



Cultural and creative industries

April 29, 2011

Growth potential in specific segments

The creative economy encompasses eleven industries. The (cultural and) creative industries were not officially defined in Germany until three years ago, with the eleven categories of industry ranging from the performing arts to software programming. These segments share the common feature of the creative act as the core of their value-added, but they possess very different structures in some cases. They can be classified in three groups: mainly market-based, culture-related with the nature of a public good, and not clearly attributable segments with elements from both categories.

Major economic factor. In Germany, over one million people work in creative professions as defined above. In 2009 they produced goods and services worth over EUR 60 bn – more than most branches of industry. Some segments of the creative industries are little affected by cyclical swings and managed to create new jobs during the recent recession. Without the predominant software segment the creative industries would have grown at a below-average pace in the past cycle.

Structural problems. One hallmark of the creative industries is the high ratio of self-employed persons. Insecurity of employment and low incomes are the norm in this knowledge-intensive industry. Many companies employ fewer than ten workers. Micro-firms do not have enough access to funding under current promotion schemes.

Need to recalibrate protection of intellectual property rights. Existing copyright and patent law is no longer in keeping with an ever faster-changing digital world. Adjustments are needed so that the innovative capacity of creative people is not stifled. Furthermore, a broader understanding of the term innovation has to take root among funding and promoting institutions in order to cover the specific (often digital and content-oriented) innovations of the creative economy.

Creative industries offer growth potential. If policymakers are successful in drafting appropriate incentives, the growth of these industries could accelerate. It would then be realistic to forecast revenues of EUR 175 bn in 2020.

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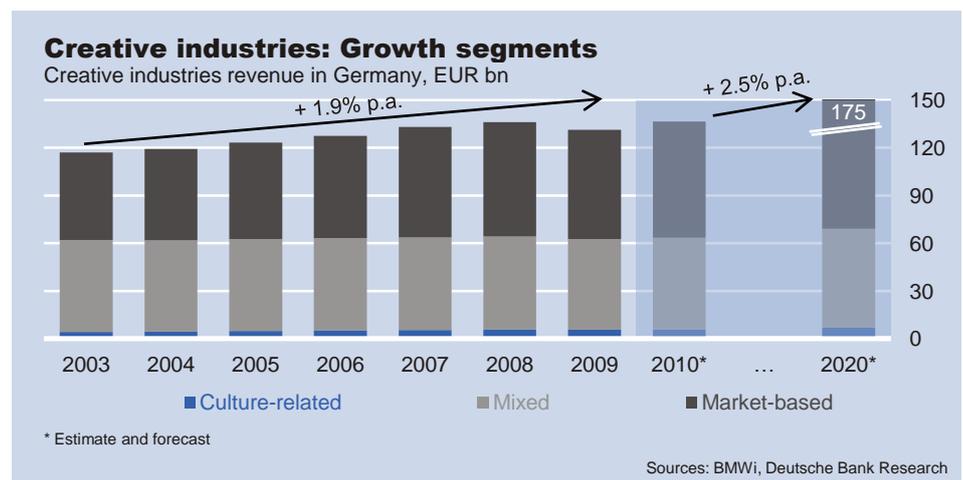
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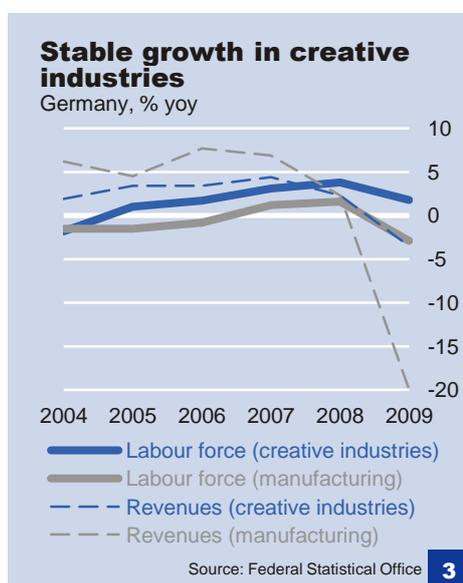
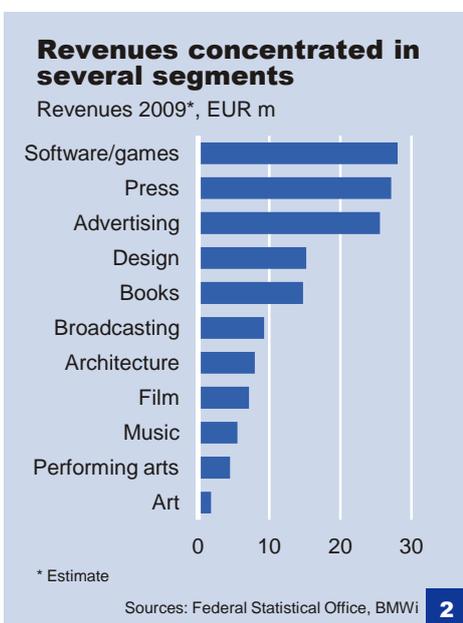
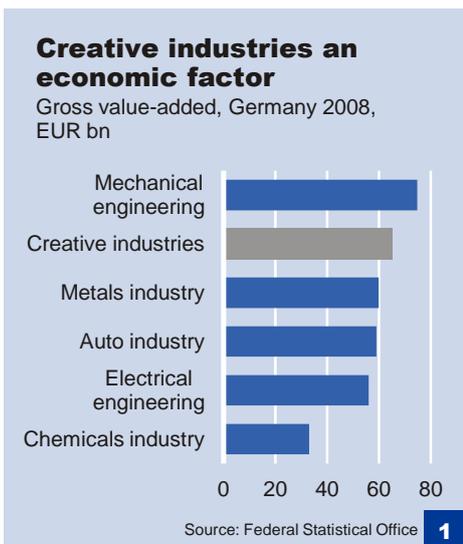
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1. Creative industries: Significant economic factor

The creative industries¹ are relative newcomers to Germany's official statistics: it was not until the end of 2007 that a commission of enquiry set up by the German parliament officially defined this sector and categorised it in the statistics. Many of the professions listed there, e.g. painters, sculptors and actors, have existed for thousands of years, though.

The creative industries are a very mixed bag. They fall under eleven statistical subgroups stemming from the retail, business-related and other services sectors. For instance, software programmers are as much a part of the cultural and creative industries as are musicians, journalists, architects and designers. The variety of industries makes it difficult to find a uniform definition.² The definition set out by the "Kultur in Deutschland" commission of enquiry comprises all cultural and creative enterprises that have a mainly commercial focus and are engaged in the creation, production, distribution and/or media dissemination of cultural/creative goods and services.³ This rules out not-for-profit organisations as well as associations and publicly sponsored institutions.⁴ What the various segments have in common is the creative act as the core of their value-added.

Stable economic development in the past

The growing public interest in the creative industries over the past few years can be explained by their economic importance. According to data from Germany's Federal Ministry of Economics and Technology, the gross value-added under this definition of the creative industries currently totals more than EUR 60 bn, or close to 2.6% of total German GDP.⁵ This puts the creative industries in the same league as the automobile industry or electrical engineering. Furthermore, the location of other economic sectors presumably benefits from spillover effects in the creative industries.⁶ Such effects are not reflected by the statistics. As regards the size of the workforce, the more than one million "creatives" in Germany in fact outnumber the autoworkers, commanding a leading position in Europe ahead of the UK and France. This is, of course, partly because of the size of the country's population. In relation to the size of the total workforce, the creative segment in Germany ranks only slightly above the EU-27 average at 2.8%.

Furthermore, the creative industries have boosted employment over the past five years: since 2003, the number has increased by close to 2% of the workforce annually – and thus slightly outstripped the services sector as a whole. By contrast, in many branches of industry there has been a net decrease in employment – despite the boom in the years 2004-2008. And it was especially during the

¹ The term "creative industries" as used in this report invariably refers to the cultural and creative industries as cited in other studies; see Enquêtekommission (2007).

