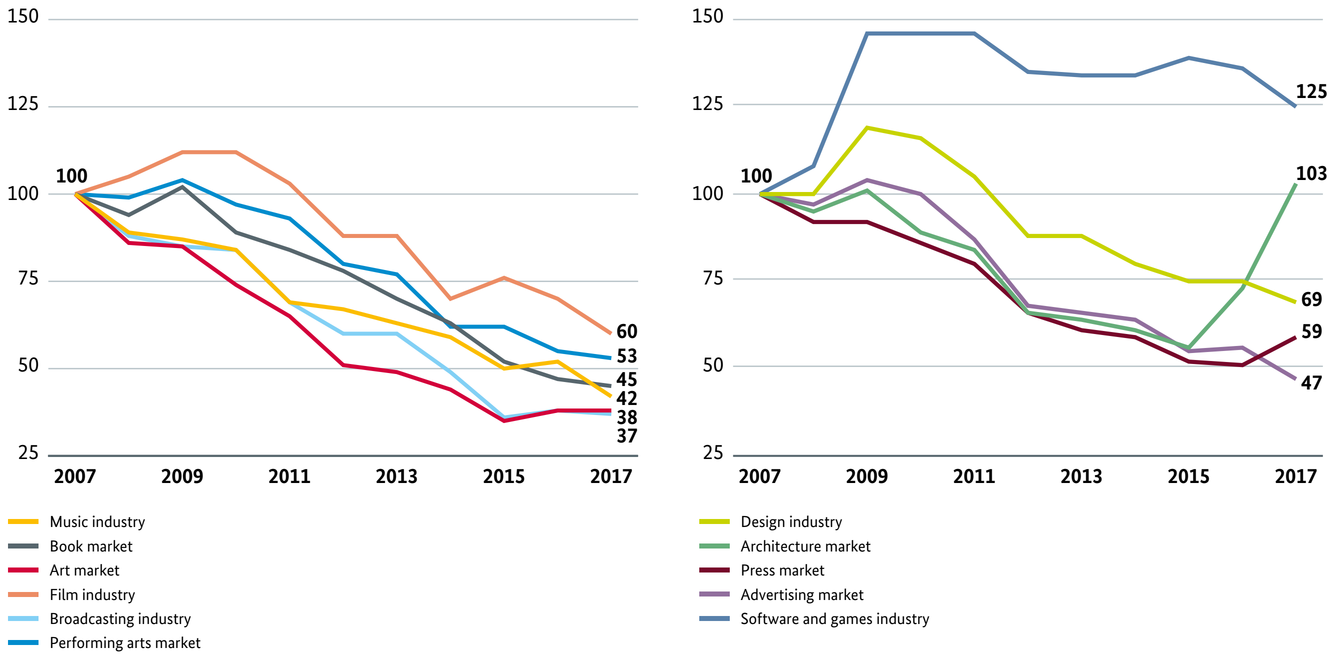
The number of start-ups varies widely between submarkets. The only two submarkets in which start-up activity in 2017 was higher than ten years earlier are the software and games industry and the architecture market (see Figure 4.2). While in the software and games sector the high number of start-ups recorded in 2009 was maintained in the following years, in the architecture market there has only been a significant increase in the number of start-ups in the past two years, following 6 consecutive years of decline. Over the past two years, start-up activity in the art market has stabilised at a very low level. In the press market, a slight increase in the number of start-ups was seen in 2017. In the broadcasting industry, the number of new start-ups remained virtually unchanged in 2017 following a slight increase in 2016. All other submarkets saw a decline in the number of new start-ups in 2017, with the lowest figures in the last ten years.

Start-up activity in the CCI sector is strongly focused on four submarkets which account for almost two thirds of all the new companies.

In 2017, 31% of all start-ups took place in the software and games industry, 16.5% in the design industry, 13% in the architecture market and 12.5% in the advertising market. Other submarkets with a relatively high share of CCI start-ups are the press market and the film industry. Together, the other five submarkets (as well as Other) account for less than 14% of all start-ups in Germany's cultural and creative industries.

In the last 10 years, the start-up scene in the cultural and creative industries has very much shifted in the direction of the software and games industry, i.e. towards a submarket aimed primarily at commercial customers. Whereas in 2007 just under 18% of all start-ups in the sector took place in this submarket, by 2017 this figure had risen to 31% (see Figure 4.3). The main reason behind the shift is the advancement of digitalisation, which opens up endless possibilities to link creative business ideas to software solutions. For this reason, many new firms in this sector are specialised in the programming of new applications – from web solutions to apps, to online platforms. There were

Figure 4.2: Start-up rate in the cultural and creative industries in Germany by submarket 2007 – 2017
(Index, 2007 = 100)



Aid to interpretation: The largest growth in the number of new start-ups between 2007 and 2017 was in the software and games industry (+25%).

Source: Mannheim Enterprise Panel, ZEW, 2018.

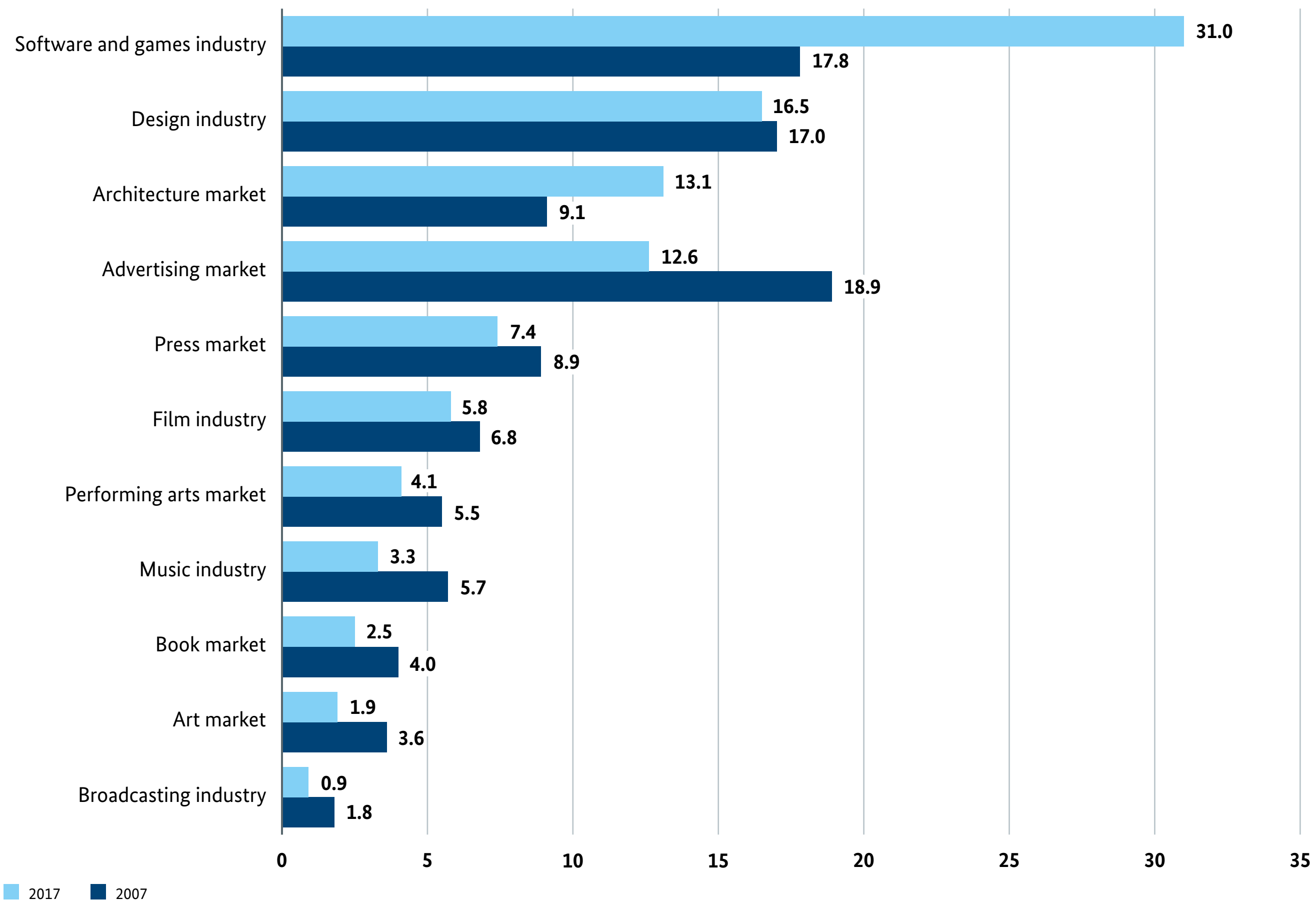
significant declines in start-up activity in the advertising market, the press market, the art market, the book market, the performing arts market, the film industry, the music industry and the broadcasting industry. The design industry roughly maintained its share of start-up activity. The percentage of total CCI start-ups in the architecture market increased significantly thanks to the recent overall increase in the number of start-ups.

The 'start-up rate' is an indicator that allows start-up activity to be compared between individual sub-markets and with other sectors. The start-up rate relates the number of new start-ups over the course of a year to the number of active enterprises at the beginning of that year. It provides information about the speed at which the number of companies is renewed by start-ups.

From 2015-2017, the start-up rate in the cultural and creative industries in Germany remained at an average 5.1%, thus slightly above that of the overall economy (5.0%, see Figure 4.4). In the sectors used in the comparison, the start-up rate was slightly higher, at 5.5%, which was primarily due to the very high start-up rate in ICT services as well as comparatively high rates in business consulting.

Within the cultural and creative industries, the software and games industry has easily the highest start-up rate (8.1%). The start-up rates in the design industry, the advertising market, the film industry and the market for the performing arts are slightly below the overall level for the cultural and creative industries as a whole.

Figure 4.3: Start-ups in the cultural and creative industries in Germany broken down by submarket in 2007 and 2017 (in %)



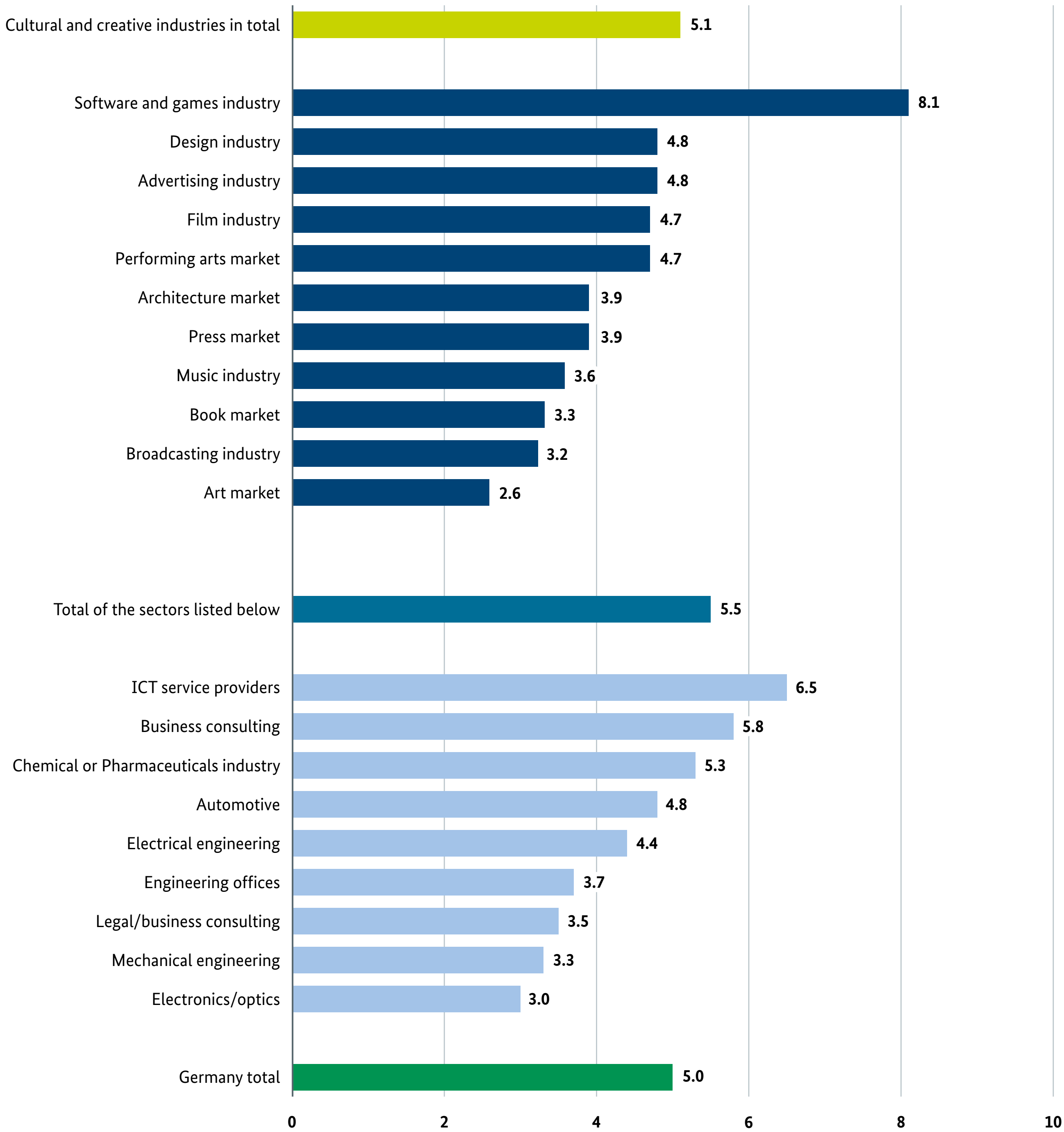
Aid to interpretation: The share of startups from the software and games industry within the cultural and creative industries rose from 17.8% in 2007 to 31.0% in 2017.

Note: Share of the respective submarket in the sum of cultural and creative industries with double counting. Difference to 100% corresponds to submarket "Other".

Source: Mannheim Enterprise Panel, ZEW, 2018.

At 3.9%, the start-up rate remains low in the architecture market, despite strong start-up activity over the past two years. The art market has the lowest start-up rate, at 2.6%.

Table 4.4: Average start-up rates in the cultural and creative industries in Germany between 2015 and 2017 by submarket and in comparison (in %)



Note: Start-up rate corresponds to the number of company start-ups as a percentage of the number of companies in existence, average for the years 2015 – 2017.

Aid to interpretation: The average start-up rate in the CCI sector during the period between 2015 and 2017 was 5.1%.

Source: Mannheim Enterprise Panel, ZEW, 2018.

5 Innovation in the Cultural and Creative Industries Compared with Other Sectors

In order to examine the innovation capacity of the cultural and creative industries, established indicators from national and international innovation statistics are used. Using this base of indicators for the cultural and creative industries is no simple task. This is because many CCI businesses primarily provide unique products and tailor-made solutions and rarely offer standard products or services. Secondly, many products and services from the cultural and creative industries also serve as upstream products in other sectors, meaning their innovative character often only develops in the client industries. In general terms, it is difficult to measure the innovative capabilities of a sector whose production activities centre around creativity and the development and use of new ideas. This is because the indicators used to do this do not fully reflect the specific features of the cultural and creative industries (see box on methodology directly below.)