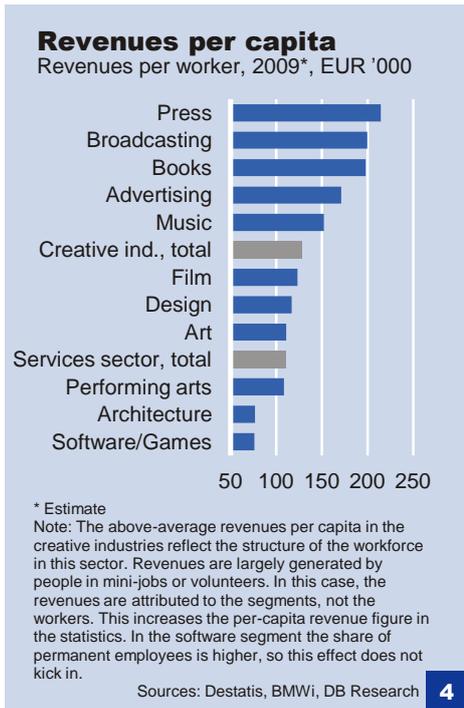
² This is why different definitions of the creative industries are to be found in the literature, with some including more sub-segments and others fewer sub-segments. Also, it remains challenging to say definitively whether the individual segments belong to the cultural or the creative area.

³ Enquêtekommission (2007). Schlussbericht der Enquêtekommission "Kultur in Deutschland".

⁴ This is why, for example, public broadcasters are stripped out of the broadcasting subgroup.

⁵ The availability of data on the services sector in general – and the creative industries in particular – is poor. For this reason, current figures are usually based on estimates.

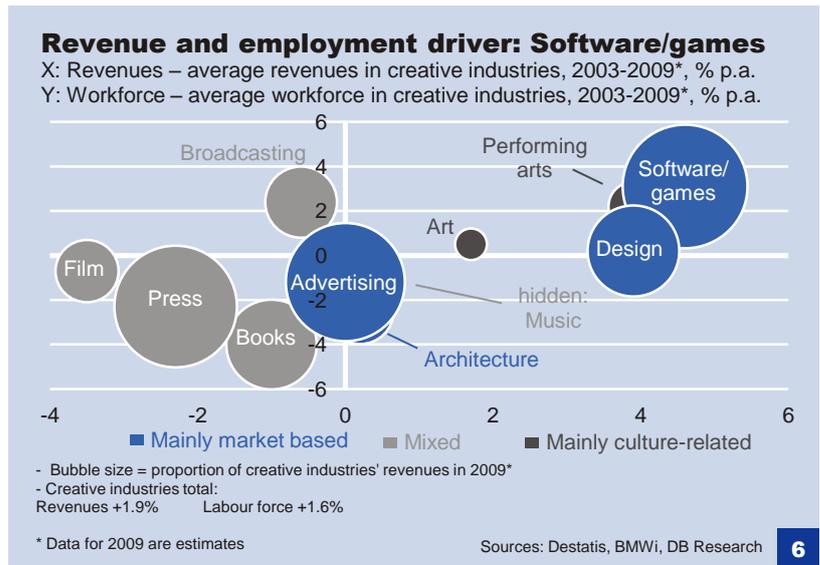
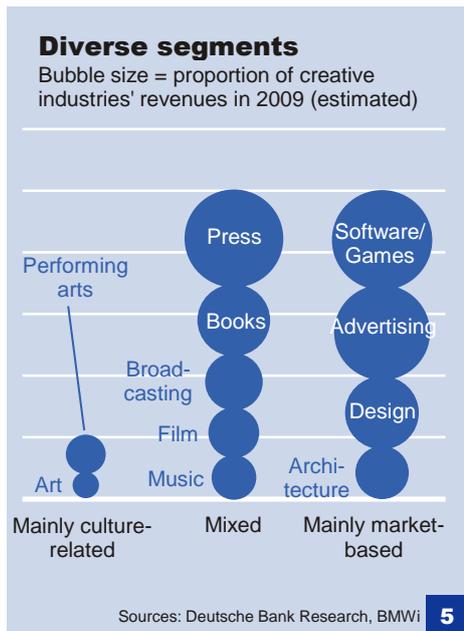
⁶ See Florida (2002). The Rise of the Creative Class. And how it's transforming work, leisure, community and everyday life. New York. Basic Books.



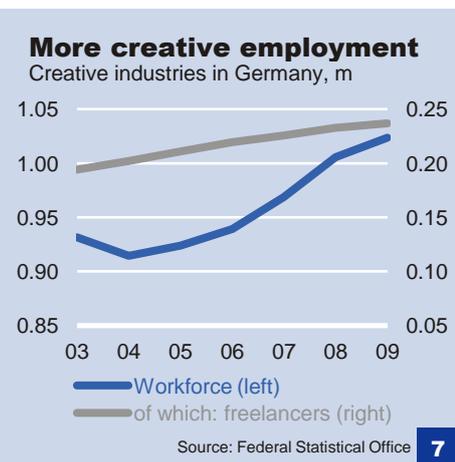
recession that interest in non-cyclical sectors such as the creative industries increased even more.

Not only state-protected sectors, also market-based ones

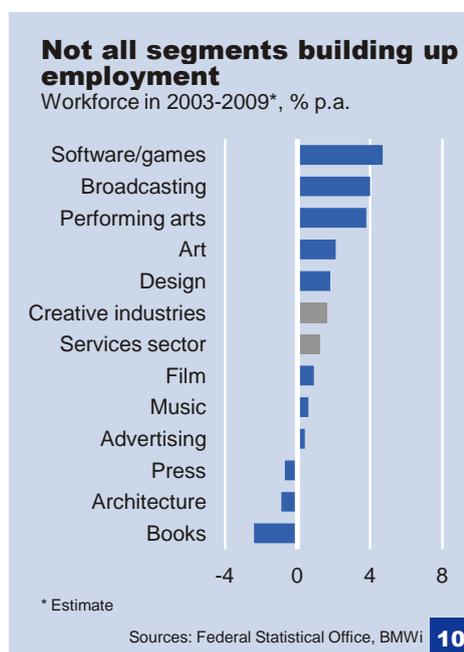
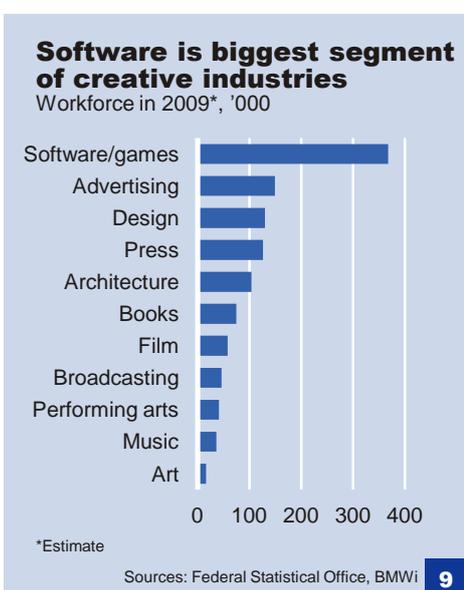
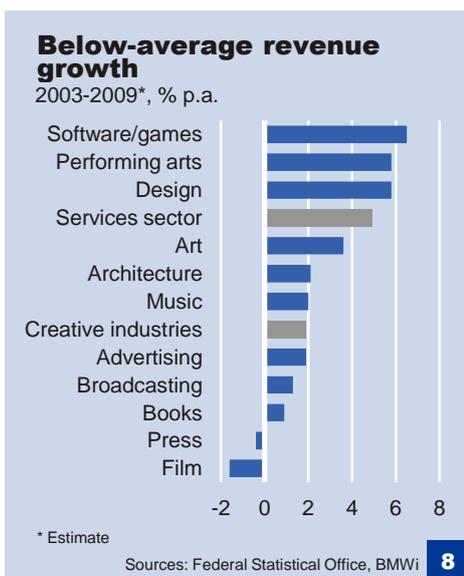
It is necessary to differentiate among these industries, though: certain segments, such as advertising or design, react extremely sensitively to changes in the business cycle. Less market-oriented segments and ones that are often state-protected and promoted, such as the performing arts and parts of the broadcasting industry, were more stable during the crisis – but they are typically benefiting less from the upside momentum in the upswing. Generally speaking, the creative industries can be roughly divided into three groups: mainly market-based (software, advertising, design, architecture), culture-related with much the nature of a public good (art, the performing arts) and not clearly attributable activities with elements from both categories (books, film, music, press and broadcasting).⁷ However, there are no clear demarcations between the three groups. The economic importance of the creative industries largely emanates from the four market-based segments: they account for 52% of the related total revenues and 65% of the related workforce. The culture-related segments, by contrast, account for only 4% and 5%, respectively.



Nonetheless, the culture-related segments did pull their weight in the successful performance of the creative industries over the last cycle: in terms of both workforce and revenues they grew every bit as quickly as the market-based segments. The strongest driver of growth was software/games, which at the same time carries the largest weight. Without this segment the annual average revenue growth of the creative industries would have been nearly one full percentage point (pp) lower between 2003 and 2009. There would have been nearly 1.5 pp missing from the growth of the workforce, so the increase would have been negligible. If the software segment is stripped out, the creative industries actually performed below



⁷ Naturally, none of the subgroups can be classified exclusively under one extreme. For example, there are also theatres organised along private-sector lines, public and also private broadcasters, and architectural work with a pronounced cultural bias.



average in the last economic cycle in relation to Germany's services sector as a whole.⁸

Since the creative industries export relatively little and their output tends to be geared to the domestic market, the sector is also a suitable avenue for building up domestic activities vis-à-vis exports.⁹ Considering the current account imbalances within the EU there have been calls from many quarters for a corresponding shift of the weightings in Germany.¹⁰

The creative industries have long since left the realm of the exotic. Indeed, they are a steadily developing part of the economy that has to be taken seriously, especially since numerous creative industry firms lack business or legal expertise which they then buy in from providers of business services in the market. This fosters the growth of these segments and indirectly contributes to growth.

2. Features of the creative industries

The creative industries set themselves apart from other branches of industry thanks to a string of special features: for instance, some of their output is not traded on free markets and cultural offers are subsidised by public or not-for-profit/charitable organisations (e.g. public broadcasters and opera houses). Many of the goods produced are intangible in nature (e.g. music or software) and require new distribution channels. This often necessitates the existence of rights exploitation entities between the creator of a product and the consumer – such as Germany's GEMA¹¹, GEZ¹² or VG Wort.¹³ Much of the value-added in the creative industries cannot be generated by means of industrial mass production. Products are often unique, with production procedures being improvised and comparable to an innovation process: difficult to plan ahead and with an unpredictable outcome.¹⁴

Micro-enterprises are backbone of the creative industries

Micro-enterprises have a big footprint in the creative industries. In 2008, 97% of the 233,000 firms in the sector employed fewer than ten workers and generated less than EUR 2 m in revenues. Large companies with over 250 employees and over EUR 50 m in revenues generated the bulk of turnover (41%). There are, however, significant differences between the segments: in the press market and the performing arts in particular, large companies generate a much smaller percentage of revenues – while no architectural firms whatsoever are defined as being large enterprises. In broadcasting,

⁸ See also Flögel et al. (2011). Kultur- und Kreativwirtschaft. Mehr als Software? Institut Arbeit und Technik. Forschung aktuell 02/2011.

⁹ With cultural goods the export ratio in Germany's creative industries came to 3% in 2006, see Eurostat (2007). Cultural statistics. Factoring in the creative services segments the export ratio is probably 1-2 pp higher, but even in comparison with Germany's services sector with its focus on the domestic market it is likely to remain below average.

¹⁰ See Ehmer (2010). Sustainable growth thanks to stronger domestic demand. The role of the services sector in Germany. Deutsche Bank Research. Research Briefing. June 22, 2010; also Gräf & Schneider (2010). Germany: Only modest decline in the current account surplus. Deutsche Bank Research. Current Issues. September 6, 2010. Frankfurt am Main.

¹¹ Gesellschaft für musikalische Aufführungs- und mechanische Vervielfältigungsrechte (a German musical performance and mechanical reproduction rights company).

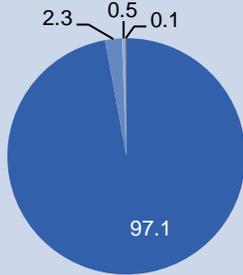
¹² Gebühreneinzugszentrale der öffentlich-rechtlichen Rundfunkanstalten. The central fee-collecting agency for the public broadcasting bodies in Germany.

¹³ Verwertungsgesellschaft Wort (a rights exploitation company).

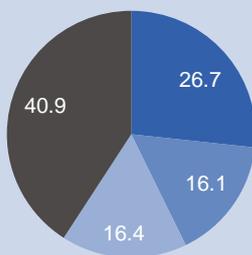
¹⁴ See Dapp (2009). Your country needs innovative minds! Deutsche Bank Research. Current Issues. November 3, 2009. Frankfurt am Main.

Many micro-firms, but large companies driving revenues

Proportion of companies, creative industries, %, 2008



Proportion of revenues, creative industries, %, 2008

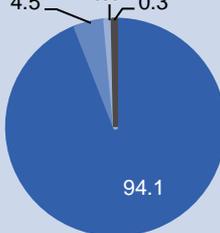


- Micro-firms (revenues < EUR 2 m)
- Small companies (EUR 2-10 m)
- Medium-sized firms (EUR 10-50 m)
- Large companies (revenues > EUR 50 m)

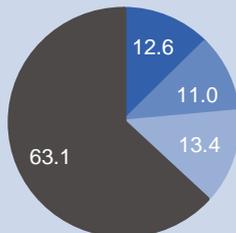
Source: Federal Statistical Office **11**

Large companies dominate total economy

Share of companies, total economy, %, 2008



Share of revenues, total economy, %, 2008



- Micro-firms (revenues < EUR 2 m)
- Small companies (EUR 2-10 m)
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- Large companies (revenues > EUR 50 m)

Source: Federal Statistical Office **12**

publishing and the music industry, by contrast, large companies have a dominant position. All in all, though, micro-firms as well as small and medium-sized enterprises (SMEs) are much more significant players in the creative industries than in the economy as a whole.

Two links in the value chain

Micro-firms with their fewer than ten employees are often unable to handle all the aspects of their business from development to distribution all on their own. Hence, the value chain in many branches of the creative industries is split up: authors/copyright holders of new ideas are to be found upstream. These firms, in most cases very small, work with an experimental approach and produce prototypes. Downstream, the ideas are marketed by large companies or rights exploitation entities and individually tailored products are reproduced. The creative act takes place in early innovation phases, while distribution and marketing are pursued in later phases.

Examples of such value creation patterns include the music industry, the book market and the art market.¹⁵ Given the dissimilar market environments the two phase levels have differing demand profiles for the firms in question: upstream companies, for instance, have to rely on the creativity of their employees and degrees of freedom in design work. For downstream companies, refinancing conditions and sales distribution are the primary concerns.

The two value creation levels differ moreover on the height of their market entry barriers: a creative industry player often requires nothing more than an idea or a talent and the right basic accessories (e.g. IT equipment or acting lessons) to penetrate the market. As a result, there are many small firms competing with one another, of whom only a few manage to distinguish themselves from the masses and lock in customers. At the exploitation level, by contrast, market entry barriers are higher: in this case, potential candidates often need to invest heavily, e.g. in building up distribution channels or advertising platforms. At this level there is less competitive and margin pressure.