An indicator frequently used for measuring the resources that companies make available for innovation activities is the amount of spending on innovation. The spending on innovation comprises all expenditure and investment involved in the development and launch of product and process innovations.[14]

Average spending on innovation in 2015/2016 across the whole of the German CCIs[15] was €5.6 billion. This amounts to 3.6% of total spending on innovation by German businesses.[16] Over 70% of this innovation spending (see Figure 5.1) was accounted for by the software and games submarket (and more than 99% of this by the software industry). Significant spending on innovation is also made by the press market (7.7% of total CCI spending on innovation) and the broadcasting industry (5.8%). The other submarkets make only a small contribution to the total innovation

Methodology for evaluating the innovation statistics

International statistics on innovation use the Oslo Manual methodology to measure innovation (OECD and Eurostat, 2005). The cultural and creative industries are not, however, included in innovation statistics in their entirety. Furthermore, only companies with at least five employees are considered, meaning most businesses in the CCIs are not featured.

The cultural and creative industries also differ from the other economic sectors because they offer few standard products and services. In this sector, each individual product or service is in and of itself a creative achievement. It could be said that almost everything in the cultural and creative industries is innovative. In contrast, the economic concept of innovation does not primarily depend on whether a specific product or service on the market differs from what has previously been available.

An innovation exists when a company has altered its product/service range or production process in such a way that the new product/service represents a significant improvement for the user or a significant improvement for the company itself.

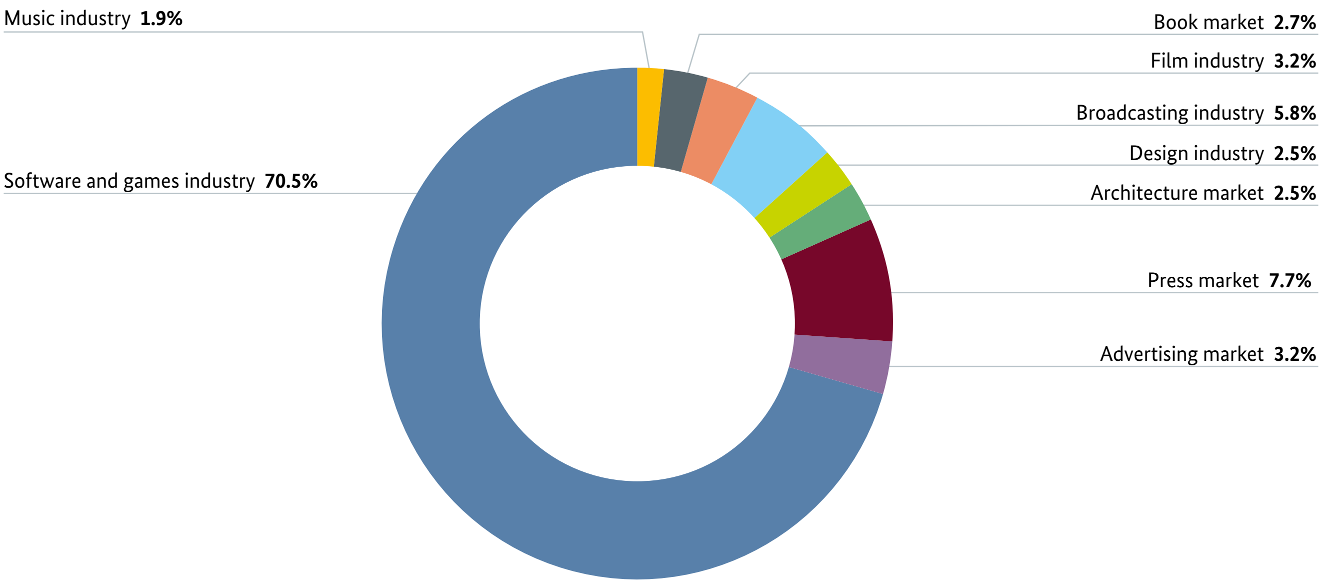
In the international debate, therefore, there are suggestions that the innovation concept be broadened, as non-technical innovations are becoming more significant (e.g. business models in the digital age), and this is particularly true of the cultural and creative industries. However, these are highly contextual, and difficult to operationalise and measure. Accordingly, the points made here about innovation are only partially comparable with those in other economic sectors.

14 Innovation expenditures include all internal and external R&D expenditures (even those not directly related to specific product and process innovation), expenditures for procuring capital goods and software for innovation, expenditures for acquiring external know-how and industrial property rights, innovation-related expenditures for further training, marketing, design, construction, testing and checks, expenditures for preparing production and marketing for innovation, as well as all other expenditures incurred for innovation (e.g. design, evaluation of innovation ideas, and innovation management).

15 Innovation indicators can be calculated for nine of the eleven submarkets in the cultural and creative industries on the basis of a special evaluation of the German innovation survey, whereby some submarkets do not include all economic sectors included in those categories. The submarkets of the cultural and creative industries are factored in as follows (economic sectors are given in parentheses): the music industry (only 59.2 and 32.2), the book market (only 58.11 and 18.14), the art market (not included), the film industry (only 59.1), the broadcasting industry (only 60), the performing arts market (not included), the design industry (only 32.12, 74.1 and 74.2), the architecture market (only 71.11 and 71.11.2 included here in their entirety), the press market (only 58.12, 58.13, 58.14, 58.19 and 63.91), the advertising market (included in its entirety, 73.11 included completely), the software and games industry (included in its entirety). The performing arts market and the art markets could not be shown. The total values for the cultural and creative industries indicated in this chapter only include the economic sectors listed here.

16 Regarding the sectors covered by the innovation statistics, i.e. sectors 5 – 39, 46, 49 – 53, 58 – 66, 69 – 74, 78 – 82.

Figure 5.1: Distribution of innovation expenditure in the German cultural and creative industries by submarket (in %)



Aid to interpretation: The software and games industry accounted for 82.6% of all innovation expenditure in the cultural and creative industries. Average figures for 2015/16.

Source: Mannheim Innovation Panel, ZEW, 2018.

spending by the German cultural and creative industries (film industry 3.2%, advertising market 3.2%, book market 2.7%, architecture market 2.5%, design industry 2.5%, music industry 1.9%).

In comparison to 2012/2013 (€4.87 billion), spending on innovation in the CCIs has risen significantly (+15%). The software and games industry recorded the strongest absolute growth, at +€0.52 billion. The highest relative (percentage) increase in innovation spending is reported by the music industry, the design industry, the press market and the architecture market. In the film, broadcasting industry and advertising market, innovation spending declined between 2012/2013 and 2015/2016. Spending on innovation in the book market has remained almost unchanged.

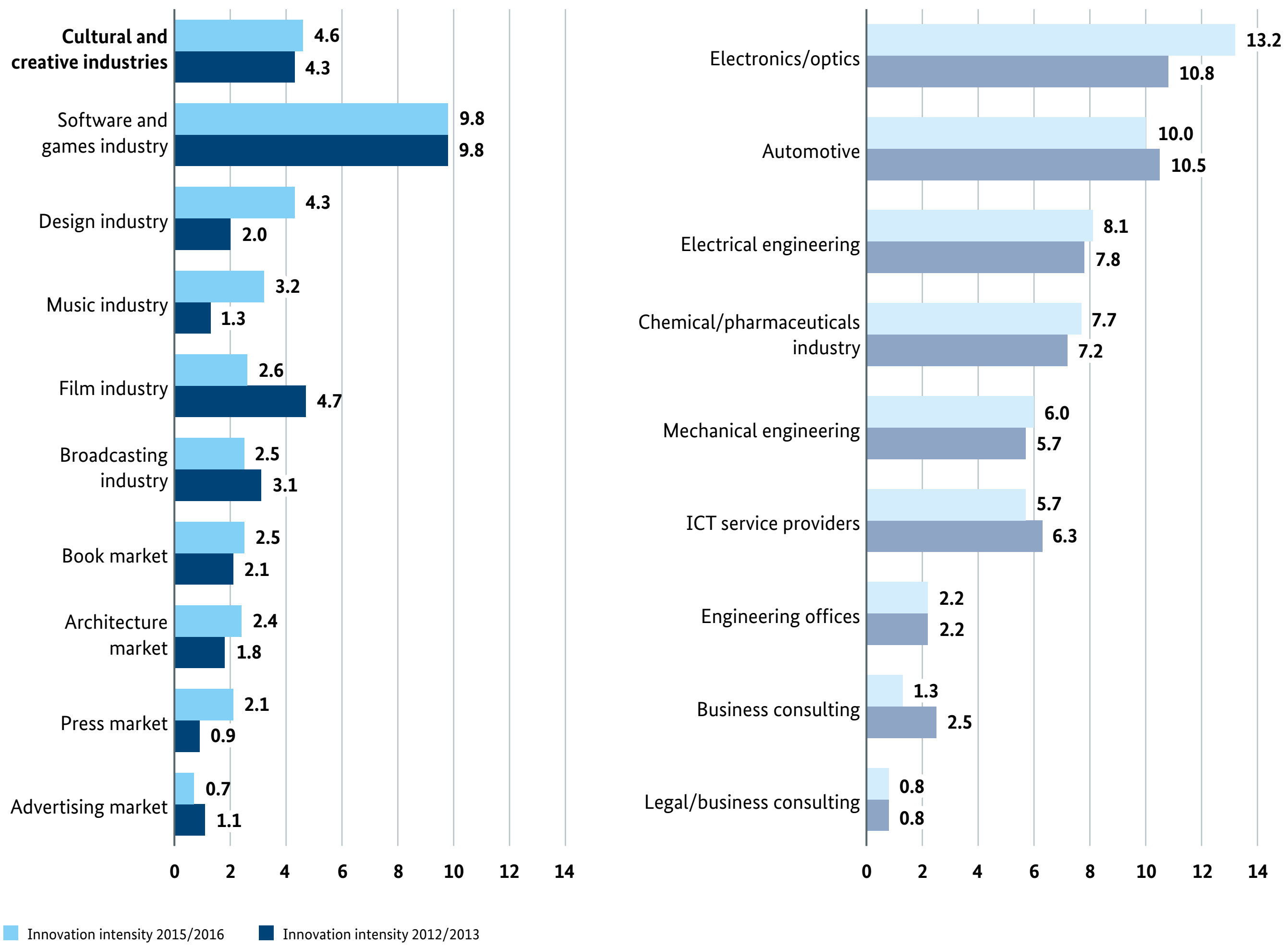
If one takes the spending on innovation as a proportion of the total sales of a submarket or a sector, one derives the innovation intensity. Overall, the CCI sector attained an innovation intensity of 4.6% (see Figure 5.2).

The rate rose slightly from that of 2012/13, climbing 0.3 percentage points. Within the cultural and creative industries, the software and games industry has by far the highest rate (9.8%), followed by the design industry (4.3%) and the music industry (3.2%). The innovation intensity of the cultural and creative sector is lower than that of the industrial sectors, but higher than that of most services sectors, except for the ICT service providers, where the innovation intensity is 5.7%, or a quarter as much again.

Between 2012/13 and 2015/16, the innovation intensity rose in all the submarkets with rising spending on innovation (book market, design industry, architecture market, press market, music industry). This means that the increases in the innovation budgets were not primarily driven by market and demand growth, but that the companies invested more in innovation projects overall while sales remained steady. The software and games industry has increased its innovation spending in recent years in lockstep with its growth in turnover.

Another indicator to measure how prevalent innovation-based business strategies are in a particular sector is the innovation rate. This number indicates the share of companies that have introduced at least one innovative product or service in the past three years, that is, that have markedly improved their services or service generation process or have expanded them to include customer needs not previously dealt with. In the cultural and creative industries, this was true of just over half of companies in 2015/2016. Two submarkets exhibit innovation rates well above the CCI sector average (53%), namely the book market (69%) and the software and games industry (67%) (see Figure 5.3). In the music industry and press market, the innovation rate is slightly above the average. In the film industry, the broadcasting market and the advertising market, almost one in two companies is an innovator business. Relatively few innovator businesses are to be found in the architecture market (38%) and the design industry (28%). These low numbers do not mean of course that the companies in these markets are not creative or do not search for new solutions. However, creativity mainly takes place in the context of existing business models and a focus on these same client groups and needs, as well as by using established internal processes and steps.

Figure 5.2: Innovation intensity in the German cultural and creative industries by submarket and in comparison to other sectors (proportion of turnover in %)

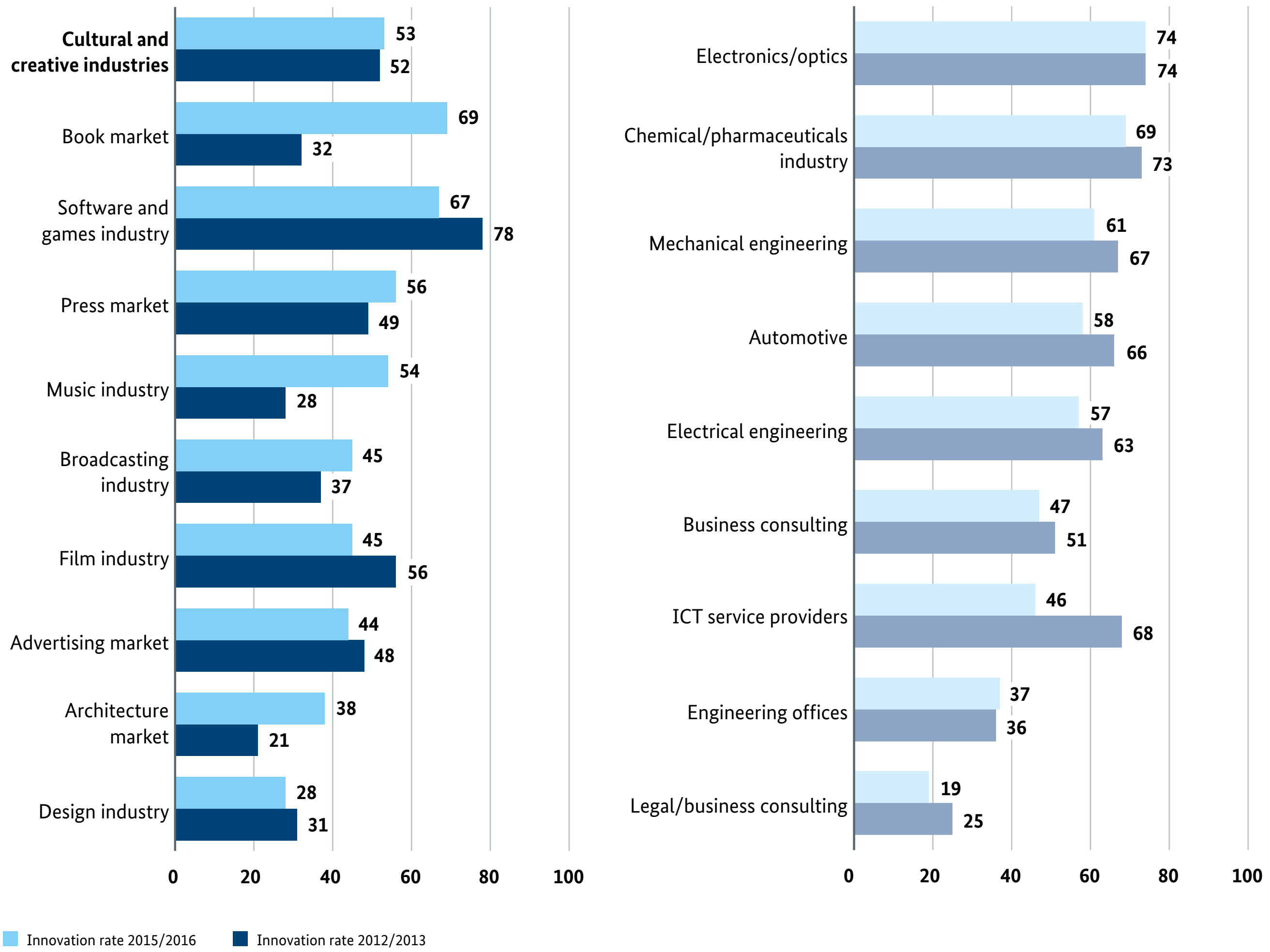


Aid to interpretation: In the software and games industry, the innovation intensity, i.e. the amount spent on innovation as a percentage of sales, averaged 9.8% in 2015/2016.