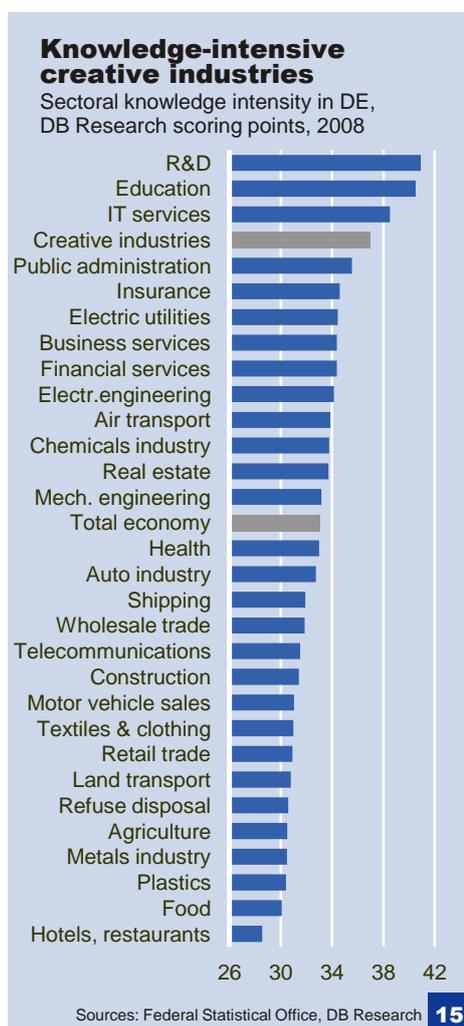
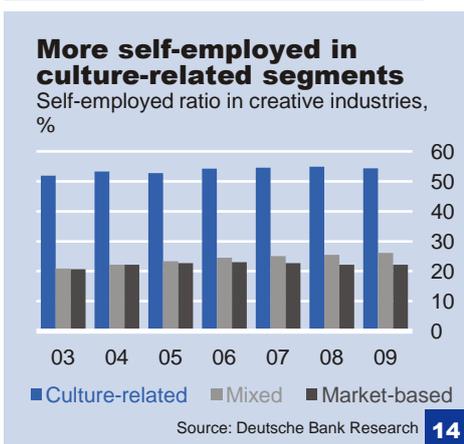
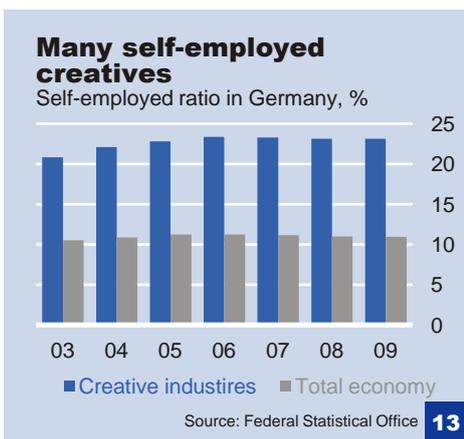
Small number of permanent employees

The dominance of micro-firms goes hand in hand with a large share of self-employed and freelancers among the workforce in the creative industries: in 2009 some 23% of all gainfully employed in the sector belonged to this group. In the overall economy, this share came to merely 11%.¹⁶ Many micro-firms in the creative industries consist of self-employed persons without any employees. Traineeships, months of (often unremunerated) work in internships and second jobs are everyday reality in many branches of the creative industries. Besides, jobs requiring contributions to the social-security system are often only temporary and project-related. Therefore, many of those employed in the creative industries do not have a steady income. Strong fluctuations in income reduce the planning certainty of creative people.

In addition, the oversupply of labour in the creative industries results in below-average incomes. In parts of the sector – more so in the segments with a disproportionately large number of self-employed –

¹⁵ Software programmers and industrial designers frequently market their product themselves.

¹⁶ Among the large industrial sectors (automotives, chemicals, engineering), in fact, only about 1-3% of workers are self-employed.



the income level is near the minimum living standard.¹⁷ The savings ratio of those in the creative industries is correspondingly low. The big companies' market clout on the second (downstream) value creation level enables this group to participate more heavily in the sector's positive revenue growth and allows higher wages and salaries.¹⁸

A knowledge-intensive sector with many lateral entrants

Despite their poor income prospects creative professions enjoy considerable popularity. The number of gainfully employed in the sector is increasing, with the share of self-employed and freelancers having risen – despite flat growth over the past three years – by over 2 pp since 2003. Many people are as willing as ever to take the plunge into self-employment. The reason for this is the smaller role played, unlike in many other sectors, by monetary incentives in decisions to pursue a creative profession. Often the main focus is on factors such as the large amount of personal/professional freedom and the will to turn one's passion into a profession. A further major incentive is partly the desire to become famous, especially in artistic professions. The increasing number of talent shows on television partly reflects the dream harboured by thousands of people of becoming a star.

The forsaking of good earnings prospects is all the more remarkable given the above-average knowledge intensity of the creative industries. This can be seen in particular by the very large share of people with a tertiary-level degree: about 37% of those working in the creative industries in 2008 had at least one university degree of some kind – at 18%, this share was only half as high in the overall economy. All in all, only research & development, education and IT services are more knowledge-intensive than the creative industries.¹⁹ Hence, creatives put up with a long period of education and the opportunity costs of forgone earning potential – along with below-average prospects of seeing these investments amortise themselves in monetary terms. However, the sector is full of lateral entrants, so people who work in the creative industries today are often ones who started their education in another occupation. The decision to take a creative job is often not made until sometime in the course of one's working life.

Interdisciplinary education offers

So far, education programmes for creative professions have in many cases failed to attach sufficient importance to business aspects. Artists seldom occupy their time with the commercial exploitability of their creations. Experience reported by the German government's

¹⁷ According to the Künstlersozialversicherung, a social-security scheme for artists, the annual income of the artists and publicists registered there (roughly 16% of the overall labour pool in the creative industries) totals EUR 13,000. By comparison: full-time employees earned an average gross annual income of EUR 40,000 in Germany in 2006; see Federal Statistical Office (2008). Verdienststrukturerhebung (labour cost survey) 2006. Since this was a one-off survey, no newer data is available.

¹⁸ However, digitisation and the internet improve the scope for authors/copyright holders to market their products themselves. Because of this, conventional business models, e.g. in the music industry, are losing significance; see Ehmer/Porsch (2008). Music industry still on song: But key changes are playing out. Deutsche Bank Research. Current Issues. June 27, 2008. Frankfurt am Main.

¹⁹ We measure knowledge intensity on the basis of worker education levels in the respective segments and on data from the microcensus. Because the creative industries are statistically defined as being cross-sectoral it is impossible to prevent double counting, but this does not have a significant impact on the overall picture.



Cultural and Creative Industries Initiative indicates that many creative workers lack the economic know-how needed to earn money from their creations. For this reason, the teaching of economics (e.g. accounting, corporate management, setting up a business) should become more heavily integrated into education programmes for creative professions. Creative workers with business skills and a well-founded business plan can also offer a more convincing performance vis-à-vis potential investors. Greater interdisciplinary features in education would thus have positive implications for innovation processes, willingness to set up new companies and growth potential in the creative industries. Lately, there have already been signs of a growing degree of professionalisation in the sector. Many SMEs and larger companies can function with two people at the top because of economies of scale: one entrepreneur is the creative head and the other one focuses on the business side.

Micro-firms often underfunded

Examples of incentive programmes: departure experts

In this Vienna-based project a consultation platform is being set up for firms in creative industries. Entrepreneurs receive a consultation voucher worth EUR 15,000. With this voucher they can use the advisory services of experts who are members of a selected pool. Follow-up consultations have to be paid for in full by the companies themselves. The aim of the programme is to reduce the reluctance of creatives to approach an external adviser in order to obtain, for example, business expertise.

Mikrokreditfonds Deutschland

The Mikrokreditfonds Deutschland, a German microcredit lending facility, supports start-ups and micro-firms with small-scale investments. When lending decisions are made the main focus is on a coherent business concept. Normal bank collateral plays a minor role in comparison with standard loans from commercial banks. The EUR 100 m fund is sourced from European and German subsidies. The loans are disbursed by Gemeinschaftsbank für Leihen und Schenken (GLS Bank).