Source: Mannheim Innovation Panel, ZEW, 2017.

Comparing sectors, the CCI innovation rate of 53% is lower than in research-intensive industry, where between 57% and 74% of companies have introduced innovative products or processes in 2015/2016 within a three-year period. None of the services sectors featured in the comparison has an innovation rate to match that of the cultural and creative industries. With their innovation rate virtually unchanged from 2012/2013, the cultural and creative industries stand out from most of the other sectors in the comparison. This is because, with the exception of electronics/optics and engineering activities/related technical consultancy, the innovation rate outside the CCIs dropped considerably. Within the CCI sector, the innovation rate rose significantly in three submarkets: the music industry, the book market and the architecture market. There was a slight increase in the broadcasting industry. There were clear declines in the film market and the software and games industry, and a slight fall in the advertising market.

Figure 5.3: Innovation rate in the German cultural and creative industries by submarket and in comparison to other sectors (share of companies in %)



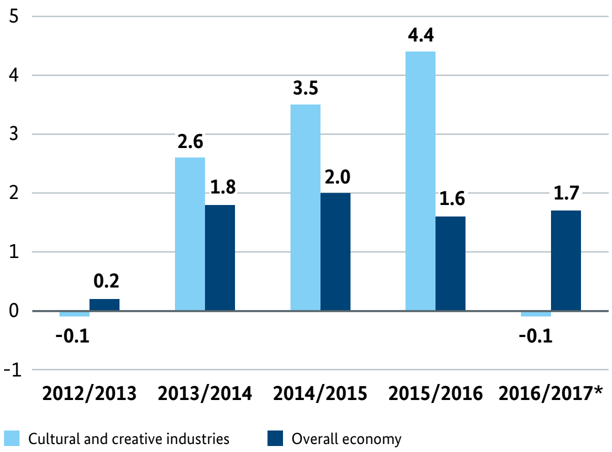
Aid to interpretation: 53% of all CCI companies introduced at least one product or process innovation on average in 2015/2016.

Source: Mannheim Innovation Panel, ZEW, 2018.

6 Summary

In 2017, turnover in the cultural and creative industries fell by an estimated 0.1% in comparison to 2016. In contrast, turnover rose across the economy as a whole, with an estimated increase of 1.7 percent in 2017 (see Figure 6.1). In the three previous years, however, the increase in turnover in the cultural and creative industries was significantly higher than in the economy as a whole. For example, turnover growth in 2016 was 4.4% in the CCIs but only 1.6% in the economy as a whole.

Figure 6.1: Development of turnover in the cultural and creative industries compared with the overall economy (change in %)



Aid to interpretation: Turnover in the music industry grew by 4.5% each year between 2012 and 2017.

*Data for 2017 based on estimates.

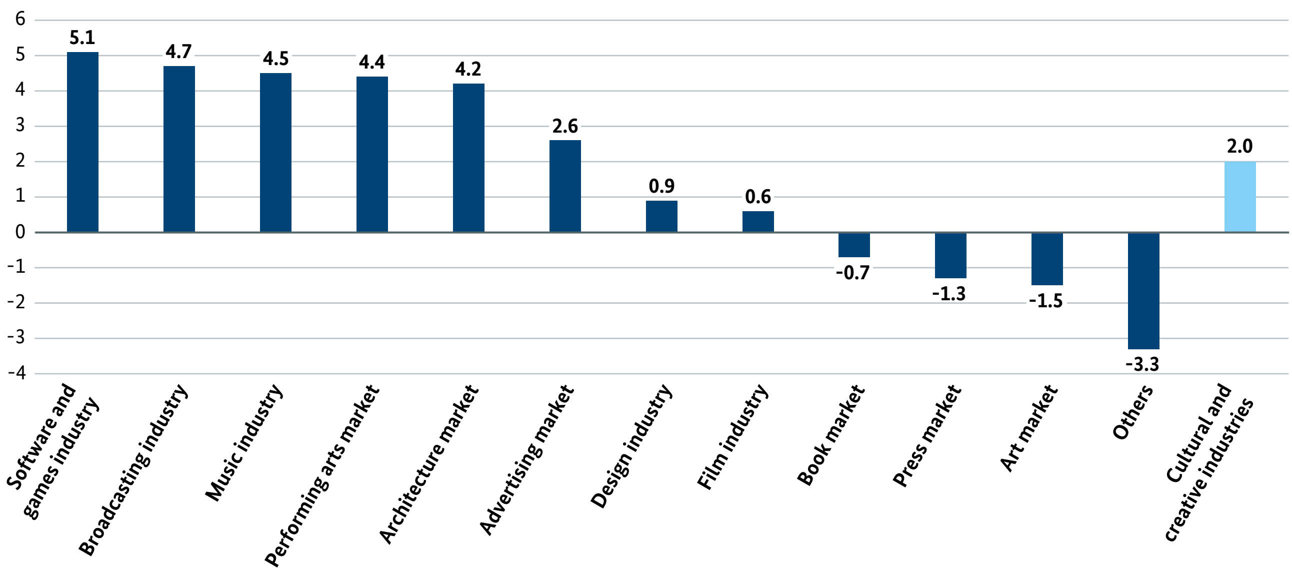
Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

Long-term development of turnover positive

The long-term development of turnover from 2012 – 2017 continues to be positive, and the average annual growth rate for this period is 2.0%. However, development across the individual submarkets varies strongly (see Figure 6.2). With an average annual growth rate of 5.1%, the software and games industry recorded the highest development in turnover from 2012 to 2017. Turnover also developed well in the broadcasting and music industries and in the performing arts and architecture markets, growing by over 4% in each.

Turnover growth in the advertising market (2.6%), the design industry (0.9%) and the film industry (0.6%) was somewhat lower, but still positive. The book market, the press market and the art market registered negative annual growth rates of -0.7, -1.3 and -1.5% respectively.

Figure 6.2: Development of turnover in the various submarkets of the cultural and creative industries (average annual change 2012 – 2017* in %)



Aid to interpretation: Turnover in the music industry grew by 4.5% each year between 2012 and 2017.

*Data for 2017 based on estimates.

Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

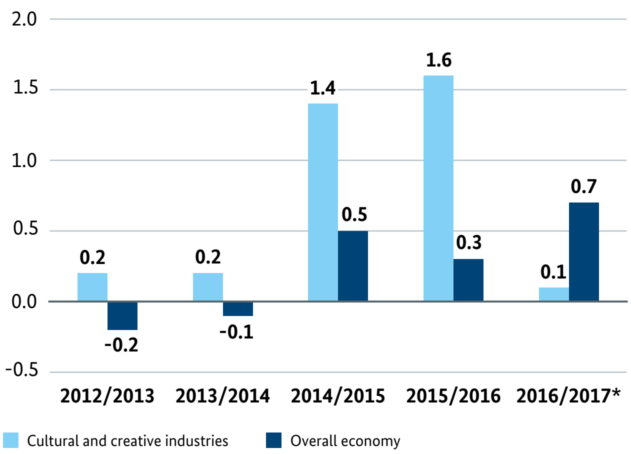
Number of companies in the cultural and creative industries rising slightly

The number of companies in the cultural and creative industries rose by just 0.1% in 2017, while the number of companies across the economy as a whole grew by 0.7% (see Figure 6.3). This is the first time since 2012 that the number of companies in the cultural and creative industries has risen less strongly than in the overall economy. In 2016, the growth in the number of CCI companies still stood at 1.6% compared to 0.3% for the economy as a whole.

Looking at the development of CCI businesses over the longer term, the number of cultural and creative businesses has grown by an average of 0.7% per year since 2012 (see Figure 6.4). A particularly large increase has been seen in the software and games industry, in which the annual growth rate is 4.1%. This figure also reflects the continued high level of start-up activity in this submarket. Development in the number of companies in the performing arts market (3.3%), the design industry (2.1%) and the film industry (0.8%) was also above average.

Across five submarkets, the number of companies has, however, fallen over the longer term. This is especially true of the advertising market, which experienced a negative average annual growth rate of -3.2%.

Figure 6.3: Development of number of companies in the cultural and creative industries compared to the overall economy (change in %)

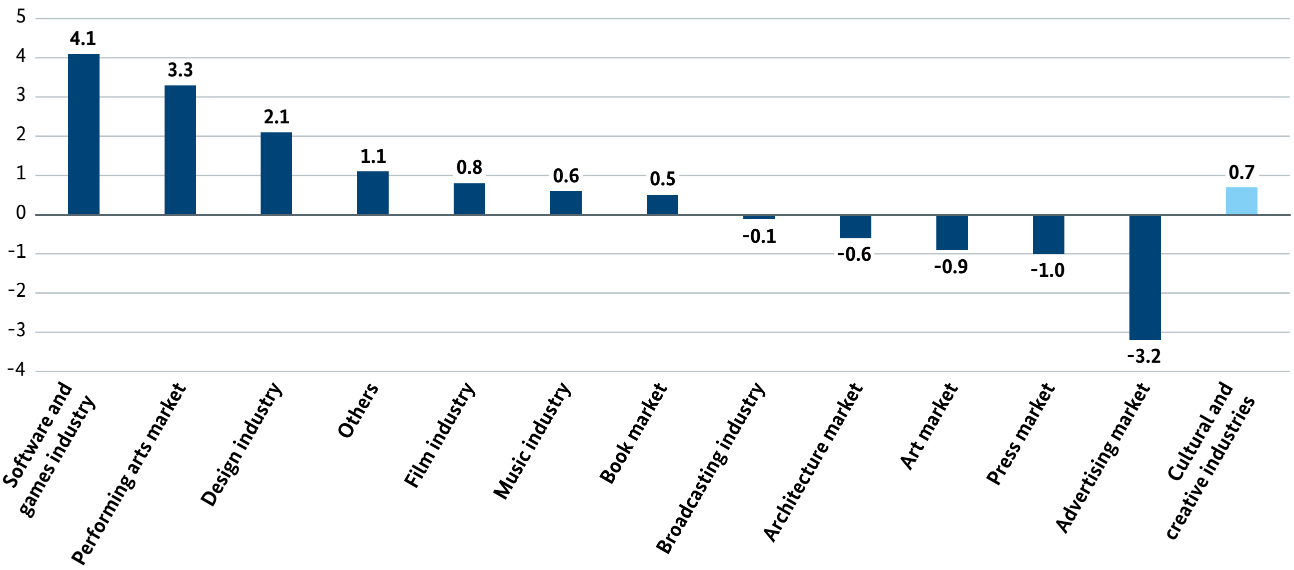


Aid to interpretation: Between 2012 and 2013 the number of companies in the overall economy fell by 0.2%; the figure for the CCI sector grew 0.2%.

*Data for 2017 based on estimates.

Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

Figure 6.4: Development in the number of companies in the various submarkets of the cultural and creative industries (average annual change in % for 2012 – 2017*)

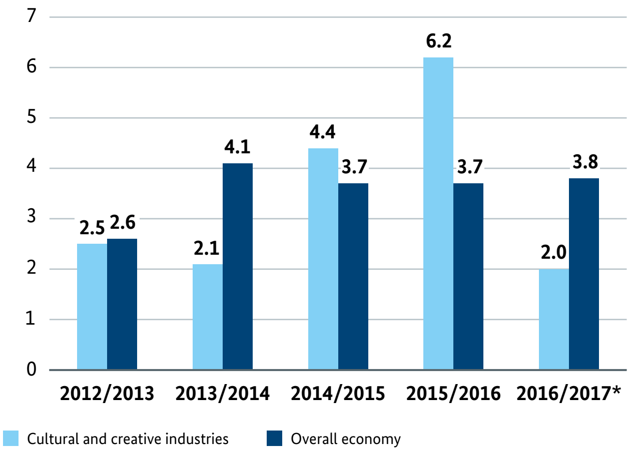


Aid to interpretation: The number of companies in the film industry grew by an average of 0.8% each year between 2012 and 2017.

*Data for 2017 based on estimates.

Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

Figure 6.5: Development of marginal employment in the cultural and creative industries compared to the overall economy (change in %)



Aid to interpretation: Gross value added in the cultural and creative industries grew by 6.2% between 2015 and 2016; the figure for the overall economy was 3.7%.

*Data for 2017 based on estimates.

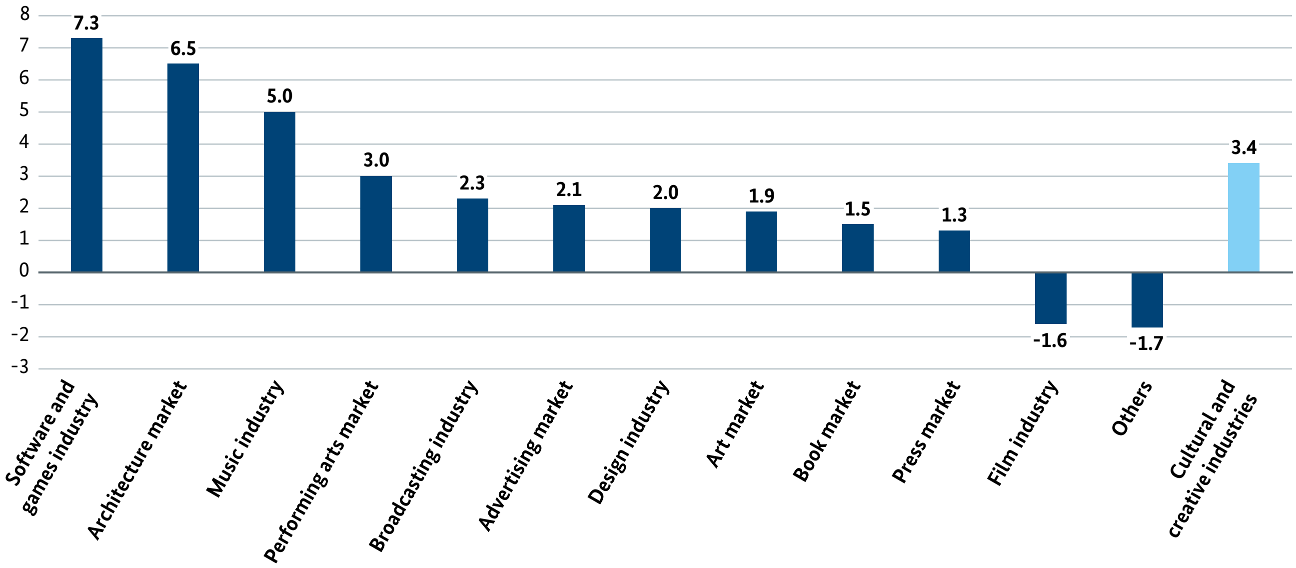
Source: VAT statistics, Destatis, 2018b; national accounts, Destatis, 2018c; in-house calculations by ZEW.

Gross value added continuing to rise

Gross value added in the cultural and creative industries rose by 2.0% in 2017, with the CCIs lagging behind the overall economy for the first time in two years. In the economy as a whole, gross value added rose by 3.8% (see Figure 6.5). In 2016, growth in gross value added in the cultural and creative industries was still 6.2%.

Over the longer term, the figure is also positive. From 2012 to 2017, gross value added increased by an average of 3.4% annually (see Figure 6.6). The largest average growth of 7.3% was achieved in the software and games industry. However, positive development was also seen across this period in the architecture market (6.5%) and the music industry (5.0%). In the film industry, on the other hand, average gross value added experienced a decline.

Figure 6.6: Development in gross value added in the various submarkets of the cultural and creative industries (average annual change in % for 2012 – 2017*)



Aid to interpretation: Gross value added in the music industry grew by an average of 5.0% per annum between 2012 and 2017.

*Data for 2017 based on estimates.

Source: VAT statistics, Destatis, 2018b; national accounts, Destatis, 2018c; in-house calculations by ZEW.

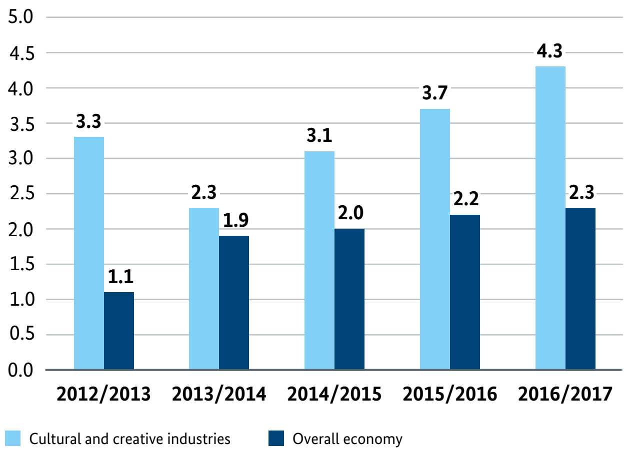
Growth in the number of core workers higher in the cultural and creative industries than in the overall economy

In the CCIs, the number of workers subject to the payment of social security contributions has been growing at a stronger rate than in the overall economy for years. In 2017, the number of workers subject to the payment of social security contributions in the CCIs rose by 4.3%, while it climbed only 2.3% in the economy as a whole (see Figure 6.7).

Marginal employment in the cultural and creative industries fell again slightly in 2017, dropping 0.1% (see Figure 6.8). After a sharp decline of 12.0% in 2015, marginal employment rose again slightly in 2016, when it grew by 0.8%. While the number of marginal workers is slightly declining in the CCI, it rose by 0.6% in 2017 across the economy as a whole.

In 2017, the number of core workers (i.e. self-employed persons and employees subject to the payment of social security contributions) again rose much more strongly in the cultural and creative industries than in the overall economy. While the number of core workers in the overall economy rose by 2.1%, in the cultural and creative industries it grew by 3.4% (see Figure 6.9). This means that the number of core workers in the cultural and creative industries grew more quickly than in the four preceding years.

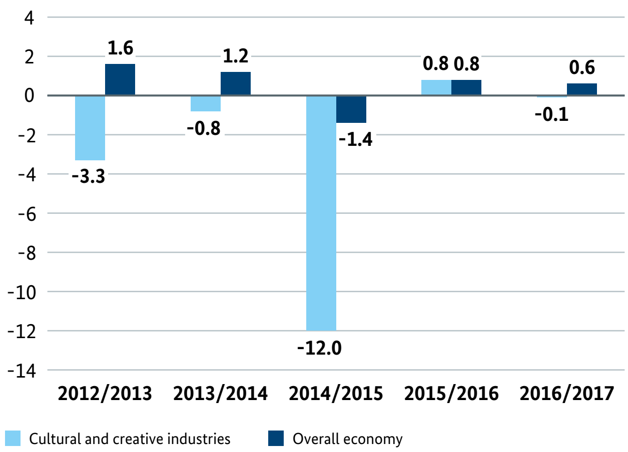
Figure 6.7: Development of the number of workers subject to the payment of social security contributions in the cultural and creative industries compared to the overall economy (change in %)



Aid to interpretation: The number of employees subject to the payment of social security contributions in the cultural and creative industries rose by 3.3% between 2012 and 2013. Across the economy as a whole, the number of employees subject to the payment of social security contributions increased by 1.1.% during the same period.

Source: Employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

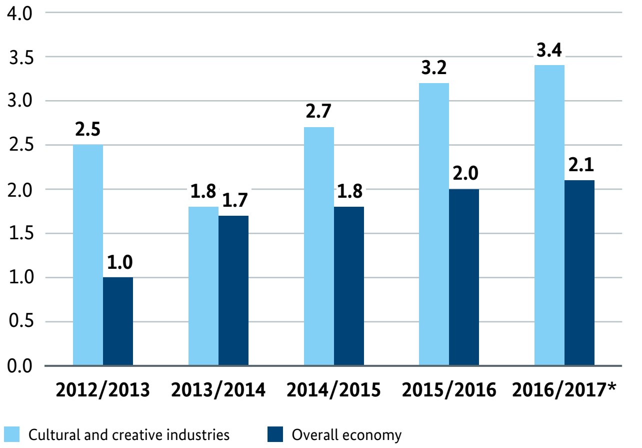
Figure 6.8: Development of marginal employment in the cultural and creative industries compared to the overall economy (change in %)



Aid to interpretation: The number of people in marginal employment in the cultural and creative industries dropped by 3.3% between 2012 and 2013, while it rose by 1.6% in the overall economy.

Source: Employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

Figure 6.9: Development of the number of core workers (self-employed persons and employees subject to the payment of social security contributions) in the cultural and creative industries compared to the overall economy (change in %)



Aid to interpretation: The number of core workers in the overall economy rose by 1.0% between 2012 and 2013; the figure for the CCIs was 2.5%.

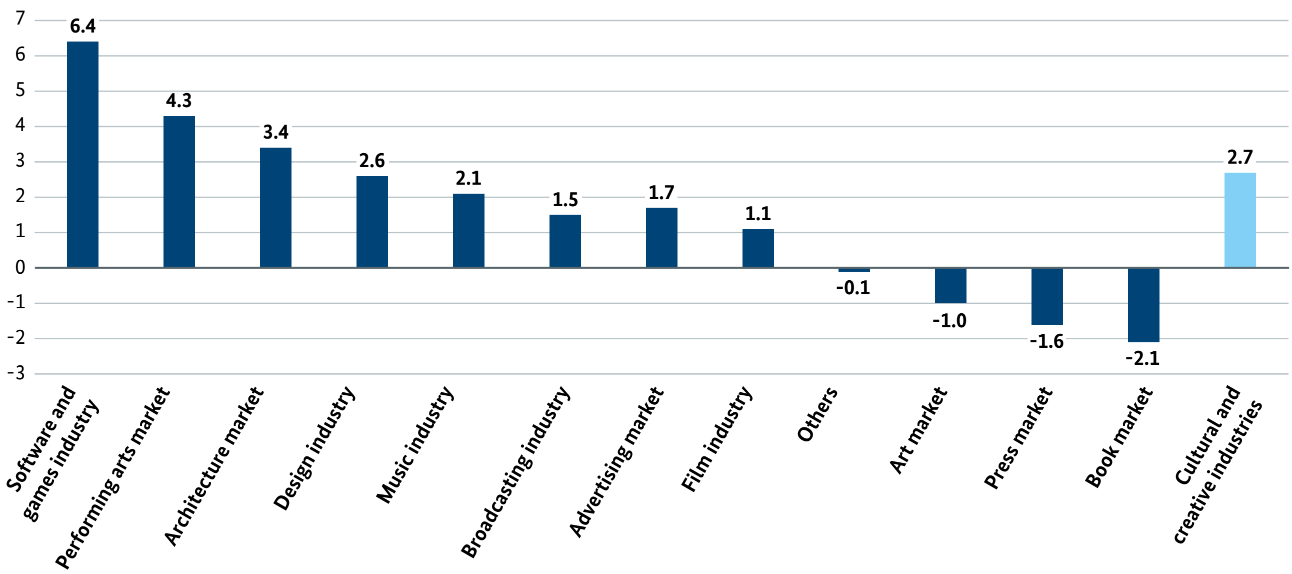
*Data for 2017 based partly on estimates.

Source: VAT statistics, Destatis, 2018b, employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

Total employment (core and marginal workers) also rose again in 2017, growing by 2.1%. This is well above the rise of 1.7% for the economy as a whole (neither figure shown).

Between 2012 and 2017, the number of self-employed persons and employees subject to the payment of social security contributions rose by an average of 2.7% per annum (see Figure 6.10). The software and games industry made a particularly strong contribution to the growth in core employment. In this submarket, the average annual growth rate in the number of core workers is 6.4%. Growth in core employment was also above average in the performing arts market, the architecture market, and the design industry. However, in the art, press and book markets, the number of core workers declined over the longer term (from 2012 – 2017).

Figure 6.10: Development of core workers (self-employed persons and employees subject to the payment of social security contributions) in the various submarkets of the cultural and creative industries (average change p.a. 2012 – 2017* in %)



Aid to interpretation: The number of core workers in the design industry grew by an average of 2.6% per annum between 2012 and 2017.

*Data for 2017 partly based on estimates (in relation to VAT statistics).

Source: VAT statistics, Destatis, 2018b, employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

Start-up activity declining

According to the Mannheim Enterprise Panel, around 9,500 active companies were set up in the cultural and creative industries in Germany last year. The number of new start-ups fell slightly compared with the preceding year, continuing the negative trend in start-up figures since 2010. In 2017, the number of start-ups founded in Germany's CCIs was 33% lower than its highest figure, recorded in 2009. The cultural and creative industries are thus following the general trend in Germany of a decline in start-ups across the economy.

The start-up rate in the CCI sector differs greatly between the different submarkets, with start-up activity strongly focused on four submarkets which account for almost two thirds of all new companies. In 2017, 31% of all start-ups took place in the software and games industry, 16.5% in the design industry, 13% in the architecture market and 12.5% in the advertising market. Other submarkets with a relatively high share of CCI start-ups are the press market and the film industry. Together, the other five submarkets (as well as Other) account for less than 14% of all start-ups in Germany's cultural and creative industries.

Software and games industry continues to account for bulk of innovation in the CCI sectors

Average spending on innovation in 2015/2016 across the whole of the German CCIs was €5.6 billion. This is equivalent to 3.6% of total innovation spending across the German economy. Over 70% of this innovation spending (see Figure 5.1) was accounted for by the software and games submarket (and more than 99% of this by the software industry). Significant spending on innovation is also made by the press market (7.7% of total CCI spending on innovation) and the broadcasting industry (5.8%).

The other submarkets make only a small contribution to the total innovation spending by the German cultural and creative industries (film industry 3.2%, advertising market 3.2%, book market 2.7%, architecture market 2.5%, design industry 2.5%, music industry 1.9%).

In comparison with the 2012/1013 (€4.87 billion), spending on innovation in the CCIs has significantly risen (+15%). The software and games industry recorded the strongest absolute growth, at +€0.52 billion. The highest relative (percentage) increases in innovation spending were recorded by the music industry, the design industry, the press market and the architecture market. In the film, broadcasting industry and advertising market, innovation spending declined between 2012/2013 and 2015/2016. Spending on innovation in the book market has remained almost unchanged.

Cultural and creative industries as a stimulus for the overall economy

The cultural and creative industries in Germany are closely linked to other companies. Around 81% of CCI businesses supply products and services to other businesses. This indicates that the cultural and creative industries can often contribute to value creation in other companies.

The capacity of the cultural and creative industries to help create value is not just limited to its own sector or to the services sector, as might be imagined. The purchase of CCI services is also particularly important for clients in manufacturing. Around 79% of industrial companies state that they have bought cultural and creative services from external companies in the past three years. Within manufacturing, the figure is the highest in vehicle construction, at 88%. Other industries in which an above-average number of companies purchased cultural and creative services are electronics/electrical engineering at 86%, and machine and equipment manufacturing at 82%.

Conclusion

Last year, indicators for the cultural and creative industries showed a mixed picture. While gross value added and the number of core workers significantly increased once again, the total number of companies and their turnover either stagnated or experienced a slight decline. Overall, the cultural and creative industries are continuing to evolve in similar fashion to the overall economy.

The cultural and creative industries were able to significantly increase their innovation spending in 2015/16 compared to 2012/13, with this increase mainly focused on the software and games industry. At the same time, the cultural and creative industries play an important role in stimulating innovation in other sectors, not only in the software and games industry, but also, for example, in the design industry and advertising market, which support traditional industries with content and design, as well as with the way in which they interact with their clients. The industrial sector often finds creative services too expensive and does not always see the benefits of such services. At the same time, however, it should also be noted that many industrial companies employ their own creative staff and do not outsource these services.

Recommendations for action

This report gives rise to the following recommendations for action in economic policy in order to foster the cultural and creative industries:

- Leveraging the innovation capacity of the cultural and creative industries to raise growth and value added across the overall economy.
- Communicating positive examples of successful cooperation between industrial companies and providers of cultural and creative services more widely in order to demonstrate how valuable cultural and creative services are.
- Making it easier to measure non-technical innovation provided by and used within the creative industries and evaluating how suitable various metrics are through further studies.
- Making sure funding for non-technical innovation in industry is also available to upstream products and services from the cultural and creative industries.

7 Annex

7.1 Detailed Tables

Table 7.1: Cultural and creative industries by submarket: number of companies, 2009 – 2017*

Submarket	2009	2010	2011	2012	2013	2014	2015	2016	2017*
1. Music industry	13,862	13,723	13,894	13,796	13,811	13,759	14,057	14,430	14,197
2. Book market	16,232	16,481	16,702	16,828	16,811	16,798	17,079	17,268	17,254
3. Art market	13,763	13,464	13,422	13,203	13,153	12,794	12,752	12,874	12,616
4. Film industry	18,312	17,956	18,199	18,282	18,440	18,267	18,624	19,075	19,013
5. Broadcasting industry	17,853	17,751	18,128	18,154	18,159	18,074	18,179	17,880	18,071
6. Performing arts market	14,993	15,402	15,982	16,497	17,004	17,473	18,249	19,080	19,419
7. Design industry	48,332	50,111	52,439	53,676	54,454	55,624	57,127	58,431	59,548
8. Architecture market	39,956	40,159	40,702	40,762	40,205	40,040	39,849	39,691	39,605
9. Press market	34,317	33,564	33,498	33,131	32,557	32,119	32,341	32,241	31,569
10. Advertising market	37,082	35,330	34,577	33,448	32,107	30,855	30,221	30,220	28,490
11. Software and games industry	27,018	28,527	30,413	31,915	33,365	34,725	35,933	37,375	39,016
12. Others	7,353	7,506	7,736	7,751	7,812	7,775	7,887	8,249	8,183
Total, including double counts	289,073	289,974	295,692	297,442	297,877	298,302	302,298	306,813	306,980
Duplicate categories of economic activity	50,594	50,440	51,402	51,627	51,525	51,336	51,859	52,330	52,323
Cultural and creative industries (excluding double counts)	**238,479**	**239,534**	**244,290**	**245,816**	**246,353**	**246,967**	**250,439**	**254,484**	**254,657**
Overall economy	3,135,542	3,165,286	3,215,095	3,250,319	3,243,538	3,240,221	3,255,537	3,266,429	3,289,461
Ratio of CCIs to overall economy	*7.61%*	*7.57%*	*7.60%*	*7.56%*	*7.60%*	*7.62%*	*7.69%*	*7.79%*	*7.74%*

Note: *Data for 2017 estimated. Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

Table 7.2: Cultural and creative industries by submarket: sales (in € million), 2009 – 2017*