Limited access to capital and underfunding

Many creative industry businesses have difficulties funding their projects. However, this is another case in which it is necessary to distinguish between the two value creation levels in the sector – and their eleven segments: large companies, as exploiters, have better access to the capital market. They usually have a broad portfolio of marketed artists or ideas. There are often several among them requiring extensive investment and whose future success is not yet in sight. Other investments are already paying off and generating profits. Business models of rights exploiters have proved their worth in the past, and future fund inflows are thus more predictable. By contrast, the business potential of the still-to-be-funded ideas put forward by micro-firms that are new in the market as authors/copyright holders remains up in the air. Often it is uncertain whether they can be marketed in the first place. Future monetary inflows – and thus the basis for credit repayments – are often difficult to gauge. In addition, many of the micro-firms usually do not have (sufficient) collateral. Thus, they have too little appeal for risk-averse investors. Moreover, self-employed people do not have a steady income and therefore have particular difficulties gaining access to credit funds. A second problem for micro-firms is small credit volumes: often they require amounts of less than EUR 30,000. Lending volumes of this size are often not attractive to commercial banks, for example, owing to the administrative costs required.

Publicly funded support reaches only parts of the sector

The German government is seeking to correct the problem of underfunding with the help of subsidies and advisory services. There are extensive incentive programmes above all in the skills and start-up areas. In the start-up phase, creatives may apply for conventional grants, such as “KfW Startgeld”, from KfW Bankengruppe, a major “promotional bank”, to cover their needs. However, only a few incentive measures are tailored to the specific needs of the players in the creative industries – e.g. small credit volumes for micro-firms or longer amortisation periods, since financial success usually materialises at a later date and lead times are longer than in other sectors.²⁰ This means that while the subsidies enable creative-

²⁰ For a comprehensive analysis of the incentive schemes and their shortcomings, see Söndermann (2009). Endbericht Kultur- und Kreativwirtschaft. Bundesministerium für Wirtschaft und Technologie. Berlin. One of criticisms levelled by the sector is that funding from foundations primarily flows into prestigious projects, while the day-to-day work of associations has to be performed by volunteers.

Cultural and Creative Industries Initiative

As a result of the "Kultur in Deutschland" commission of enquiry the German government recognised the economic relevance of the creative industries and in 2007 it unveiled the Cultural and Creative Industries Initiative. Joining forces with the Federal Government Commissioner for Culture and Media, the Federal Ministry of Economics and Technology initiated the nationally organised platform in close collaboration with the Federal Foreign Office and the Federal Ministries of Justice, Finance, Labour and Social Affairs, and Education and Research. This is the first organisation that represents the creative industries as a whole. It is meant to raise the currently low level of the sector's political organisation. In this context, it functions as a common mouthpiece for industries whose segments have so far seldom considered themselves part of an overall sector because of their heterogeneity.

Besides active public relations, the aims of the Initiative are:

- Annual publication of economic monitoring programmes,
- Encouragement of networking between creatives and funding and promoting institutions as well as business associations,
- Greater support for creatives on business issues,
- Easing of access to debt capital and promotion of external trade,
- Maintenance of social security for artists and information programmes on old-age provision,
- Information pertaining to protection of intellectual property rights.

As part of this initiative the competence centre for cultural and creative industries (Kompetenzzentrum Kultur- und Kreativwirtschaft) encourages the entrepreneurial advancement of small cultural and creative companies. It supports creatives with sector-overarching concerns on a supra-regional basis and offers advisory consultations at over 70 locations in Germany.

Info: www.kultur-kreativ-wirtschaft.de

Concept of innovation influences incentive policy

industry SMEs to also attain better access to funding, most micro-firms continue to be denied access to the capital market. The main reasons for this are the many small-scale incentive programmes whose complexity obscures the overview for companies with only a few employees in particular and often involve considerable red tape.

Creative industries require differentiated concept of innovation

Innovations come in many guises. It is often overlooked that there are also creative ideas that do not involve high-tech or advanced technology which find their way into the markets. After all, incremental innovations or recombinations of existing products, services or processes can also generate value.

97% of all the companies in the creative industries are micro-firms. Because of their variety and segmentation this group is among the least researched in the corporate landscape. Söndermann writes in his final report on the creative industries that the share of hidden innovations in the creative industries and in the services sector is generally particularly high, which makes it difficult *per se* to value the innovation activities and effects of businesses in the cultural and creative industries.²¹ Many of these hidden innovations have barely been captured in the statistics and many do not attain the level of media attention as do, for example, innovations pertaining to vehicle safety or the energy efficiency of green technologies. A broader understanding and a differentiated concept of innovation should become permanently established, especially in the creative industries, because the shortcomings in the existing concept of innovation has negative effects not only on promotion and innovation policy. It also keeps investors, for example, from being able to consider companies' creative potential in creditworthiness decisions.²² Confining incentive promotion mainly to technological innovations leaves a great deal of value creation potential in the creative industries untapped. The definition of innovations used in established incentive programmes does not necessarily correspond to the way the creative industries work. It is precisely innovations enabled by digitisation (e.g. apps for mobile phones) that are scarcely taken into consideration. The lack of innovation policy to promote the creative industries holds back the growth of the sector.

Opening the incentive programmes to the creative industries as well as guiding creative workers towards the diverse promotional instruments at the institutional level (municipalities, cities, states and federal government) remain important fields of activity. This is where the German government's Cultural and Creative Industries Initiative comes in (see box). Its aim is to increase the transparency of the offers of already existing incentive programmes and associations and to support the sector with contacts and entrepreneurial expertise.

Innovation processes take place in communities

A broader understanding of the innovation concept is important, moreover, because the idea of networks is playing an increasingly vital role in the creative industries in terms of value creation (buzzword: "open communities"). The creations are hardly ever the product of a single individual anymore and innovations can also no

²¹ Söndermann (2009). Endbericht Kultur- und Kreativwirtschaft. Bundesministerium für Wirtschaft und Technologie. Berlin.

²² To date, business ideas or product innovations have scarcely been able to be used as collateral in the shape of licences or patents since intangible assets cannot be valued on the basis of objective yardsticks.



Co-working

In the creative space, co-working has emerged as part of a trend towards new forms of working over the past few years. This way of working particularly stimulates the innovation process for freelancers, smaller start-ups and people who create value in the digital and virtual space. People are increasingly working independently of one another and collaborating in differing personnel combinations and projects. For this reason, conventional career paths and strict hierarchies are much less pronounced in the creative industries than in other sectors.

Co-working environments are usually found in fairly large premises which can be rented temporarily (by the day, week or month) in creative districts. The scope of co-working ranges from work environments and infrastructure (network, printer, scanner, fax, telephone, projector, conference rooms) right through to relaxation and fitness rooms, secretarial and catering services.

The aim of co-working is to create a creative community (open community) that can be strengthened via joint events, projects and workshops. Collaboration remains temporary and flexible. The frequent change of players ensures an increased transfer of knowledge with new stimuli for the innovation process. The demand for open workspace is met in Germany, for example, by the Betahaus* in Berlin and Hamburg. There, creatives can temporarily rent space for specific projects. The Betahaus is only one of many so-called "coworking spaces" to be found across Germany.**

* <http://betahaus.de>

** <http://coworking.de>

longer be attributed to single persons either. Interactive collaboration within the value creation process increasingly gives rise to new ideas and drives the knowledge or technology transfers necessary in projects.