Submarket	2009	2010	2011	2012	2013	2014	2015	2016	2017*
1. Music industry	6,307	6,270	6,639	7,099	7,674	7,896	8,178	8,139	8,858
2. Book market	14,848	14,182	14,255	14,032	13,737	13,686	13,657	14,024	13,572
3. Art market	2,146	2,332	2,341	2,316	2,292	2,091	2,170	2,249	2,151
4. Film industry	8,734	8,925	9,283	9,228	9,060	9,328	9,844	9,572	9,523
5. Broadcasting industry	7,445	7,671	7,905	8,327	8,942	9,378	9,578	9,892	10,484
6. Performing arts market	3,316	3,478	3,742	3,909	3,971	4,262	4,502	4,770	4,851
7. Design industry	17,595	18,243	18,353	18,535	18,338	18,566	19,078	19,764	19,428
8. Architecture market	7,967	8,031	8,708	8,813	9,130	9,554	10,236	10,700	10,829
9. Press market	31,341	31,398	31,711	31,931	31,065	30,657	30,133	30,054	29,855
10. Advertising market	25,508	25,714	24,929	24,965	25,175	26,130	27,033	29,405	28,344
11. Software and games industry	24,296	26,496	28,442	29,642	29,418	31,619	34,362	37,727	38,005
12. Others	1,578	1,588	1,652	1,587	1,531	1,418	1,381	1,425	1,343
Total, including double counts	151,080	154,327	157,960	160,385	160,332	164,586	170,151	177,720	177,244
Duplicate categories of economic activity	16,751	16,993	16,990	17,047	17,178	17,691	18,084	18,906	18,666
Cultural and creative industries (excluding double counts)	**134,329**	**137,333**	**140,970**	**143,338**	**143,155**	**146,895**	**152,067**	**158,814**	**158,578**
Overall economy	4,897,938	5,240,997	5,687,179	5,752,249	5,765,567	5,870,875	5,989,743	6,088,287	6,190,332
Ratio of CCIs to overall economy	*2.74%*	*2.62%*	*2.48%*	*2.49%*	*2.48%*	*2.50%*	*2.54%*	*2.61%*	*2.56%*

Note: *Data for 2017 estimated. Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

Table 7.3: Cultural and creative industries by submarket: number of core workers, 2009 – 2017*

Submarket	2009	2010	2011	2012	2013	2014	2015	2016	2017*
1. Music industry	46,827	46,698	46,627	46,533	47,493	47,941	48,496	50,533	51,667
2. Book market	78,846	76,860	79,504	78,846	78,157	75,917	73,048	71,836	70,895
3. Art market	19,424	19,161	18,945	18,912	18,793	18,249	18,177	18,292	17,997
4. Film industry	58,503	57,313	57,772	57,633	57,090	57,429	58,866	59,712	60,989
5. Broadcasting industry	38,890	38,881	39,694	39,865	41,353	41,688	42,477	42,420	42,930
6. Performing arts market	32,298	33,225	34,112	35,389	37,886	38,805	40,278	42,158	43,679
7. Design industry	125,452	125,878	128,427	131,767	134,274	137,262	141,297	145,593	150,118
8. Architecture market	100,082	101,897	105,087	107,750	110,169	112,775	116,695	121,688	127,411
9. Press market	168,312	163,305	161,101	158,860	156,097	152,409	150,380	148,641	146,762
10. Advertising market	140,958	137,006	138,881	140,431	140,562	142,978	145,863	150,715	152,768
11. Software and games industry	243,807	251,708	268,456	299,427	321,092	337,923	358,800	381,364	408,382
12. Others	15,346	14,991	15,182	15,436	15,548	15,104	15,140	15,376	15,362
Total, including double counts	1,068,745	1,066,923	1,093,788	1,130,848	1,158,513	1,178,480	1,209,516	1,248,326	1,288,958
Duplicate categories of economic activity	115,637	114,403	117,016	119,119	121,245	122,442	124,589	128,246	131,275
Cultural and creative industries (excluding double counts)	**953,108**	**952,520**	**976,772**	**1,011,729**	**1,037,268**	**1,056,038**	**1,084,927**	**1,120,080**	**1,157,683**
Overall economy	30,738,823	31,131,887	31,858,678	32,530,353	32,859,218	33,414,726	34,026,834	34,709,747	35,454,434
Ratio of CCIs to overall economy	*3.10%*	*3.06%*	*3.07%*	*3.11%*	*3.16%*	*3.16%*	*3.19%*	*3.23%*	*3.27%*

Note: *Some data for 2017 estimated. Source: VAT statistics, Destatis, 2018b, employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

Table 7.4: Cultural and creative industries by submarket: employees subject to social security contributions, 2009 – 2017

Submarket	2009	2010	2011	2012	2013	2014	2015	2016	2017
1. Music industry	32,965	32,975	32,733	32,737	33,682	34,182	34,439	36,103	37,470
2. Book market	62,614	60,379	62,802	62,018	61,346	59,119	55,969	54,568	53,641
3. Art market	5,661	5,697	5,523	5,709	5,641	5,455	5,425	5,419	5,380
4. Film industry	40,191	39,357	39,573	39,351	38,650	39,162	40,242	40,637	41,976
5. Broadcasting industry	21,037	21,130	21,566	21,711	23,194	23,614	24,298	24,540	24,859
6. Performing arts market	17,305	17,823	18,130	18,892	20,882	21,332	22,029	23,078	24,260
7. Design industry	77,120	75,767	75,988	78,091	79,820	81,639	84,170	87,162	90,570
8. Architecture market	60,126	61,738	64,385	66,988	69,964	72,735	76,846	81,997	87,806
9. Press market	133,995	129,741	127,603	125,729	123,540	120,290	118,039	116,400	115,193
10. Advertising market	103,876	101,676	104,304	106,983	108,455	112,123	115,642	120,495	124,278
11. Software and games industry	216,789	223,181	238,043	267,512	287,727	303,198	322,867	343,989	369,366
12. Others	7,993	7,485	7,446	7,685	7,736	7,329	7,253	7,127	7,179
Total, including double counts	779,672	776,949	798,096	833,406	860,636	880,178	907,218	941,513	981,978
Duplicate categories of economic activity	65,043	63,963	65,614	67,492	69,721	71,107	72,731	75,917	78,952
Cultural and creative industries (excluding double counts)	**714,629**	**712,986**	**732,483**	**765,913**	**790,915**	**809,071**	**834,488**	**865,597**	**903,026**
Overall economy	27,603,281	27,966,601	28,643,583	29,280,034	29,615,680	30,174,505	30,771,297	31,443,318	32,164,973
Ratio of CCIs to overall economy	*2.59%*	*2.55%*	*2.56%*	*2.62%*	*2.67%*	*2.68%*	*2.71%*	*2.75%*	*2.81%*

Source: Employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

Table 7.5: Cultural and creative industries by submarket: people in marginal employment, 2009 – 2017

Submarket	2009	2010	2011	2012	2013	2014	2015	2016	2017
1. Music industry	11,857	11,916	12,128	12,671	12,902	13,213	13,423	13,863	14,675
2. Book market	21,288	20,920	20,374	19,766	18,959	18,320	17,610	17,188	16,471
3. Art market	4,591	4,472	4,395	4,355	4,290	4,178	4,046	3,999	3,882
4. Film industry	29,179	28,317	26,928	26,368	25,994	24,920	24,185	23,332	22,955
5. Broadcasting industry	2,142	2,045	1,750	1,723	1,841	1,842	1,752	1,785	1,766
6. Performing arts market	12,804	13,011	13,715	14,754	15,806	16,450	17,084	17,998	19,476
7. Design industry	65,288	66,974	63,977	62,114	61,783	65,410	56,513	60,399	60,779
8. Architecture market	18,116	18,080	18,391	18,462	19,109	19,369	18,892	18,989	19,279
9. Press market	134,817	133,704	131,207	130,370	123,373	113,233	89,870	84,448	81,751
10. Advertising market	119,006	123,173	115,272	110,736	104,008	111,445	95,069	101,754	102,467
11. Software and games industry	20,715	21,196	22,373	23,732	24,841	25,900	25,507	26,961	27,863
12. Others	1,914	1,773	1,754	1,682	1,652	1,614	1,576	1,634	1,698
Total, including double counts	441,717	445,581	432,264	426,733	414,558	415,894	365,526	372,349	373,063
Duplicate categories of economic activity	64,647	66,253	63,461	61,777	61,739	65,737	57,475	61,850	63,012
Cultural and creative industries (excluding double counts)	**377,070**	**379,328**	**368,803**	**364,956**	**352,819**	**350,158**	**308,051**	**310,499**	**310,051**
Overall economy	7,359,609	7,450,194	7,536,790	7,591,384	7,716,104	7,811,376	7,704,750	7,763,218	7,806,047
Ratio of CCIs to overall economy	*5.12%*	*5.09%*	*4.89%*	*4.81%*	*4.57%*	*4.48%*	*4.00%*	*4.00%*	*3.97%*

Source: Employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

Table 7.6: Mini-self-employed persons in the cultural and creative industries by submarket, 2009 – 2017*

Submarket	2009	2010	2011	2012	2013	2014*	2015*	2016*	2017*
1. Music industry	20,668	21,083	21,300	21,668	21,899	21,258	22,026	22,799	22,407
2. Book market	25,013	26,035	26,838	27,721	28,956	28,123	29,113	29,818	30,193
3. Art market	26,526	26,795	26,917	27,442	27,917	26,975	27,117	27,273	27,092
4. Film industry	35,239	36,390	37,416	38,913	40,186	40,242	41,936	43,690	44,431
5. Broadcasting industry	27,573	28,446	28,743	28,857	29,240	28,674	29,003	28,502	28,828
6. Performing arts market	34,072	35,586	37,230	39,550	41,610	41,818	44,112	46,382	47,596
7. Design industry	56,487	58,756	60,334	62,267	65,193	66,974	69,009	70,751	72,939
8. Architecture market	30,017	29,357	28,454	27,432	27,160	28,471	27,955	27,578	27,527
9. Press market	35,740	36,706	36,678	36,457	36,590	35,824	36,177	35,643	35,579
10. Advertising market	37,836	35,780	33,708	32,100	30,790	30,429	29,606	29,406	27,718
11. Software and games industry	31,873	33,402	34,497	35,953	37,900	40,824	42,002	43,510	45,629
12. Others	11,023	11,021	10,919	10,995	11,136	11,337	11,437	11,913	11,870
Total, including double counts	372,067	379,357	383,033	389,355	398,577	400,949	409,491	417,265	421,809
Duplicate categories of economic activity	78,774	80,333	81,060	82,248	83,746	84,093	85,966	87,371	88,272
Cultural and creative industries (excluding double counts)	**293,293**	**299,024**	**301,974**	**307,107**	**314,831**	**316,856**	**323,525**	**329,894**	**333,537**
Overall economy	2,730,690	2,852,745	2,978,680	3,088,923	3,191,742	3,002,379	3,052,847	3,086,893	3,120,875
Ratio of CCIs to overall economy	*10.74%*	*10.48%*	*10.14%*	*9.94%*	*9.86%*	*10.55%*	*10.60%*	*10.69%*	*10.69%*

*Data based on estimates. Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

Table 7.7: Cultural and creative industries by submarket: gross value added (in € million), 2009 – 2017*

Submarket	2009	2010	2011	2012	2013	2014	2015	2016	2017*
1. Music industry	4,763	4,682	4,905	5,354	5,755	5,928	6,198	6,393	6,822
2. Book market	4,744	4,765	5,054	5,055	5,089	5,148	5,180	5,467	5,451
3. Art market	1,282	1,400	1,280	1,313	1,362	1,312	1,373	1,484	1,442
4. Film industry	8,158	8,455	8,691	8,741	7,685	7,779	8,357	8,819	8,057
5. Broadcasting industry	6,997	7,332	7,479	7,987	7,682	7,885	8,203	9,166	8,930
6. Performing arts market	5,595	6,362	6,509	6,797	6,991	7,139	7,471	7,623	7,891
7. Design industry	9,112	9,431	9,494	9,721	10,125	9,689	10,031	10,757	10,738
8. Architecture market	4,689	4,714	4,977	5,144	5,700	5,865	6,575	6,791	7,050
9. Press market	10,482	11,175	12,163	12,515	12,515	12,727	12,738	12,748	13,318
10. Advertising market	10,901	11,157	10,812	10,764	11,554	11,164	11,366	11,922	11,931
11. Software and games industry	15,474	17,269	19,957	21,769	23,522	25,353	26,721	29,135	31,010
12. Others	1,432	1,362	1,346	1,341	1,313	1,184	1,189	1,331	1,228
Total, including double counts	83,629	88,104	92,667	96,502	99,294	101,172	105,402	111,636	113,867
Duplicate categories of economic activity	9,437	9,698	9,751	9,882	10,515	10,559	10,811	11,210	11,458
Cultural and creative industries (excluding double counts)	**74,192**	**78,406**	**82,916**	**86,620**	**88,779**	**90,613**	**94,591**	**100,425**	**102,409**
Overall economy	2,207,236	2,321,695	2,428,078	2,478,596	2,542,656	2,646,444	2,745,337	2,847,740	2,954,696
Ratio of CCIs to overall economy	*3.36%*	*3.38%*	*3.41%*	*3.49%*	*3.49%*	*3.42%*	*3.45%*	*3.53%*	*3.47%*

Note: *Data for 2017 estimated.

Source: Employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

Table 7.8: Number of companies in the cultural and creative industries by submarket and category of economic activity (WZ), 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014	2015	2016	2017*
1. Music industry										
32.20	Manufacture of musical instruments	1,165	1,180	1,197	1,204	1,218	1,216	1,265	1,291	1,287
47.59.3	Retail sale of musical instruments, etc.	2,235	2,142	2,087	1,998	1,922	1,858	1,809	1,742	1,654
47.63	Retail sale of music and video recordings, etc.	238	282	306	319	333	353	387	389	405
59.20.1	Sound-recording studios, etc.	479	539	583	610	634	659	659	700	730
59.20.2	Publishing of sound recordings	395	390	383	366	376	380	388	403	389
59.20.3	Publishing of printed music	1,200	1,149	1,134	1,095	1,062	1,075	1,055	1,072	1,022
90.01.2	Ballet companies, orchestras, bands and choirs	1,828	1,661	1,666	1,560	1,510	1,472	1,505	1,556	1,425
90.02	Support activities to performing arts	2,024	2,109	2,249	2,395	2,471	2,429	2,547	2,720	2,800
90.03.1	Own-account composers, etc.	2,656	2,643	2,683	2,695	2,752	2,776	2,924	3,016	3,001
90.04.1	Organisation of theatre performances and concerts	1,414	1,400	1,378	1,337	1,325	1,335	1,316	1,332	1,291
90.04.2	Operation of opera houses, theatre and concert halls, etc.	228	228	228	217	208	206	202	209	194
	Submarket total	**13,862**	**13,723**	**13,894**	**13,796**	**13,811**	**13,759**	**14,057**	**14,430**	**14,197**

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Tabelle 7.8: Number of companies in the cultural and creative industries by submarket and category of economic activity (WZ), 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014	2015	2016	2017*
2. Book market										
18.14	Binding and related services	1,070	1,041	1,010	993	961	909	896	855	830
47.61	Retail sale of books	4,290	4,195	4,137	4,038	3,896	3,803	3,716	3,682	3,539
47.79.2	Retail sale of second-hand books	479	459	448	429	428	414	407	391	382
58.11	Book publishing	2,193	2,220	2,243	2,209	2,170	2,117	2,075	2,034	2,013
74.30.1	Translation activities	1,584	1,625	1,718	1,811	1,884	1,974	2,088	2,244	2,295
90.03.2	Own-account writers	6,616	6,941	7,146	7,348	7,472	7,581	7,897	8,062	8,195
	Submarket total	**16,232**	**16,481**	**16,702**	**16,828**	**16,811**	**16,798**	**17,079**	**17,268**	**17,254**
3. Art market										
47.78.3	Retail sale of art, etc.	1,797	1,712	1,685	1,632	1,560	1,469	1,425	1,395	1,322
47.79.1	Retail sale of antiques, etc.	2,193	2,115	2,041	2,007	1,949	1,853	1,786	1,752	1,696
90.03.3	Own-account visual artists	8,883	8,814	8,932	8,892	9,010	8,870	8,949	9,127	9,102
91.02	Museum activities	890	823	764	672	634	602	592	600	497
	Submarket total	**13,763**	**13,464**	**13,422**	**13,203**	**13,153**	**12,794**	**12,752**	**12,874**	**12,616**
4. Film industry										
47.63	Retail sale of music and video recordings, etc.	238	282	306	319	333	353	387	389	405
59.11	Motion picture, video and TV programme production	5,785	5,253	5,118	4,988	4,894	4,567	4,400	4,409	4,237
59.12	Motion picture, video and TV programme post-production	696	767	851	861	856	774	833	852	846
59.13	Motion picture, video and TV programme distribution	929	865	792	711	654	576	556	518	423
59.14	Motion picture projection	888	878	865	843	849	834	841	822	812
77.22	Renting of video tapes and disks	1,321	1,201	1,087	969	864	753	653	553	434
90.01.4	Own-account stage, motion picture, radio and TV artists, etc.	8,455	8,710	9,180	9,591	9,990	10,410	10,954	11,532	11,855
	Submarket total	**18,312**	**17,956**	**18,199**	**18,282**	**18,440**	**18,267**	**18,624**	**19,075**	**19,013**
5. Broadcasting industry										
60.10	Radio broadcasting	266	262	255	255	262	262	254	252	257
60.20	Television programming and broadcasting	87	88	91	89	94	89	87	79	85
90.03.5	Own-account journalists and press photographers	17,500	17,401	17,782	17,810	17,803	17,723	17,838	17,549	17,729
	Submarket total	**17,853**	**17,751**	**18,128**	**18,154**	**18,159**	**18,074**	**18,179**	**17,880**	**18,071**
6. Performing arts market										
85.52	Cultural education	1,986	2,080	2,105	2,111	2,147	2,204	2,269	2,310	2,317
90.01.1	Theatre ensembles	126	124	128	131	133	142	166	157	160
90.01.3	Own-account performers and circus groups	564	573	546	550	584	588	642	665	661
90.01.4	Own-account stage, motion picture, radio and TV artists, etc.	8,455	8,710	9,180	9,591	9,990	10,410	10,954	11,532	11,855

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Tabelle 7.8: Number of companies in the cultural and creative industries by submarket and category of economic activity (WZ), 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014	2015	2016	2017*
90.02	Support activities to performing arts	2,024	2,109	2,249	2,395	2,471	2,429	2,547	2,720	2,800
90.04.1	Organisation of theatre performances and concerts	1,414	1,400	1,378	1,337	1,325	1,335	1,316	1,332	1,291
90.04.2	Private operation of opera houses, theatre and consert halls, etc.	228	228	228	217	208	206	202	209	194
90.04.3	Variety shows and small theatres	196	178	168	165	146	159	153	155	141
	Submarket total	**14,993**	**15,402**	**15,982**	**16,497**	**17,004**	**17,473**	**18,249**	**19,080**	**19,419**
7. Design industry										
32.12	Manufacture of jewellery and related articles	3,777	3,706	3,661	3,603	3,477	3,424	3,314	3,308	3,204
71.11.2	Consulting architectural activities in interior design	2,675	3,185	3,577	3,862	3,987	4,119	4,189	4,216	4,562
73.11	Advertising agencies (50% share)	18,060	17,125	16,702	16,096	15,408	14,761	14,426	14,383	13,486
74.10.1	Industrial, product and fashion designers	1,606	2,164	2,586	2,975	3,372	3,590	3,792	3,987	4,491
74.10.2	Graphics and communications designers	5,506	7,269	8,725	10,054	11,100	12,425	13,598	14,419	15,833
74.10.3	Interior decorators	8,017	7,679	7,773	7,303	6,898	6,661	6,588	6,512	5,994
74.20.1	Photographers	8,691	8,983	9,415	9,783	10,212	10,644	11,220	11,606	11,977
	Submarket total	**48,332**	**50,111**	**52,439**	**53,676**	**54,454**	**55,624**	**57,127**	**58,431**	**59,548**
8. Architecture market										
71.11.1	Consulting architectural activities in building construction	28,140	27,587	27,554	27,137	26,465	26,084	25,772	25,490	24,934
71.11.2	Consulting architectural activities in interior design	2,675	3,185	3,577	3,862	3,987	4,119	4,189	4,216	4,562
71.11.3	Consulting architectural activities in town, city and regional planning	4,664	4,828	4,990	5,088	5,050	5,083	5,115	5,185	5,234
71.11.4	Consulting architectural activities in landscape architecture	3,072	3,088	3,108	3,156	3,168	3,179	3,198	3,193	3,236
90.03.4	Own-account restorers	1,405	1,471	1,473	1,519	1,535	1,575	1,575	1,607	1,640
	Submarket total	**39,956**	**40,159**	**40,702**	**40,762**	**40,205**	**40,040**	**39,849**	**39,691**	**39,605**
9. Press market										
47.62	Retail sale of newspapers and stationery	9,536	9,219	8,891	8,563	8,208	8,000	8,256	8,604	7,874
58.12	Publishing of directories and mailing lists, etc.	211	200	217	211	212	214	203	198	203
58.13	Publishing of newspapers	831	829	826	845	849	835	812	808	828
58.14	Publishing of journals and periodicals	1,848	1,782	1,741	1,722	1,689	1,643	1,621	1,568	1,546
58.19	Other publishing activities (excluding software)	3,396	3,144	3,053	3,002	2,906	2,866	2,799	2,739	2,659
63.91	News agency activities	995	989	988	978	890	838	812	775	729
90.03.5	Own-account journalists and press photographers	17,500	17,401	17,782	17,810	17,803	17,723	17,838	17,549	17,729
	Submarket total	**34,317**	**33,564**	**33,498**	**33,131**	**32,557**	**32,119**	**32,341**	**32,241**	**31,569**

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Tabelle 7.8: Number of companies in the cultural and creative industries by submarket and category of economic activity (WZ), 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014	2015	2016	2017*
10. Advertising market										
73.11	Advertising agencies	36,120	34,250	33,404	32,191	30,815	29,521	28,851	28,765	26,972
73.12	Media representation	962	1,080	1,173	1,257	1,292	1,334	1,370	1,455	1,518
	Submarket total	**37,082**	**35,330**	**34,577**	**33,448**	**32,107**	**30,855**	**30,221**	**30,220**	**28,490**
11. Software and games industry										
58.21	Publishing of computer games	392	354	336	326	295	283	279	273	245
58.29	Other software publishing	354	474	534	529	543	544	532	563	574
62.01.1	Web-page design and programming	7,457	8,256	9,037	9,603	10,073	10,611	11,106	11,559	12,174
62.01.9	Other software development	18,625	19,172	20,165	21,042	21,919	22,638	23,300	24,182	25,121
63.12	Web portals	190	271	341	415	535	649	716	798	902
	Submarket total	**27,018**	**28,527**	**30,413**	**31,915**	**33,365**	**34,725**	**35,933**	**37,375**	**39,016**
12. Others										
32.11	Striking of coins	49	54	54	53	50	45	43	41	39
32.13	Manufacture of imitation jewellery and related articles	303	289	304	303	305	318	327	328	331
74.20.2	Photographic laboratories	518	466	466	428	413	378	354	338	312
74.30.2	Interpretation activities	6,006	6,237	6,456	6,547	6,637	6,638	6,791	7,173	7,160
91.01	Libraries and archives	111	100	101	81	80	79	73	64	55
91.03	Operation of historical sites and buildings and similar visitor attractions	104	95	95	92	87	90	92	85	82
91.04	Botanical and zoological gardens and nature reserves	262	265	260	247	240	227	207	220	204
	Submarket total	**7,353**	**7,506**	**7,736**	**7,751**	**7,812**	**7,775**	**7,887**	**8,249**	**8,183**
Total, including double counts		289,073	289,974	295,692	297,442	297,877	298,302	302,298	306,813	306,980
Duplicate categories of economic activity		50,594	50,440	51,402	51,627	51,525	51,336	51,859	52,330	52,323
Cultural and creative industries (excluding double counts)		**238,479**	**239,534**	**244,290**	**245,816**	**246,353**	**246,967**	**250,439**	**254,484**	**254,657**
Ratio of CCIs to overall economy		*7.61%*	*7.57%*	*7.60%*	*7.56%*	*7.60%*	*7.62%*	*7.69%*	*7.79%*	*7.74%*

Note: *Data for 2017 estimated. Minimal discrepancies in the submarket totals or overall totals can be caused by rounding.

Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

Table 7.9: Turnover (in € million) in the cultural and creative industries by submarket and category of economic activity 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014	2015	2016	2017*
1. Music industry										
32.20	Manufacture of musical instruments	532	551	579	592	616	611	628	640	661
47.59.3	Retail sale of musical instruments, etc.	1,105	1,175	1,207	1,245	1,187	1,227	1,279	1,345	1,308
47.63	Retail sale of music and video recordings, etc.	113	126	140	158	155	154	186	169	181
59.20.1	Sound-recording studios, etc.	93	109	125	134	126	119	120	130	130
59.20.2	Publishing of sound recordings	1,215	989	1,016	983	866	829	793	541	554
59.20.3	Publishing of printed music	587	549	571	918	1,675	1,666	1,749	1,698	2,402
90.01.2	Ballet companies, orchestras, bands and choirs	225	210	239	233	228	209	224	231	223
90.02	Support activities to performing arts	379	402	440	461	501	550	597	700	702
90.03.1	Own-account composers, etc.	261	261	274	283	275	308	316	313	320
90.04.1	Organisation of theatre performances and concerts	1,437	1,509	1,644	1,639	1,597	1,766	1,795	1,897	1,870
90.04.2	Operation of opera houses, theatre and concert halls, etc.	361	389	403	453	447	456	491	475	507
	Submarket total	**6,307**	**6,270**	**6,639**	**7,099**	**7,674**	**7,896**	**8,178**	**8,139**	**8,858**
2. Book market										
18.14	Binding and related services	732	836	871	805	786	733	696	691	650
47.61	Retail sale of books	3,667	3,600	3,506	3,551	3,451	3,558	3,866	3,831	3,727
47.79.2	Retail sale of second-hand books	66	72	70	65	63	56	61	61	54
58.11	Book publishing	9,590	8,848	8,945	8,754	8,581	8,480	8,133	8,457	8,195
74.30.1	Translation activities	271	274	295	287	278	293	315	374	342
90.03.2	Own-account writers	522	552	568	570	578	566	585	611	605
	Submarket total	**14,848**	**14,182**	**14,255**	**14,032**	**13,737**	**13,686**	**13,657**	**14,024**	**13,572**
3. Art market										
47.78.3	Retail sale of art, etc.	594	660	742	707	729	619	679	667	656
47.79.1	Retail sale of antiques, etc.	409	404	432	416	381	324	302	301	275
90.03.3	Own-account visual artists	730	750	753	765	766	770	784	874	846
91.02	Museum activities	412	518	414	428	416	378	405	407	373
	Submarket total	**2,146**	**2,332**	**2,341**	**2,316**	**2,292**	**2,091**	**2,170**	**2,249**	**2,151**
4. Film industry										
47.63	Retail sale of music and video recordings, etc.	113	126	140	158	155	154	186	169	181
59.11	Motion picture, video and TV programme production	4,447	4,489	4,458	4,444	4,418	4,664	4,674	4,676	4,663
59.12	Motion picture, video and TV programme post-production	124	153	164	181	240	210	234	211	262
59.13	Motion picture, video and TV programme distribution	1,667	1,815	1,993	1,752	1,569	1,572	1,630	1,528	1,322
59.14	Motion picture projection	1,315	1,276	1,419	1,527	1,524	1,488	1,761	1,535	1,657
77.22	Renting of video tapes and disks	348	315	302	296	261	277	309	353	301

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Table 7.9: Turnover (in € million) in the cultural and creative industries by submarket and category of economic activity 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014	2015	2016	2017*
90.01.4	Own-account stage, motion picture, radio and TV artists, etc.	720	752	806	870	892	964	1,049	1,102	1,137
	Submarket total	**8,734**	**8,925**	**9,283**	**9,228**	**9,060**	**9,328**	**9,844**	**9,572**	**9,523**
5. Broadcasting industry										
60.10	Radio broadcasting	1,004	965	962	969	981	933	942	1,034	1,004
60.20	Television programming and broadcasting	5,233	5,487	5,686	6,135	6,747	7,238	7,423	7,641	8,286
90.03.5	Own-account journalists and press photographers	1,208	1,219	1,258	1,223	1,213	1,206	1,212	1,218	1,194
	Submarket total	**7,445**	**7,671**	**7,905**	**8,327**	**8,942**	**9,378**	**9,578**	**9,892**	**10,484**
6. Performing arts market										
85.52	Cultural education	235	239	252	265	272	275	290	305	312
90.01.1	Theatre ensembles	53	54	55	81	91	93	101	103	124
90.01.3	Own-account performers and circus groups	51	55	60	57	79	72	89	97	102
90.01.4	Own-account stage, motion picture, radio and TV artists, etc.	720	752	806	870	892	964	1,049	1,102	1,137
90.02	Support activities to performing arts	379	402	440	461	501	550	597	700	702
90.04.1	Organisation of theatre performances and concerts	1,437	1,509	1,644	1,639	1,597	1,766	1,795	1,897	1,870
90.04.2	Private operation of opera houses, theatre and concert halls, etc.	361	389	403	453	447	456	491	475	507
90.04.3	Variety shows and small theatres	81	78	82	84	91	86	89	92	96
	Submarket total	**3,316**	**3,478**	**3,742**	**3,909**	**3,971**	**4,262**	**4,502**	**4,770**	**4,851**
7. Design industry										
32.12	Manufacture of jewellery and related articles	2,216	2,531	2,686	2,780	2,336	2,181	2,219	2,110	1,952
71.11.2	Consulting architectural activities in interior design	401	485	594	634	669	727	768	873	902
73.11	Advertising agencies (50% share)	12,132	12,112	11,704	11,609	11,703	11,868	11,984	12,473	12,173
74.10.1	Industrial, product and fashion designers	237	327	419	475	544	599	625	664	749
74.10.2	Graphics and communications designers	495	627	749	856	954	1,078	1,210	1,331	1,427
74.10.3	Interior decorators	1,012	981	1,040	972	922	922	1,028	1,076	970
74.20.1	Photographers	1,102	1,179	1,160	1,209	1,210	1,191	1,244	1,237	1,254
	Submarket total	**17,595**	**18,243**	**18,353**	**18,535**	**18,338**	**18,566**	**19,078**	**19,764**	**19,428**
8. Architecture market										
71.11.1	Consulting architectural activities in building construction	5,821	5,765	6,126	6,117	6,316	6,569	7,080	7,290	7,315
71.11.2	Consulting architectural activities in interior design	401	485	594	634	669	727	768	873	902
71.11.3	Consulting architectural activities in town, city and regional planning	1,022	1,066	1,239	1,288	1,347	1,389	1,486	1,599	1,647
71.11.4	Consulting architectural activities in landscape architecture	571	543	565	586	603	658	700	737	748
90.03.4	Own-account restorers	151	171	183	188	196	211	203	202	217
	Submarket total	**7,967**	**8,031**	**8,708**	**8,813**	**9,130**	**9,554**	**10,236**	**10,700**	**10,829**