Mobile, flexible and increasingly virtual work methods

Open communities need not only virtual platforms for person-to-person contact but also physical workspace. The development of creative milieus enables real, sector-overarching and project-related collaboration between diverse fields of knowledge in addition to digital networking. The mixed assortment of creatives in collaborative projects gives rise to a valuable breeding ground for ideas. Some of the fundamental requirements for the independent working style in the creative industries are a high level of mobility and flexibility as well as a needs-oriented virtual infrastructure. One point that ought to be particularly emphasised in this context is the link between digital and real network structures. Quick access, low transaction costs and a broad, interdisciplinary network figure are just as much among the advantages as is the supply of modern information and communications infrastructure.²³

ICT is a vitally essential cross-sectoral technology

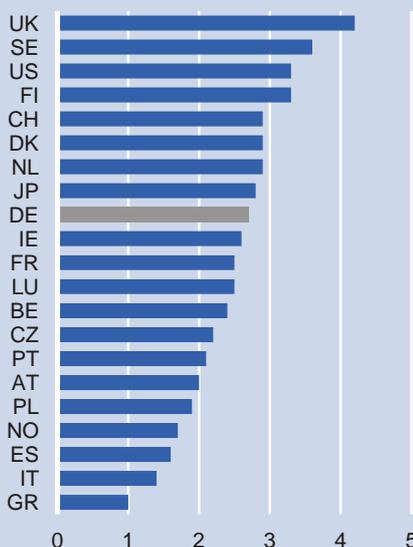
Information and communications technology (ICT) is a cross-sectoral technology that is now integrated into virtually every value creation process. ICT infrastructure serves in many sectors as a (virtual) network platform, means of production and distribution channel all at the same time. Creatives, with their independent way of working, particularly benefit from technological advances in ICT. Furthermore, digital technologies will in many sectors give rise to new business models in future. In addition, they offer alternative solutions for opening up value creation networks as an additional instrument to release innovation potential. More and more external actors (clients, business partners, rivals, suppliers etc.) will be integrated into the process of value creation.²⁴ However, the increasing implementation of modern ICT brings with it an increased demand for investment which makes itself noticeable even at the macroeconomic level. In 2009, ICT investment in Germany ran to 2.7% of gross domestic product. The highest spending ratios were reported in the United Kingdom (4.2%), followed by Sweden (3.6%) and the United States (3.3%). The UK has noticeably boosted its ICT spending since 2006, by a full percentage point, while Germany's spending has stagnated.

Further expansion of ICT infrastructure is recommended

Given the key significance of ICT as a cross-sectoral technology its continued expansion ought to be on the political agenda for all (future) German governments and European-level authorities as well. Its expansion facilitates access to technological innovations and secures the international competitiveness of Germany's (creative) industries.²⁵ Moreover, the digital technologies help to

Average investment in ICT

ICT investment in 2009*, % of GDP



*Data for NO, CH, US and JP from 2008.

Source: Eurostat 16

²³ On a long-term horizon an even stronger focus on flexible, family-oriented employment models is to be recommended in order to tackle the implications of the demographic shift.

²⁴ What is meant is the use of open innovation, crowd sourcing or other virtual idea contests (not only in the creative industries) in order to anchor external expertise in value creation processes via interaction and participation.

²⁵ In the German government's recently adopted ICT strategy the stated aim is to create 30,000 additional jobs in the ICT sector and in user sectors by 2015. Another objective is an increase in the number of ICT-based company start-ups,

Modern way of working in the creative industries: Avant-garde or mainstream?

Creative milieus and a “creative class”^{**} require (extra) freedom. The modern, increasingly independent way of working in the creative industries has a touch of the avant-garde. Part of belonging to the creative crowd is to move to a trendy district to live and work. Given the structural change towards a digital economy and the improvements in the scope of information and communications technologies, flexible job models will take root in work routines in other sectors on a long-term horizon as well. The negative effects of demographic change on the labour supply will reinforce this trend, since modern job models all along the value chain support a family-friendly policy that optimally combines the working world and private life.

Naturally, not all sectors can implement the modern job models of the creative industries. Wherever contributions from different fields are required, wherever labour processes are increasingly conducted in virtual space and people create digital value independently of fixed working hours and workplaces, this modern way of working may be just the solution.

* Florida (2002). *The Rise of the Creative Class: And how it's transforming work, leisure, community and everyday life*. New York. Basic Books.

The “Venture Capital Fonds Kreativwirtschaft” in Berlin

The “Venture Capital Fonds Kreativwirtschaft” in Berlin is a EUR 30 million fund set up by Investitionsbank Berlin and the State of Berlin. It is indirectly supported with funds from the European Regional Development Fund. It invests in companies from all segments of the sector and seeks to hold its stakes for a period of only three to seven years. Beyond the funding, it also makes available business expertise. Since 2008, the fund has invested in 17 creative companies; many of these offer content-oriented innovations, e.g. internet radio programmes or film recommendations geared to individual tastes. The model for this fund is the Advantage Creative Fund in the United Kingdom. This was founded with start-up capital of GBP 5 m in 2003 and was the first ever capital fund to focus on the creative industries in the first place.

pave the way towards the necessary close collaboration of all players in the innovation process, i.e. between business, science, politics, society and culture.

The existing possibilities for the use of modern ICT in the arts-related segments of the creative industries, for instance, have scope for further expansion. Besides, targeted collaboration between creatives and research institutes would make sense to achieve both higher acceptance and broader use of ICT in those segments of the creative industries that have hitherto made relatively little use of ICT. One suitable approach for this, for example, would be open (virtual) laboratories that as “open source research cooperation partners” drive technology-based innovations in the creative industries.

3. Need for action in some segments of the creative industries

Given the heterogeneity in the creative industries it is difficult to identify key industrial-policy measures that favour all segments to a similar degree. The interests and concerns of the individual segments differ too much for this to be the case. Furthermore, value creation in the creative industries is often predicated on local conditions, such as available infrastructure. For this reason it is virtually impossible to make general recommendations for action at the national level. Two fields of action with a relatively broad impact are the shape and design of intellectual property rights and funding.

Funding

Untried business model, a shortage of collateral and low volumes make investments unattractive

One of the biggest obstacles to growth in the creative industries is the widespread problem of latent underfunding. In particular, small companies with an innovative idea but without a proven business model face a rocky road to acquiring capital. Improving the funding situation could pave the way of the creative industries to higher growth.

While large companies are the recipients of funds from banks and other sources, creative-industry SMEs often do not hold any attraction for private investors. Thanks to government incentives, SMEs are also becoming more interesting for the private sector, for the prospect of subsidies can serve as collateral. But the many innovative micro-firms that frequently are unable to take advantage of the incentives do not fit the private banks’ business matrix: it is difficult for them to envision the size of future income flows and the companies cannot offer sufficient collateral to guarantee a bank the repayment of an outstanding loan. Moreover, these small firms have a demand for modest amounts for which the administrative expense may exceed potential earnings.

The underfunding problem affects some segments of the creative industries more acutely than others. For instance, firms active in the art market and in the performing arts face difficulties finding lenders. In these sectors there is sometimes a stronger focus on high-quality cultural content than on business aspects. For this reason, the public sector often steps in to finance cultural goods. Without subsidies there might be cases where there would be no offering at all, perhaps because the required infrastructure could not be funded

see German Ministry of Economics and Technology (2010). *IKT-Strategie der Bundesregierung. Deutschland Digital 2015*. Berlin.

Coupled products

The problem of small credit volumes and thus scarcely profitable lending potential could be resolved by coupling further products to a loan. For example, banks could conceivably take on the borrower's payment-transaction or retirement-savings business at the same time. In this way, a less profitable loan transaction could be cross-subsidised by means of cross-selling other products. It is doubtful, though, whether creatives would have funds available for such financial services to make product bundling of this kind worthwhile.

Creatives joining forces can generate economies of scale

To enable lending in underfunded parts of the creative industries despite small loan volumes, those concerned are demanding less bureaucracy in the lending processes. In such cases it is often overlooked that a simplified risk check would only lead to higher risk premia in order to preclude loss-making business. Furthermore, statutory minimum standards will have to be observed in the assessment procedures.

If creatives joined forces, the problem of small credit volumes could be reduced via economies of scale. However, such solutions are unlikely to materialise for the volume market, since creatives working at a company incorporated under civil law (a GbR in Germany), for example, must be jointly and severally liable with their private assets for the obligations of the organisation. They would be obliged to cover losses made by any co-owner. In addition, the pooling of borrowers makes it more complex for banks to conduct their risk tests. This partly offsets the advantages of higher volumes.

(e.g. theatres, opera houses). Market-based funding is often illusory in such cases.