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Table 7.9: Turnover (in € million) in the cultural and creative industries by submarket and category of economic activity 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014	2015	2016	2017*
9. Press market										
47.62	Retail sale of newspapers and stationery	3,403	3,351	3,381	3,422	3,303	3,275	3,344	3,458	3,357
58.12	Publishing of directories and mailing lists	1,369	1,415	1,762	1,875	1,825	1,706	1,599	1,516	1,688
58.13	Publishing of newspapers	10,930	11,183	11,501	11,781	11,396	10,595	10,112	10,094	10,164
58.14	Publishing of journals and periodicals	9,918	9,933	9,829	9,934	9,742	9,768	9,708	9,473	9,505
58.19	Other publishing activities (excluding software)	3,996	3,785	3,458	3,197	3,120	3,622	3,643	3,733	3,442
63.91	News agency activities	516	513	522	497	466	485	515	561	504
90.03.5	Own-account journalists and press photographers	1,208	1,219	1,258	1,223	1,213	1,206	1,212	1,218	1,194
	Submarket total	**31,341**	**31,398**	**31,711**	**31,931**	**31,065**	**30,657**	**30,133**	**30,054**	**29,855**
10. Advertising market										
73.11	Advertising agencies	24,264	24,223	23,407	23,217	23,406	23,737	23,969	24,946	24,346
73.12	Media representation	1,244	1,491	1,522	1,748	1,769	2,394	3,064	4,459	3,998
	Submarket total	**25,508**	**25,714**	**24,929**	**24,965**	**25,175**	**26,130**	**27,033**	**29,405**	**28,344**
11. Software and games industry										
58.21	Publishing of computer games	4,135	3,040	2,327	1,743	1,395	336	269	304	309
58.29	Other software publishing	272	429	504	396	425	424	400	442	396
62.01.1	Web-page design and programming	2,530	2,732	3,055	3,179	3,208	3,523	3,955	4,670	4,502
62.01.9	Other software development	17,034	19,818	21,997	23,663	23,509	26,489	28,070	30,298	30,891
63.12	Web portals	324	477	559	661	881	847	1,667	2,013	1,907
	Submarket total	**24,296**	**26,496**	**28,442**	**29,642**	**29,418**	**31,619**	**34,362**	**37,727**	**38,005**
12. Others										
32.11	Striking of coins	128	118	159	147	160	109	105	117	118
32.13	Manufacture of imitation jewellery and related articles	110	125	128	117	124	131	75	68	82
74.20.2	Photographic laboratories	567	518	503	449	372	235	232	225	128
74.30.2	Interpretation activities	428	462	495	509	520	536	559	642	631
91.01	Libraries and archives	63	66	48	43	44	49	55	30	32
91.03	Operation of historical sites and buildings and similar visitor attractions	39	32	36	35	34	36	36	36	36
91.04	Botanical and zoological gardens and nature reserves	244	267	283	288	277	323	319	306	317
	Submarket total	**1,578**	**1,588**	**1,652**	**1,587**	**1,531**	**1,418**	**1,381**	**1,425**	**1,343**
Total, including double counts		151,080	154,327	157,960	160,385	160,332	164,586	170,151	177,720	177,244
Duplicate categories of economic activity		16,751	16,993	16,990	17,047	17,178	17,691	18,084	18,906	18,666
Cultural and creative industries (excluding double counts)		**134,329**	**137,333**	**140,970**	**143,338**	**143,155**	**146,895**	**152,067**	**158,814**	**158,578**
Ratio of CCIs to overall economy		*2.74%*	*2.62%*	*2.48%*	*2.49%*	*2.48%*	*2.50%*	*2.54%*	*2.61%*	*2.56%*

Note: *Data for 2017 estimated. Minimal discrepancies in the submarket totals or overall totals can be caused by rounding.

Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

Table 7.10: Number of core workers in the cultural and creative industries by submarket and category of economic activity 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014	2015	2016	2017*
1. Music industry										
32.20	Manufacture of musical instruments	6,620	6,396	6,300	6,376	6,339	6,413	6,352	6,385	6,381
47.59.3	Retail sale of musical instruments, etc.	6,111	6,169	6,232	6,292	6,241	6,105	6,081	6,015	6,015
47.63	Retail sale of music and video recordings, etc.	1,632	1,662	1,626	1,589	1,328	1,265	1,246	1,229	1,235
59.20.1	Sound-recording studios, etc.	1,384	1,403	1,449	1,513	1,552	1,556	1,549	1,608	1,693
59.20.2	Publishing of sound recordings	2,679	2,550	2,666	2,584	1,891	1,776	1,835	1,598	1,653
59.20.3	Publishing of printed music	2,910	3,199	3,095	2,697	2,716	3,224	3,253	3,436	3,516
90.01.2	Ballet companies, orchestras, bands and choirs	7,341	6,812	6,312	5,788	5,786	5,815	5,750	6,929	6,940
90.02	Support activities to performing arts	5,522	5,832	6,144	6,622	6,721	6,951	7,570	8,313	8,915
90.03.1	Own-account composers, etc.	2,838	2,819	2,865	2,882	2,935	2,944	3,130	3,232	3,205
90.04.1	Organisation of theatre performances and concerts	6,344	6,365	6,386	6,593	8,419	8,261	8,105	8,327	8,655
90.04.2	Private operation of opera houses, theatre and concert halls, etc.	3,446	3,491	3,552	3,597	3,565	3,631	3,625	3,461	3,460
	Submarket total	**46,827**	**46,698**	**46,627**	**46,533**	**47,493**	**47,941**	**48,496**	**50,533**	**51,667**
2. Book market										
18.14	Binding and related services	12,071	11,366	10,895	10,791	10,114	9,923	9,551	8,584	8,337
47.61	Retail sale of books	28,515	27,926	29,942	29,148	28,522	26,559	23,634	22,155	21,236
47.79.2	Retail sale of second-hand books	809	776	765	752	767	741	719	721	676
58.11	Book publishing	25,805	24,804	25,419	25,260	25,423	24,893	24,619	25,221	25,093
74.30.1	Translation activities	4,666	4,692	4,961	5,160	5,419	5,708	6,027	6,395	6,610
90.03.2	Own-account writers	6,980	7,296	7,522	7,735	7,912	8,093	8,498	8,760	8,943
	Submarket total	**78,846**	**76,860**	**79,504**	**78,846**	**78,157**	**75,917**	**73,048**	**71,836**	**70,895**
3. Art market										
47.78.3	Retail sale of art, etc.	3,560	3,539	3,310	3,290	3,182	3,067	3,100	3,099	3,035
47.79.1	Retail sale of antiques, etc.	3,566	3,438	3,400	3,422	3,363	3,174	3,015	2,927	2,830
90.03.3	Own-account visual artists	10,203	10,160	10,265	10,256	10,361	10,129	10,183	10,367	10,383
91.02	Museum activities	2,095	2,024	1,970	1,944	1,888	1,879	1,879	1,899	1,750
	Submarket total	**19,424**	**19,161**	**18,945**	**18,912**	**18,793**	**18,249**	**18,177**	**18,292**	**17,997**
4. Film industry										
47.63	Retail sale of music and video recordings, etc.	1,632	1,662	1,626	1,589	1,328	1,265	1,246	1,229	1,235
59.11	Motion picture, video and TV programme production	26,148	25,524	25,525	26,109	25,764	26,286	26,492	27,190	27,968
59.12	Motion picture, video and TV programme post-production	5,617	5,384	5,580	5,004	4,900	4,917	4,977	4,858	5,097
59.13	Motion picture, video and TV programme distribution	3,422	3,291	3,182	2,945	2,956	2,895	2,716	2,700	2,682
59.14	Motion picture projection	8,771	8,581	8,697	8,696	8,816	8,596	9,582	9,592	9,929
77.22	Renting of video tapes and disks	3,924	3,608	3,444	3,117	2,744	2,426	2,206	1,824	1,429

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Table 7.10: Number of core workers in the cultural and creative industries by submarket and category of economic activity 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014	2015	2016	2017*
90.01.4	Own-account stage, motion picture, and TV artists, etc.	8,989	9,263	9,718	10,173	10,582	11,044	11,647	12,319	12,648
	Submarket total	**58,503**	**57,313**	**57,772**	**57,633**	**57,090**	**57,429**	**58,866**	**59,712**	**60,989**
5. Broadcasting industry										
60.10	Radio broadcasting	13,517	13,601	13,745	13,437	14,030	14,230	15,067	15,093	14,685
60.20	Television programming and broadcasting	6,924	7,007	7,304	7,715	8,659	8,879	8,710	8,775	9,439
90.03.5	Own-account journalists and press photographers	18,449	18,273	18,645	18,713	18,663	18,579	18,700	18,552	18,806
	Submarket total	**38,890**	**38,881**	**39,694**	**39,865**	**41,353**	**41,688**	**42,477**	**42,420**	**42,930**
6. Performing arts market										
85.52	Cultural education	4,539	4,708	4,914	5,157	5,385	5,592	5,922	6,184	6,467
90.01.1	Theatre ensembles	1,240	1,340	1,214	1,214	1,056	1,056	1,080	1,121	1,135
90.01.3	Own-account performers and circus groups	1,292	1,286	1,262	1,107	1,194	1,222	1,275	1,389	1,296
90.01.4	Own-account stage, motion picture, radio and TV artists, etc.	8,989	9,263	9,718	10,173	10,582	11,044	11,647	12,319	12,648
90.02	Support activities to performing arts	5,522	5,832	6,144	6,622	6,721	6,951	7,570	8,313	8,915
90.04.1	Organisation of theatre performances and concerts	6,344	6,365	6,386	6,593	8,419	8,261	8,105	8,327	8,655
90.04.2	Private operation of opera houses, theatre and concert halls, etc.	3,446	3,491	3,552	3,597	3,565	3,631	3,625	3,461	3,460
90.04.3	Variety shows and small theatres	925	940	923	926	965	1,048	1,054	1,044	1,103
	Submarket total	**32,298**	**33,225**	**34,112**	**35,389**	**37,886**	**38,805**	**40,278**	**42,158**	**43,679**
7. Design industry										
32.12	Manufacture of jewellery and related articles	14,848	13,847	11,725	11,592	11,396	11,323	11,203	11,202	10,951
71.11.2	Consulting architectural activities in interior design	4,149	4,743	5,399	5,857	6,379	6,595	6,821	7,164	7,799
73.11	Advertising agencies (50% share)	67,106	64,774	65,546	65,975	65,589	66,116	66,876	68,882	69,756
74.10.1	Industrial, product and fashion designers	3,332	4,247	4,871	5,643	6,550	7,134	7,989	8,386	9,924
74.10.2	Graphics and communications designers	8,364	10,338	12,261	14,245	15,856	17,567	19,140	20,357	22,167
74.10.3	Interior decorators	10,582	10,482	10,669	10,152	9,829	9,606	9,695	9,911	9,423
74.20.1	Photographers	17,071	17,447	17,956	18,303	18,675	18,921	19,573	19,691	20,097
	Submarket total	**125,452**	**125,878**	**128,427**	**131,767**	**134,274**	**137,262**	**141,297**	**145,593**	**150,118**
8. Architecture market										
71.11.1	Consulting architectural activities in building construction	74,651	75,306	77,334	79,473	81,311	83,467	86,553	90,265	94,611
71.11.2	Consulting architectural activities in interior design	4,149	4,743	5,399	5,857	6,379	6,595	6,821	7,164	7,799
71.11.3	Consulting architectural activities in town, city and regional planning	11,355	11,600	12,029	11,803	11,721	11,649	11,972	12,369	12,509
71.11.4	Consulting architectural activities in landscape architecture	7,035	7,314	7,393	7,617	7,822	8,031	8,323	8,778	9,254
90.03.4	Own-account restorers	2,892	2,934	2,932	3,000	2,936	3,033	3,026	3,112	3,239
	Submarket total	**100,082**	**101,897**	**105,087**	**107,750**	**110,169**	**112,775**	**116,695**	**121,688**	**127,411**

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Table 7.10: Number of core workers in the cultural and creative industries by submarket and category of economic activity 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014	2015	2016	2017*
9. Press market										
47.62	Retail sale of newspapers and stationery	29,143	29,032	28,806	28,622	27,788	27,435	27,650	27,796	26,430
58.12	Publishing of directories and mailing lists, etc.	5,070	5,049	4,352	4,283	4,074	3,832	3,641	3,540	3,143
58.13	Publishing of newspapers	51,654	49,515	47,744	47,619	47,020	45,916	44,713	43,885	42,622
58.14	Publishing of journals and periodicals	43,451	41,341	40,655	38,777	38,111	36,212	34,838	33,464	32,888
58.19	Other publishing activities (excluding software)	11,518	11,264	11,551	11,188	11,059	10,767	10,081	9,635	9,517
63.91	News agency activities	9,027	8,831	9,348	9,658	9,382	9,668	10,757	11,769	13,355
90.03.5	Own-account journalists and press photographers	18,449	18,273	18,645	18,713	18,663	18,579	18,700	18,552	18,806
	Submarket total	**168,312**	**163,305**	**161,101**	**158,860**	**156,097**	**152,409**	**150,380**	**148,641**	**146,762**
10. Advertising market										
73.11	Advertising agencies	134,212	129,548	131,092	131,949	131,177	132,232	133,751	137,763	139,512
73.12	Media representation	6,746	7,458	7,789	8,482	9,385	10,746	12,112	12,952	13,256
	Submarket total	**140,958**	**137,006**	**138,881**	**140,431**	**140,562**	**142,978**	**145,863**	**150,715**	**152,768**
11. Software and games industry										
58.21	Publishing of computer games	1,191	1,517	1,826	1,961	1,583	1,701	1,763	2,080	1,823
58.29	Other software publishing	12,501	15,417	17,932	20,664	22,028	23,144	25,401	28,690	32,370
62.01.1	Web-page design and programming	25,566	29,477	34,557	38,343	40,190	41,645	45,011	48,173	51,461
62.01.9	Other software development	202,254	201,743	208,997	231,515	248,469	260,525	272,735	284,698	301,342
63.12	Web portals	2,295	3,554	5,144	6,944	8,822	10,908	13,890	17,723	21,386
	Submarket total	**243,807**	**251,708**	**268,456**	**299,427**	**321,092**	**337,923**	**358,800**	**381,364**	**408,382**
12. Others										
32.11	Striking of coins	465	468	482	511	518	489	538	559	590
32.13	Manufacture of imitation jewellery and related articles	832	857	903	891	876	762	754	738	724
74.20.2	Photographic laboratories	5,609	5,045	4,862	4,945	5,008	4,704	4,587	4,217	3,996
74.30.2	Interpretation activities	6,419	6,645	6,930	7,127	7,232	7,200	7,325	7,905	7,977
91.01	Libraries and archives	1,028	991	991	927	895	931	927	945	1,068
91.03	Operation of historical sites and buildings and similar visitor attractions	220	210	223	226	223	223	225	205	203
91.04	Botanical and zoological gardens and nature reserves	772	774	792	808	795	795	783	807	804
	Submarket total	**15,346**	**14,991**	**15,182**	**15,436**	**15,548**	**15,104**	**15,140**	**15,376**	**15,362**
Total, including double counts		1,068,745	1,066,923	1,093,788	1,130,848	1,158,513	1,178,480	1,209,516	1,248,326	1,288,958
Duplicate categories of economic activity		115,637	114,403	117,016	119,119	121,245	122,442	124,589	128,246	131,275
Cultural and creative industries (excluding double counts)		**953,108**	**952,520**	**976,772**	**1,011,729**	**1,037,268**	**1,056,038**	**1,084,927**	**1,120,080**	**1,157,683**
Ratio of CCIs to overall economy		*3.10%*	*3.06%*	*3.07%*	*3.11%*	*3.16%*	*3.16%*	*3.19%*	*3.23%*	*3.27%*

Note: *Some data for 2017 estimated. Minimal discrepancies in the submarket totals or overall totals can be caused by rounding.

Source: VAT statistics, Destatis, 2018b, employment statistics, Federal Employment Agency 2018; in-house calculations by ZEW.

Table 7.11: Mini-self-employed persons in the cultural and creative industries by submarket and category of economic activity 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014*	2015*	2016*	2017*
1. Music industry										
32.20	Manufacture of musical instruments	518	531	518	527	550	539	560	570	571
47.59.3	Retail sale of musical instruments, etc.	1,378	1,349	1,288	1,271	1,231	1,167	1,140	1,098	1,047
47.63	Retail sale of music and video recordings, etc.	221	300	328	365	409	384	433	440	463
59.20.1	Sound-recording studios, etc.	697	790	871	952	962	988	993	1,061	1,110
59.20.2	Publishing of sound recordings	612	607	617	649	641	623	643	676	657
59.20.3	Publishing of printed music	1,963	1,932	1,905	1,898	1,882	1,828	1,808	1,844	1,765
90.01.2	Ballet companies, orchestras, bands and choirs	4,810	4,805	4,697	4,681	4,725	4,261	4,436	4,603	4,254
90.02	Support activities to performing arts	3,118	3,353	3,458	3,511	3,492	3,666	3,829	4,042	4,131
90.03.1	Own-account composers, etc.	5,827	5,943	6,203	6,424	6,660	6,417	6,828	7,095	7,084
90.04.1	Organisation of theatre performances and concerts	1,351	1,319	1,278	1,263	1,216	1,252	1,229	1,242	1,205
90.04.2	Operation of opera houses, theatre and concert halls, etc.	173	154	137	127	131	134	127	129	121
	Submarket total	**20,668**	**21,083**	**21,300**	**21,668**	**21,899**	**21,258**	**22,026**	**22,799**	**22,407**
2. Book market										
18.14	Binding and related services	481	494	479	462	432	421	417	396	383
47.61	Retail sale of books	2,593	2,603	2,638	2,643	2,585	2,419	2,387	2,382	2,296
47.79.2	Retail sale of second-hand books	531	545	542	547	523	497	496	479	469
58.11	Book publishing	2,827	2,846	2,884	2,952	2,991	2,782	2,738	2,699	2,688
74.30.1	Translation activities	2,793	3,128	3,384	3,685	4,063	3,888	4,199	4,552	4,683
90.03.2	Own-account writers	15,788	16,419	16,911	17,432	18,362	18,116	18,876	19,310	19,675
	Submarket total	**25,013**	**26,035**	**26,838**	**27,721**	**28,956**	**28,123**	**29,113**	**29,818**	**30,193**
3. Art market										
47.78.3	Retail sale of art, etc.	1,627	1,581	1,505	1,467	1,433	1,333	1,295	1,263	1,200
47.79.1	Retail sale of antiques, etc.	1,958	1,833	1,790	1,764	1,691	1,709	1,702	1,532	1,482
90.03.3	Own-account visual artists	22,054	22,551	22,887	23,515	24,160	23,299	23,485	23,878	23,909
91.02	Museum activities	887	830	735	696	633	634	635	600	501
	Submarket total	**26,526**	**26,795**	**26,917**	**27,442**	**27,917**	**26,975**	**27,117**	**27,273**	**27,092**
4. Film industry										
47.63	Retail sale of music and video recordings, etc.	221	300	328	365	409	384	433	440	463
59.11	Motion picture, video and TV programme production	7,004	6,765	6,610	6,398	6,109	5,774	5,610	5,610	5,375
59.12	Motion picture, video and TV programme post-production	736	888	927	960	968	859	933	948	946
59.13	Motion picture, video and TV programme distribution	663	644	597	567	516	438	428	401	329
59.14	Motion picture projection	316	307	294	288	272	285	285	277	273
77.22	Renting of video tapes and disks	713	692	625	550	490	426	372	315	246

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Table 7.11: Mini-self-employed persons in the cultural and creative industries by submarket and category of economic activity 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014*	2015*	2016*	2017*
90.01.4	Own-account stage, motion picture, radio and TV artists, etc.	25,586	26,794	28,035	29,785	31,422	32,078	33,875	35,700	36,800
	Submarket total	**35,239**	**36,390**	**37,416**	**38,913**	**40,186**	**40,242**	**41,936**	**43,690**	**44,431**
5. Broadcasting industry										
60.10	Radio broadcasting	239	213	220	193	176	210	198	195	195
60.20	Television programming and broadcasting	49	56	65	55	59	56	56	51	54
90.03.5	Own-account journalists and press photographers	27,285	28,177	28,458	28,609	29,005	28,408	28,748	28,255	28,580
	Submarket total	**27,573**	**28,446**	**28,743**	**28,857**	**29,240**	**28,674**	**29,003**	**28,502**	**28,828**
6. Performing arts market										
85.52	Cultural education	2,267	2,422	2,718	3,164	3,564	2,978	3,161	3,324	3,402
90.01.1	Theatre ensembles	300	304	321	354	406	372	443	425	439
90.01.3	Own-account performers and circus groups	1,028	1,008	1,067	1,139	1,176	1,131	1,248	1,318	1,313
90.01.4	Own-account stage, motion picture, radio TV artists, etc.	25,586	26,794	28,035	29,785	31,422	32,078	33,875	35,700	36,800
90.02	Support activities to performing arts	3,118	3,353	3,458	3,511	3,492	3,666	3,829	4,042	4,131
90.04.1	Organisation of theatre performances and concerts	1,351	1,319	1,278	1,263	1,216	1,252	1,229	1,242	1,205
90.04.2	Operation of opera houses theatre and concert halls, etc.	173	154	137	127	131	134	127	129	121
90.04.3	Operation of variety theaters and cabarets	249	232	216	207	203	207	200	203	185
	Submarket total	**34,072**	**35,586**	**37,230**	**39,550**	**41,610**	**41,818**	**44,112**	**46,382**	**47,596**
7. Design industry										
32.12	Manufacture of jewellery and related articles	2,292	2,241	2,273	2,281	2,302	2,142	2,085	2,098	2,040
71.11.2	Consulting architectural activities in interior design	2,615	2,955	3,180	3,225	3,379	3,688	3,682	3,664	3,947
73.11	Advertising agencies (50% share)	18,425	17,281	16,186	15,363	14,692	14,484	14,043	13,899	13,025
74.10.1	Industrial, product and fashion designers	2,767	3,450	4,197	4,790	5,347	5,842	6,098	6,422	7,223
74.10.2	Graphics and communications designers	8,177	10,417	12,276	14,024	16,121	17,823	19,368	20,513	22,574
74.10.3	Interior decorators	11,331	10,787	9,758	9,109	8,599	8,749	8,522	8,278	7,639
74.20.1	Photographers	10,880	11,625	12,464	13,475	14,753	14,246	15,211	15,877	16,490
	Submarket total	**56,487**	**58,756**	**60,334**	**62,267**	**65,193**	**66,974**	**69,009**	**70,751**	**72,939**
8. Architecture market										
71.11.1	Consulting architectural activities in building construction	20,241	19,224	18,148	17,266	16,845	17,463	16,998	16,622	16,226
71.11.2	Consulting architectural activities in interior design	2,615	2,955	3,180	3,225	3,379	3,688	3,682	3,664	3,947
71.11.3	Consulting architectural activities in town, city and regional planning	3,482	3,527	3,470	3,360	3,331	3,550	3,524	3,529	3,547
71.11.4	Consulting architectural activities in landscape architecture	2,316	2,302	2,232	2,143	2,126	2,268	2,256	2,227	2,243

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Table 7.11: Mini-self-employed persons in the cultural and creative industries by submarket and category of economic activity 2009 – 2017*

Submarket/ WZ-2008	Sector of activity	2009	2010	2011	2012	2013	2014*	2015*	2016*	2017*
90.03.4	Own-account restorers	1,363	1,349	1,424	1,438	1,479	1,501	1,495	1,536	1,564
	Submarket total	**30,017**	**29,357**	**28,454**	**27,432**	**27,160**	**28,471**	**27,955**	**27,578**	**27,527**
9. Press market										
47.62	Retail sale of newspapers and stationery	3,122	3,114	2,964	2,819	2,786	2,667	2,763	2,874	2,631
58.12	Publishing of directories and mailing lists, etc.	82	94	86	91	90	90	87	83	87
58.13	Publishing of newspapers	261	266	281	277	271	271	265	265	269
58.14	Publishing of journals and periodicals	810	858	873	838	811	785	787	762	747
58.19	Other publishing activities (excluding software)	3,037	3,006	2,838	2,736	2,648	2,638	2,591	2,519	2,440
63.91	News agency activities	1,143	1,191	1,178	1,087	979	965	935	885	825
90.03.5	Own-account journalists and press photographers	27,285	28,177	28,458	28,609	29,005	28,408	28,748	28,255	28,580
	Submarket total	**35,740**	**36,706**	**36,678**	**36,457**	**36,590**	**35,824**	**36,177**	**35,643**	**35,579**
10. Advertising market										
73.11	Advertising agencies	36,850	34,561	32,371	30,725	29,384	28,968	28,086	27,798	26,051
73.12	Media representation	986	1,219	1,337	1,375	1,406	1,461	1,520	1,608	1,667
	Submarket total	**37,836**	**35,780**	**33,708**	**32,100**	**30,790**	**30,429**	**29,606**	**29,406**	**27,718**
11. Software and games industry										
58.21	Publishing of computer games	446	393	366	330	308	305	298	289	258
58.29	Other software publishing	355	493	568	594	611	583	577	616	631
62.01.1	Web-page design and programming	13,921	14,596	15,065	15,511	16,408	18,136	18,632	19,183	20,186
62.01.9	Other software development	16,536	17,131	17,465	18,269	19,156	19,875	20,410	21,097	21,948
63.12	Web portals	615	789	1,033	1,249	1,417	1,926	2,086	2,325	2,607
	Submarket total	**31,873**	**33,402**	**34,497**	**35,953**	**37,900**	**40,824**	**42,002**	**43,510**	**45,629**
12. Others										
32.11	Striking of coins	29	27	23	21	17	20	18	17	16
32.13	Manufacture of imitation jewellery and related articles	480	531	597	687	792	652	701	723	745
74.20.2	Photographic laboratories	411	416	389	380	351	322	306	290	269
74.30.2	Interpretation activities	9,579	9,544	9,463	9,511	9,612	9,946	10,044	10,536	10,521
91.01	Libraries and archives	153	163	143	143	117	121	114	99	87
91.03	Operation of historical sites and buildings and similar visitor attractions	119	119	99	96	105	102	105	95	93
91.04	Botanical and zoological gardens and nature reserves	252	221	205	157	142	173	150	154	139
	Submarket total	**11,023**	**11,021**	**10,919**	**10,995**	**11,136**	**11,337**	**11,437**	**11,913**	**11,870**
Total, including double counts		372,067	379,357	383,033	389,355	398,577	400,949	409,491	417,265	421,809
Duplicate categories of economic activity		78,774	80,333	81,060	82,248	83,746	84,093	85,966	87,371	88,272
Cultural and creative industries (excluding double counts)		**293,293**	**299,024**	**301,974**	**307,107**	**314,831**	**316,856**	**323,525**	**329,894**	**333,537**
Ratio of CCIs to overall economy		*10.74%*	*10.48%*	*10.14%*	*9.94%*	*9.86%*	*10.55%*	*10.60%*	*10.69%*	*10.69%*

*Data based on estimates.

Source: VAT statistics, Destatis 2018b; in-house calculations by ZEW.

7.2 Bibliography

Castendyk, Oliver; Müller-Lietzkowen, Jörg (2017), Die Computer- und Videospielindustrie in Deutschland, Daten – Fakten – Analysen (The computer and video games industry in Germany, data, facts – analyses), Forschungs- und Kompetenzzentrum Audiovisuelle Produktion der Hamburg Media School.

Conference of Economic Affairs Ministers (2009), Leitfaden zur Erstellung einer statistischen Datengrundlage für die Kulturwirtschaft und eine länderübergreifende Auswertung kulturwirtschaftlicher Daten (Guidelines on the production of a statistical data base for the cultural industry and a cross-Länder evaluation of cultural industry data), Cologne.

Destatis/Federal Statistical Office (2018a), Microcensuses, various years, Wiesbaden.

Destatis/Federal Statistical Office (2018b), Value-added tax statistics, various years, Wiesbaden.

Destatis/Federal Statistical Office (2018c), National Accounts, Domestic Product Calculations, Detailed Annual Results, 4 September 2018, Wiesbaden.

Federal Employment Agency (2018), Employment Statistics, various years, Nuremberg.

Federal Ministry for Economic Affairs and Energy (2018), Monitoring Report on Selected Economic Key Data on the Culture and Creative Industries 2017, unabridged, Berlin.

Federal Ministry of Economics and Technology (2009a), Endbericht Kultur- und Kreativwirtschaft: Ermittlung der gemeinsamen charakteristischen Definitionselemente der heterogenen Teilbereiche der „Kulturwirtschaft“ zur Bestimmung ihrer Perspektiven aus volkswirtschaftlicher Sicht (Final Report on the Cultural and Creative Industries: Identifying the Common Characteristic Defining Elements of the Various Segments of the Cultural Sector to Determine their Prospects from an Economic Perspective), Cologne, Bremen, Berlin.

Goldmedia/HMS/DIW Econ (2017), Wirtschaftliche Bedeutung der Filmindustrie in Deutschland (Economic significance of the film industry in Germany), Study commissioned by the Federal Ministry for Economic Affairs and Energy, Berlin.

OECD and Eurostat (2005), Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data, 3. Auflage, Paris.

Seufert, Wolfgang; Schlegel, Robert; Sattelberger, Felix (2015), Musikwirtschaft in Deutschland, Studie zur volkswirtschaftlichen Bedeutung von Musikunternehmen unter Berücksichtigung aller Teilsektoren und Ausstrahlungseffekte (Music industry in Germany, Study into the economic significance of music companies considering all subsectors and external impact), Hamburg.

Söndermann, Michael (2012), Statistische Anpassung der Kultur- und Kreativwirtschaft in Deutschland – Kurzanleitung zur Erstellung einer statistischen Datengrundlage für die Kulturwirtschaft (Statistical Adjustment for the Cultural and Creative Industries in Germany – Brief Guidelines on the Establishment of a Statistical Data Basis for the Cultural Sector), ARKStat e. V. Arbeitskreis Kulturstatistik, Cologne.

Wirtschaftszweigklassifikation (2008): Classification of economic activity, Federal Statistical Office, Wiesbaden.

Working Group on the Cultural and Creative Industries in the Conference of Economic Affairs Ministers (2016), Überarbeitung des Leitfadens zur Erfassung von statistischen Daten für die Kultur- und Kreativwirtschaft (Revision of the Guidelines on the Collection of Statistical Data for the Cultural and Creative Industries), 2016 edition, 20 July 2016.

www.kultur-kreativ-wirtschaft.de