By contrast, operations in segments with market structures, such as design and advertising, often find outside backing. Particularly the software/games segment has certain advantages here, for its products are usually simple to market and they start to generate revenues earlier and more predictably. This segment is largely the driver of revenue growth in the creative industries.²⁶ Furthermore, companies from this segment also have access to alternative sources of funds such as venture capital. Venture capital investors target a fast increase in the value of their stake, which is easier to achieve in technology-oriented start-ups than in say the performing arts or publishing houses, which have been pummeled by the digital revolution.²⁷

Valuation of business ideas and risk assessment by third parties

The biggest obstacle to private-sector loans is the difficulty of gauging future income flows and assessing the risk of an investment. In the underfunded segments there is no basis for comparison to be able to judge these factors: with company start-ups in other sectors banks can draw conclusions about the prospective success of the company being founded from their experience with established customers from the same sector. In traditional industrial sectors, for example, new clients can be compared with existing clients. In the creative industries, though, companies are distinguished by the individuality of their ideas: products and services are less similar than in other branches of the economy. This means that conventional assessment procedures provide less meaningful prognoses of future business success.

One possible solution in this case could be to convene a committee of experts who are widely knowledgeable about the creative industries. This committee could provide advice to banks on their lending decisions and assume the task of forecasting the success of a given project. Given the low margins in business with the creative industries, building such a team within a bank is not usually cost-effective.²⁸ Alternatively, subsidies could be used to create an external institution. The assessment reached by this type of expert body could serve banks as a basis for their own credit decisions – without them having to make their own assessment. The outsourcing of this formerly in-house work can reduce creditors' costs, thus making lending to creative firms a more attractive proposition.

In such a model, however, the distribution of risk would have to be clarified first. Since banks' lending decisions would be based on the judgement of third parties, such a solution would be unlikely to gain currency if banks had to shoulder the entire risk themselves. Risk could be distributed via, for example, guarantees which the borrower

²⁶ For a more detailed investigation of the games sector, see Heng (2009). A serious business with plenty to play for: The PC, console and mobile gaming sector. Deutsche Bank Research. E-economics 72. Frankfurt am Main.

²⁷ See Heng et al. (2010). Verlage im Umbruch: Digitalisierung mischt Karten neu. Deutsche Bank Research. Aktuelle Themen 496. Frankfurt am Main. However, the market for venture capital and business angels in Germany is relatively underdeveloped by international standards. See Dapp (2009). Your country needs innovative minds! Deutsche Bank Research. Current Issues. November 3, 2009. Frankfurt am Main. See also Meyer (2008). Venture Capital: Bridge between idea and innovation? Deutsche Bank Research. E-economics 65. Frankfurt am Main.

²⁸ The fixed costs of such a department would have to be apportioned to the costs of every single loan – higher interest rates would make these loans unattractive.

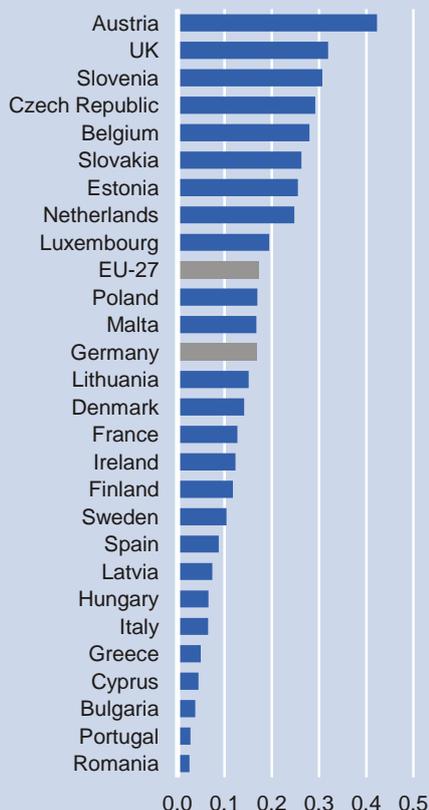
Institut pour le Financement du Cinéma et des Industries Culturelles

The IFCIC is a credit guarantee fund set up in 1983 to fund France's film and cultural industry. Half of its financing comes from the state and half from private commercial banks. The IFCIC not only provides the financial guarantee, but also performs the risk analysis of financial investments. As a rule, 50% of the credit amount is guaranteed by the fund.

Opening of value-creation networks

Austria – exporter of culture

Exports of cultural goods in 2006 (% of GDP)



Sources: Eurostat, DB Research **17**

could obtain cheaply from a public-sector bank. The private-sector lender then shoulders only part of the risk. Using a similar model, France's ministries of culture and finance established the IFCIC (see box).

All in all, funding remains a problem for large swathes of the creative industries. The less profit-oriented segments in particular will have to continue to rely on public-sector subsidy programmes. Other segments, such as software or the design market, by contrast, have already generated profits and attracted private investors in the past.

Intellectual property rights

Adjustment of intellectual property rights to a digital world

Intellectual property rights and their enforcement are an elementary component of our market-based economic and innovation systems. In order for creatives to be able to benefit from the value they create, patents and copyrights, for example, need to enjoy unambiguous protection and enforcement.

However, the fact must not be ignored that there is an increasing number of sectors and segments that successfully generate value without strict enforcement of protection rights. For this reason, not every form of value creation in the creative industries should be benchmarked against conventional exploitation logic. Sectors with a cultural focus are precisely the areas where profit is not the primary motive for every creative act. Segments in which intellectual property rights are not necessarily enforced are increasingly to be observed in areas where digitisation has superseded conventional production and distribution forms. The value creation of digital products, services and processes increasingly transpires in the virtual space, benefiting from the partial opening of value creation networks ("open innovation"). Thanks to the opening of individual links in the value-creation chain, external experts' knowledge can flow into the innovation process. Third parties participate more heavily – often on a voluntary basis and without monetary incentives.²⁹

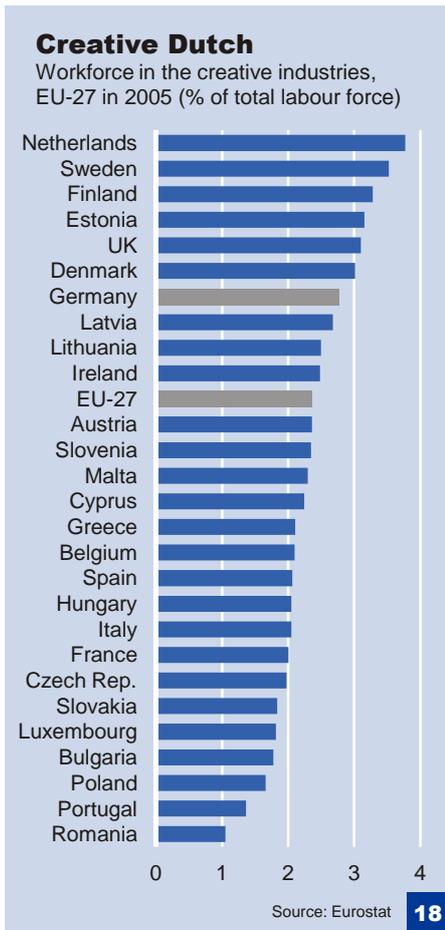
Thus, value being created on the internet is increasingly developing as a collective product. The rising participation of third parties in corporate innovation processes hampers the enforcement of intellectual property rights. For organisational and work-specific reasons, the developing values cannot be based exclusively on the principles of the protection of intellectual property rights. Working collectively on the source code of a software programme is only made possible in the first place because it is based on open licences.

Examples of collective value creation are to be found in so-called "open design communities" or "open music communities".³⁰ Open innovation enables companies to boost their innovation potential by allowing the integration of external experts or lead users³¹ in the

²⁹ Benkler (2006). *The Wealth of Networks. How Social Production Transforms Markets and Freedom*. Yale University Press. New Haven and London.

³⁰ See Dapp (2010). *The pirate inside us: In the depths of copyright*. Current Issues. August 24, 2010. Deutsche Bank Research. Frankfurt am Main.

³¹ According to Eric von Hippel, "lead users" are consumers whose needs pre-date requirements demanded by the market. These trendsetters expect to gain relatively high benefits from a solution to the needs they have encountered and thus often emerge as innovators. In so doing, they help companies in the innovation process with their "expertise". Interactive involvement in the innovation process turns them into so-called *prosumers*. See von Hippel (1986). *Lead Users. A source of novel product concepts*. Management Science Vol. 32.



value creation process. The principles of the open source movement revolutionising the IT sector also show how technological progress in ICT and the increased use of open licence models can foster interactive participation in the value creation process. In the creative industries this mainly benefits the technology-intensive segments such as design and software/games.

Does copyright architecture fit the digital world?

The possibilities harboured by Web 2.0 have turned the issue of copyright into a political and societal minefield. Copyright law is infringed wittingly or unwittingly by millions of internet users every day. Many of these laws are violated in the virtual space (on social media platforms in particular). Within this interactive online world, digital content (which is sometimes altered without permission) is being created, linked and shared incessantly 24 hours a day. This raises the issue of whether existing copyright law is to be understood as a source of or impediment to innovations. In particular, the relationship between the authors/copyright holders, users and rights exploiters has become unbalanced. More and more people are actively using the internet, with the boundaries between consumers and producers of digital content fading more and more.

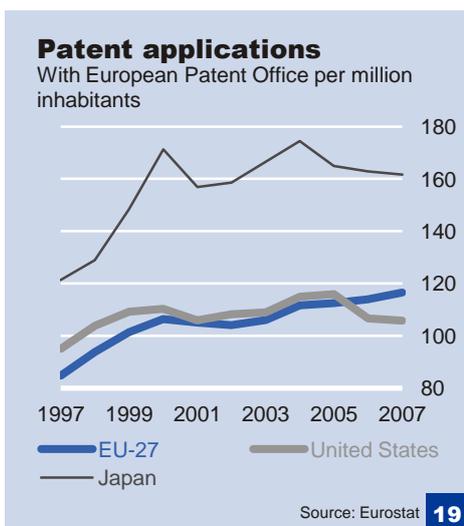
At present, Germany's justice and interior ministries have the third copyright amendment lined up on their agendas. As part of a modern internet policy, the attempt to make the existing copyright law compatible with a digital society – above all one of sovereign consumers – could succeed. Besides the copyright holders themselves, the rights exploiters and experts from the online community should also be heard during the negotiations. The increasing willingness to infringe copyright law should not be met so much by network blockages, internet censorship, additional service protection laws³² or digital rights management (DRM), but rather it would be more advisable to initiate remedial measures and an information drive creating (renewed) awareness that digital content has its price.

More patent filings and a decrease in the inventive step

Not only copyright but also patents play an important role especially in the software and design segments. Technological inventions are increasingly being granted patents with a dubious inventive step or quality. Over the past few years there has been an increase in the number of patents filed worldwide, while the inventive step of the patented ideas has continued to decrease. As long as it remains cheaper for a patent office to grant a patent than to reject the application (because it lacks an inventive step), this is not about to change on a medium-term horizon.

It is precisely in the technology sector that many marginal changes to existing products tend to be the basic prerequisites for further research and development (“standing-on-shoulders effect”). Patented incremental innovations can hamper or in fact curb more profound innovations. Protection periods for intellectual property should therefore be differentiated and if necessary adjusted to the faster-moving digital world.

The digital era enables consumers to participate in the development of new ideas and products. This makes adjustments to intellectual property rights a necessity. In patent law, in particular, the protection



³² See Dapp/Lorber (2010). Leistungsschutzrecht – Mehr Schutz als Leistung! Deutsche Bank Research. Aktueller Kommentar. 29.09.2010.

period of 25 years appears debatable considering the rapid advances in technological progress along with shortened product life cycles and the increasing degree of international competitive pressures. Patent and copyright laws were created for an analogue world. A reform for a digital world is inevitable.

Culture flat rate: Controversial payment model for cheated copyright holders

Controversial culture fee

As the reform of protection rights progresses and internet piracy increases there are often discussions about the pros and cons of a “culture flat rate”. The culture flat rate is a lump-sum payment on digital cultural goods that is centrally collected and distributed to rights holders. It is currently under discussion that every internet user with a broadband connection would be required to pay a monthly fee of EUR 5-10 to the internet provider. The provider or a related exploitation company would transfer this money on a pro-rata basis to the creator of the digital content. This type of lump-sum fee collection has become firmly established in the public-sector radio and television broadcasting sector. However, no agreement has been reached yet on this controversial issue.

4. Creative industries offer growth potential

Important to differentiate between segments

The creative industries form a sector with great economic significance in Germany: going by the statistical definition used here there are one million people working in creative professions and producing goods and services worth over EUR 60 bn – more than the automobile industry. The sector shows that selected culture-related areas can also be an economic success. However, our classification into mainly market-based and mainly culture-related segments highlights that especially the market-based segments generate value creation in the creative industries. Moreover, the sector itself has not been substantially affected by the worst recession since the Second World War – even though this is naturally because some parts enjoy state protection.

Nevertheless, the creative industries are confronted with several problems, such as some cases of poor working conditions and very low incomes, project-financing problems particularly among the many micro-firms and outdated intellectual property rights. However, the heterogeneity of the creative segments requires that the individual segments be weighted differently: for example, software companies have no significant problems in tapping sources of funding and have posted strong growth. The arts and culture-related segments, by contrast, have to continue relying on public subsidies.

Germany’s federal, state and municipal government authorities have recognised the potential of the creative industries, enabling the emergence of creative milieus and launching promotion initiatives. However, it remains a challenge to pursue an economic policy capable of promoting the entire sector, since creative environments emerge in decentralised fashion.³³ Incentive programmes should be developed regionally and funding aid in particular should be tailored more closely to the specifics of the creative industries (e.g. longer repayment periods). Furthermore, for intellectual property rights, policymakers should adjust the underlying conditions to fit the digital world in order to support the creative industries in their specific, often content-oriented innovations. An expanded concept of innovation could help in this case to improve the visibility of

³³ See Lange et al. (2009). *Governance der Kreativwirtschaft. Diagnosen und Handlungsoptionen*. Transcript Verlag. Bielefeld.

**Market-based segments driving growth**

innovations; a differentiated structuring of the maturities of intellectual property rights would probably boost innovation activity.

If policymakers are successful in paving the way for incentive policy to promote individual sectors, this would enable small companies and micro-firms in particular to become more dynamic. The market-oriented segments, such as software/games and advertising, will remain the growth drivers of the overall sector. In a developed economy such as Germany there is sizeable demand for the products generated by the creative industries. All in all, the sector still offers growth potential and could even accelerate its revenue growth. Between 2003 and 2009, the creative industries posted annual average growth of 1.9%; if the crisis year 2009 is stripped out, the mean growth rate was around 3.1%. We expect that given the adoption of the right policies – and barring a renewed relapse into a similarly serious recession – the sector could grow by an average of roughly 2.5% every year up to 2020. In 2020, this would translate to revenues of about EUR 175 bn.

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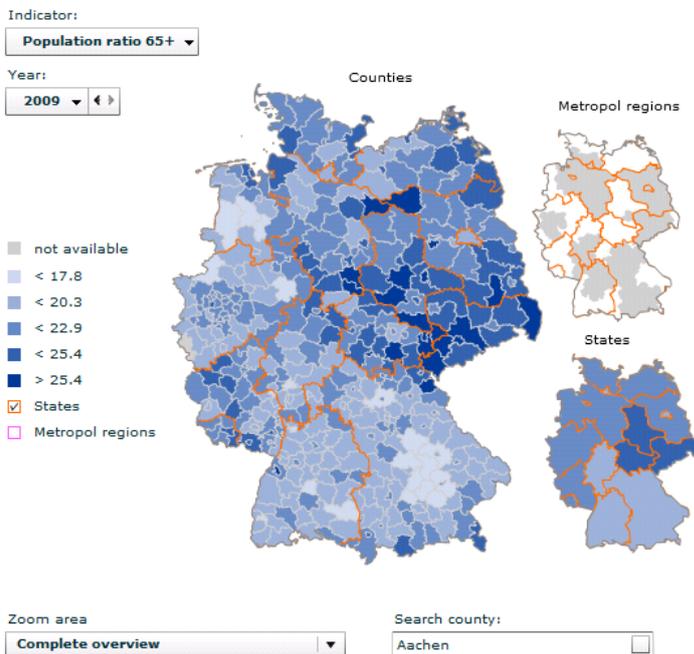


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